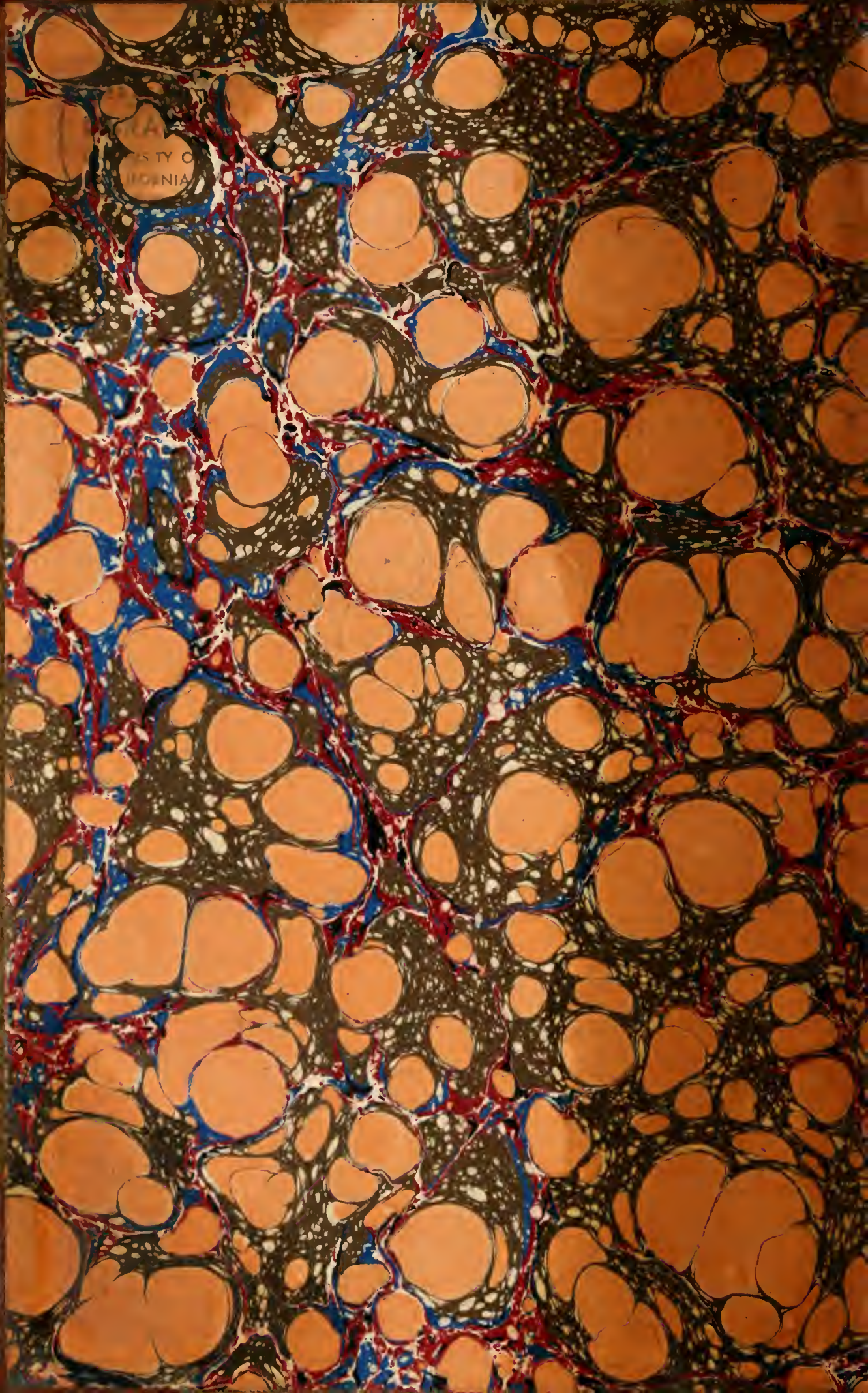

TRAVELS
IN TROPICAL LANDS.

CACAO IN TRINIDAD.

IN TROPICAL LANDS:

Recent Travels

TO THE SOURCES OF THE AMAZON, THE WEST INDIAN ISLANDS, AND CEYLON.

BY

ARTHUR SINCLAIR

(FELLOW OF THE ROYAL COLONIAL INSTITUTE,
MEMBER OF THE ABERDEEN PHILOSOPHICAL SOCIETY, ETC.).

"Patience! and ye shall hear what he beheld
In other lands, where he was doom'd to go."

Byron.

ABERDEEN: D. WYLLIE & SON:
EDINBURGH: JOHN MENZIES & CO.;
LONDON: SIMPKIN, MARSHALL, & CO.;
CEYLON: A. M. & J. FERGUSON.
1895.

Dedicated

TO THE DEAR MEMORY OF

DR. WILLIAM ALEXANDER,

FOR THIRTY-SEVEN YEARS

THE WARM AND STEADFAST FRIEND

OF THE AUTHOR.

PREFATORY NOTE.

To the Peruvian Corporation's Representative, who so admirably plays a very important and difficult part in Lima, I have to express gratitude for kindness, especially in obtaining facilities for the exploration of regions hitherto but little known.

To my fellow-travellers, Messrs. A. Ross and P. D. G. Clark, whose urbanity and resourcefulness smoothed many a difficulty during an arduous journey through the upper valleys of the Amazon, my best acknowledgments are due. The keen enthusiasm for economic botany evinced by Mr. Clark proved very helpful, and in the following pages the result of our researches is duly dealt with.

In the West Indies I was indebted to His Excellency the Governor of Grenada, and also to Mr. Hart, the Superintendent of the Botanical Gardens, Trinidad, for much courtesy and valuable information.

For the more recent facts and figures relative to Ceylon, I owe thanks to the encyclopædic editor of the *Ceylon Observer*, the stanchest friend I ever made in tropical lands.

ARTHUR SINCLAIR.

MEADOWBANK,
ABERDEEN, *January*, 1895.

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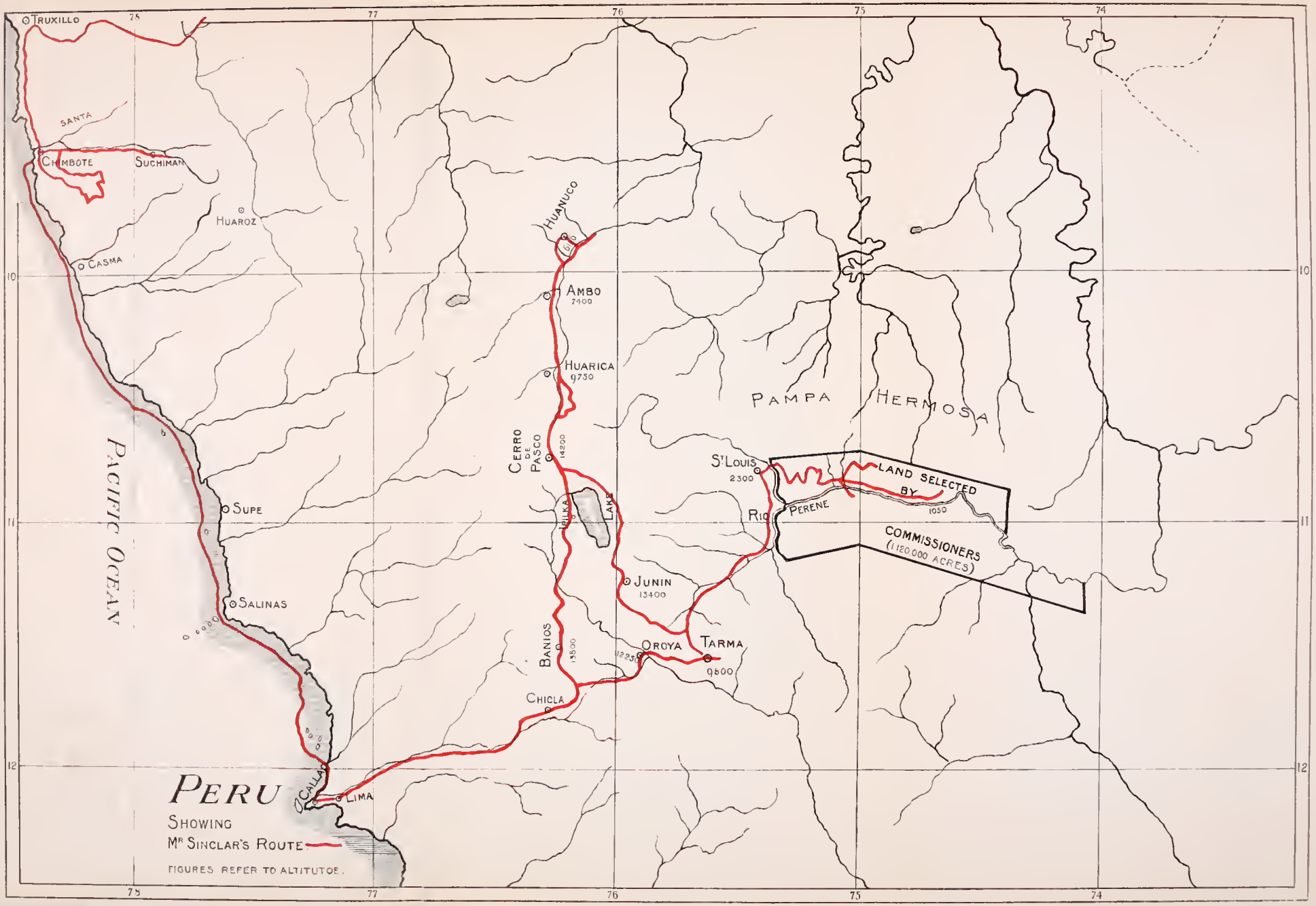
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CHIMBOTE
SUCHIMAN
HUAROZ
CASMA
HUANUCO
AMBO
7400
HUARICA
9750
CERRO DE PASCO
14200
PAMPA HERMOSA
ST LOUIS
2300
LAND SELECTED BY
PERENE
1050
COMMISSIONERS
(1,120,000 ACRES)
SUPE
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JUNIN
13400
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CHICLA
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PACIFIC OCEAN
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SHOWING
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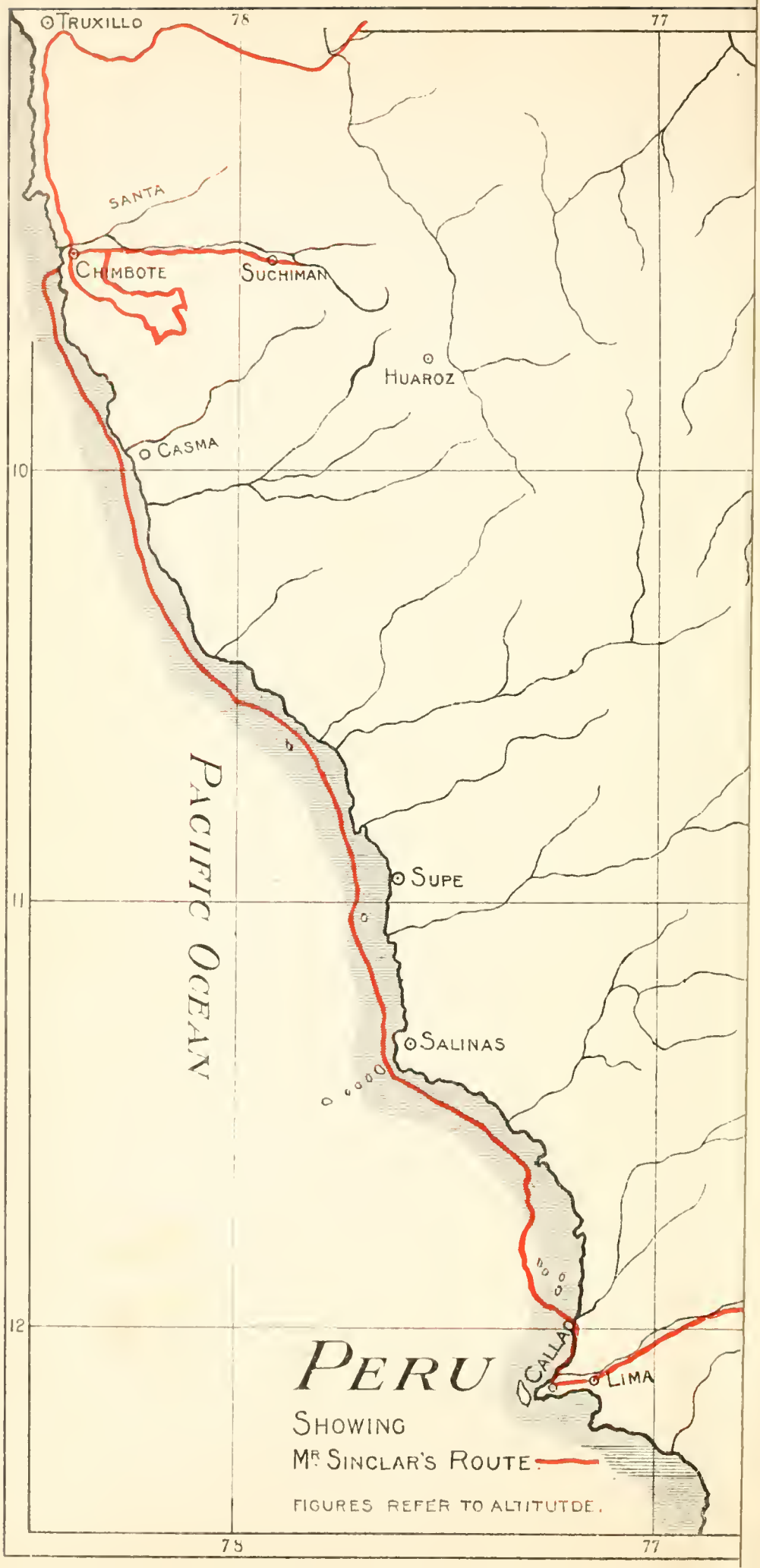
IN TROPICAL LANDS.

PERU.

THERE are three routes available from Europe to Peru—the most direct, after crossing the Atlantic, being up the Amazon; the most comfortable, by the Straits of Magellan; and the quickest, *via* the Isthmus of Panama. To save time, let us choose the last. One advantage of this route is, that it gives us a peep, in passing, at the islands of Barbadoes and Jamaica—the two oldest and most valuable of our West Indian possessions. Barbadoes is only 166 square miles in extent, but every acre is cultivated, chiefly in sugar-cane, and, altogether, the best cultivated little tropical colony I have come across. It is densely populated, chiefly by negroes, who look much happier and better off than the "poor whites." The English language only is spoken—spoken with a terrific fluency and an unmistakable Irish brogue. Readers of Carlyle's "Cromwell" will not be at a loss to account for this, remembering how Oliver sent so many of his refractory Irishmen there. "Terrible Protector!" exclaims the Sage, "can take your estate, your head off if he likes. He dislikes shedding blood, but is very apt to Barbadoes an unruly man; has sent, and sends up in hundreds to Barbadoes, so that we have made an active verb of it—Barbadoes you."

Again, in one of the Protector's characteristic epistles, we read that 1,000 Irish girls were sent, "and as to the rogue and vagabond species in Scotland, we can help you at any time to a few hundreds of these." An Irish fellow-passenger, hearing his own language so well accented, enquired of a Barbadoes negro working at Jamaica, "How long have you been here?" "Noine years," was the reply. "Be jabbers," said my friend, "if you 've got black like that in noine years, it 's high time I were off home again."

Jamaica has a magnificent harbour, from which superb views of the grand old Blue mountains are to be seen. Kingston, the capital,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is spread out on the rich flat land lying between; sweltering under a blazing sun, from which even the laughing negro is glad to take shelter below the umbrageous trees. The climate and vegetation strikingly remind one of Ceylon, but alas! the abandoned hillsides testify to the greater labour difficulties of the poor planter here. A few days more and we heave in sight of the Isthmus of Panama. Generally speaking, the first land seen is Porto Bella in the Gulf of Darien, which reminds us of a chapter in Scottish history we would fain forget if we could. Here, about 200 years ago, some of the very cream of our countrymen were landed and sacrificed to the contemptible jealousies of our neighbours. Terrible was the loss to so poor a country, and heroic was the struggle, but it was of no avail against such fearful odds, and, now, the only really useful lesson we can learn from the disaster is, that even Scotchmen are not equal to manual labour in the tropics; and, whatever inducements selfish individuals or soulless companies may hold out, it may be accepted as a general rule that Europeans are unfitted for field labour in purely tropical temperatures. It may be all very well for overseers, who live in luxurious bungalows, and view their fields from under the shade of ample umbrellas, but it means death to the exposed pick-and-shovel man. No; Europeans, or men from temperate regions, do not readily acclimatise to the tropics, and for that matter, as far as my experience goes, the same rule holds good in the vegetable kingdom; for, although nearly all our most cherished plants come to us from near the equator, we cannot, as a rule, induce our native trees to take root there.

Colon, our first landing port, apart from its luxurious vegetation, is a very wretched spot. It is only in a Spanish Republic that the existence of such a pestiferous place is possible. It is not merely the disreputable appearance of its degenerate people, nor the frequent squabbles dignified by the name of revolutions we have to fear, but the ever present *filth*, which is much more dangerous to life. Fortunately, a fire has recently burned down and purified a large portion of the town of Colon, rendering it, for a time, less dangerous to sojourners. A statue to Columbus stands at the entrance of that now abandoned project—the canal. Poor Lesseps! would that he had been content with his success at Suez! This gigantic failure—a failure so tremendous that the very ruins may be said to be stupendous—must, for many years to come, form a melancholy subject of comment as passengers ride along the margin of the unsightly

TYPICAL ORCHID BY THE WAYSIDE.
PANAMA AND GUAYAQUIL.

ditch. What a sad sacrifice of human life and carefully accumulated wealth this unfinished ditch and surrounding *debris* represent! There is little hope of the work ever being finished by Frenchmen now; indeed, we are told that, by agreement, the Columbian Republic can next year lay claim to the works as they stand, and mean to do so.

The railway on which we cross the Isthmus belongs to an American company, and Jonathan knows well how to make the most of it. No such exorbitant charges would be tolerated in any civilised country, and beyond the mere cost of ticket and transport of baggage the amount of palm-oil one has to expend on officials in order to get along at all is simply iniquitous. "Ah!" says Jonathan, "but you little know how costly this railway has been. Every sleeper it rests upon cost a life." As if those who paid down those lives or suffered through it got the profit! It takes about four hours to get over the 45 miles of comparatively flat land dividing the Pacific and Atlantic Oceans, and such is the condition of the first-class American carriages that a shower of rain renders the use of an umbrella absolutely necessary, even while seated in them.

The outlook from the carriage windows is not exactly inviting. Deserted villages, palatial bungalows abandoned, ponderous machines rusting among the malarious jungle, flit past in slow succession, while at the various stations a few poor ghostly whites and hundreds of dark and hungry-looking old canal labourers scramble to make a penny out of the sympathetic passengers. The luxuriant vegetation is the only relief to the eye, and it is impossible to believe that these beautiful shrubs, trees, and creepers could not be turned to some useful purpose. There is not an acre of real cultivation; we simply pass between living walls of natural greenery. The beautiful banana leaf, the graceful bamboo, and curious mangrove, the glossy mangoe tree and feathery palms, all mixed up with ferns, orchids, and creeping flowers of every possible form and hue, display a truly tropical scene. By those who have never left a temperate region, the astonishing variety of plants near to the Equator can scarcely be realised.

A more beautiful situation for a city than that of Panama would be difficult to find in the world. The noble and ever tranquil bay is dotted over with the most exquisitely arranged islands, from one to a hundred and fifty acres in extent, and closely clothed with evergreen trees, glossy shrubs, and flowering creepers, down to the water's edge. The little hills around the city are covered with rich and

varied vegetation, while the valleys teem with giant trees, amongst the most useful and beautiful in the vegetable kingdom.

Of the city itself I have little to say. There is the usual plethora of Roman Catholic churches and American bars, while Lesseps has added one substantial building in the shape of a handsome range of now, alas! tenantless offices. But the streets are atrociously rough, and the sanitary condition indescribably bad. This, I feel sure, has more to do with the unhealthiness of the place than anything else. The climate is humid and warm, but so are many places in India and elsewhere in the tropics; and it would be absurd to suppose that a mere strip of land lying between the Pacific and the Atlantic would continue to be specially unhealthy if cleared, drained, and cultivated like any other civilised country. As it is at present, the cemeteries tell their own sad tale—an ample acreage, but filled to overflowing. On the one hand, as we drive along into the suburbs, lie the remains of the common herd, little wooden crosses being deemed sufficient to mark their resting-place. On the other side, a smaller enclosure evidently contains mould of a more select kind, the marble and Aberdeen granite headstones testifying to the goodness, greatness, or prowess of the departed.

Historically, Panama is chiefly interesting to us as the quondam headquarters of the Spaniards during the years they were spying out with envious eyes that great land of promise, Peru. 'Twas from here, 360 years ago, that the bastard, but ambitious, swineherd Pizarro set sail with his cruel and greedy adventurers. Let us follow him, afar off as it is. We can imagine with what impatience the months and years were spent in sailing to and fro while reconnoitring his prey; but it seems ridiculous to either credit or altogether blame Pizarro for the so-called conquest of Peru: a man who could not read a line in his own mother tongue, whose signature was a clumsy cross, whose only redeeming quality was a certain amount of animal courage, was not the man to carry out great schemes. The inception, indeed, was that of a priest who furnished the funds for the expedition, and the real instigator of the treacherous murder of the too confiding Inca monarch was the wily monk who accompanied the gang of butchers. The hardships, too, and terrific tempests encountered in the Pacific must have been rather overrated by Prescott, as the Pacific does not so frequently belie its name as that eminent historian would lead us to suppose. My own experience, at least, during several voyages at the same season of the

year as Pizarro sailed, was in seas the very reverse of tempestuous: the temperature was simply perfection, the air a positive luxury to breathe after the moist atmosphere of the Caribbean Sea, while old salts whom I consulted on the subject declared that this had been their general experience during the past thirty years. Pizarro took six weeks to accomplish the distance we covered comfortably in one afternoon, namely, to Point Pinas, where he turned into the river *Biru*, which some suppose to be the origin of the name *Peru*. After sailing up this stream for a few miles he came to anchor, and proceeded to explore the surrounding swamps. There we must leave him for a time. Pity it was he ever came out of them!

Peru in Pizarro's time, the magnificent, prosperous, and wisely-governed land of the ancient Inca, extended along the coast for 3,000 miles, including what is now Columbia, Ecuador, Chili, and Bolivia. Since then it has been considerably curtailed, divided, and subdivided into little Republics, each more corrupt than its neighbour.

Now-a-days our first port of call from Panama is Guayaquil, the commercial capital of Ecuador, sixty miles inland, beautifully situated on the Guay, the finest river flowing into the Pacific. The island of Puna, at the entrance, may be noted as the frequent rendezvous of Pizarro and his crew. Ecuador is a rich and lovely country, owned, however, by one of the rottenest little Republics in South America, and this is saying a great deal.

The descendants of Europeans living near the Equator seem to degenerate more rapidly and thoroughly than they do at a safe distance. The descendant of the Spaniard here is a very different type from the Chilian, for instance, who, with all his faults, is a brave, active, and industrious man. I would recommend the traveller who wishes to retain a pleasant recollection of Guayaquil not to land, the city looks so very much better from a distance. But the country around is a vegetable paradise, such as Britain, with all her tropical colonies, can scarcely lay claim to, supplying spontaneously the very finest varieties of tropical products and fruits, such as cocoa, coffee, pine-apple, plantain, and chirimoya, &c., the latter beyond all comparison the most delicious fruit I ever tasted, so unlike anything else that it cannot well be described. Mr. Clements Markham, the illustrious traveller, speaks of it as "spiritualised strawberries," but I do not know that this description conveys very much. The tree, usually about 15 to 20 feet high, is a native of Peru, and belongs to

the natural order called Anonad, extensively represented in India and Ceylon by a relative known as the *Sour sop*, a rather refreshing fruit in a hot climate, but coarse compared with this "master work of nature."

Of commercial products cocoa is the chief, and yet there cannot be said to be any cultivation. "At what distance apart do you plant your cacoa trees?" I asked an old planter I chanced to meet. "Plant!" he repeated reflectively; "why, the donkeys plant all our cacoa." "The donkeys!" I exclaimed, with unfeigned surprise. "Yes, yes," he hastened to explain, "the human-being-like animal you English call donkeys." It dawned upon me that the man meant "monkeys." And it turned out that, being fond of the fruit, they occasionally made inroads upon the ripe cocoa, which they carried to a distance, enjoying the luscious pulp, but dropping the seeds, and thus extending the plantation.

In scenery I do not know that we have anything, in what we call our old world, to quite compare with the bold surroundings of the Guay. What can we show equal to Chimborazo, when the curtain of mist is obligingly withdrawn, exhibiting a perfect pyramid, about 21,000 feet in height, with its foundation in everlasting summer, and its pure white summit in eternal winter, or the still bolder and more rugged Peruvian Andes to the south, like "mountains piled on mountains to the skies?" The first impressions such scenes have upon ordinary mortals are so overwhelming, that the most, or the least, we can do is to calmly sit down and exclaim, with the Turk—"God is great."

From Guayaquil, Payta, our next port of call, and first introduction to modern Peru, is reached in one day, and never was a more complete transformation seen. Last night we were sailing down a noble river, lined on either side by banks of the densest vegetation; to-day not a particle of vegetable life is to be seen as far as the eye can reach. From Aden to India the transition is equally remarkable, but that takes a week to accomplish; here, in a few hours, the scene changes from moist luxuriance to an arid waste, from a damp, relaxing climate to a dry bracing air, from dark chocolate soil to light driven sand. "And this is a fair sample of what you will see for the next 2,000 miles along this forsaken coast," says our ship captain.

The fact is, we have passed the dividing line which separates the rainy from the rainless locality, and let me say at once I prefer the

latter. Refreshing as the rain-drops are to the thirsty soil and flagging plants, and taught as we long have been to look upon the gentle rains as blessings falling upon the just and unjust alike, still, it is not only found possible to live and enjoy good health in an absolutely rainless country, but the soil can be rendered even more productive, as will be seen by and by, where the agriculturist does not directly depend upon these fitful supplies of moisture from the clouds.

It is, perhaps, not strictly correct to speak of Payta as an absolutely rainless district, as occasionally they do get the tail-end of a shower here "about once in nine years," said the local weather clerk, and then there is a rush of vegetation marvellous to look upon, plants growing where seeds were never known to be cast, and particularly one was described to me belonging to the cucumber family, but containing a sponge and soap!—a formidable rival to Pears—of which the inhabitants here stand much in need. But the most valuable plant of the interior of this locality—for nothing is to be seen on the coast—is doubtless the perennial cotton-tree, a very superior variety, surpassing anything of the kind growing in North America. No doubt with ordinary industry and judicious irrigation the cultivation of this valuable product might be greatly extended.

The next port of call to which I would like to introduce the reader is Salaverry, about 300 miles south from Payta, and, as seen from the sea, an equally bleak and altogether unprotected coast. To land here without being drenched is next to impossible. The poor ricketty place itself is chiefly notorious for the inquisitiveness of the not overworked custom house officials, who will examine the toe of every stocking, and even peer into the tins of Swiss milk, purchased perchance at Payta, and will charge duty thereon. And while you haggle over the exorbitant demands, ten to one you lose the only daily train by which you hoped to reach Truxillo. It is better perhaps, under the circumstances, to calmly submit to a little extortion than run the risk of being left in the lurch in such a place.

Truxillo lies about nine miles inland, was founded in 1535 by, and named after the birthplace of, Pizarro. The city is a sort of third-rate Lima, containing about 15,000 inhabitants, many great and garish-looking churches, and a few more or less empty hotels, all slowly falling into decay. On the roughly paved streets we now and again meet a decaying sample of the dignified Spaniard; while

the only busy man in the place, the Chinese cook, to wit, comes to his door for a breath of fresh air, or to look for a fresh customer. In the Plaza—which corresponds to our public square—young Peru may be seen loafing against the rail of the little central garden, smoking cigarettes, and looking languidly at the few brilliant crotons, Poinsettia, and Vincas which surround the fountain.

The priests, like great black beetles, creep stealthily along in twos and threes, entering or emerging from the always open churches, from which we can hear what is intended for sweet seductive notes of music. But we must push on. A run of 20 miles brings us to the centre of one of the most flourishing groups of sugar estates in Peru. The Casa Granda estate, which I specially visited, is an admirably managed property of some thousands of acres; more luxuriant cane, or cane richer in saccharine juice, could scarcely be found, and yet this is an absolutely rainless district. Men live and die here without having once seen a shower of rain, and wonder to hear of the haphazard agriculturists of other lands, who simply plant or sow their seeds and wait for the fitful clouds to water them. Here the chief work and art of cultivation consists in applying water when absolutely necessary, and withdrawing it the moment it would prove injurious; and, unquestionably, a richer cane is raised by this means than is possible in the rainy region of the tropics. The labour here is exclusively Chinese, experts at this particular work, and I doubt if equally good results could be obtained by any other class of labourers. The maturing of the cane is so managed that there is a daily supply sufficient to produce 500 cwts. of the finest sugar. The machinery is of the most modern description, and the whole works and yards are thoroughly lighted up by electricity. There are several other equally well-managed estates in the same valley, and the cultivation might well be indefinitely extended for hundreds of miles. It is merely a question of capital and suitable labour. But we must now resume our voyage for about 100 miles further along the coast, our next port of call being Chimbote, at the mouth of the river Santa, the largest Peruvian river on the western side of the Andes. This was the furthest point reached by Pizarro on his first memorable voyage of discovery. He was satisfied with what he had seen, that the country was not only worth the conquest, but rich beyond his wildest dreams, and from here he was induced to return to tell the story of his adventures to his avaricious masters. But, however prosperous the district of Santa may have then been,

it is now a poor, abandoned place, and yet, with such an ample supply of water, it might vie with the richest spots on the coast of Peru in productiveness.

As it is, it is chiefly interesting to the antiquarian. The remains of Inca roads rival anything the Romans ever built in Britain, and there are also the marvellous aqueducts, and more particularly the hauchas, or mounds, scattered over the country at irregular intervals. When opened these hauchas prove to be burial-places; and beside the bones curious pottery is often found, chiefly water bottles, of which I secured a number of specimens. The chief enterprise of the place consists in despoiling the graves of the ancient Incas. The bay of Chimbote itself is remarkable as the best sheltered bay on the coast of Peru, protected by a semi-circle of rocky islands which, though here lacking the vegetation which adorns the islands around the Bay of Panama, supply the means of vegetation to many an unfertile spot on the earth's surface. Sea-lions, which startled us with their roar as we were coming ashore, and myriads of seals, frequent these islands, daily basking in the sun. It is *their* refuse, and not the refuse of birds, as generally supposed, that forms the bulk of Peruvian guano.

WATER BOTTLES.

We make no further calls till we reach Callao, the chief commercial port of Peru, where, however, in the most uncommercial-like way we were kept waiting two hours for the captain of the port, who was supposed to be at a cock fight. Our own dignified old English salt is a Christian gentleman and not a swearing man, but as he nervously paced the bridge he looked so uncommonly like a man whom an "aith" would relieve that I would not have ventured near him had he not beckoned on me. "You are now leaving us," he brusquely said, "and will be coming in contact with Peruvian

officials; my advice is, never believe one word they say, even supposing they should swear to it on a cartload of Bibles." A warning, I regret to remark, which proved not altogether unnecessary.

Callao has no special interest for us, with its quays and wharfs, ugly warehouses, and polyglot population; it is like any other seaport town, and as Lima is only seven miles distant we prefer to pass on at once.

And now, when in the capital, I am afraid I shall disappoint you, for I am not fond of cities; my heart longs always for the quiet country beyond. A simple man, my tastes lie among the simple people on the mountains, or in culling the common weeds by the wayside. I cannot, therefore, enter here into any detailed description of Lima, which at one time, we are told, was considered the gem of South America, and though now somewhat sullied, is still beautiful; picturesquely situated, with a climate almost perfect, the sun rarely scorching, and the rains never bedraggling the inhabitants.

The two chief characteristics of the city are perhaps its magnificent churches, more than seventy in number, and its great bull ring, *Plaza de Acho*, where over ten thousand weekly witness and applaud the cowardly slaughter of poor helpless animals. From the churches we might, perhaps, with advantage take one little lesson, they are always open from 4 a.m. till 10 or 11 p.m., while here, in Scotland, we build, by a supreme effort, substantial kirks and then lock them up for 312 days in the year. Foreigners laugh at this, and I do think there are few greater absurdities to be seen in any other part of the world.

The population of Lima may be about 130,000, but no one knows exactly, as they have not succeeded in taking a census for many years. The last attempt showed something like eight ladies to every man, and the ladies are as famous for their beauty and energy as the men are for their feebleness. The marriages seem only to number about 83 per annum, or less than 1 per 1,000, not a very prosperous sign.

Now for the hills. By rail to Chicla, 87 miles, thence on mule-back. This railway, it will be remembered, is, without any exception, the highest in the world, and the engineering the most audacious. "We know of no difficulties," the consulting engineer said to me; "we would hang the rails from balloons if necessary!"

When rather more than half-way to Chicla we reach Matucana station, at an altitude of 7,788 feet above sea level, and here we

resolved to stop for two days in order to get accustomed to the rarified air. But we were not idle. Procuring mules, we proceeded to ascend the surrounding mountains. Matucana may be described as a village of 250 inhabitants, situated at the bottom of a basin only a few hundred yards wide, but widening out to 50 miles at the upper rim, which is covered with snow. The hills rise at an angle of from 45 degrees to 75 degrees, and the so-called roads are really a terror to think of. In the distance the mountains of Peru, or the Andes, look as bleak and barren as Aden, and most globe trotters who take a passing glimpse at them say they are so : but such is not the case. I have not yet seen an acre upon which the botanist might not revel, and but for the fact that I had to watch with constant dread the feet of my mule, I have never spent a more intensely interesting afternoon than I did during this memorable ride. Up, up, we went, zig-zagging on paths often not more than 18 inches wide, and sloping over chasms that made one blind to look down. Speak o' "loupin' owre a linn"! here is a chance for any love-sick Duncan !

But, oh ! the flowers, the sweet flowers ! who could pass these unheeded ? So many old friends, too, in all the glory of their own native home, to welcome us, and indicate the altitude more correctly than any of our aneroids. First comes the heliotrope, scenting the

HELITROPIUM PERUVIANUM.

AGERATUM.

air with its massive blue clusters. So different from the straggling exotic in Britain or the leafy, lanky, plant in India. This grows in the greatest perfection and profusion to about 8,000 feet above sea level ; then come miles of bright yellow calceolarias, intermixed so prettily with brilliant red and blue salvias, every vacancy apparently

filled up with lovely little lobelias, curious cupheas, and creeping solanums, while our old enemy in India, the ageratum, everywhere intruded its white thrummy head. Suddenly all is changed, and hundreds of acres of the most beautiful blue lupine covers the ground; this grows up to 14,000 feet, and then gives way for the

LOBELIA ERINUS.

CUPHEA PLATYCENTRA.

anemone, sedum, and dandelion, which dispute with the snow the limit of 15,000. We were contented, however, on this occasion to reach about 13,000 feet, and, "sair forfochen" as we were, eagerly accepted the invitation of a Cholo Indian to enter his hut; and here let me say that my ignorant prejudices against the Indian changed

LUPINS.

STOCK.

at once as I looked upon this evidently happy and most hospitable family. The best they had was placed before us, and one sweet lassie, seeing we were fond of flowers, disappeared into a tidy little garden and brought us such bouquets as I had rarely seen. Imagine

real red roses, stock, fuchsias, sweet peas, gladiola, &c., mixed with sprigs of fennel! I could not help contrasting this delightful reception with what I had sometimes seen amongst more pretentious people.

We next halted at Chicla: altitude, 12,215 feet above sea level. A dreary enough spot, where passengers not infrequently get their first experience of *sorroche*, or mountain sickness, caused by the rarified air, the disagreeable symptoms being headache, vomiting, and bleeding at the ears and nose, the only cure being a greater atmospheric presssure. Horses and mules from the low country frequently drop down dead here from failure of the heart's action.

Leaving Chicla, the real tug of war begins; the crest of the Cordilleras has to be encountered and crossed. A wretched road, made worse by the *debris* from the railway, which, for the first fifteen miles, we saw being constructed still far above us, the navvies hung over the cliffs by ropes, looking like venturesome apes. Higher and still higher goes this extraordinary zig-zagging railway, boring into the bowels of the mountains and emerging again at least a dozen times before it takes its final plunge for the eastern side of the Andes. Meanwhile, we continue our scramble to the top of the ridge, 17,000 feet above sea level. I have no desire to magnify the difficulties and dangers of this tedious ride. The great question is—What do we see when we get there? This I cannot well magnify. It is not a case of merely going up one side of a range, like the Grampians, and down the other, but there is now before us a tableland as far as the best eyes can reach and ten times further, with its hills and dales, lochs and rivers, more than equal in extent to Great Britain itself, at an average height of about 13,000 feet above sea level.

SALVIA ARGENTEA.

Viewing this plateau from here, we have spread out before us a region unlike anything we have ever before seen, far above the rest of the world, upon the cares and troubles of which it looks down with calm, if cold, indifference, sharing none of its alarms, and seldom indeed disturbed by the insane political broils of the lower regions. The clear sky above, the occasional clouds chasing each

other up from the valley of the Amazon, only to be dissipated on the snowy peaks which they cannot possibly pass, above all the glorious sun, so welcome a benefactor here, that we can no longer marvel that it was the great object of worship by the Inca. And all this bleak but most interesting region has to be traversed before beginning our descent into the promised land beyond, the real basin of the great Amazon, for which we are now bound, a region which even the Inca in the plenitude of his power never subdued, and, we are assured, no living Peruvian has penetrated. It would be tedious were I to describe too minutely the ride of the next few days over the great grassy puna. Here is the home of the gentle llama, a sort of link between the camel and the sheep, the wool of which is so much appreciated; the paco also, which supplies the world with alpaca; and their more timid relative, the vicuna, with wool still more valuable. Here and there we come upon the remains of roads and crumbling ruins, indicating a civilisation which may date back thousands of years, even before the advent of the Inca.

Of human inhabitants there are now comparatively few, but such as there are, are interesting specimens of sturdy little Highlanders. The women, particularly, are admirable examples of a hardy, industrious race. No finer female peasantry in the world, I should say. The chief town of this region is Tarma, about 200 miles inland, altitude 9,800 feet, population about 8,000. We stayed for some days here, greatly enjoying its splendid climate—a paradise for consumptive patients. Excellent wheat and barley are grown here. This is also the home of the potato, it having been cultivated here as carefully as it now is in Europe, perhaps hundreds of years before America was discovered by Europeans. "Papa" they are still called, being the old Inca name of the tuber; and the quality is fully equal to the best we have produced here; moreover, they have some varieties better than any of ours, one of which I hope to introduce to Scotland.

It was in the end of July, 1891, that one fine morning (every morning is fine here), we managed to muster our retinue, and make a fair start for the famous low country. The peculiar vegetation on the steep mountain slopes—more grotesque than beautiful—betokens a comparatively dry climate all the year round. Such expanses of gigantic cacti and broad-leaved agave we had not before seen, and prior to the age of mineral dyes, fortunes might have been made here in cochineal; as they still might be, by

any enterprising agriculturist who would devote his attention to fibres.

The resplendent flowers of the cacti were just closing as the morning sunbeams fell across their brilliant petals, and we, too, were soon reminded that we were in the tropics, and were glad to hug closely the little belt of trees which shaded the lower side of the winding path.

CONVOLVULUS.

Here a watercourse carries grateful moisture to the Alfalfa (Lucerne) fields below. The banks of this little watercourse are a delightful study. I can scarcely express the pleasure I had in recognising so many old familiar friends. The trees were chiefly alder and buddlea; the former, our "ain arn," the latter, with its silvery leaf, a well-known native of Peru. Here also are veritable bourtree bushes; there a line of the beautiful Peruvian willow named after the illustrious Humboldt. Nor can we pass without recognition the sweet little flowers that clothe the margin of the rippling stream. The yellow calceolaria, ever ready to assert its nativity, blended with the blue salvia and ageratums, various vincas, passion flowers, solanum, and thunbergias, all so familiar and all so much at home here, gave a peculiar charm to this morning's ride.

CANNA.

We halted for breakfast at Acobamba, only six miles from Tarma, from which we had been rather late in starting. Acobamba is a beautifully situated but decaying hamlet, with about 1,500 rather seedy-looking inhabitants, where not long ago there had been more than double that number; and evidently destined before long to become another deserted "Sweet Auburn," of which this grand Spanish colony furnishes so many sad examples. Here already

"Half the business of destruction 's done."

Every second house is in ruins, and what had doubtless once been trimly kept gardens,

"And still where many a garden flower grows wild."

are now scenes of desolation. Not without its interest, however, and as one curious in such matters, I accomplished the feat of scrambling through the straggling fence "unprofitably gay," and I dare confess explored the wild spot with more real pleasure than I would look upon well-clipped bushes. Beneath a jungle of real red roses were violets scenting the morning air, and many other exotics as far from home as myself, including the gaudy geranium, southernwood, and costmary—bachelors' buttons—

> "The golden rod, and tansy running high,
> That o'er the fence top smiles on passers by."

How they came there is a question we leave to others. Buxom women squat under the trees, industriously weaving, on the most primitive of looms, the cloth of which their husbands' ponchos and trousers are made, while their lords, such as they are, may be seen loafing in crowds round the drinking bars on the Plaza. The tipple here is appropriately called "chicha," made from fermented maize, and similar to the ale from which raw grain whisky is distilled. By no means a very deadly poison, "for," said our host, "these people live to a great age, 110 to 120 years being not unusual"—but then I daresay there is no Dr. Cramond* in Acobamba.

The *padre*, we are told, not unfrequently joins his flock in their drunken orgies; indeed, the so-called Church festivals seem to have degenerated into blasphemous ribaldry, enough to make one shudder. It is the boast of the proud Spaniard that he has at least given the Peruvians a *language* and a *religion*. The language may be all right, but we cannot congratulate them upon their religion, and who will dare to say that it would not have been better for them had they still been speaking their native *quichua*, and reverently saluting the glorious rising sun as they wended their way to work in their well-tilled fields as in the olden time when industry formed part of their religion.

I have perhaps lingered rather longer over Acobamba than the reader could have wished, but it is the last remnant of a decaying village I shall at present have to notice, for with the exception of a half-deserted hamlet called Palca, a few miles further on, we see little more of the homes of the mountain Cholos during our present journey. The gorge, along which our road threads its way, now gradually narrows, a gurgling little torrent runs at the bottom, and

* A famous detector of would-be centenarians in the North.

the presence of half-hardy little shrubs, growing without irrigation, shows that the tail-end of many a tropical shower must now reach this limit. Amongst the native plants here, may be noted the beautiful trailing rubus and the monnina : the bark of the root of this plant is used for soap, and the Peruvian ladies archly ascribe the beauty of their hair to the use of it. Amongst other plants there are many brilliant billbergias, nightshades, &c. We were now 30 miles from Tarma. The ravine gets narrower and more dismal looking, and, as the sun has already sunk behind the mountains, we decided to halt for the night at a place called Huacapistana, where there is a very miserable hovel in which benighted travellers are invited to rest; but such were the surroundings, and so strange were the bedfellows, that of that weary night I have still rather more than a hazy recollection of lying watching my companion trying to sleep with a loaded revolver in his hand. But nothing happened, and next morning we were off betimes. Steeper and steeper became the descent. We preferred "shank's mare" to the already tired mules. Narrower and narrower became the gorge until it culminated in two "tall cliffs which lift their awful form" many hundred feet high, leaving only room for the now raging river, and a very narrow path between. Once through this, the valley opens out, and the vegetation assumes a more luxuriant aspect. Our aneroids indicate an altitude of 2,650 feet, and the moist steamy heat tells us that we are truly in the tropics. The district is called Chanchamayo, where for 20 years a number of Frenchmen and Italians have been trying

COFFEE PLANT.

their hand at coffee, indigo, and sugar-cane growing, it must be confessed, with very indifferent success, though, certes,

. . . . . "If vain their toil,
They ought to blame the culture, not the soil."

But these men have been sent out without much previous training. "That is a splendid specimen of cinchona," we said to a planter, pointing to a tree near his bungalow. "Cinchona!" he exclaimed, in real amazement, "I have been 15 years here, and never knew I had been cutting down and burning cinchona trees." In Chanchamayo we learned that the Convent of San Luis, on the borders of the Chuncho country, was about 25 miles distant. We had letters of introduction to the chief priest there, and after resting a day in the house of a hospitable Frenchman, eagerly pushed onwards. The trip was now getting decidedly interesting; the scenery and vegetation improved as we proceeded, while the prospect of meeting real Franciscan monks was by no means distasteful; for although I have no great leaning towards the Spanish priesthood, still I honestly tried to go forward unprejudiced, thinking only of the monks of old, and the good they did in their day. But this convent was a revelation to us. We had never seen anything quite so filthy and suspicious looking before, and would have gladly escaped within an hour; indeed, did so, and began erecting our tent at a safe distance; but were implored not to insult the reverend fathers by refusing to accept their hospitality, an infliction which we now bore patiently for several days. We were introduced to a number of Chunchos. Miserable specimens they were, and more familiar than pleasant, who had left their country for their country's good. Just as a herd of elephants in Ceylon occasionally expel the incorrigible rogues, so the Chunchos, it seems, have their outcasts, male and female, who make a parley-ground of this Convent— fit converts to this specious mockery. After sundry, rather meaningless, postponements, we at length got a start. In Peru every good work is to be done to-morrow: "mañana" is in everybody's mouth on all occasions. I often wonder what the degenerate Spaniard will do when there is no longer a "mañana." Two priests who professed to know the country volunteered to accompany us. The start was made on a Saturday morning, and as the *padres* pretended that they were prepared to hold service in a village next day, we flattered ourselves that we would still have another Sunday in something like civilization; but we have not yet seen the village, much less the service!

Peruvians are not famous as travellers. As a rule, they know very little of their country. They have their Geographical Society, forsooth! and possess maps, more or less inaccurate, compiled by industrious foreigners; but the richest portion of the interior is practically a *terra incognito* to them. "Have you ever been to the interior?" I asked a leading authority in Lima. "No, my dear sir," was the naïve reply; "I never but once rode twenty miles, and that only because the Chilians were at my back."

But the worst weakness of the Hispano-Peruvian race is their utter inability to tell truthfully the little they do know. David said in his haste that all men were liars, but had he lived at present in Peru, he might—as the Scotch minister put it—say the same, very deliberately. The common people are born and bred to it, but their lies are clumsy, palpable, and comparatively harmless. With the priests and privileged classes, however, it becomes a studied art. "We must dissimulate," said the chief priest of the convent, and I will give him the credit for consistency in this; for during the three weeks I had the opportunity of studying this great economist of truth, I never once knew him utter a word that could be relied upon. And yet we must own to the weakness of being over and over again misled by the arch-deceivers. Forgetful of all warnings we went on trusting that by some accident they might prove truthful to us. Such were the guides with which we entered the great Trans-Andean forest after crossing the Pucartambo river. We were a goodly company to start with, consisting of seven Europeans, as many Cholos, and a score of mules. The shade of the gigantic trees seemed grateful at first; like passing from the hot blazing noonday to the cool dim gloaming. But the road was a villainous rut at a gradient of about one in three, a width of about eighteen inches, and knee deep in something like liquid glue. Before we had gone five miles one-half the cavalcade had come to grief, and it was some weeks ere we saw our pack mules again; indeed, I believe some of them lie there still. We soon found out that the *padres* knew as little about the path as we did ourselves, and the upshot was we were benighted. Shortly after six o'clock we were overtaken in inky darkness, yet we plodded on, bespattered with mud, tired, bitten, and blistered by various insects. Whole boxes of matches were burned in enabling us to scramble over logs or avoid the deepest swamps. At last there was a slight opening in the forest, and the ruins of an old thatched shed were discovered, with one end

of a broken beam still resting upon an upright post, sufficient to shelter us from the heavy dews. It turned out to be the tomb of some old Inca chief whose bones have lain there for over 350 years, and there, on the damp earth, we lay down beside them, just as we were. Our dinner consisted of a few sardines, which we ate, I shall not say greedily, for I felt tired and sulky, keeping a suspicious eye upon the Jesuit priests. We had resolved before leaving home that we would never move on Sunday, but when next day dawned we saw the absurdity of sitting in that old damp sepulchre longer than we could help.

We were told, by the way, that the bones we were handling were the bones of Athawalpa, so treacherously murdered by Pizarro; but in Peru, of course, every such tale must be taken *cum grano salis*, and in this case the remains turned out to be those of a pretender who died about 1740. A start was again made without much regard to toilet, and we rode for a few hours, till the path the Government of Peru had prepared for us came abruptly to an end, and we were not sorry. This path, which we had the pleasure of wading along for some 20 miles at a gradient of one in three up and down, is looked upon as a great piece of engineering for a Peruvian, and so delighted were the authorities in Lima with the achievement that they actually bestowed upon the engineer-in-chief the degree and title of Doctor. I have in other countries travelled in tracks traced and made by elephants, and had reason to admire their gradients and marvel at the topographical knowledge displayed, but anything so perfectly idiotic as this atrocious trail I had never before been doomed to follow so far. It was a relief to leave it and cut our own way through the jungle, or follow occasionally the paths of the Chunchos who come hither for salt. The Cerro de Sal, or mountain of salt, lies a few miles to the west, providentially placed here for the benefit of the poor natives who come from many hundreds of miles around. The supply is said to be practically inexhaustible, and as to its savour and purity I can well vouch, having for months used it as it was quarried out of the hill. Soon after leaving the Peruvians' path we found ourselves upon an extensive *pajonal*, or *patena*, as we call it in Ceylon, where the great forest abruptly and completely ceases, and we have instead a grassy sward, it may be from a few acres up to a few thousand acres. Here there are about 500 acres, and our

> "Scottish fairies never trod
> A greener nor a softer sod."

But our chief delight was in the glorious view. I shall never forget that calm, bright Sunday afternoon when we looked out for the first time on the great interminable forests of the upper valleys of the Amazon. Right in front of us as we stood with our faces to the east were evergreen hills of various altitudes, all richly clad, and undulating down towards the great plains of Brazil. We were standing at a height of 4,600 feet, but, even in that clear atmosphere, could see but a comparatively short distance; still it showed better than any words can convey the extent and richness of this vast reserve, and the absurdity of the cry that the world is getting overcrowded. Why, we have only as yet been nibbling at the outside borders, and are now trying to peep over the walls of the great garden itself. The extent of this unbroken forest is probably greater than our whole Indian Empire. "From Plymouth to Peterhead," said Mr. Stanley, in describing the extent of forest he came across in Africa; but here is a forest stretching as far as from Plymouth to Timbuctoo, with a few hundred miles to spare! In estimating this I adopt the figures of that very reliable authority, Alfred Russell Wallace, who travelled in the lower portions of this forest for some three years, and whose definitions of the upper Peruvian boundaries I can confirm. Behind us tower the snow-capped Cordilleras, from which the ever watchful condor swoops down in search of prey—and woe to the unwary traveller who may be found sleeping or exhausted on these distant and dismal mountain passes; but our immediate surroundings are mild and peaceful to a degree. The faint buzzing of bees, the subdued chirping of finely feathered birds, the flutter of brilliant butterflies, are the only commotion in the air, itself the perfection of summer temperature. What a glorious spot in which to form a quiet, comfortable home! Quiet it certainly would be—lonely it might seem to those accustomed to town life; but healthy it could scarcely fail to be at this altitude, where the climate seems similar to that of the best parts of Great Britain—say Braemar in August. Imagine this all the year round, every month seedtime and every month harvest. What crops of vegetables and fruit might not be produced in such a climate and in such a soil! Had poor old Malthus only been permitted to look upon a country like this, so rich, and yet so tenantless, his pessimistic fears of the population outgrowing the means of sustenance would have quickly vanished.

Right below we could see the River Perene wending its way to

swell the mighty Amazon, and our object now was to get down to this tributary. Unfortunately, we had lingered rather too long over this view, and it was four o'clock ere we felt inclined to move. Better for us had we pitched our camp there for the night, but we were induced once more, against our better judgment, to believe the *padre*, who declared he could in two hours take us to the house of one King Chokery, a Chuncho chief. "I know the way," he said, as he mounted his mule, but scarcely had he gone a hundred yards when the so-called way became impassable, each step being a drop of five to six feet. For a time we dragged the poor animals after us, but ultimately had to leave them behind, plunging into the forest again just as it was getting dusk. We were now down to about 2,000 feet above sea level. The air was very steamy and the vegetation most luxuriant, but we were past the stage of studying botany. Tantalised by thorny creepers, like the "wait a bit" of Ceylon, tripped up by gnarled roots, rising again only to have our hats knocked off by an overhanging branch—elegant fern trees and beautiful palms may be there, but we are in no mood to admire. We now come to a newly-burned clearing, intended for yucca, as we afterwards learned. It is not by any means the first clearing we had scrambled through, but this had been so badly lopped that the fire had only succeeded in burning the leaves and blackening the branches. To scramble through such a confused mass in daylight tries the best of tempers. You can imagine what it was for tired men in the dark.

Ashamed to think how we had again been befooled by the dissembling priest, we plodded on, shouting till we were all hoarse, and listening only to the echo from the opposite ridge. Still we knew, if we kept on descending, we must, sooner or later, come to the river. But our strength and patience were getting sadly exhausted, and every five minutes we had to sit down to breathe; the perspiration pouring from us in little streams.

The night was calm, and a death-like silence reigned all around, not even a jaguar growled, not a monkey chattered, but we could now hear the distant murmur of the water, and, Oh, *caramba!* a human voice at length answered our call. Nearer and nearer we drew to the spot, and at length, through an opening in the jungle, saw the swinging of a fire stick. A few minutes more and half our troubles were forgotten in shaking hands with the owner of the welcome voice. This gentleman turned out to be the King's

medical adviser. I do not know if he had taken his M.D., but the learned doctor had at least one European word which he used to good effect—"Amigo ! Amigo !" he said, as he shook hands with us. It turned out the King was prostrate with fever.

KING CHOKERY.

The palace was simply a thatched roof supported by a few jungle trees, and on a raised bench in the centre of the only apartment lay His Majesty, groaning. Our chief priest cautiously approached, unbuckled his flask, a sort of bladder he always carried well primed with rum—the only spiritual matter he dealt in. The tube attached to this he placed in the royal mouth, into which he injected a liberal supply of the spirit, which for the moment had the desired effect. The King, lifting his head, indicated that we might be permitted to lie down on the earthen floor at his feet, and there we lay, supperless and saturated with perspiration, till next morning. I arose, I need scarcely say, but little refreshed. But then the

THE QUEEN.

surroundings were so intensely interesting that I soon forgot my aching limbs as I gazed upon the marvellously beautiful vegetation. We were within a hundred yards of the river Perene, and after a bath in its clear tepid water I felt fit to tackle the manioca roots upon which we breakfasted. Our immediate surroundings in the palace were, however, very filthy, and the curiosity displayed by the royal family became rather inconvenient as they grew more familiar. They had never, for instance, before seen human beings with anything in the shape of beards, and seemed greatly amused as they came to rather closely handle us. The Queen, by the way, seriously suggested that I would be much improved by being well tatooed, and actually proposed carrying the operation into effect herself—a decoration, however, which to her great disappointment I, being a modest man, protested against.

For day after day we had to remain the involuntary guests of this curious household. Our object was to get down the river, and we had to await the recovery of the King before labour could be commanded, and balsas (rafts) made. But the time was not altogether wasted, for we made daily excursions into the forest, with increasing interest and admiration. Never had I seen such a variety of plants. It is one of the characteristics of tropical vegetation that plants of the same family are less sociable, as it were, than in the cooler regions of the world. In North America, for instance, the same dark green pine covers thousands of square miles, and in Australia the dingy eucalypti and myrtle monopolise half the ground; or, nearer home, that most sociable of all plants, our heather, still covers a very large extent of our country. There is nothing of that kind in the purely tropical regions; and here, in the upper tributaries of the Amazon, the variety is almost incredible, for scarcely two plants of the same family can be seen growing side by side. Diversity is the rule, nature delighting both in variety and contrast: one tree upright as an areca palm, another sloping over a chasm; one with bark smooth as ivory, the next prickly as "acacia horrida." Exceptions there are, and one might be seen in most river banks, viz.—the balso wood (*ochroma piscatoria*), as if providentially placed there for the natives, who invariably use its remarkably light wood for their rafts. The ochroma has a cotton-like fruit which might be used for stuffing beds, &c.

The graceful ivory palm (*phytelephas*), may also be seen in small groups, indicating the very richest spots of soil. Near to this may be found a solitary cacao (*theobrama*), 30 to 40 inches in circumference, and rising to the mature height of 50 feet.

Coffee, of course, is not found wild here, but at intervals we came upon gigantic specimens of the cinchona, both calisaya and succirubra, 6 feet in circumference. The walnut of Peru, an undescribed species of *Juglans*, is frequently seen in the Perene Valley, growing to a height of 60 to 70 feet. Satinwood there is also, but not the satinwood of Ceylon (*chloroxylon*); for though the wood looks similar, the family (*ebenacea*) is in no way related to our Ceylon tree. The indigenous coca, as an undergrowth, we rarely came across, except in semi-cultivated patches. Gigantic cottons, the screw pine (*carludovia*) —from which the famous Panama hat is made—the grand scarlet flowering erythrina, and another tall and brilliant yellow-flowering tree—probably the laburnum of Peru—add much to the beauty of the scene. Many other leguminous plants we also noted, particularly calliandra and clitoria.

Innumerable orchids, mosses, and ferns, sufficiently indicated the humid nature of the climate. Probably the chief distinguishing feature in Peruvian vegetation is that it is an essentially flowering and fruit-bearing vegetation, rather than the excessively leaf-producing, which so distinguishes the luxuriant greenery in Panama, the West Indies, and Ceylon. Peru, undoubtedly, possesses a richer soil, and a climate more favourable to fruit bearing; while, compared with the massiveness and grandeur of the Trans-Andean forest monarchs, the jungle trees of India and Ceylon are somewhat diminutive. A few plants we missed; the beautiful and useful yellow bamboo is not there, nor are the palmyra, talipot, and cocoanut palms. The jak and bread fruit trees might also be introduced with great advantage. The cultivated grasses of the East, the Guinea and Mauritius grass, are here already, but as a nutritious fodder they cannot be compared with the "Alfalfa."

There cannot be said to be any cultivation here, but we can see by the well-beaten footpaths leading to them that certain plants are more highly prized than others, and coca (*erythroxylon*) is one of the chief favourites. Around little patches of this plant the jungle is occasionally cleared away, and the coca leaves are carefully harvested.

Coca, from which the invaluable drug, cocaine, is obtained, is a native of this locality. It is a plant not unlike the Chinese tea, though scarcely so sturdy in habit, growing to a height of from four to five feet, with bright green leaves and white blossoms, followed by reddish berries. The leaves are plucked when well matured, dried in the sun, and simply packed in bundles for use or export. Probably tea might be treated in the same way and all its real virtues conserved in the natural vessels of the leaf till drawn out in the tea-pot. The fermenting and elaborate manipulation introduced by Chinamen is of doubtful utility. Of the sustaining power of coca there can be no possible doubt; the Chunchos seem not only to exist, but to thrive, upon this stimulant, often travelling for days with very little, if anything else, to sustain them. Unquestionably it is much superior and less liable to abuse than the tobacco, betel, or opium of other nations. The Chuncho is never seen without his wallet containing a stock of dried leaves, a pot of prepared lime, or the ashes of the quinua plant, and he makes a halt about once an hour to replenish his capacious mouth. The flavour is bitter and somewhat nauseating at first, but the taste is soon acquired, and, if not exactly palatable, the benefit under fatiguing journeys is very palpable. Cold tea is nowhere, and the best of wines worthless in comparison with this pure unfermented heaven-sent reviver.

The chief food of the Chuncho when at home is, however, the yucca (*jatroba manihot*), the cassava of the East, which also obtains a certain amount of care and protection, in this case almost amounting to semi-cultivation. The plant may be freely grown from cuttings the thickness of one's finger, stuck obliquely into the ground. In about nine months the roots, the only edible part, are fit for use. They look like huge kidney potatoes, or roots of the dahlia, and taste when boiled something between a waxy potato and a stringy yam. Roasted they are better. Still, one wearies even of roasted yucca; for weeks I had no other solid food, morning, noon, nor night, and, though duly thankful for these mercies, I have no craving for another course of yuccas. With the Chunchos, as I have said, they form the chief food. Fish is the favourite accompaniment, though they do not despise a slice of wild turkey when obtainable, which is but seldom. Black monkey and white maggots are delicacies set before the king.

They have no regular meal hours, but eat like cattle, whenever

ORCHIDS ON THE BANKS OF THE PERENE.

OUR "BALSA" ON THE PERENE.

they have a mind to. That is to say, if food is at hand, if not, there is always the coca.

The papaw *(carica)* is here one of the most abundant of indigenous fruit trees. The eastern world has been indebted to Peru for many good things, and the best variety of papaw is one of them. The pleasant, melon-like fruit is not only very agreeable and digestible in itself, but it has the property of helping the digestion of other foods, particularly flesh meats, with which it may come in contact. Even the leaves rolled round tough beef is said to tender it, and the most ancient fowl hung up in this tree for a night will become like chicken. The juice is used by the Spanish ladies as a cosmetic. But the most valuable product of this prolific tree is fibrine, so beneficial to the dyspeptic. One peculiarity is that its male and its female flowers grow on separate plants, and the tree is thus called *papaya*, or *mamai*, according to sex.

After a weary wait of eight days the royal patient began to show signs of recovery, his subjects coming in crowds to call upon him, bringing presents, generally large white maggots, about three inches long, which the King greedily ate.

On such occasions it was curious to note how, on the approach of visitors, the ladies disappeared, just as ladies sometimes do nearer home, reappearing again in all the dignity of the warpaint of their tribe. The preliminaries seemed soon over, and, hunkering down in a circle, the social chat over the latest sensation at once had full play. No doubt *we* formed the chief topic, and, judging from the loud laughter of the company, were evidently looked upon as harmless lunatics, frequent allusion being made to bunches of flowers and weeds we had gathered, which caused much merriment.

King Chokery at length gave orders for balsas to be made, and trees were at once cut down and fixed together by pins of palm wood. The balsa, or raft, consisted of seven logs, about 24 inches in circumference, rather roughly pegged together, but sufficiently buoyant to support three of our party on each. Seven of these rafts carried our company of twenty ; the King accompanied us, and as he himself had never been forty miles down the river, it was an interesting voyage of discovery to all concerned.

We started in single file, I electing to sit in the prow of the foremost balsa. It was a glorious morning, and as we glided onward at the rate of four miles an hour, through ever changing, but always enchanting, scenery, the effect was indescribably exhilarating.

Every nerve seemed stretched to the highest pitch of enjoyment; the eyes, glancing from scene to scene, took in more impressions than the mental powers could take note of. Such a wealth of vegetation seems to mock at the idea of a few poor puny planters ever making any impression upon it. The leafy monarchs may indeed be cut down, but who is to keep that interminable undergrowth in check. Beautiful as these creepers are as they hang in festoons from the lofty trees, they almost bid defiance to the progress of explorers, and a path cut, which in other countries would remain open for years, would here close up in a few weeks. Such seems the inexhaustible fertility of the soil, and such the forcing nature of the climate, that there is a mixture of awe in our admiration. In every other country we know, the more fertile the soil, the more friendly it is to man; but here, its excessive fertility has led it to be looked upon as an enemy to his progress. But, as an old planter, I do not despair of its fertility being yet turned to good account. If we could only tap the labour supply of India and China, where there are millions to spare, and conduct the stream hither, the result, if well directed, would bring a wealth of supplies, such as the world has not before been blessed with.

Turning a bend in the river we are struck by what seems the ivy-clad ruins of an ancient castle; but it turns out to be only an aged tree clad from top to bottom with verdant creepers, its huge horizontal arms supporting a perfect screen of living trellis-work below, while ferns, lycopods, and rare orchids, beautiful in hue as they are grotesque in form, grow upright from the damp decaying bark. The original tree itself is so hidden that it is hardly recognisable, but from its curious buttresses we suppose it to be a ficus. Right behind, on the steep bank, stands a lovely scarlet erythrina, 40 to 50 feet in height, in full flower; while, 100 yards to the right, a still taller tree, with bright yellow blossoms, stood out conspicuously—evidently a very near relative of our own laburnum. To the left is a group of palms, near to which we can see a grand, specimen of the cinchona tree, and another of the cacao. One of the noblest trees in this forest is the walnut, a variety new to us.

The whole scene is one of surpassing beauty, but it must be remembered that from the river we see it to the greatest advantage. The leafy boughs naturally bend to the light and lean lovingly over the water, while flowers can only bloom in the bright sunshine. Nothing could be more dismal than to scramble beneath the dark

forest, and the further one penetrates the more monotonous it gets. Scarcely a flower or a bird is to be seen there; all such life is at the top. Not even the snakes will cross your path, for they too are children of the sun. It is like living in a dark cellar and longing to get out into the cheerful light again.

Merrily our rafts glide down the river. Here and there we have a few yards of rocky rapids, requiring careful navigation, but beyond an occasional ducking nothing of importance happens to us. Natives, armed with bows and arrows, creep from below the trees and look at us with evident wonder and some suspicion, but offer no active hostility; or we suddenly come upon them as they are shooting their arrows into a passing fish. Our *padre* here astonished the natives by throwing in a charge of dynamite, the result of which was five or six dozen fine fish on the surface within a minute. This diabolical and unsportsmanlike mode of fishing is, I am sorry to say, daily practised by these Convent fathers. There was a tremendous scrimmage in the water after the dead fish, and by the time it was over the sun was sinking behind the trees. Moreover, heavy rain set in, causing us to seek such shelter as was obtainable.

We followed the Chunchos into the jungle by tortuous paths for about a mile ere we came to a hut; but before being permitted to enter, we were first led to witness their prowess as marksmen, the target being a banana tree at about 40 yards distant, which was soon bristling with arrows. Sufficiently impressed with this, we were allowed to enter a hut, about 10 by 20 feet, into which we all (about 30 in number) were huddled for the night, and, after drinking a little Liebig's Extract, tried to sleep, but without success. We lay on the floor like sardines in a box, our hosts crowding on to a rude bench in front watching our every movement. The house was so narrow that my head lay right below the eaves, which continued to drip all night. Sleep was an impossibility. The Chunchos drank their abominable masato, and soon became uproarious, evidently cracking their favourite jokes, judging from the screaming laughter. This was varied by an idiotic war dance, and in other respects their deportment was even more objectionable. We are apt to imagine that man in a perfectly natural state must be a very delightful and interesting creature. On the contrary, my experience is that no other animal is less lovable or more repulsive in its habits than a thoroughly untamed man or woman. These Chunchos, or "Campas," are evidently the remnant of a very barbarous and low

caste race of untameable savages, recognising no laws, and killing each other with as little compunction as we kill our rodents. On the night before we passed down the river, a woman and two children were tumbled off a raft and drowned. It seemed the standing joke of the day, and no one more enjoyed it than the woman's husband, who danced with fiendish glee the whole night through, encouraged by the screaming laughter of the native ladies. If loud laughter, by the way, be a healthy and happy sign, the Chunchos are to be envied. My experience of mankind, however, is that he who laughs loudest and is most easily moved to tears is not always the man to be most trusted. I was not sorry to see the sun rise next morning, and did not linger long over our early breakfast, which consisted of tea and yucca, the latter like badly-boiled potatoes.

Once more on the river we were all alive with excitement. Several tributaries fall in; one, the Ipuki, equal to the Don in volume, adds palpably to the depth and force of Perene, upon which we are now carried at the rate of about 5 miles an hour. Denser and denser became the forest, now no longer relieved by patches of grassy land. Such perfect lands for coffee and cocoa cheered the hearts of old planters, while such unheard-of varieties of orchids, ferns, gloxinias, begonias, and caladiums, were enough to drive a botanist frantic.

The question here naturally arises, Why has this rich country been allowed to remain, from the creation to the present day, in a wild and desolate condition?—a country capable of supplying many millions of inhabitants with not only the necessities of life, but also all the luxuries the most fastidious appetites could desire. When we see so many less favoured countries crowded and cultivated to the utmost, it does seem strange to see this magnificent land left to a few Chunchos, who are really little better than the monkeys that grin on the branches above them. Practically, it is *no man's land*, for it has never been taken possession of, the present nomadic tribes recognising no laws, no government, no God.

In every other country we know men have succeeded in subjecting the productive powers of nature to his sway; and is there no hope that such will yet be the case with the valleys of the Amazon? Are men always to despair of utilising this marvellous vegetation, and to be for ever overwhelmed by the excessive bounties of nature? Surely the time has come, or will soon come, when this, the richest

CATTLEYA AMETHISTOGLOSSA.

Common on the Pampa Hermosa, Peru.

portion of the globe, will no longer be entirely left to nature and the few wandering tribes who are so utterly incapable of making any proper use of it.

We had landed for luncheon under a far-spreading rubber tree, and so refreshing was the shade and inviting the scene that we fain would have pitched our camp there for the night in order to thoroughly explore the locality, but our guides, who were fast becoming insufferable nuisances, urged us onwards, stating that the cascades were still a long day's journey off and that we ought to push on for a few hours more, so as to reach them before next night. So again we started, but had scarcely moved 300 yards when I, still in the prow of the first balsa, began to feel we were gliding along rather faster than was pleasant, and distinctly heard a not very distant roar like muffled thunder. All at once it dawned upon us that we were uncomfortably near the rapids, and the greatest possible exertion was required to beach our rafts. I never jumped on the banks of a river with a greater feeling of relief. We had now time to take a leisurely view of the rapids. Though not more than four or five feet of a fall in any one place, a succession of these was sufficient to obstruct further navigation, though lasting only for a few miles, probably under ten. Our aneroids told us we were now 1,050 feet above sea level, and as the water has quite 3,000 miles yet to run before reaching the Atlantic, the average fall is not great We would now have naturally wished to work our way down to the Atlantic, by far the easiest and most natural outlet, but we were under orders to visit other tributaries of the Amazon 200 miles to the north, so we had reluctantly to wend our way back. We slept that night rather comfortably under a tree, but before going to rest I shot a large snake which hung from a branch above us, and the only one we saw during our sojourn. Next morning we arose more refreshed than usual, explored the country a little, finding the vegetation now gradually assuming a low-country type, took some photos of the rapids, and then prepared to start on our return voyage. We found, however, that something like a mutiny was brewing in the camp. The priests declared that the rum was done, and that it was ridiculous to think that men could live in this country without drink. The King grumbled because the jam was finished, while the Chunchos struck work for no earthly reason at all. For a time we moved away slowly and sullenly, chiefly by walking along the margin of the river, for about two miles, when matters came to a

deadlock. The chief priest disappeared, and we never saw him more, the reverend brother slyly followed, stealing the few bottles of spirits we had carefully laid aside in case of sickness. Our own servants also vanished, we knew not why nor where; and just as the shades of evening were closing in we could see by the lurid light of a log fire, suspicious movements in the surrounding jungle. The natives, in short, were gathering in force, each armed with a bow and a bundle of arrows. They peered at us from behind trees, and apparently awaited a signal. It was a trying moment, and the probabilities were against our escape. Still, the uppermost feelings in our minds seemed to be that the actions of even those creatures are under the control of a greater Power than a Chuncho chief or a pseudo priest, and that practically we were in no more danger than we might be comfortably sleeping at home.

Meanwhile, we hugged our rifles and revolvers, collected our cartridges, and continued rubbing our weapons. It was at this moment that one of our party burst forth with "O, gin I were whar Gaudie rins" which he rendered with much pathos. Shortly afterwards we observed our Chuncho visitors being served with drink by an old crone whose vocation was evidently to prepare the stimulating beverage. The drink was followed by a dance, and again the old crone appeared with the big pumpkin bottle, and drink and dance alternated till the hilarious company seemed to forget and ignore our very existence. This went on "till daylight did appear." We had, of course, never shut an eye, and did not feel very brilliant, but considered ourselves fortunate in being alive enough to coax a few of the soberest of the gang to help us up the river with our rafts. By dint of great exertions we succeeded in getting about six miles onwards before breakfast, overtaking the truant *padre*, No. 2, who, having drunk a whole bottle of brandy, fell asleep over it. It would be tedious to tell of our struggles for the next few days and nights; suffice it to say we once again reached the King's hut in safety, which, after such roughing as we had gone through, seemed a palace indeed.

We parted from the royal family in the most amicable of terms, presenting them with souvenirs of our visit in the shape of beads, mirrors, hatchets, and a gun. King Chokery—or, as the Peruvians prefer to call him—"Kinchoquiri," is by no means a very powerful potentate; his followers are not numerous, nor very energetic. A nomadic race, the Campas, or Chunchos, are here

to-day and fifty miles off to-morrow; of medium height, fairly muscular build, and dark brown colour. They are usually found in groups of two or three families, living under the shelter of palm leaves. They chiefly feed on fish, at the catching of which—with rude wooden hooks—they are very expert. They also appreciate the yucca when obtainable, while white grub, ants, and even lice are great delicacies. When travelling, the coca is an absolute necessity. Their language is an extraordinary jargon, intelligible only to a few, a totally different language cropping up every forty or fifty miles. This probably prevents anything in the shape of extensive combination, either for good or evil. They are wholly unacquainted with agriculture. But though Markham speaks of these Chunchos as "untameable savages, barbarously cruel, showing the greatest hostility to the advance of civilisation"—and, locally, we were told they had already massacred and eaten several European planters—and though we are bound to say that their reception of us was not particularly gracious, yet they showed no active hostility, and we shall ever take a kindly interest in watching their future fate.

Poor Chuncho! the time seems to be approaching when, in vulgar parlance, you must take a back seat; but it must be acknowledged you have had a long lease of those magnificent lands, and done very little with them. Whatever may be the value of the unearned increment, you have no claim for permanent improvements. The world, indeed, has been made neither better nor richer by your existence, and now the space you occupy—or rather wander in—to so little purpose, is required, and the wealth of vegetation too long allowed to run to waste, must be turned to some useful account. The world was probably very young when you first found your way into this warm valley, but you have failed to "dress it and keep it," and the fiat has gone forth. You must make way for others. Albeit, this is not a case of dispossessing. In no sense can those vagrant tribes be called possessors of the soil. Creatures in a state of such abjectness, who do not evince the slightest desire to improve their own condition, could not, under any circumstances, be expected to ever render the pampas of the Amazon fit for civilised man. Still, it is devoutly to be hoped that the rough and ready way British pioneers too often take to civilise such aborigines will be avoided in this case; and who knows but even the Chuncho may in the course of time learn the arts of civilised life? Anything that would stimulate such dormant intellects into an appreciation of the

value of their surroundings, would be an improvement on their present condition.

In short, this beautiful valley of the Perene has now become the property of a British Corporation, the concession having been duly ratified by the Peruvian Government, and arrangements are in progress for establishing a planting colony upon a scale never before attempted in Peru.

This land, as selected and conceded, extends to 1,250,000 acres, sufficient to grow the world's present requirements in coffee, cocoa, coca, chinchona, rubber, sarsaparilla, and vanilla, &c., for all of which both soil and climate are admirably adapted. Here will be a favourable opening for many a trained Indian planter, and many a restive youth in England and Scotland will here find elbow-room of the most interesting and lucrative description, helping, I hope, to solve to many an anxious father the problem "what to do with our boys."

It would be unwise to under-estimate the hardships, discomforts, and even dangers to which such pioneers will be exposed, though these are of a nature which must daily diminish as the colony gets established.

The outlet, the want of which has hitherto prevented the profitable development of this region, will soon be supplied by rail to the Pacific, while roads to the nearest navigable port on the river will give two strings to the bow. Danger from the native Chuncho will not be formidable once a colony of a few thousand are settled, and it is to be hoped the Government of Peru will rise to the occasion by giving every possible facility, encouragement, and protection to the planters and intending settlers. This, we may be assured, will come in time. The first and greatest difficulty will be the obtaining of a supply of suitable labour. European labour has never been found, and never will be found, suitable for *purely tropical* agriculture. Yet, Peru, though situated wholly within the tropics, offers a unique choice of climates, there being thousands of square miles on the higher table lands and highland valleys where settlers from any conceivable country might find a congenial home, and probably add materially to the length of their days.

The Perene valley, however, for a tropical climate, seems remarkably healthy ; there is little or no malaria, few mosquitoes, while leeches—the great pest of Ceylon—are unknown. "May the holy mother forbid !" prayed the priest, when we enquired as to the

existence of leeches in the forests. There is an abundant supply of the purest water, flowing freshly from the snow-topped mountains, almost within sight. On the banks of the Perené we nightly slept in the open air, and drank almost hourly of its waters unfiltered; a thing we could not with impunity venture to do in any other tropical country I know. Apart from the purity of the water, the evenness of temperature seems here to be the chief secret of immunity from sickness. Paradoxical as it sounds, in most hot countries it is *the cold that kills*. The along-shore winds of India and chilling evening breezes in Australia are more to be feared than Red Sea heat or Panama steam.

There are, unfortunately, no meteorological records to consult in this country; no barometers in the Perené valley; no rain gauge ever known in the planting district of Chanchamayo. A proprietor in the latter valley, of whom I made the relative inquiries, laughed for full five minutes, and then exclaimed, "O, L——d! the idea of asking such a question!" So that there is no other means of estimating the average temperature or rainfall than by a minute study of the flora and vegetation; and to this alone I was indebted for such facts as I personally gathered regarding the climate. Amongst the travellers who have previously visited this part of the world, and have written of its wealth and capabilities, perhaps none is more reliable than Professor Orton, the intrepid American, who for years made the eastern slopes of the Andes a special study, crossing and recrossing the Cordilleras several times—alas! leaving his bones near Titicaca at last. Mr. Orton never, it seems, visited the Perené valley, but his general description of the country applies with special fitness to this locality, and is all the more valuable coming, as it does, from an independent scientist, whose palpable object, like that of our own A. R. Wallace, was to ascertain and publish only the unvarnished truth.

"Peru," says Orton, "has immense capabilities. She is the France of the South American continent. All the fruits and grains of the earth here find a congenial and fertile soil. With the great Pacific on her left, and the navigable sources of the Amazon on her right; with mountains of mineral wealth untouched; with highland valleys, like the overhanging gardens of Babylon for beauty; and with plains and reclaimable pampas which might equal Egypt in fertility, she is, potentially, one of the richest countries on the globe."

No other country can furnish 6,000 miles of continuous internal navigation for large vessels. For 2,000 miles from its mouth, the main stream has not less than seven fathoms of water, and not a fall interrupts navigation for 2,600 miles. It is impossible to avoid asking the question what is to become of this great region—this grand system of inland navigation—these thousand and one products of nature? The wealth of an empire is yearly lost in these boundless forests. These rich resources, lying almost at our very doors, must soon appeal to that restless spirit of enterprise which, not content with its past triumphs, longs for new conquests and a wider field of exercise. One looks forward to the dazzling future of this great valley, "when the ships of all nations will crowd the network of rivers." Specifically, the description of the Perené valley may be briefly summed up as a richly-wooded region, situated on the eastern slopes of the Cordilleras, in latitude 11° 5′, longitude 75° W. It belongs properly to the great valley of the Amazon, and we name it after the principal river by which it is watered.

The Perené is formed by the junction of the Chanchamayo and Pucartamba rivers, from which point it may be said to be navigable for 50 miles, when the navigation becomes obstructed by a few miles of rapids, after which all is reported to be plain sailing to the Atlantic. For 50 miles the Perené flows in an easterly direction, till it meets with the Ene and becomes the Tambo. Still flowing eastward for 60 miles more, and then turning suddenly to the north, it meets with the Urabamba on its way from Cuzco, and the two unite into the mighty Ucayali, now navigable for large steamers for 700 miles, which in its turn unites with the still mightier Marañon, to form the greatest river on the globe.

Leaving the Perené, we now wend our way once more up to the great plateau, halting for a few days in passing through the planting district of Chanchamayo, without having occasion to modify our minds as to the system of tropical agriculture, by which the poor but kindly colony of Frenchmen here make a precarious living. Some of them had at first tried the cultivation of indigo, with the result only of introducing a troublesome weed—no one there knowing how to prepare the product for the market.

Coffee was next tried, and the plant seems to have thriven as it seldom thrives in the East, even with greater care; but inasmuch as there were no roads upon which to carry the crops away, this enterprise also collapsed, only a few scattered patches now remaining

to show the capabilities of the soil and climate. Sugar-cane now absorbs the undivided attention of the planter, and all the available labour force is concentrated upon this one product. In this case there is a local market, the demand, indeed, exceeding the present possibilities of supply. Unfortunately the demand is for *rum*, not for sugar. Not an ounce of sugar is made, and the alcohol distilled direct from the juice is of the very vilest description. The presence of hundreds of purchasers—amongst whom I observed a local padre—waiting to buy the stuff hot from the still, is one of the most saddening sights I have seen. Nothing could be more shocking, except it be the muster three times a day of all the field labourers to receive their allowance. Men and boys—often mere children—greedily gulp down the atrocious liquid, and go off again to work in a blazing sun, with the thermometer over 100°. So rare is it for any Cholo labourer to refuse his glass of alcohol, that the only exception on a large estate was pointed out to me, and I at once had him photographed as a curiosity. One can hardly conceive that any employer should so systematically demoralise his labour supply. Yet such is the common practice here, and such is the demand for drink by outsiders, that a dozen distilleries are unable to meet it. Seeing, however, that the vice is really fostered by the priests, it is less to be wondered at that the planter has not the moral courage to set his face against it; but that this should be the only enterprise existing on the borders of the great Pampa Hermosa, from which we hope so much, is surely greatly to be deplored.

I was glad to escape from these somewhat depressing surroundings, albeit the scenery is very fine, almost equal to anything in that surpassingly beautiful isle where "every prospect pleases." Here the straight and stately trees show a greater immunity from tearing winds, the pure air is less humid, while the ample waters of the river rolling down the valley so cool, clear, and sparkling, form a striking contrast to the muddy Mahavillaganga; and though here no graceful bamboos bend over the stream, nor gigantic spikes of talipot tower above the surrounding greenery, there are still many brilliantly flowering trees and pillars of gorgeous creepers which are as yet strangers to Ceylon. What a paradise for millions of the human race these regions might become if—and there is more than usual virtue in this if—they could but attain to a *wise and stable government*. Homes might be formed here such as few tropical lands could boast of. As it is, there is an air of comfort and plenty about the tidy

little bungalows of these French colonists which I have not found elsewhere in Peru, while the produce of their vegetable gardens would put to shame many of the beef-eating planters of India and Ceylon.

Amongst the most vigorous of indigenous trees—as I have already noted—is the cinchona; and although much has been made of the achievement of the German botanist Justus Karl Hasskarl, who was the first to introduce this valuable medicinal plant to the eastern world, there is no one who now sees how widely and profusely the several varieties are distributed over this vast expanse, can entertain the remotest fear of the product becoming scarce or exhausted. Give but roads, labour, and political quiet, and these regions would supply enough of cinchona, coffee, and cocoa to sweep the Mrs. Malaprop of Java out of the market—broom and all!

We now continued, and greatly enjoyed, the ride upwards into the bracing air of the mountain zone, and on the second day reached the village of Acobamba—altitude about 9,000 feet above sea level, and a temperature as near perfection as I ever experienced. One is not surprised to learn that the only doctor in this locality is unable to gain a living, and that in order to keep him alive at all, the authorities make him an allowance from the tax on spirits. Barring accidents, one can scarcely imagine the necessity for a functionary of the sort in such a delightful climate.

Our road now diverged to the right, our destination being the source of the Huallaga, another important tributary of the Amazon. The road proved a very good one for Peru, and lay through some of the most interesting portions of the Sierra, at an average height of 12,000 to 13,000 feet above sea level, rising gradually through fruitful though narrow valleys, in which the usual fruits, flowers, and vegetables of temperate regions are abundant. The peach particularly gave great promise, while both apple and pear were also rich in blossom. But the indigenous forest trees are now few and far between. The Eucalypti of Australia seem to take most kindly to this climate and soil, and there seems no reason why large tracts of the Sierra should not be clothed in heavy forest.

This Sierra extends to an average of about 100 miles in width, by fully 600 in length, and, although the climate in the more sheltered valleys is charming, on the higher ridges we experienced very violent storms.

After travelling for about fifteen miles we halted for breakfast at

a place called Palcomayo. Here the native Cholos may be seen at their best, living a very primitive, but fairly industrious life, ploughing their fields somewhat after the manner of the Singalese, and in the same way treading out the grain by the feet of the unmuzzled ox. The crops are chiefly barley and maize, the latter, notwithstanding the altitude of 10,000 feet, bearing heavy crops of large and well-ripened cobs. Soon after leaving Palcomayo, however, the Sierra becomes more and more bleak. Still, the soil is a rich, black loam lying upon a bed of conglomerate, and we gaze with wonder upon the gigantic remains of many a "hanging garden" that probably had been highly cultivated 1,000 years before Columbus was born. The water, too, is there in abundance, bursting forth in marvellous springs from the mountain sides, enough to drive a dozen mill-wheels or irrigate many thousands of acres; but the plodding Inca husbandman is no more, and his poor, improvident successor has been drawn away by his Spanish masters to other fields of enterprise—chiefly silver mining.

In days of old, the wise Inca monarch dug only as much silver and gold as were absolutely necessary for immediate use, and then closed the mines till a further supply was required. On no account was the cultivation of the land neglected. The Inca kings by example and precept ever declared agriculture to be, as Washington has since expressed it, "the most useful and most noble employment of man." Neglect this, and under any circumstances, a country becomes poor and the people deteriorate. The gold and silver, guano and nitrates shipped from this country may have enriched many others, but to the working Peruvian it means, and means only, deterioration and ruin.

"Proud swells the tides with loads of freighted ore," &c., &c.

As we ascend higher the verdure gets poorer, the climate decidedly colder, and the air uncomfortably light for all who have not been born and bred on the Sierra. We seem suddenly to have become asthmatic, and our mules too gasp for breath. At length we reach a tableland. For many miles on either side and ahead as far as the eye can reach, stretches a green sward, flat as a bowling green, upon which large flocks of prettily spotted sheep and diminutive cattle graze, while tailless pigs of the most degenerate type disport in the mossy swamps.

Occasionally a timorous herd-lassie will hide her head as we pass, but she will never omit to mutter the courteous "buenós dias," or "buenós noches," as the case may be; and every now and again we

meet herds of donkeys, mules, and llamas, trudging along with packs of ore or provisions. These are usually driven by women, while the husbands walk unconcernedly behind—or if there be a spare donkey, the man is sure to be seated upon it, for women in this part of the world do all the laborious work, and, it must be confessed, look all the fitter for it. Wherever we met a wife and husband walking she invariably led the way and carried all the burdens, at the same time spinning yarn to clothe the miserable creature who toddles behind her. The secret of the better physique of the females here is probably that they live a more active life and drink less rum. Even the soldiers, such as they are, require women to carry their arms, and if it ever comes to be a war between the sexes in Peru, I know which side I shall be prepared to back. I one day witnessed a single combat, and took due note that the wife here unquestionably justifies her title to the "better half."

A bitterly cold wind was driving a keen shower of hail in our faces as we entered the township of Junin just as it was getting dark. The length of day in Peru varies but little, daylight lasts from 6 to 6 all the year round, with very little twilight.

Junin, though giving the name to an important department, is itself a very poor, dreary, and comfortless place. Situated in an open plain, without the ghost of a bush or tree within sight, not even potatoes will grow nor oats ripen, for the altitude is now 13,300 feet above sea level, and one only wonders how a township came to be here at all. The few hundred shivering inhabitants seem to do little beyond sitting looking at the portal of the grand cemetery—apparently the only cheerful prospect for them—and the passport even to this is jealously guarded by a fat priest, the only well-to-do man in the place. We looked about for a hotel, but found all such institutions had been shut up during the war with Chili, and were not yet reopened. At length we were fortunate enough to find a partially occupied shed of two apartments, one being tenanted by an invalid nursing a gun-shot wound, the other containing a table and three rather ricketty beds—for wood is very scarce here and iron very dear. We gladly took possession of this shelter, and ultimately discovering a hole in the wall, evidently meant for a fireplace, we succeeded in obtaining some turf and dried dung, and, by dint of great perseverance, managed to light a fire. We had not much wind to spare, but each took his turn at blowing. The smoke, however, could get no vent at all, and after a time it

became uncomfortably thick, the incense from the dried cow-dung being particularly pungent and objectionable. Still, it was preferable to starving, and we bore it heroically. We got a Chola woman to manufacture some sort of soup, upon which, in the absence of anything better, we contentedly dined. This "sopa" is the national dish of Peru, an indescribable compound, varying very much according to locality or altitude, but remorselessly administered to travellers everywhere and at every meal, morning, noon, and night, sometimes as a prelude to something more substantial, but frequently it is the beginning and the end. On the sea coast and in Lima this "sopa" is a fairly palatable dish, always hot, and usually rich in meat and vegetables, but as we go up country it gradually gets thinner and cooler, till, on the Sierra, it is simply tepid water with a few lumps of badly boiled potato or yucca floating in it. After partaking of this we tried to comfort ourselves with some good Ceylon tea, but even this was a failure, for at 13,300 feet water boils at much too low a temperature to make good tea. We now went through the ceremony of going to bed, but it proved a somewhat tedious night, and when morning at length came it brought the report that the paths were quite obliterated by snow, in consequence of which we could not proceed. It was not a cheering prospect, the entertainment in Junin for man or beast being of the scantiest. By 10 o'clock, however, the sun shone out in all his tropical glory, and in a few minutes melted the mantle of snow which had so completely enveloped the country. Nevertheless, as one of our party was indisposed, we were obliged to postpone our onward movement for a day. Meanwhile I went out, kodak in hand, to take such stolen peeps of the natives as their superstitious fears would permit, but the women would have none of it, bolting into their houses, while the men stood stolidly around the always numerous drinking bars, evidently wondering what new species of interlopers we were. The buildings—never very substantial—were all more or less dilapidated. "The Chilians did it," was the invariable response to all enquiries on the subject, and this, with something between a shrug and a shudder, showed how thoroughly cowed the poor creatures have been. Anything more desolate than the surroundings of Junin could not be conceived. A vast treeless plain, bounded on two sides by the summits of the snow-clad Cordilleras, rising still 10,000 feet above us, but in the distance, and sparkling in the morning sun, looking like a series of alabaster palaces, huge

sugar loaves, or pillars of salt. But the turf under foot was green and inviting, so I sauntered out a few miles in search of anything in the shape of plants. These were not numerous, but always interesting and curious. The first to attract my attention was our old friend the dandelion — the veritable *leontodon taraxacum*, there is no doubt about it; but in adapting itself to this cold, breezy climate it has become literally stemless, the flowers growing so close to the root that they could only be got at by digging them up carefully with the point of a knife. I also found a few sedums, one anemone, and a mimulus, all hugging as closely as they could to the ground. But the most curious plant in this region is a cactus growing in the shape of a mound, a foot or a foot and a half high, of a greyish yellow colour, and at a little distance looking exactly like a crouching sheep or deer. These little mounds are formed of dwarf cactaceæ, the leaves of which lie close to each other, showing their greyish spines over all the surface, giving the plant the appearance of being covered with rough wool; the flowers are found hidden amongst these spines, never rising above them, and so striking is the resemblance to a crouching animal that we were more than once deceived by it.

Our next day's journey proved more interesting, travelling as we did along the margin of the lake of Junin—otherwise known as Chinchay-Cocha—about 80 miles in circumference, and, with the exception of Titicaca, the largest lake in South America. Its height above the sea is 13,150 feet.

This is historic ground in which the Peruvians take some pride, and yonder stands the monument to commemorate their prowess, the decisive struggle to cast off the yoke of Spain having been fought out here by the help of the highlanders, who have least profited by the so-called independence. Poor Cholo! to him the Spanish Government may have been oppressive, but the more unstable Republic has proved his ruin.

The battle of Junin had not been a very stupendous affair, as decisive battles go, but it seems to have been enough to satisfy the royalists. The engagement is graphically described by a trustworthy eye-witness, Mr. James Thompson, a native of Edinburgh, who had for some time resided in Peru as agent for the British and Foreign Bible Society. He wrote home to his friends as follows:—

"Having touched upon this subject of the Spanish cause here, I cannot forbear mentioning to you the singular interposition of Providence on behalf of the cause of liberty in this quarter. On the 6th of August, 1824, the two armies came in sight of each other at a place called Junin, between Pasco and Tarma. The consequence was that a battle took place between the cavalry of the two parties. There were 1,200 of the Spaniards, and 800 of the patriots. The concussion was tremendous, as they came up to each other at full gallop. In a quarter of an hour upwards of 400 men lay dead upon the field, more than three-fourths of whom were royalists. All this havoc and slaughter was caused by the lance and sword, principally by the former. Not a shot of any description was fired. In a short time victory began visibly to declare for the Spaniards, and the general at the head of the patriot cavalry was made prisoner. At this critical moment, by some scarcely explained movement, the Spaniards got somehow into disorder, and began to give way. This was followed up by the patriots, and in a very short time they obtained a complete victory. The whole of the Spanish army was, in consequence of this defeat, struck with a panic, and by forced marches endeavoured to get out of the way of the enemy as fast as possible. Bolivar immediately advanced, and the Spaniards continued to flee before him with all speed. On the 22nd August, only fifteen days after the battle, the advance guard of the patriot army entered Guamanga. Five of the finest provinces of Peru thus fell into their hands in the short period of about a fortnight. The Spanish army has been sadly reduced and dispirited by their rapid retreat, and the army of Bolivar has increased in numbers and in strength. I consider this to be a deadly blow to the Spanish cause in this quarter of the world, from which I think and hope it will never recover. With this cause will terminate, I trust, the reign of oppression and violence, of ignorance and fanaticism, in Peru, by which it has been borne down for these three hundred years. So perish all tyranny and ignorance from the earth."

Sanguine aspirations, unfortunately never realised, for tyranny under royalty became doubly tyrannical under the Republic. And it is curious to note that, under the old regime, Mr. Thompson must have had far greater facilities for promoting the cause he had so much at heart than would be possible at the present day. Probably the priests were less sensitive and more liberal in their views during the stage of

transition than they are now disposed to be. Mr. Thompson seems to have been permitted to open a school in Lima, on the Madras or Lancasterian system, which he taught for several years.

In the afternoon we reached a hamlet called Carhumayo, a village of a few hundred inhabitants, all apparently steeped in poverty and clothed in rags, a characteristic of this portion of the Sierra. We had to force our way through a howling, staggering, gesticulating crowd, who surrounded a few rather less tipsy dancers—the only really rational-like men of the lot being the fifers, fiddlers, and drummers, if I except the Padre, who, on this occasion, it is but right to say, seemed quite sober. We soon learned that this was one of their saints' days—even the chief of saint days—the Santa Rosa fête, the grandest of all the year. But, when one makes minute enquiries as to how these poor Cholos usually occupy their time, it is found that from one year's end to another they are chiefly employed in what they have been taught to look upon as "religious ordinances," into which they enter, it must be confessed, with more than ordinary spirit and enthusiasm. The saints' days are very numerous, and no sooner is the excitement and headaches of one fête over than preparations are begun for the next. These preliminaries consist in brewing or buying a cask of fire-water and making collections of all the available food. Let any casual traveller offer to purchase a pig, he is at once told it is "St. Peter's pig," or to buy poultry, and he hears they are reserved for the "Holy Mother." Church festivals, in short, are the great business of their lives, by due attention to which they earn, at least, what is called Christian burial. The marvel is where the money comes from, Probably the sale of cattle or a few weeks' earnings from the mines is sufficient.

Notwithstanding the noise, we spent a night here in tolerable comfort. The altitude, however, being 13,300 feet, we required all the wraps and blankets we could gather. The frost was keen at night, and the average temperature of the day did not seem to exceed 51°. On the following day we continued for a time riding along the margin of the lake towards Cerro de Pasco. The lake literally swarmed with geese which seem seldom disturbed. We had a little practice with our revolvers—the only firearms we had with us—but did not succeed in bagging any game.

Our path now gradually led us away from the lake, and the gradients became steeper. Here, too, a track to the right was pointed out as leading to the Hauncabamba, where an attempt has

been made, with partial success, to form a German colony. About forty years ago some 500 Germans were induced to form a settlement here, and the fact that a considerable number still remain to fight against bad roads and cruelly heavy taxes, speaks volumes for the soil and the climate. We afterwards met several of these colonists, who looked the picture of healthy, hardy sons of toil, though as full of grievances as—but not more so than—the average British farmer.

The altitude was now rapidly getting higher and the temperature correspondingly lower. Terrific showers of hail obliged us now and again to turn our backs to the storm. When within a few miles of Cerro, we stopped to examine sundry little works where the silver ore was being treated with the rudest possible appliances. Broken up like road metal, it seems to be brought to the works in bags, and first ground to powder by huge circular stones moving in a trough, very much like the process by which our grandfathers crushed the furze for winter fodder. The powder is then mixed with salt and toasted in an oven, after which it is moistened with water and mixed with quicksilver. The mass is after this trodden out by the feet of mules—a cold, tedious, and laborious process. It is then cast into a cistern and a stream of water is turned upon it, when the amalgam sinks to the bottom, while the mud runs off. The amalgam is next hung up in bags, through which the quicksilver oozes out, leaving a residue of pure silver.

We at length reached the famous silver city of Cerro de Pasco, the highest inhabited town in the world, and one of the oldest, richest, and most renowned silver-mining centres in South America. What Broken Hill is to Australia, and Zeehan promised to be to Tasmania, Cerro de Pasco has for centuries been to Peru. The township, which contains about 9,000 inhabitants, is situated on the eastern slope of the Andes, amidst surroundings as filthy and forbidding as it is possible for any place to occupy. We threaded our way through the disreputable-looking crowd to what they were pleased to call Hotel del Universo. We had already seen and experienced some rather comfortless quarters during our travels, but anything so unutterably filthy as these premises we had never come across. The passages reminded us of a neglected poultry run in wet weather, but when we entered the bedroom we could only stand speechless with dismay, wishing ourselves back in the wilds of Perené. To sleep there was impossible, but we had a good coal fire and spent the night in sitting over it as best we could.

In the morning we bethought ourselves of presenting our credentials to the Sub-Prefect of the district. Now the Sub-Prefect is a very important personage in Peru, contriving, amidst the most squalid poverty to erect and furnish a house, the very gorgeousness of which is expected to strike awe amongst the people. It was into one of these spacious drawing-rooms we were ushered, and as we stood upon the rich Brussels carpet and gazed at the gilded mirrors, garish papering, and somewhat suggestive pictures, we heard the approach of this born prince of officialdom. Politeness is a poor word to apply to the deportment of this stately dignitary. Our language is not rich enough to convey anything like an adequate idea of our reception, for surely the Hispano-Peruvian Prefect excels all others in outward courtesy. There may not be much sincerity, and certainly there is much sameness in it, as we had already learned the beautiful blarney by heart. "My house, such as it is, my family, my servants, &c., are all at your honour's service," was invariably the greeting we got, and hitherto, as expected, the stereotyped thanks had been our only response; but in this extreme case we resolved to accept the house, which we did, and at once took up our abode in this grand reception-room for a couple of days, no doubt to the chagrin of our pompous host, of whom, however, we saw but little more during our stay. We rarely left the one room, finding the adjoining compartments and conveniences did not bear a critical examination, and the climate is such that there is little pleasure in taking an excursion around this highland township. In the morning all is usually buried in snow, by 10 o'clock the people wade amongst slush, and by afternoon the dust is blowing. At this height above the sea-level (14,518 feet) few can live save those who are born and bred on the Sierra, even donkeys frequently drop down from failure of the heart's action, while it is a curious fact that cats cannot exist many hours after arrival—a few scrambles up the walls and they fall back to mew no more!

The silver-mining industry, as at present carried on here, consists in working up the tailings left by the old Spanish miners. From these about 8 marks per cajon, or, say, 21oz. silver per ton, are being extracted. This, it will be observed, is a very poor return compared with Australian mining, where the average is from 40 to 120oz. per ton; but with proper mining and modern appliances there can be no doubt that the yield here would be very much greater. The prevailing rock is conglomerate, the silver occurring

in the native state, also as mixed with pyrites and oxides, forming what are known as pacos and colorados. A large quantity of mercury is used in treating the ore, so wastefully indeed that two pounds of mercury are lost for every pound of silver extracted. Fortunately, there are mines of quicksilver within easy distance. During the last 250 years the yield of these mines has been valued at something like £83,000,000, but before they can again be worked on anything like an adequate scale an extensive system of drainage will be absolutely necessary. With this, and the extension of the rail from Oroya, Cerro de Pasco might still rival in riches all the Broken Hills and Zeehans in the world.

On the morning of the third day we left Cerro de Pasco without regret. The snow had fallen heavily during the night, and the streets lay several inches deep as we cantered out of town. The wind was as cold as the bitterest east winds of Edinburgh. The poor mules shivered from head to foot, while the rarified air caused us to feel as if suffering from a bad attack of asthma.

About a mile out we observed the first little patch of green we had seen for several days, and, riding over to examine it, found a tiny well with a clear little stream trickling away from it; just starting on its way to the Atlantic, a distance of about 4,000 miles. This is the source of the Huallaga, or, as some geographers say, the real source of the Amazon. The Huallaga is at least one of the chief tributaries of the king of rivers, and our immediate object was now to follow this streamlet until it became a mighty flood, upon whose bosom steamers of considerable magnitude may safely float. We purposely travelled along its course, watching with interest its gradual development, till at about three miles from its source the rivulet is fit to drive some powerful waterwheels. Silver mines are still dotted about on every side, and the ore is being quarried as it has been for centuries, and treated in the primitive style which I have described.

By and by other little "burnies" from the snow-capped ridges above come gurgling down the ravines to join the infant Huallaga. At Chiquirin, Malanchaco, and Huariaca considerable volumes are added, which, with the mining process, agitate its limpid waters and convert them into something like the consistency of pea soup. Presently a little vegetation begins to line the banks of the stream. Specially interesting is it to note the luxuriant patches of that prince of vegetables, the potato, growing in its own native home, and to think what a marvellous influence this little plant has

had upon the world since first it found its way to Europe, so late as the seventeenth century, where it was at first so little appreciated that Frederick the Great, we are told, had to *compel* his people to give it a fair trial. Scotchmen refused to eat a tuber not mentioned in Scripture, while "The Complete Gardener," published in 1719, contemptuously declares that "this tuber is of less value as a food than horse radish or scorzonera"! And yet what a power it had become by 1846, when its partial failure led to the complete overthrow of the old Protection party, its very sickness bringing more blessings to the British nation than the vigorous growth of any other single plant! Now, from the Orkney Islands to distant Tasmania, it is the one universal favourite; probably mankind would rather give up any plant in the vegetable kingdom than the potato. It is interesting, also, to learn that in this its native locality the potato blight has never been so much as heard of. The productive power of the potato here is not more than in Britain, but the quality is very fine, the favourite variety throughout Peru being the *Papa amarilla*, or yellow potato. It is said, however, that this beautiful tuber loses its distinctive characteristic on being transplanted to Europe. This, however, I hope to test definitely in a few months.*

Arracacha is another favourite vegetable here, and next to the potato is amongst the most common. Though seldom seen in Europe, it would, if cultivated, prove a very valuable addition to our garden products. The *Arracacha esculenta* is a herbaceous perennial resembling the parsnip in appearance, but the roots are larger and of much better quality than our hardier old friend. I doubt, however, if the *Arracacha* could stand a British winter, though in sub-tropical climates it would prove a great acquisition. Already it has been introduced into Ceylon, and may be seen flourishing from Hackgalla to Badulla.

Another excellent little tuber common here is the Oca-quina (*Ullucus tuberosus*), an article of food extensively cultivated all along the cooler slopes of the Andes, and much esteemed by the hill people. The Aji, also, is a universal favourite; indeed, as universal as is the use of salt. There are several varieties grown, but *Capsicum annuus* and *Baccatum* are amongst the most common; both natives of India, but no Indian appreciates his chili more than the Peruvian does his aji. The remarkable thing is that though

* Cultivated at Cults, near Aberdeen. The quality of the tuber is found to be quite as good as it is in its native Peru, but the distinctive yellow colour is somewhat paler.

it readily blisters when laid on the outside skin, it seems to have no disastrous effect on the digestive organs.

We are now getting beyond the limits of the regular mining districts, and the country begins to assume a more cultivated appearance, though the fields are still in patches and very steep. When about fifteen miles out of Cerro, we accepted a Spanish proprietor's invitation to breakfast, but it proved a cruel kindness as it took us six miles out of our way and over a most dangerous path, so that it was night before we reached Huariaca, our first resting-place. Huariaca is a fairly thriving village on the banks of the Huallaga—here grown into a mountain torrent difficult to cross. We are now 24 miles in a direct line from Cerro de Pasco and 5,000 feet lower down, so that the air gets sensibly warmer and more genial. There are the usual country stores, two flour mills, and a decently clean little hotel, in which we resolve to take shelter for the night. Next day we made sundry little excursions in the neighbourhood, particularly paying our respects to a well-to-do Spanish family, whose prettily-kept garden had attracted our attention on nearing the village. We were kindly received and leisurely shown through every corner of the garden, with all its favourite little bowers in which the ladies sip their evening coffee. Such delicious coffee! and such charming faces! Whatever else Peru can produce, there can be no mistake about its coffee nor its handsome women. The aroma of the former, and the fine liquid black eyes of the latter, seemed to me as near perfection as anything of the kind I had ever come across: and the setting of the picture here was everything the eye could desire, the clematis twining overhead, the perpetual roses blushing in the background, or half hiding beneath the rich trusses of the *Fuchsia corymbiflora*, a well-known native of this locality, together with the abutilon and many other marvellously pretty mallow-worts. Lower down we note, amongst other native beauties, the aster-like barnadesia and many brilliant shades of tropæolum, so common in Britain under the strangely erroneous name of nasturtium. The beautifully varigated lupine, known to florists as *Cruickshankii*, is also

TROPÆOLUM.

CALANDRINIA.

at home here; and I note another native, called in other portions of the world to which it has been carried, the "Cape gooseberry," though it is not a gooseberry, neither is it a native of the Cape. The *Physalis Peruviana* is rather a poor substitute for that prince of small fruits, the yellow gooseberry, as grown to perfection in Scotland and Tasmania, but it has been thought worth introducing into the most distant corners of the earth. It is to be seen growing so luxuriantly on the hills around Nuwara Eliya, Ceylon, that many imagine it to be indigenous. I find it also common in different parts of Australasia, while H. O. Forbes specially mentions having found it on the Cocos, Keeling Islands. The *physalis* is a *solanum*, and is called the "Cape gooseberry," because its insipid fruit is partially enveloped in a cape, or hood! The tree tomato (*cyphomandra*) is a much more useful native of this locality. Amongst the garden weeds, or those plants which apparently grow against the wishes of the gardener, I noted canna, or Indian shot, calandrinia, ageratums, calceolaria, convolvulus, oxalis, and portulaca, and many beautiful creeping solanums well worth a place on any greenhouse trellis. The larger trees that shelter us, are, however, chiefly foreigners, the eucalypti predominating, and thriving here as freely as in New South Wales. Amongst vegetables I found the artichoke in great perfection, and admired it so much that the thoughtful lady

CALCEOLARIA.

PETUNIA.

sent me a dish for dinner, accompanied by the perfection of sauce made by her own dainty hands. Before leaving this interesting spot we were shown a curious warm spring of very clear water which runs into a natural stone bath, daily used by the family. The temperature of the water, which has a somewhat sulphureous taste, is 90°, while the air is about 60°. But the strangest spot in these grounds was pointed out to us in the centre of a paddock, where there is a small cavity, not more than three feet deep, which at times emits such a poisonous gas that, report says, no bird or beast can live near it. Rats running across this hole are said to drop down dead; the snake that pursues them to share the same fate; while birds flying above it drop down and fly no more. I would not have given much heed to this story, but there lay the birds, snakes, and rats where they fell: and although on stepping into the cavity I could perceive nothing unusual in the exhalation, the fact remains that the place seems well known in the district as fatal to birds, vermin, and all creeping creatures who come across it.

OXALIS.

PORTULACA.

One of the most remarkable and amusing scenes we witnessed during our pilgrimage in Peru was enacted during our stay at Huariaca, interesting chiefly as a relic of the past, and only to be seen in perfection where Spaniards of the old school still vegetate. Customs are still in vogue here that date back prior to the day of Cervantes—having survived all his ridicule—serving to show how the interior of Peru is governed, and to what degree of civilisation it has attained.

The morning was still early when we were suddenly awakened by the tramp of horses, the clank of armour, and the stormy voices of military minions. It seemed as if at least the Chilians, or some foes equally formidable, had taken possession of the village, and

were denuding it of everything removable. The screams of energetic females and the loud expostulations of sluggish men were met only by stern demands in the name of some higher powers. Horses and mules, it appeared, were chiefly in request, and every animal of the kind fit to carry a biped was seized *sans ceremonie*. There was poor old Juan Rodriguez, who had contrived to borrow a horse to yoke with his own—for the annual rains are at hand, and the *chacra* ought to be ploughed—but all must now be pressed into the service. The sturdy goodwife returning from Cerro de Pasco with provender, riding astride her well-worn mule, is also waylaid and dismounted. Pack ponies by the dozen—sores and maggots and all—are ruthlessly seized upon, saddled, and made to prick up their ears in military array. No miserable clodhopper would continue to cultivate his fields on such an occasion as this, while yarn and distaff must be flung aside, for it would be treason to tend to any such menial duties when government and military officials claim homage. Our own rather tired mules lay in the hostelry stables, dreaming as little as their masters of the honour intended for them. The discovery was no sooner made than they were pounced upon, and our saddles about to be appropriated, without the trifling formality of asking. But here was a slight hitch in the proceedings. Our interpreter, backed up by the hotelkeeper, who had an interest in us, managed to make another story heard. These horses and mules, they declared with due emphasis, belonged to English Commissioners, who were armed with letters from the President. At first this was pooh-poohed, but reiteration gradually took effect, and it at length dawned upon the officers in command that meanwhile it was not worth risking a war with Great Britain! We had thus the privilege of being neutral spectators of a scene in every way worthy of Spain in the fifteenth and Peru in the nineteenth century.

First came the magnificent outriders, on prancing steeds, bedecked in brilliantly coloured fringes. The gallant soldiers themselves, if rather encumbered with the awkwardly dangling swords, had each a splendid pair of massive spurs, which they used with masterly skill, the horses dancing in the morning sun with delight—or agony, I am not certain which, but the effect was all the same very grand.

Anon came the hero of the hour, supported on the right by a lady armour bearer. Swollen with importance, and reeking with pride and perspiration, our hero, it must be admitted, looked somewhat weighed down with the responsibilities of the occasion, or, it

may be, fagged by the festivities of the past night. Closely on the heels of the chieftain's horse followed a cavalcade which, for fantastic variety, baffles any little powers of description I possess. We simply looked on with awe and astonishment, but the only substantial impression left was a cloud of dust, which wondering eyes followed for some miles.

But let me hasten to explain the object of this gorgeous and costly display. Be it known, O unromantic Briton! that a portion of the public footpath through the district being in danger of slipping away, a deviation had been resolved upon by the Government in Lima, and that the personage you have just been introduced to is none other than the accredited agent of the Peruvian Government—the deputy sub-prefect, to wit—bound upon the important mission of reporting on these works. Shades of poor General Wade! compared with this, what a prosy proceeding was yours! And what a miserably humdrum country our Land o' Cakes is, where such a piece of work would be undertaken and completed without the trumpets being so much as heard in the adjoining parish! A hardish bargain with a petty contractor, and our work is done. Or, in India, a *cangunie* and a few coolies would be told off to accomplish the job. Here display invariably costs ten times the amount of the actual work done!

When public works are conducted in Peru upon such principles as these, it will naturally occur to many to ask how that most marvellous feat of engineering, the trans-Andean railway, is being accomplished—for it is probably the most difficult piece of road-making ever before attempted, surpassing the wonderful works of the Incas as much as their commendable industry exceeded that of the Spaniards who succeeded them. Let it be remembered, however, that these stupendous railway works have been built entirely by British and American enterprise.

Next morning we continued our course eastward, still trending along the banks of the now rapid river, the narrow path running as near as possible to the bottom of the ravine, which is merely a yawning gap in the great mountain range, the walls of which rise almost perpendicularly to a height of 6,000 to 8,000 feet, with here and there little shelves of rich soil industriously cultivated by the hardy hill tribes, who occasionally roll down big boulders, to the terror and no small danger of passengers below.

It was down this trail that the Peruvian army was chased by the

Chilians a few years ago. "Strategic" move, it was called, and the stratagem led them to flee for fifty miles, and hide in the forests till the Chilians retired in disgust to sack and plunder the poor villages on the mountain plateaux, all of which lie in ruins to this day. Surely never had an army a better chance of annihilating an enemy than the Peruvians lost on this occasion. There followed miles of Chilians in single file; yonder are thousands of boulders the slightest touch to which would hurl them down thousands of feet, hopelessly crushing all below. Had this Johnny Cope of Peru only told off a few hundred of the women who carried the baggage, the work might have been a *fait accompli*, but, as it was, the poor Peruvian was too much cowed for anything except fleeing before the enemy.

A weary and not very interesting journey of sixteen miles from Huariaca brought us to an hacienda, where a little agriculture was being attempted under great difficulties, the steepness of the land being such that the fields can only be ascended by experts born and bred to such climbing, and even then not without extreme danger. The soil is very black, rich, and friable, and, when it gets sufficient moisture, yields enormously.

We halted here for breakfast, observing that the interior of the house was hung round with black cloth, and that the two sonsy Chola girls who received us were also in mourning, and wore a very sombre expression. On inquiry, we learned that they were indeed orphans, the mother having died some time ago, while the father, alas! had been only last week killed by a stone rolling down the hill. He saw one stone moving, and jumped aside to avoid it, only to be killed by another which he did not observe. We felt very much for the poor lonely girls, many miles from any neighbours, and regretted that our command of Spanish was too limited to enable us to give proper expression to our sympathies; but such comfort as we could give was given freely, and we lightened our bag of a goodly number of *soles* ere we parted.

For the next fifteen miles the road, such as it is, continues steep and very dangerous; precipitous cliffs above, perpendicular rocks below, a roaring torrent at the bottom of the gorge, on the margin of which we could see crowds of gold-seekers washing out the mud.

The most common plants here are some very curious and very pretty varieties of *Tillandsia*—epiphytes growing on rocks, agave or cacti indiscriminately—some with spiked leaves and others curled curiously backward, all leaden grey or silvery in colour, here and

there throwing out splendid flower spikes of different hues. Some, like the *Usneoides*, hang like a veil or beard of extraordinary length, and when moved by the wind wave to and fro like gigantic silver tresses. The varieties most common here are evidently *Argentea*, *Recurvata*, and *Usneoides*. We first came across these plants at Matucana, on the west side of the Andes, and 7,788 feet above sea level, and now while nearing Ambo, at exactly the same altitude on the eastern side of the mountain range, we meet once again with our eccentric floral friends. Still we note a peculiar absence of large forest trees, difficult to account for, in soil so rich and in a temperature now approaching the truly tropical. The scanty rainfall by no means explains it, as we can see the Eucalypti, wherever introduced, growing in great luxuriance, even without irrigation. With irrigation, the vegetation is simply marvellous.

The ravine now begins to open out into something like a valley, with little plots of flat land by the river side, on which we observe coffee and sugar-cane thriving vigorously. The aneroid tells us we have descended to an altitude of 7,500 feet above sea level, and the thermometer at sunset stands at 70°, so that in two days we have travelled from perpetual winter into everlasting summer. In no other part of the world have I seen coffee yielding such crops at this altitude. In Ceylon, for instance, it ceased to give profitable returns at 5,500 feet, *i.e.*, 2,000 feet lower down than here.

Ambo, our destination for the day, is a considerable village, with two hotels, a church, and several well-stocked stores, prettily situated on the margin of the river, at a spot where several passable bridle paths branch off into the surrounding valleys. I had a great desire to spend a week in exploring a locality so intensely interesting as this, my ambition being rather to leisurely observe and correctly note than merely to beat the record in travelling; but the fates were against me, and I shall never cease to regret I did not see more of Ambo. Next morning we were off by daylight, having been warned to avoid as much as possible the hot, dusty winds which invariably begin to blow in these valleys by mid-day.

We had now a good, broad, and almost level road on which to ride, lined on either side by a beautiful avenue of mixed vegetation, prominent amongst which the Eucalyptus vies with the loftiest poplars in towering above the indigenous trees. But if this district is indebted to Australia for some of its tallest trees, Australia in its turn is indebted to Peru, and particularly to this locality, for one of

the very loveliest trees which adorn the gardens, parks, and streets of Victoria and New South Wales. The pepper tree (*Schinus molle*), with its pretty pink pendant clusters of pungent seeds, graceful habit, and rich foliage, is here at home, and wherever we get a peep of the now less rugged scenery, there it is in the foreground—one of the handsomest plants in the vegetable kingdom. Magnificent specimens of Agave, Cereus, Æchmea, &c., form the undergrowth, while gorgeous flowers of Tacsonia, Thunbergias, Vernonica, Verbena, and Lobelia decorate the ditches. This Agave is of considerable economic value, as producing the "Sisal Hemp" of commerce. The plant is abundant here and evidently indigenous.

LOBELIA.

The valley gradually broadens out as we proceed, and may now be said to measure from two to three miles in width. Wherever irrigation is applied, we have large paddocks of thriving sugar-cane or plots of very productive coffee intermixed with most tempting fruit trees. We find oranges in great abundance, Papaya in perfection, the stately Avocada pear tree loaded with its eminently luscious and wholesome fruit, so greatly prized on every breakfast table in Peru,

and so greatly superior to the Avocada, or Alligator pear, as grown in Ceylon or India. Vines laden with rich clusters of grapes now hang over rickety trellises, while the Granadilla creeps over the mud walls with much superfluous luxuriance.

But of all the indigenous fruits of this locality, commend me to the *Chirimoya*. Indeed, for exquisite flavour, I know of no fruit in the vegetable world to be compared with it. I had already made the acquaintance of this "master-work of Nature" in Guayaquil and Lima, and had quoted the curious description of Markham—"spiritualised strawberry"! But here, in its native home, it seems to me the chirimoya would suffer by comparison with any other fruit. It is an incomparable natural custard, as far beyond the clumsy cunning of cook or confectioner as the lily is beyond the art of a manufacturer. The tree is a compact, laurel-like evergreen of moderate size, from 18 to 20 feet in height, belonging to the natural order *Anonads*, which gives us the custard apple, the sour sop, and sweet sop—all rather refreshing in their way, though they cannot be compared with the *Anona Chirimoya*. This fruit usually weighs from two to three pounds. Green, heart-shaped, and covered with knobs, scales, and black marks, the external appearance is anything but attractive; but take off the tough skin, and there is revealed a snow-white juicy fruit which, for richness and delicacy of flavour, stands unrivalled. Readily propagated from seed, the tree has already been introduced into Jamaica, St. Helena, and Ceylon, and might easily be made a valuable addition to the fruits of any part of the tropics where the rainfall is not too heavy. It must always be remembered that this, and indeed almost any other fruit, attains perfection only in comparatively dry climates. Cocoa is an exception, delighting as it does in a moist climate. Huanaco, the *Ultima Thule* of Peruvian civilisation, has at least the credit of supplying the world with the chirimoya. Visitors to Kew will see this fruit beautifully and faithfully figured amongst Miss North's paintings.

VERBENA.

Here we are still in a decidedly dry climate, as we can see by the

prevailing vegetation—the Cereus, with its magnificent crimson flowers; and the Agave, with majestic spikes rising to a height of 20 to 30 feet, displaying a perfect pyramid of brilliant flowers.

The township of Huanaco itself is a curious mixture of the novel and antique, situated on the banks of the Huallaga, its narrow, roughly-paved streets converging towards the invariable *plaza*. Around, we have the dingy churches, the dilapidated government buildings, shoddy shops, and some third-rate hotels. We were fortunate enough to select a hotel which had been opened so recently that dirt had not had time to accumulate. The proud proprietor welcomed us with a few words of English, expressing his delight at being honoured by the patronage of the "English Commissioners." There seems a tradition that once before a benighted Briton found his way into this township, but, added our host, "it was many years ago." Here we made our headquarters for the next few days, making daily excursions into the surrounding country, an amphitheatre of somewhat bare-looking hills, the scanty, though interesting, verdure upon which indicates a very deficient rainfall. With irrigation, however, the haciendas yield crops of coffee and sugar cane, equal to the best I ever saw. The redeeming feature of Huanaco is its garden-plots. Wild and neglected though they be—like the cottagers' of Glenburnie, withal—still they are beautiful and remarkably productive, both tropical and sub-tropical fruits and flowers in great perfection and profusion. But all require irrigation, which is supplied in the most perfunctory manner by the poor, lazy, priest-ridden inhabitants of this Sleepy Hollow.

If any man really wishes to escape from civilisation, to hide himself in a hole where a few thousand primitive beings may be said to exist without any communication with the outside or inside world, let him try this *Ultima Thule* of Peruvian townships. Here no stage-coach comes lumbering from neighbouring towns; they have not arrived at this stage of high pressure as yet. No wheeled traffic of any description—not even a cycle fiend—disturbs the meditations of the foot passenger, no newspaper, no tell-tale wires to overtake or intercept the runaway, no screaming engines to break the slumbers of a peaceful people, who, nevertheless, are, for all practical purposes, kept sufficiently awake by the brass band of a little corps of tatterdemalions, yclept the National Guard.

Here, as elsewhere in Peru, comely woman is the real worker. The only thing that seems beyond her is the garden, and this—

THE NATIONAL GUARD (PERU).

THE CHOLO HIGHLANDER AND HIS BETTER HALF.

begging her pardon—is pretty much the same all over the world. She can taste and share the fruit, we know, but as to garden cultivation, she is of little more use than a hen. She can cull a pretty flower, but in all my experience I never came across a woman who could water a plant. It was the man who was told off to "dress it and keep it," and where *he* neglects this first of duties that country is on the down grade. No matter how many churches he builds or padres he feeds, no matter what his prowess in the hunting, battle, or football field, if he neglects to till and plant it is a poor look-out for posterity. All the churches in Peru or Australia are a poor substitute for neglected fields.

Here the poor, ragged, and besotted men lazily hang around the rustic bars, drinking their favourite *chicha*, while the priests may frequently be found in the inner rooms of the hotel sipping *pisco* or rum. No wonder though the morals of the place are said to be of the lowest and loosest description. One can only wonder what is to be the future of such a locality.

While staying in Huanaco we had a visit from a representative member of the German colony of planters now settled at Pozuzo, a locality some 50 miles distant (lat. 10° S., 75° E.). This communicative gentleman, whose name was Mr. Egg, described the progress of the colony in anything but glowing terms—albeit the climate, soil, and productiveness seemed everything that could be desired. This colony, Alemana, was formed 40 years ago by emigrants from the Fatherland, 600 in number, who, after being decimated in crossing the Andes and undergoing unheard-of privations, finally settled down at the junction of the Pozuzo and Hauncabamba rivers to cultivate coffee, cocoa, tobacco, maize, and rice. Ninety families still remain, and, on the whole, seem to be fairly contented and well off—more fortunate than our countrymen who tried to settle in Central America. It speaks volumes for the climate in such a latitude that so many remain to tell the story of their early struggles; the altitude, however, being 4,000 feet, the climate is comparatively cool and pleasant. Brought up in the jungle, as they have been, the younger generation have no expensive tastes, which is in itself equivalent to a large income. The greatest drawbacks seem to be the want of roads, markets, and schools, while there is something cruelly oppressive in the extortionate demands of the tax-gatherer, who pounces upon the produce as it passes through Huanaco and Cerro de Pasco. To the

poor hard-working colonist there must be something peculiarly discouraging in thus being compelled to contribute to a lazy, corrupt, and effete government. Living literally without protection, with no roads, and but few comforts, these plucky planters, labouring like negroes in a tropical climate, have a harder lot than any agricultural labourer in the British Isles, and no class of men that could now be imported would submit to it.

Altogether, the gist of the interview we had with this intelligent German only tended to confirm our opinion that any further attempt to introduce European labour for tropical agriculture is an absurdity.

Three such experiments have already been made in Peru. Germany, France, and Italy have in their turn been indented upon, and all proved failures, and until the Peruvian has been taught to be less selfish and less squeamish as to the introduction of Asiatics, there is not much hope for the future of his country.

The Spaniard himself was at best but a wretched colonist, and his descendant in Peru would be an intolerable bully if he could get out with it. A characteristic illustration of this I find in a little work published in Lima in 1891 for the avowed purpose of encouraging immigration, in which, however, the spirit of the proud Spaniard crops out thus :—

"The only means," says this sage, "by which a man can make his will felt in dealing with the common herd is force. This is the explanation why the only persons who are well served among us are the prefectural and ecclesiastical authorities, who can respectively call to their aid the force of the barracks and the fears of hell. It is only in the presence of the Prefect and of the priest that a clod-hopper conducts himself in the way an inferior ought always to do."

It is curious how, even in our most palpable blunders, history has a knack of repeating itself. After the repeated failures to acclimatise European labourers to the tropics, it seems strange to hear of another attempt being made to encourage English working men to settle in the upper valleys of the Amazon !

So recently as 1872-76, during the benign reign of Don Manuel Pardo—the most enlightened President Peru has yet seen—a society was formed called the "European Immigration Society," divided into five branches, for the purpose of establishing, on a grand scale, European colonies in Peru, viz. :—

1.—Great Britain and Ireland.
2.—France, Belgium, and Switzerland.
3.—Germany, Austria, and Holland.
4.—Sweden, Norway, and Denmark.
5.—Italy, Spain, and Portugal.

The result of this magnificent scheme was an influx variously estimated at from 850 to 3,000, chiefly Italians, who were located on the banks of the Rio Chanchamayo, on lands wrested from the Chuncho chiefs, and which, with the little township of La Mereed, I have already noticed.

In addition to grants of land, these colonists were supplied with agricultural implements and sufficient money allowances to maintain them up to the time of their first harvest. For their protection they were provided with firearms and a detachment of the National Guard from Tarma. The net outcome, apart from the German colony, however, seems to be the settlement of half a score of families, who make a somewhat precarious living by the manufacture of rum.

The fact is, the Italian Government stepped in and put a stop to the emigration by publishing a circular denouncing the scheme, and describing Peru as "a country in which there was no work, the land arid, living dear, and destitute of the means of communication."

To which an official scribe in Lima replied :—"Quite true, there is no work because there is no one to work ; the land is arid because there is no one to irrigate it ; living is dear, an evident proof of the richness of the country (*sic*) ; there are no means of communication because of the want of population ; if we had all these there would be no need for immigrants."

The time had now arrived when we had again to turn our faces towards the Andes. It was not, however, without a certain regret that I had to turn my back upon a region becoming every day more interesting, regions which may be said to be, botanically, but little known, and yet which are already classic ground, for was it not while wandering in these territories that, 90 years ago, Humboldt first conceived the idea of his "Geography of Plants," a natural enough discovery, upon which he always looked back with unmixed pleasure. Writing in his old age he remarks :—"It was a fortunate circumstance of my life that at a time when I employed myself almost exclusively with botany,

my studies, favoured by the view of a grand climatically contrasted nature, could be directed to this subject"—namely, to classify plants according to temperature, viewing them as they arranged themselves in belts one above the other. For this purpose there are perhaps few such object lessons in the vegetable world as can be seen here at a glance where plants of many different species, and of every climate, are flourishing in the same degree of latitude. In the morning we may walk under the shade of stately palms, through the coffee and the sugar cane fields, reaching before nightfall the region of the prostrate little Alpine plants which struggle for life at the snow limit. It is all a question of temperature, which here altitude alone determines. Nature, in short, has provided within a very small compass all the necessary conditions for every known family of plants, and nowhere does she unfold a page more intensely interesting to the lover of plants than on the eastern slopes of the Andes.

Our returning journey was comparatively uneventful. We again halted for a few days at Cerro de Pasco, this time, however, with the British Consul, who entertained us with sterling hospitality; a fine sample of the genus John Bull, who, with his admirable wife, did everything possible to mitigate the discomforts of the horrible climate, which in this, the highest township on the globe, is specially trying to new-comers. Some idea of the drawbacks to such an elevated position may be gathered from the fact that, though in good health, Mrs. S. had been unable to leave the house for some months, only once had crossed the Cordilleras, an experience she had no desire to repeat till kind fate might open up a way for her return to England, which, from such a distance and from such a quarter, we can readily understand looks indeed paradisiacal.

Mr. S. has been for a number of years in charge of the principal silver-smelting works of Cerro de Pasco, and he willingly gave us reliable information regarding the extraordinary mineral wealth of the surrounding country. This is not confined to silver ore. Coal of the very best quality is now found in great abundance within a few miles of Cerro de Pasco, while gold in payable quantity is still discovered along the course of the Huallaga. At Chiquirin, where we saw primitive-looking gold-seekers at work on the banks of the river, the returns are said to be very good considering the absence of modern appliances and technical knowledge, a moderate application of which could not fail to yield very rich returns. Besides the

Huallaga, the auriferous rivers are said to be the Chanchamayo, Tulumayo, Pangoa, Pucartamba, and Ogabamba. The gold these waters bring down seems to come from the veins of quartz that cross the slate and crystalline formation which chiefly constitutes the Cordilleras. The more elevated Cerros are sometimes composed of metamorphic sand, the auriferous ore being cubical pyrites, accompanied with a copper ore containing green stains of carbonate of copper. It is very evident, however, that mining, like everything else in Peru, is in a bad way at present, and the cause is equally palpable, viz., *bad administration.*

Few men know the country and people better than Mr. S., and, like a straightforward Englishman, he does not hesitate to express his contempt for the insidious knavery which goes on in Lima, and has no very exalted notion of the Hispano-Peruvian in general. For the Cholo, or mountain Indian, there seems more hope if he could only be kept from rum. It is curious to hear that amongst the more intelligent of those highlanders there is still a lingering hope that their country will some day be restored to them through the intervention of England. It will be remembered that Raleigh thought there was an old prophecy, "That from Inglaterra those Ingas should be againe in time to come delivered from the servitude of the said conquerors."

It is worth while noting that at the present moment the President of Peru is a Cholo Indian, with strong leanings towards the British, and that a corporation in London practically holds the purse-strings of Peru. "The interests of this corporation and the best interests of Peru are identical," said General Caceres the other day.

We left Cerro de Pasco once more on as bleak and cold an October morning as was ever experienced on Ben Muich Dhui. For the first five miles, according to the custom of the country, we were convoyed by our host and a few of the leading residents, after bidding goodbye to whom, we steered a westerly course towards the lake of Junin, our destination for the night being Incapilka, which, in Quichua, may mean a royal rest-house. I only hope it was more comfortably equipped in Inca days of old than it is now.

This miserably inhospitable shed stands on the western margin of the lake, about twenty miles from Cerro, and at an altitude of 13,300 feet. We reached the place by dusk, in pelting rain, the thermometer, however, only standing a few degrees above freezing; and, as we had watched the movements of a party behind us which

we had with an effort out-distanced, we eagerly secured, in self-protection, the only apartment set apart for public use. This contained three ricketty beds, which we at once took possession of, dining as best we could upon our own provisions, the energies of the scarecrow of a proprietor being sufficiently taxed to provide a little hot water for us and provender for our mules.

Next morning we were up betimes, and, after settling *la cuenta*, which our ragged host seemed to have sat up all night concocting, we rode briskly off, leaving the lake, with its swarms of fat wild-geese undisturbed on the water, and the ill-favoured and milkless kine shivering amongst the coarse rushes on the margin. We zig-zagged over a preliminary ridge, had a smart canter for two hours over an undulating plateau, and reached by 9 a.m. the station called San Blas. Here there are extensive salt works in active operation, but no food for man nor beast procurable, so we pushed forward. The surroundings were not very interesting—no cultivation, and very little vegetation of any kind. Again we see the low Cactaceæ, the leaves of which are pressed close, and furnished with reddish yellow spines, in little mounds like couching deer; dwarf verbenas on the ridges, and lycopods on the damp rocks. Plants with strong, leathery, but glossy, leaves, such as the Baccharis, are pretty common. So also are species of Vaccinium and Andromeda, while, among the more herbaceous looking, I note dwarf Draba, Gentian, and a veritable duckweed. Cattle, of rather a lean type, feed on the scanty herbage, dwarf and spotted sheep are numerous, while occasionally the pretty little chinchilla bolts across the path, affording practice for the sportsmen of the party. Llamas are only met with as beasts of burden; the paco and vicuna—so valuable for their wool—are more wild, keeping at a respectful distance, but the llama is tame and gentle in the extreme. What the camel is to the Arab, the llama is to the Cholo. All the silver, and all the produce of every kind, is carried to market by these patient, docile creatures, who find sufficient sustenance, as they move along, in nibbling the moss, or yehu—a stunted grass—by the wayside. It is a beautiful and interesting sight to see a flock of laden llamas marching with measured steps across these high table-lands, and up and down precipices where mules would be helpless. The arriero, as a rule, is very kind to his llamas, and when one succumbs from fatigue he will lie down beside it, embrace the animal, and make use of the most coaxing and endearing expressions. Nevertheless, the route is strewn with the

bones of dead llamas, and every journey to the coast is made at the sacrifice of many lives. Children of the higher Cordilleras, the heat and weight of air in the lowlands frequently proves fatal to them.

Here and there we come upon traces of the gigantic roads of the Incas, which had been the admiration and wonder of the world for centuries, works so stupendous that we cannot conceive how they could have been constructed without the use of iron and mechanical appliances. When we take into account the altitude (10,000 to 14,000 feet) and the rocky regions through which they were made, we may well marvel and doubt if any nation in Europe could have constructed such works 500 years ago. These roads are about 20 feet broad, and had all been paved, or "macadamised," extending from Cuzco to Quito, about 1,500 miles, with occasional branches to the Pacific coast. At equal distances there are the remains of rest-houses and milestones, the halting places, called tambos, or *Inca pilkas*, but nothing of these are to be seen now save the remains of the foundations. The bridges also have all been allowed to go to ruin, but enough remains to commemorate the marvellous power of the Inca monarchs, and to prove what a well-ordered government could effect through the industry of the obedient people over whom it ruled, a people evidently superior to their conquerors in everything except the science of murder. True, even more marvellous roads have now been constructed in Peru. The highest railway in the world crosses the Peruvian Andes, but this can scarcely be put to the credit of the Peruvian, being entirely constructed by Anglo-Saxon brains and money.

Well may the Peruvian Government now cry out for emigrants,

> "But a bold peasantry, their country's pride,
> When once destroyed, can never be supplied."

Semi-abandoned as most of the great plateau is, it is depressing and wearying work travelling across it. No wayside inn to welcome us, not a tree to shelter us from the showers of hail which ever and anon cross the Cordilleras. The wind which blows from these serrated crests is icy cold, while the trails we follow were never made for mules' feet. It is, however, a long lane that has no turning, and at the end of the thirty-sixth mile from Incapilka we were able to turn into Banios where there did seem a little more prospect of a comfortable rest than we had on the previous night. Banios has some pretentions to be called a hotel, with a veritable dining-room and two bedrooms, a quadrangle of sheds for cattle, and the

usual sleepy and ill shaken-up hangers-on. Immediately on our arrival, there was a case of sudden death—not the fatted calf by any means—but a poor misguided sheep, the cooking of which we soon found out to have been on a par with its feeding. Never did I before attempt anything quite so tough and unsavoury; but hunger, as usual, proved sufficient sauce, and we managed to satisfy the craving fairly well. The night, however, being frosty, and the surroundings cheerless, we were not long in seeking such beds as Banios afforded. But sleep I could not. The night was pitch dark: I had for years accustomed myself to sleep with a light in the room—a weakness my companion had no sympathy for. Moreover, he felt fidgety as to the ventilation, and prayed for the door to be left ajar. The mercilessly cold wind blew right in my face: I shivered and covered my head with the blankets. Presently the old four-poster began to rock me in a way I had not been accustomed to for over half a century. I might have imagined that I was only dreaming of childhood, but a simultaneous howling all over the establishment soon convinced me of the fact that we had experienced a smart shock of earthquake. It soon passed over, however, and all was again quiet, save for the groaning of the poor restless mules, seeking in vain for food or smarting from irritating sores. Poor, starved, over-burdened mules! I shall never quite shake off the qualms of conscience I carry through life on account of these too hurried rides.

We were astir by daylight next morning, and the first thing that attracted our attention was smoke from the swamp close by, the wells in which contained boiling water! The crisp hoar-frost all around, and the snow-clad mountains which overshadowed us, made it all the more curious; but there it was, literally bubbling up, and while I stood by marvelling, I noticed a poor frog which jumped unwarily into the steaming water, and instantly turned up its white belly, and died in a few seconds.* After the usual tedious delay in

* The water had a sulphurous smell, and was said to prove very effective in skin diseases. We forthwith filled a bottle, sealed it, and sent it to London for analysis. Appended is the report of Messrs. Savory & Moore:—

ANALYTICAL DEPARTMENT,
143 NEW BOND STREET, LONDON W., 19*th November*, 1891.

ANALYSIS OF WATER.

We beg to report the result of our analysis of a sample of water received from the Peruvian Corporation on the 10th inst.

The sample, which was contained in a soda-water bottle, secured with a cork and sealed, was clear but not bright, and had a slight deposit, consisting of vegetable debris and fungoid

rearranging packs and plastering sores, we at last started, unrefreshed and badly provided as we were, to cross once more the dividing ridge of the Andes. I had suffered so little in first crossing that I did not anticipate great difficulty in returning, forgetting that, in the interval, poor food and much fatigue had run me considerably down.

ON THE CREST OF THE ANDES.

It was a weary zig-zag; my mule and I got sadly short of breath, but it had to be done, and what is more, we were in a tremendous hurry, my companions being possessed by the one idea—an ambition to break the record—which neither my mule nor I shared. Whymper, in his admirable work, recently published, remarks, with reference to his ascent of Chimborazo, that, while himself suffering from the rarified condition of the air, he was surprised to find a feeble little gentleman who, though often ailing in the low country, was not only unaffected with mountain sickness, but actually became very vigorous and active. Our own experience seems to have been somewhat similar, but all I know for certain is that I had no breath to boast of. By and by the heart's action seemed to fail, and I suddenly collapsed, slipped off the saddle and lay down on my back, my mule gasping for breath beside me. When I gradually came to myself, I could see around me the bones of many a good mule and llama, cleanly picked, while high in the air floated the ever alert condor, said to be the largest and most powerful of all birds; but I was not just then in a mood to admire his proportions nor appreciate his attentions, and, gathering myself together again with the help of a more fortunate companion, I moved on, but

growth, with traces of iron. The water had an alkaline reaction, and contained traces of sulphuretted hydrogen. No arsenic or other poisonous metals were found.

The most was made of the very small quantity of water at our disposal, and the following component parts were determined:—

Calcium - -	Parts per million,	347·5	Silica Present quantity not determined.
Magnesium -	" "	74·3	Carbonic Acid " "
Chlorine - -	" "	630·0	Total Solids - Parts per million, 4075·0
Sulphuric Acid	" "	1484·0	
Nitrogen, as Nitrates	" "	1·6	(Total hardness—Degrees per gallon, Clark's scale, 77.)
Sodium Present quantity not determined.			

The chief characteristics of the water are its alkalinity, the presence of sulphuretted hydrogen, and the large proportion of salts—chiefly sulphates, carbonates, and chlorides of calcium (lime), magnesium, and sodium.

(Signed) SAVORY & MOORE.

only for fifty yards, when I again fainted. This was repeated at least fifty times till the crest was crossed and some progress was made down the western slopes. *Soroche* is the native name of this mountain sickness, and is thus described by Whymper:—

"We were feverish, had intense headaches, and were unable to satisfy our desire for air except by breathing with open mouths. This naturally parched the throat and produced a craving for drink, which we were unable to satisfy, partly from the difficulty of obtaining it, partly from the trouble in swallowing it. When we got enough we could only sip, and not to save our lives could we have taken a quarter of a pint at a draught. Before a mouthful was down we were obliged to breathe and gasp again until our throats were as dry as ever. Besides having our normal rate of breathing largely accelerated, we found it impossible to sustain life without every now and again giving spasmodic gulps like fishes when taken out of water. Of course, there was no inclination to eat, but we wished to smoke, and found that our pipes refused to burn, for they, like ourselves, wanted more oxygen."

The various affections which have been classed together under the name of mountain sickness are fundamentally caused by diminution in the atmospheric pressure, which operates at least in two ways, viz., by lessening the value of the air inspired, and by causing the air or gas within the body to expand and to press upon the internal organs. The results which ensue from the former are permanent, *i.e.*, so long as the cause exists; the effects produced by the latter may pass away when equilibrium has been restored between the internal organs and external pressure. My own experience, as indicated, was fainting and violent vomiting. There is no real preventative, and no two may suffer alike. Travellers are usually warned in Lima to beware of taking alcohol: its effects are often fatal during suffering from *soroche*; and in the face of such warning I hesitate to give my own experience, which was that a moderate use of stimulants was decidedly palliative.

It may here be stated that to cross the Andes in this particular locality is no longer necessary, owing to the opening of the Galera tunnel on the Oroya railway.

Once across the Cordilleras, and in touch with the Oroya railway, a few hours lands us safely in Lima, where, while recruiting for a few weeks, I had the opportunity of making the acquaintance of this queen city of South America. Named by its founder Ciudad de

los Reyes (City of Kings), now briefly Lima, a mere corruption of Rimac, the rivulet which ripples through it, and to which, insignificant as it may seem, the gardens owe their irrigation, the fields, for miles around, their luxuriance, and the 140,000 inhabitants their absolutely necessary supply of water. We know how important a good supply of running water is even in localities where the rains afford sufficient moisture for the vegetation. But Lima, beautiful Lima! owes its very existence to the one little torrent of clear cool water which comes rolling rapidly down from the snowy mountains, still within sight as we stand on the Bridge of Desemperados, which connects the north and south portions of the city. This bridge is, by the way, worth a passing notice, if only for its antiquity.

LIMA

Built by Pizarro, 370 years ago, it still stands firmly with all its curious nooks and crannies, in which a languid trade is carried on with the numerous passengers, who never seem in a hurry. The merchandise consists of old books, fruit, the everlasting hancas, various articles of shoddy attire, to say nothing of lottery tickets, to buy which every passer-by is importuned. The view from this fine old bridge is, moreover, one of the finest in Lima. To the east, clearly defined in their everlasting coating of snow, are the distant Cordilleras, nearer the picturesque San Cristobal, which overlooks the city, and on the top of which is a fort erected by that rascal

Pierola, ostensibly to repel the Chilians, but really to dominate the city and secure his own directorship, in which the unscrupulous demagogue would doubtless have succeeded had not a few British residents spoiled his project by secretly rushing up the mountain and spiking the guns, in which state they still remain.

The nearer views bring out peeps of those artistic and luxurious-looking dwellings so characteristic of Hispano-Moorish architecture, which seems to bespeak an unusual degree of dignified repose and grandeur, and yet experience has perchance taught us that even these apparent abodes of bliss are seen to the best advantage at a little distance.

One of the first objects of attraction to me is always the botanical gardens, but an enquiry for these elicited only a shrug of the shoulders from a Limeno, and at length a confession that the gardens were not what they once were, in fact, that they were abandoned. The Chilians, alas! had been there, tethered their horses amidst the choicest flower beds, cut down the noblest trees for firewood, and carried away the rarest shrubs to Valparaiso. Not content with this the vandals also appropriated the statues and seats, stole the lions, shot the elephant, and, sad to say, these terrible Chilians walked away with several hundred of the fairest Limenas, the flowers of many a decent family. It is but right to admit that these victims were alleged to be willing captives, and, further, that the Chilian Government no sooner heard of the arrival of these last-mentioned fair exotics than it chartered a ship and honourably returned every one of them to the bosom of their families. Altogether the Chilians, notwithstanding the fact that they took a few souvenirs of their visit, behaved tolerably well during the time they were in possession of Lima. Ask any shop-keeper, and he points to plate glass mirrors with several bullet holes; nevertheless he says, "I wish they were back again! Trade was never better than then, and what the Chilian bought he paid for, which is more than I can say of my own countryman."

These botanic gardens, deserted and neglected though they are, are still very interesting, and contain many rare and valuable plants, a list of the more notable of which will be found appended. There is another garden, however, surrounding the Exposición Buildings, which is well kept and really very pretty. The Exposición Palace itself is one of the most substantial and handsome buildings in Peru, with its highly ornate and beautiful surroundings, altogether the finest

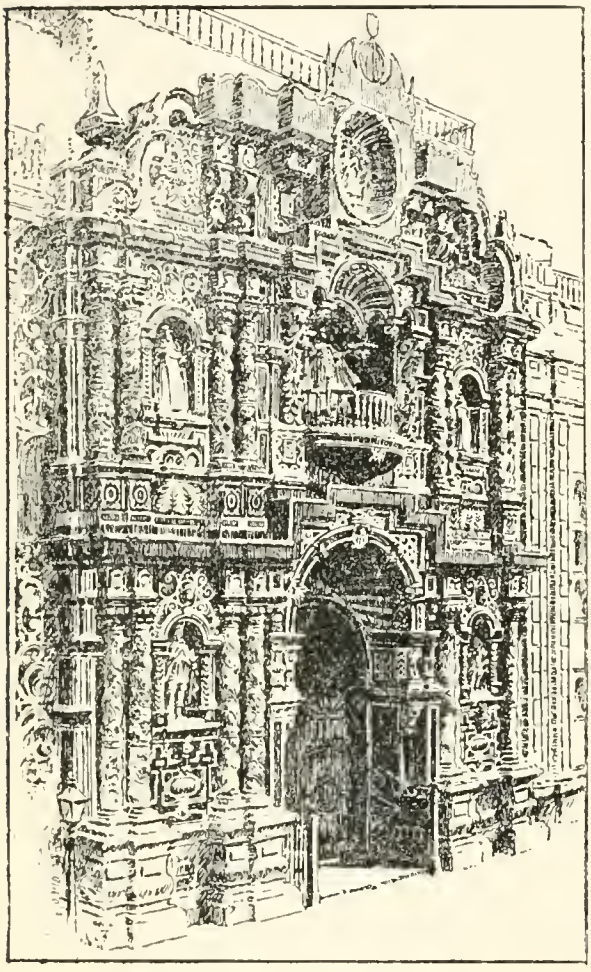
resort about Lima. Here are now held the balls and public fêtes which give lovely Limena an opportunity of disporting herself to the time of really excellent music. The promenades are particularly inviting, the brilliantly coloured flowers, always in rich splendour, the noblest of palms throwing a refreshing but not too dense a shade, while the gentlest of sea breezes keeps the thermometer about 68°, a marvellously pleasant temperature for such a latitude, and, as the vegetation indicates, a climate which, with irrigation, is capable of producing any plant of either the temperate or torrid zones. Here may be seen such purely tropical plants as coffee, cacoa, mango, palms, and pine-apple growing in great perfection alongside apples, pears, grapes, cauliflowers, and cabbages in equal luxuriance. For deciduous trees requiring rest one has only to withdraw the water and it is winter, return it again and we have a seasonable spring. With very little effort, indeed, every plant worth growing might be cultivated here. Possibly it would be better for the poor degenerating Peruvian if a little more energy were required!

The climate is as near perfection as possible, yet the men are feebler and do not seem to live a day longer than the natives of the much-abused climate of North Britain. Irrigation, with all its manifest benefits, is not an unmixed blessing. Naturally no locality should be freer from fever than Lima, yet this beautiful vegetation, forced by water little better than sewage, sometimes brings trouble in its train, as the Countess of Chincon, wife of the Viceroy, discovered so long ago as 1640, when her attack of fever and ague led to the discovery of the specific named after her.

The monuments in Lima are not numerous or very striking. The finest is the column in memory of the heroes who died in the War of Independence; a magnificent work, creditable to the French sculptor and bronze founder.

The churches, 70 in number, are, however, the leading features and landmarks of the Peruvian capital. Many are old, dingy, and interesting only to the antiquary who dotes over the glories of the Middle Ages. Others are ornate to a degree which could not fail to call forth the admiration of the beholder. Amongst the richest is La Merced, with its most elaborate façade, San Francisco with its famous cloisters, and San Domingo with its noble tower. The largest and most imposing, however, is the cathedral on the Plaza. Here I was shown the remains of the "Gran Conquistador," a fit relic for this holy of holies! Pizarro, the pitiless tool of priestcraft.

and the conqueror for covetous Spain, had, like the last Napoleon, one redeeming trait in his character, viz., a taste for architecture, of which this cathedral is an example. Built 360 years ago, it is just as likely, barring earthquakes or Chilian bullets, to stand for 360 more. During my stay in Lima a question arose and was earnestly discussed with reference to the identity of the mummy preserved in the vaults of the cathedral, whether it really was the mortal remains of Pizarro, or whether, like Buddha's tooth of Kandy, it had not been surreptitiously bartered by some sacrilegious thief. One theory was that during the War of Independence the royalists secretly carried off the treasured remains to Spain and left a mummy of similar bulk in its place, and this story was favoured by Americans whom I met in Lima chafing under the disappointment of not being allowed to remove the mummy to the Chicago Exhibition. The matter now assumed great importance, and a committee of anthropologists was appointed to critically examine the mummy and report to the ecclesiastical and municipal authorities.



CHURCH OF LA MERCED, LIMA.

It was on the 26th June, 1891, the 350th anniversary of Pizarro's violent and bloody death, that the coffin was opened amidst the almost breathless but intense anxiety of the populace. The coffin was wooden, and in any other but this mild and dry climate would inevitably have returned to dust 300 years ago, but here it was very little the worse. On removing the lid the body was found almost in its entirety and completely mummified, still partially covered by

rags of silk which had evidently formed a cassock, and by the remains of a finely embroidered linen shirt. The body was quite desiccated, and of a dingy white colour. On close examination it was found that certain portions were amissing, viz., the fingers, toes, and certain other parts, having been cut off and removed. From the appearance, the committee were satisfied that these mutilations had taken place immediately after death, and a letter sent by the City Corporation in 1541 to Ferdinand VI. of Spain throws some light on this. The letter, which describes the assassination of Pizarro, goes on to say—"In order to dishonour and ridicule him, the murderers committed upon his person many inhuman and infamous things, which, that your Majesty may receive no further pain, we refrain from describing." These atrocities had probably been committed by an exasperated populace on the corpse as it lay where it fell, atrocities which can scarcely surprise us when we look back upon the life of cruelty, avarice, treachery, and rapine, which had thus been summarily closed. It will be remembered that the friends of Almagro, vowing vengeance for the execution of their chief, resolved to kill the hated tyrant as he returned from church on Sunday, 26th June, 1541. Pizarro heard of the conspiracy, but pretended to attach little importance to it: nevertheless he deemed it prudent not to go to mass on that day. This did not screen him for long—the infuriated people were no longer to be restrained—they broke into his palace, murdered his servants, and by force of numbers soon overwhelmed the hitherto dauntless and unconquered soldier. One can imagine the stalwart old "Conquistador" parrying their thrusts and dealing many a mortal stroke on the heads of his assailants, till a ringleader at length, lifting one of the crew, threw him bodily upon the General. Pizarro ran the man through, but while struggling to withdraw his sword, received a mortal wound in the neck. Thus, in a pool of his own blood, fell the founder of Lima and the greatest butcher of the sixteenth century. The same house still stands in much the same state as when Pizarro lived there, and in the same apartment in which he was killed the President of the day received our letters of introduction.

The report of the committee of anthropologists was published with commendable promptitude on Saturday, 27th June, 1891, and occupied four columns in *El Comercio* newspaper of that date. The conclusion come to was that the identity of the body was absolutely established, not only by general indications, but by evidence of

wounds on the neck and elsewhere, which, after lying three and a half centuries, the mummified corpse clearly disclosed. The conformation of the cranium has a very marked resemblance to that of the typical criminal of to-day. The lower jaw protrudes abnormally, a certain sign of a brutal man. The chief peculiarity, however, is the knee joints, which are so unusually large as to look like a deformity. The total length of the mummy is fully six feet. After having been carefully scrutinised, the precious relic was handed over to the care of the Metropolitan Chapter, who placed it in the Chapel of the Kings in the Cathedral of Lima, where the curious may now see all that is mortal of Pizarro resting on a couch of crimson velvet, the whole being enclosed in a marble tomb with glass sides.

PIZARRO.

The Limenas, or ladies of Lima, are unquestionably a very religious people, and, as far as they are concerned, it is a religion of a very tolerant and non-aggressive type: whether it tends to godliness is quite another matter. The priests are not greatly respected by the husbands and fathers. "We do not admit them to our table," said a leading grandee, whose hospitality we had the honour of enjoying. Yet the ladies go daily to church, the gentlemen merely walking down to the door, where they lift their hats and pass on. The whole system seems merely another case of "pleasing the womens." The music at church services is good and hearty, chiefly performed by brass bands, from which "General" Booth's "musicians" might well take a wrinkle. The outdoor displays, when processions march from one church to another, are very imposing—the glittering adornments of the Virgin, the beautiful canopy of relics, the richly coloured robes of the padres, the gorgeous flags of the people, and the first-rate music, all combine to make a very striking and harmonious scene. The climate favours pageantry.

The priests are, however, anything but tolerant. The only Presbyterian minister in Peru—an American—I found had been lying in jail for a year for commenting too freely, and perhaps too truthfully, on the habits of the R.C. priesthood. There is one

little Protestant chapel in Lima, ostensibly in connection with the British Consulate, in which a few members of the Church of England weekly meet, but the clergyman—whom I met at the Phœnix Club—complained that his usefulness was sadly curtailed by the enmity and intolerance of the priesthood. The little English church must not show its gable to the street, must on no account ring a bell, and in the event of death no member of the "heretical sect" is permitted "Christian" burial. "I had a case in point the other day," remarked the clergyman. "A young English gentleman sent out here in search of health died after a lingering illness, and I had actually to tell a white lie before I could get his remains interred in the public cemetery." The lie was that immediately before his death the young man expressed a wish to see the R.C. padre, and this alone had the desired effect upon the authorities.

A FAIR LIMENA.

"But is this necessary?" I asked. "For the sake of friends at home," replied his reverence, "I could not bury the boy like a dog."

This exclusion from consecrated burial-grounds was a prospect which, I confess, had no alarms for me. Poor Professor Orton, who pluckily crossed the Andes six times, declaring "I have not been ill a moment," crossed once too often, was seized by *soroche*, and left his bones on the Sierra. And yet the remains of this intrepid traveller, whose inflexible veracity and faithful descriptions have done more to make Peru known than have all her dignitaries, clerical or otherwise, must needs be forbidden a resting-place in the filthy, little highland graveyard, with its vultures perched on the walls, and starving dogs fighting over the bones. No: the fat priest at the gate said—"You must not enter here!"

Fortunately, a more appropriate spot was found for the remains of our celebrated cousin, and visitors to Titicaca may now see from

a distance a fitting memorial to the illustrious traveller, conspicuous, elevated, and alone, on the margin of the lake—just such a spot as he would, in all probability, have selected for himself.

Of all the places of public resort and popular amusement in Lima, the Plaza de Toros stands unrivalled in the eyes of the Peruvian. We were often told that this bull ring is the largest in the world, sufficient to entertain all Lima and the stranger within her gates. "There are two things worth seeing," said an ex-Mayor to us, viz., "cock fights and bull fights." Once a week, usually on a Sunday afternoon, is to be seen a procession similar in most respects to that which leaves Melbourne on a cup day. Everything in the shape of a carriage is in requisition, from the seedy-looking costermonger cart to the stylish equipage, with brilliantly beautiful occupants: pedestrians in thousands, of every description and of every shade of colour, from the pure white of the far-famed Limena down to the Ethiopian black: the swaggering, laughing, but often, it must be confessed, not very clean-monthed negro; the red, brown, and copper-coloured Cholo; the wary and reserved Chinaman, so strangely out of place here alongside the pumped-out Peruvian. Then there are hybrids, such varieties as only a specialist could name. Of this motley crowd, all who are able pay for admission: the rest find their way to the top of San Cristobal, which, though some miles distant, is in this clear atmosphere sufficiently near to give the eager spectators an interest in the fight.

The covered amphitheatre around the open ring is capable of accommodating 12,000 to 15,000, and is usually crowded. A marvellous spectacle is this excited, surging crowd, chiefly young women, the majority of whom are chastely and becomingly dressed. The men are mostly of the genus Larrikan—more loudly rigged out in ample fronts and showy scarfs. All are ready with a hearty cheer as the bull-fighters enter the ring—big, bull-necked, showy, and swaggering gladiators, such as the *aficionados* delight to dote upon. A few are mounted on horses, trembling with excitement, but the chief champions are on foot, with stout swords dangling by their side, and carrying long poles with a red flag attached thereto. In the centre, and here and there around the circus, are little retreats, like sentry boxes, into which the man can conveniently slip when hardly pressed by the animal. Altogether, the fight is a sorry affair.

The poor bull, on the withdrawal of a door, issues forth from a dark cellar into the blazing sun. Dazzled and half-blind, the bewildered brute shakes his shaggy head and tries to stare around him. The first object he sees is a horse, at which he makes a frantic plunge, but is easily dodged by the keenly alert steed. The rider, dressed like a Spanish noble, now plays with the maddened beast, provoking him with a red flag to make sundry dives into space. Gradually recovering sight, the bull now takes in the situation, and forthwith makes a dash at the nearest biped, who escapes into his sentry-box in good time to save his skin. Number two fighter now approaches warily from behind, flourishing his red rag, at which the bull rushes with a bound, to find there is nothing at the back of it, and to fall flat on his nose, to the great amusement of the easily-entertained spectators. Number one, the chief Matador, again slips from his box, and begins a series of tantalising flourishes with his red rag; but the animal, now more wary, makes for the man, with the evident determination of impaling the object of his wrath, and again the "great fighter" escapes into his box, around which the discomfited animal roars in a terrific rage. At this stage of the unequal combat, the *Chulo*—a kind of merry-andrew—brings out the *banderillas*, *i.e.*, barbed darts so strung together as to readily catch hold and, entering the flesh, cause the most excruciating pain. From a safe distance these are thrown across the neck of the bull, every shake of whose head sends the darts deeper into the lacerated hide. The "brave" Matador now steps out, sword in hand, to complete the business. The exasperated animal, though writhing with pain, approaches his enemy with unflinching courage, but receives about 18 inches of cold steel somewhere behind the shoulder-blade. Frequently the blundering Matador is unable to withdraw his sword, leaving the poor brute to run round the ring with the weapon sticking in its gory side; but his legs soon begin to totter, and, with one look of intense disgust at the contemptible bipeds, he lies down, gives a few groans, and all is over. The brass band now strikes up a lively air, while horses gallop out to drag away the mutilated carcase. There is great waving of handkerchiefs by the ladies, bouquets are thrown to the heroes, the merryman takes round the hat, and there is a general buzz of gratified enjoyment all over the vast concourse. Another victim is now brought out, and the tragedy is re-enacted—usually six times during the afternoon. Such are the favourite pastimes of this proud and highly-enlightened people! To our stolid northern

minds there may be nothing in it save the most cowardly butchery: but this does not alter the fact that for centuries it has been, and still is, the chief enjoyment of Lima, and to us one of the marvels of this curious country is to see beautiful Limenas gloating over these very sickening sights. If there was a chance of the swaggering Matador getting neatly gored I could understand it, but as the poor bull has not the faintest ghost of a chance, it is difficult to see the source of the keen enjoyment.

In ordinary business matters, Lima presents many features akin to what we daily see in British cities. There is the draper, for instance, standing yawning behind piles of Manchester goods, upon which are flags of distress bearing in huge letters the words, "*Colosal baratura*," which, I suppose, means "big bargains," and there stands the loafing bagman, with more of his "special lines" and job lots, while ladies with languid eyes drop in to look and ask for "*ejemplo*," though evidently too poor to buy.

Then there are the noisy newspaper boys, howling out "*El Nacional!*" "*El Comercio!*" and trying to palm off old papers upon unsuspecting buyers. But the greatest of all bores is the lottery-ticket sellers. At every street corner, at every church or hotel door, there, Sunday and Saturday, is the same drawling whine of "Mil quinientos soles para mañana." "Plata para luego!" Nothing, perhaps, could better show the poverty of a country or the rotten state of the finances than these state-supported lotteries.

I have hitherto said nothing of my hotel, in which, however, I was fairly comfortable. Luxurious, indeed, it seemed after our sojourn on the Montana. "The French and English Hotel," as it is called, is the best that Lima affords, but it is blessed with very little English about it except the "boots," and he is the blackest negro I ever came across. Albeit Mr. Brown—at your service—as he styles himself, has mastered the English language admirably, and is here the only interpreter about the establishment, both Briton and Yankee constantly requiring his assistance. The fat, fussy Frenchwoman who "bosses" the business, flits about from table to table, talking either Spanish or French to the guests, while the putty-faced Peruvian husband keeps his eye on his day book and makes the most of every item, but neither of these knows a word of English. I found my expenditure invariably ran up to 10 *soles*, or about 30s., per day. The food was good, but the attendance very fitful.

We dine in an open verandah which skirts a square garden plot,

in which brilliant crotons, vincas, and poinsettias remind us we are in the tropics, though here no *punka* is necessary, the air being sufficiently cool and laden with the perfume of jessamine and other creepers which hang in festoons from the rafters. Upstairs are the ample bedrooms, gorgeous in gilt and colour. A gaudy Brussels carpet on the floor feels comfortable, but the pictures on the wall seem to be reciting a never-ending chapter in Zola. Altogether there is a want of restfulness and solidity about poor frivolous Lima which helps me to part with it without any lasting pangs.

Perhaps the pleasantest trip I had in Peru was in visiting sundry stations along the Pacific coast and up the valleys of the Santa and the Chicama. Armed with introductions to several of the leading proprietors and managers of the principal haciendas, I sailed from Callao in one of the mail boats, calling first at Chimbote, where I remained a week, exploring the valley of the river Santa. Here, it will be remembered, the Spaniards first invaded Peru in 1532. The Santa valley was then one of the richest and most populous parts of Peru ; now it is one of the poorest in this pauperised Republic. In those days the population of Peru was supposed to be 30,000,000, or twelve times greater than at the present day, and in no locality is the decadence more marked than in this once prosperous valley. Here, 400 years ago, in the time of the Incas, agriculture flourished in the highest perfection. The sandy wastes, never in the memory of man visited by a shower of rain, were rendered fertile by an artificial system of irrigation, the most stupendous, perhaps, the world had ever seen. Hundreds of miles of substantial aqueducts conveyed the precious water from the river, while the fields were enriched periodically by an application of manure brought from the adjacent islands—a fertiliser we now call guano, the use of which only dawned upon our own farmers the other day.

In this one narrow valley there is said to have been a thriving population of 700,000 agriculturists. I doubt if there now exists a population, all told, of 7,000 ; and these, sad to say, chiefly live by despoiling the graves of the ancient Incas, burrowing into the earth, and selling the trinkets of pottery, skeletons, and mummies, which for ages had lain undisturbed in these sand hills, or artificial mounds, from 20 to 100 feet in height, dotted over this country, and known generally as huachas. In every little shop these relics are on sale, and by the wayside little stocks are collected, and offered to the passer-by with an appealing whine that the collector

is himself half dead of starvation. Not an acre is now cultivated within sight of Chimbote, for all the aqueducts are gone. Not only did the Spaniard fail to keep them in repair, but he removed the best of their materials with which to build his houses.

Chimbote, though possessing a splendidly sheltered bay, and the terminus of a railway costing £4,500,000, is a poor insignificant place, its chief trade being the distributing of imported food, and almost its only export—huachas and alcohol—the remains of ancient Incas, and the spirits of modern Peruvians! These spirits come from the interior, and, being distilled directly from the sugar cane, make a very fiery liquid indeed. Being cheap (about 1/6 per gall.) the local consumption is lamentably great. The poor young custom-house official who came strutting down to the pier to examine my Gladstone bag, had, I could see, been indulging freely, probably driven to it by sheer *ennui*. He afterwards sat next to me at the table d'hote, drinking heavily, and eating but little. Next day he looked scared and wild, and talked nonsense about snakes on the wall. I felt uneasy when I saw him lift the knives, and made signs to the Chinese waiter to remove them. A day later I saw the remains of the poor young dipsomaniac laid in the dreary cemetery, a few miles out on the sandy desert. No stone, nor tree, nor tuft of grass marks the place; the fat padre mumbled his formal prayers, a few lean dogs howled dismally, and all was over. Anything more desolate than the surroundings it would be impossible to conceive. One fig tree appears in the far distance, but there is not a leaf upon it. The ruins of the ancient aqueducts and the remains of the Inca highways may be traced here and there by the parallel dykes of adobes or sun-dried bricks, but all the rest is driven sand.

My visit to Vinios and Suchiman, 30 miles inland, was more interesting and pleasant, though here, too, there are more signs of former splendour than symptoms of present prosperity. For the first 12 miles the route passes through Puento, an estate of 30,000 acres, which, with its broken watercourses and rickety fences, looks as if it had long been in Chancery. Here there is a little vegetation "unprofitably gay" with creepers, but no signs of cultivation. The next hacienda is also semi-abandoned, though its dilapidated distillery still turns out a considerable quantity of alcohol. Suchiman, on the other hand, leased by an enterprising Yankee, is well cultivated, with everything in excellent order. The effects of water judiciously applied upon these apparently barren sands is simply magical. I

was much struck to observe the result of a few drops falling continuously from a leak in the cistern whence the railway engine boiler is supplied. It had been one of the barest and most parched sidings in this lonely desert—not a particle of vegetation within sight till these tiny drops of water were followed by a few blades of grass. By and by a curious variety of creepers cropped up, as also Cucurbits of the *Luffa Egyptiaca* type, with bigger gourds, like water melons. Now a native hut has been built near, and travellers stop to refresh themselves at this perfect little oasis in the wilderness. The methodical cultivation of sugar-cane has to be credited to the early Spanish settlers, who, up to a few years ago, made splendid profits by this industry. Now the keen competition of the beet grower in Europe has considerably curtailed these, but there is still a handsome margin to the sugar planter here, and competition does not altogether account for the present state of the industry, and the generally abandoned condition of the sugar estates of Peru.

"The Chilians did it," says the torpid planter of to-day, and no doubt the proprietors were placed in a very perplexing fix during the late war. The Chilians levied exorbitant demands for money, while their own effete Government in Lima protested and threatened forfeiture or confiscation of all estates contributing to the claims of Chili. Some, on refusing to pay, had their machinery destroyed by dynamite and their luxurious *casa* blown about their ears, while others bolted to Britain or found refuge in France. But this does not explain the present decay; and had a tithe of the money, too easily borrowed, too lavishly lent upon the security of these estates, been but judiciously spent upon their upkeep, they would present a very different appearance to-day. For, notwithstanding low prices, I am convinced there are few agricultural industries better worth attention, more certain, or more remunerative than the cultivation of sugar-cane on these rich, flat, rainless regions.

The best estates are now situated in the Chicama valley, whither I proceeded after spending another day at Chimbote in watching the sleek sea-lions and amorous seals gorging themselves with fish and scrambling upon the little guano islands, basking in the sun and caressing each other the live-long day. Good fish are very plentiful on this coast, and I was interested in seeing the languid looking fishermen returning in their tiny boats, made of rushes, which, after disposing of their abundant takes, they draw up on the beach to dry, while they, with the proceeds of the night's work,

retire, alas! to the nearest bar, after the manner of too many fishermen nearer home.

Chicama lies fully 300 miles north of Lima, and is reached by boat to Salavery, the seaport of Truxillo and terminus of a railway extending for 40 miles inland, by which the sugar estates are served. There are several very valuable and prosperous properties within easy distance, notably Casa Granda, Chiquitoy, and Cartavia. A description of one may serve for all, and I shall here confine my remarks to the last-named, viz., the hacienda Cartavia, upon which I spent a pleasant week, all the more enjoyable that here I unexpectedly met some congenial types of my ubiquitous countrymen—the superintendent hailing from Elgin, the engineer from Ross, and the distiller from Fife—a very intelligent trio, who let me more thoroughly into the secrets of sugar culture and manufacture in Peru than could have been possible where the language difficulty barred the way.

Cartavia is in extent about 10,568 acres, stretching from within a few miles of the sea on the west, to near the foot of the mountains on the east, the little rivulet Chicama forming the northern boundary. The whole estate is very flat, and although apparently covered with whitish sand, the soil, upon examination, turns out to be a deep, dark, rich loam, admirably adapted for the cultivation of sugar-cane, Alfalfa, Guinea grass, and almost any other tropical product.

The extent under cultivation is divided as follows :—

2352 acres in Sugar-cane.
176 ,, in Alfalfa (*Lucerne*).
480 ,, in Guinea Grass (*Panicum maximum*).

The balance is fallow, or is being turned over by the steam plough, which is now at work, making ready for further extensions. From the time of planting till maturity, the cane takes 20 months, and according to the rotations adopted, 120 acres of cane are cut every month. This yields about 7,500 cwts. of finest grainy sugar, costing say 7s. 6d. per cwt. f.o.b. There is also a monthly yield of about 6,000 galls. alcohol.

Nowhere in rainy regions can cane be grown to such perfection as here. Water being supplied whenever it is required, and withdrawn the moment it would prove injurious, the amount of saccharine matter is such as we never find in the Indies. Moreover, the

maturing of the cane, and regulating the rotation, can be much more effectually carried out under systematic irrigation.

The Alfalfa (*Medicago Sativa*) is an excellent fodder for cattle, exactly suited for such a locality, and having the power of sending its roots twenty feet deep in search of moisture. Irrigation is less needed here, where water can generally be struck at 12 feet. Fabulous crops of this nutritious legume are raised year after year from the same ground. Alfalfa enriches the soil, and produces here five crops annually. Guinea grass is also grown very successfully, but, as a nourishing food for cattle, cannot be compared with the Alfalfa. Water for irrigation is supplied from the Chicama rivulet by a canal 12 miles in length. During the wet season on the Cordilleras, the supply of water is abundant, but for the other six months certain prescribed regulations have to be submitted to, the rights pertaining to this estate being a flush every alternate week. The fact, however, that these lands lie low, and the sub-soil is always damp, is of considerable importance and advantage. The live stock belonging to the estate consists of :—

369 Cattle.
211 Horses.
157 Donkeys and Mules.
1150 Sheep.

The manager's house is built on the top of one of the curious mounds, or *huachas*, regarding the origin of which there is room for so many surmises. Some suppose them to have been merely burial grounds, others, for the purpose of showing beacon fires ; but as I could count twenty such mounds, varying from 80 to 100 feet in height, from where I stood on Cartavia, the beacon fire theory must be dispensed with, and although graves and numerous remains are unquestionably found embedded therein, it seems to me that the primary purpose of the wise old Inca must have been to escape from the malaria arising from the low irrigated lands.

The *casa* of my bachelor host was of ample proportions, though destitute of those delicate furnishings and touches which the female fingers can alone give. My friend, like all tropical planters, was the soul of hospitality ; to entertain strangers being a vital part of planters' religion, as everyone who has travelled in tropical lands can testify.

Albeit, every country has its drawbacks, and, upon the whole, I daresay it will be found that these discomforts are pretty equally

divided. In Ceylon, for instance, we have the rains and leeches outside, the moist, mouldy rottenness within, but we are somewhat compensated by having the purest of water, the glossy green leaves, and no dust. Here, in this otherwise perfect climate, we live in a perpetual halo of dust. Looking out from the verandah, the approach of visitors can be descried at a distance of 8 or 10 miles by the clouds of sand they raise by their feet. By twelve o'clock each day the wind blows the fine particles into every corner and crevice, and to travel abroad at mid-day is to eat your way through the thick clouds of drifting dust, with ears and nostrils stopped up. Nothing looks tidy in the house, and outside nothing looks fresh—the foliage and flowers being always more or less begrimed.

But the greatest difficulty to be faced here, as elsewhere in Peru, is in the supply of suitable labour. The Cholo has been tried and found wanting—wanting in numbers and in adaptability. The hardy mountaineer does not care to settle permanently on the flat, monotonous lowlands. And who can blame him? In the valleys of the Cordilleras he has his own little *chacra*, while his wife or daughters tend the sheep on the green tablelands. Why should he toil at the beck of any planter? Occasionally a few unsettled loafers do find their way to the haciendas, attracted, I fear, more by the drink than by anything else. The backbone of the industry has hitherto been the Chinese, but their treatment has been so villainously bad that their own Government had, some years ago, to put a stop to further emigration to Peru, and as the men are now chiefly past middle age, there is a danger of the labour supply soon falling lamentably short of requirements.

There are not in the wide world more capable, plodding, patient, and faithful workers than the Chinamen. Yet, here, as in Australia, they have to cope with unreasoning prejudice and implacable hatred —a hatred not, however, shared by their employers nor, I may add, by the women of the country, for John makes a very excellent husband, and jealousy has really more to do with the apparently unaccountable dislike of him than most men care to confess. I have entered his house, studied his domestic life, and can testify that his genius for cookery relieves the wife of much drudgery. He is a perfect adept at laundry work; while the children hang around him in loving clusters. Is it any wonder a woman soon comes to adore such a husband? Compare her lot with that of many a wife tied to a clumsy Scotsman or an uncouth Colonial, and wonder may well cease.

In all those qualities by which Scotsmen have been enabled to make their mark amongst the more dashing French and English colonists, viz., patient thrift and plodding industry, the Chinese invariably excel. And what men call meanness is often neither less nor more than the most laudable self-denial. If, as Mrs. Fyvie Mayo says, "the man who produces most and consumes least is the true aristocrat," the Chinese are surely the coming aristocracy of both Peru and Australia.

Occasionally, by sheer force of character, the Chinaman will, when circumstances favour, rise far above the common herd, to a position of wealth and influence, and then all are ready to do him homage. Several wealthy Chinamen in Truxillo have married respectable "white girls," and one—a prominent citizen I found living at Haucho—had happily married an English governess, and is as polished a gentleman as can be found on the shores of the Pacific. Dressed in his vicuna poncho and broad-brimmed hat, his quiet, cultivated manners are in striking contrast to those of the proud Peruvian or the too bumptious negro. He speaks in perfect English, and his commercial morality, I am told, might put to shame many a "Christian" grandee.

This gentleman, by the way, has his prototype in Quang Tart, of Sydney, one of the most wealthy, benevolent, and distinguished citizens of New South Wales, whose command of pure, nervous English—only second to that of Sir Henry Parkes—makes him an acquisition at every public meeting, while at popular concerts he is simply indispensable. Quang married a clever Scotch lassie, but in the race for wealth and position not only has he out-distanced the Scotch colonist, but he has completely eclipsed him in his own particular line. Mr. Quang Tart is unquestionably the best singer of Scotch songs in New South Wales, while in the Highland costume he can render the Highland fling as if to the manner born. More to the purpose, however, he takes the lead in the virtue of *giving* liberally to every really charitable purpose.

Even among the lowest class of Chinese coolies in Peru it is rare to find one idle, rarer still to see one drunk, although amongst the natives and negroes indolence and drunkenness are the rule. The negroes, unfortunately, are too apt to ape the worst habits of the European, and may be seen swaggering in groups, gesticulating and spouting about their grievances and the shortcomings of others, while John placidly passes on, bent only on his own duties, or the

business of his master. And if, after twelve hours of unceasing toil, he stretches out his somewhat rheumatic legs, and soothes himself to sleep by a precious pipe of opium, is it the place of any drunken country to protest against the use of the innocent solace, while she shuts her self-righteous eyes to the fearful cruelties these patient people have had to endure?

The Chinese emigrants in Peru and their treatment by the Peruvians forms one of the blackest chapters in the chequered history of this unstable country. The immigration scheme was initiated 40 years ago, in the face of much opposition, by the enlightened Don Domingo Elias. He was told by the leading scribes in the Government organ *Peruano* that "Chinese immigrants would be absolutely useless; they are quite unadapted for field labour, and their work will never give to our failing agriculture the help required to raise it from the prostration in which it lies. Our population, in the course of time, will gradually assimilate itself to the repugnant Asiatic race. Without our agriculture obtaining any benefit, we are likely to fill up our country with a multitude of corrupt men, who, it is to be feared, will become mixed up with our lower orders, and produce a degraded progeny, the consequence of which will fall upon our grandchildren." The same writer expressed his belief that Lima would be desolated by the plague the filthy emigrants would certainly introduce. In the face of this prejudice it is not surprising to learn that the first instalments of the poor patient Mongols were met by a hooting mob on their arrival, and treated to every possible indignity as they passed through the towns.

Nevertheless Don Domingo persevered with his scheme until the number of the immigrants amounted to between 80,000 and 100,000. And now, as to the result. Let one of the Peruvians themselves bear witness. In a work recently published by Juan d'Arona, of Lima, from whom I also made the foregoing extract, I find him further expressing himself as follows:—"There has not been a single point upon which the unfortunate editor of 1856 has not turned out to be mistaken. 'The Chinese will not serve a single good purpose,' said he—*and they have served for every one.* 'Unfitted for the labours of the field!'—*Peru has not yet seen their equal.* 'Their assistance could not raise our prostrate agriculture'—*I have already told to whom was to be ascribed the boom during a succession of years in our sugar industry.* 'They will intermix with our lower orders'—*and what better lot could befall these?*"

"Here I have passed in review," continues this outspoken author, "the qualities which cause the Chinese labourer to be of value in the eyes of all who are not led away by false sentimentalism, whether this originates in æsthetic, moralistic, or ethnological considerations. The Chinaman is immensely superior to all by whom he is surrounded in the sphere he occupies. The instinctive genius of this immigrant has indeed raised him far above our lower orders, and placed him on a level with, or at least brought him within measurable distance of, the higher classes. . . . In a country like Peru, with its laughable black pride, the Chinese with their ancient civilisation must perforce have a great part to play."

A Spanish authoress, Eva Carel, in her book, "Things of the New World," tells how she had been recommended to go to the house of a rich Chinaman in Peru, who had married a European lady. "His cultivated manners," she says, "not devoid of distinction, were apparent as he saluted me with silent respect. The numerous little ones were white and rosy like their mother." What must the editor of the *Peruano* have thought of such proceedings?

By all this, and much more in keeping with it, has the Chinaman shown what he is in time of peace—would the reader now see him in the fluctuating days of war? During the late disastrous invasion by Chili, he was the only man who never budged nor changed his character, the only merchant who never changed his prices, neither in the dark days that accompanied the war nor the darker that followed on through the clouds of dishonoured fiscal paper, opening the door to all manner of commercial fraud. The desire of everybody who owned a white skin was to get out of the country. The Chinaman alone maintained the sacred fire, and continued to be a merchant, a hotel-keeper, or gardener, for the very love of the thing. Hotel-keepers deserted their post and left their customers starving—the Chinese stepped in and opened restaurants; and to this day the chief hotels in Truxillo, the second city, have not resumed cookery. Staying a night at the best hotel on my way hither, I enquired, as the tedious evening proceeded, at what time dinner would be ready. "Dinner!" said my host, "we do not dine here!" With some difficulty I got such explanation as he had to give, and a guide to the Chinaman's house, where I found all Truxillo dining, and dining well.

The only heroic action we hear of during the war was the Chinese colony coolly defending itself during an improvised siege of

several months, sustained against infuriated mobs, *not of Chilians*, but of natives of Peru, who, having harboured and nursed their hatred for 30 years, now took advantage of the Chilian occupation and the prostrate state of their own Government, to give vent to their rage against the Chinese, whose industry and useful lives had all these years been a standing reproach to Peruvians.

February, 1881, was the date on which the general rising took place, the determination evidently being to kill every Chinaman in Peru, and, taken unawares, hundreds were murdered with the most unrelenting cruelty. According to all accounts the massacre of Chinese in the one valley of Cañete puts in the shade that perpetrated by the Mussulmans of Damascus in 1860 upon the Christians, which was followed by such exemplary chastisement, while the world shrieked with execration. But here even worse deeds were done without a shadow of cause to justify their commission, and no one even thought them worth chronicling! The only Peruvian daily then published, *El Orden*, did not seem to devote a single line to the horrible calamity by which so many lives were barbarously sacrificed and valuable industries ruined. One of the first moves of the mob was to send off a detachment to waylay some Chinamen returning from market. Sixteen Chinamen were returning by boat from Callao with their purchases, little dreaming of what awaited them. Scarcely had the boat touched the shore when they were dragged out, bound hands and feet, and, amidst the jeers of the crowd, drowned like dogs. The murderers now proceeded to the sugar estates, where every Chinaman whom they could lay hands upon was killed on the spot. Some poor wretches, confiding in the traditional safety or right of asylum associated with the Mansion House—but where now the shade of the absent master no longer hovered—sought refuge there, but were soon despatched by the bloodthirsty varlets, the corpses being literally piled in the courtyard as food for the vultures. The rising was so sudden and unexpected, and the miscreants did their work so diabolically, that the innocent Chinese were at first quite flabbergasted; but when at length they had time to collect their thoughts, they made a desperate effort to at least prepare for a passive defence. The scene was the Casa Blanca estate. Lima lay prostrate at the feet of the Chilians. The guns Peru had purchased to defend itself had been turned upon its proud capital by the hands of the very men whose services had indignantly been declined. Peru's only general, the native Johnny

Cope, was running along the Huanaco road with his terrified troops, hunted by a handful of hardy Chilians. The country was indeed thoroughly cowed, and no protection could be given to Chinese or anyone else. This was the moment chosen by the lower orders of Peru to wreak their vengeance upon the hated Asiatic. Extermination was evidently the aim. At Casa Blanca estate, however, the Chinamen hurriedly held a council—not of war, but of self-defence. Joined by a few fugitives from other estates they numbered over 1,000 men. With great haste and untiring industry they managed to barricade and enclose themselves in the vast mass of buildings which include the Mansion House, the offices, factories, and outhouses. Here they awaited the threatened attack, and had the assailants been possessed of ordinary intelligence and brute courage, it might soon have fared badly with poor, unwarlike, unarmed John Chinaman; but the Peruvian herd is even less formidable in war than the Chinese. Though surrounding the place in thousands none cared to enter. The gallant besiegers brought a big gun from the town of Mala, which they mounted, loaded, and fired—when lo! the thing burst, so *that* had to be given up.

Meanwhile the besieged began to weary, and bethought themselves of more active resistance. From the pipes of the retorts and machinery they extemporised fire-arms, which they turned upon their stupid besiegers with deadly effect. They even shelled them with bottles filled with powder, to which was attached a lighted fuse, and by these means managed to make many of the opposing force to bite the dust. For months this ridiculous siege was allowed to go on. At last, in consideration of a large sum paid down, the proprietors succeeded in getting a detachment of Chilian troops despatched to Cañete, at the sight of which the besiegers fled panic-stricken, and the gates of Casa Blanca were opened. And then passed out a procession of living phantoms, disfigured by suffering, by hunger, and by terror. As many of the poor victims as could be removed were taken to Lima, and—the whole matter was forgotten in a few days!

But it has not only been during war with Chili that the Chinese immigrants have been cruelly treated. Their normal condition in Peru has for forty years long been one of patient suffering. There are always honourable exceptions, and I am glad to think the planters of Chicama valley are conspicuous examples; but, taken as a whole, the Peruvian planters are not by any means patterns of brotherly

kindness. I doubt, indeed, if ever the negro in the worst days of American slavery was subjected to such diabolical maltreatment as these poor Asiatics in Peru, for the simple reason that no planter in his senses would systematically injure or destroy what he considered his own property. The restless ambition of the Chinese to better themselves, and get on in the world, is the chief cause of their suffering. To curb this aspiration *stocks* have been brought into common use, and other unmentionable means of torture, the sight of which has such a charm for the average Peruvian that photographs are regularly circulated showing the hated Chinaman writhing under punishment.

Sir C. Mansfield, the British Consul in Lima, in a recent report on the agricultural condition of Peru, "presented to the Houses of Parliament by command of Her Majesty," refers to this matter in very plain terms as follows:—

"Labour was supplied to a certain extent by Chile, and much more by the importation of Chinese coolies; indeed all the railways were constructed by coolies and Chilians: the latter, however, since the war are no longer available.

"Further supplies of Chinese coolies also can no longer be obtained for Peru; for, in consequence of the barbarous treatment which they received, and still receive, the Chinese Government have prohibited emigration to the Republic.

"Coolies on some properties work in irons to prevent their running away, are chained and locked up at night, and undergo cruel tortures when punishment is exercised: the truck system prevails, so that the coolie is always in debt to his master, who often makes a profit, even upon the opium retailed in lieu of a portion of his wages."

Practically there is no protection in Peru. "I save the Government in Lima considerable trouble and expense," said a Prefect to us, "by occasionally shooting a troublesome character, where no one is the wiser." A proprietor of a mine whom I met in Truxillo was laughing over an item in his monthly accounts—"*To shooting a woman*, $2." "But what does it mean?" I asked. "I suppose it means that she was a nuisance," was the only reply.

Nevertheless the Chinese labourer seems to extract a considerable amount of quiet enjoyment out of his laborious life. A good cook, with a good digestion, he laughs in his own stolid way at the

superstitions of the more helpless and clumsy European. That John is not altogether destitute of humour the following anecdote may help to show :—

"Had you ever any converts amongst the Chinese?" I asked of a priest one day.

"Just one," was the response; and here a smile broke over the round face of the padre, culminating in a roar of laughter, and as he held his sides I stood perplexed at the apparent levity.

"Is it such a laughing matter?" I inquired.

"Listen," he said, "and I will tell you all.

"Ah Sing was as decent a fellow as ever delved in a garden. He supplied us with vegetables—and very good vegetables too. Came pretty regularly to church, where his deportment was all I could wish: so that, when in process of time he came forward for baptism, I was quite prepared to receive him. I prepared him as well as I could for the sacred rite, telling him that, as a Christian, he would have to exercise certain acts of self-denial—particularly the abstaining from meat on Fridays; explaining, however, that *fish* might be eaten instead of the pork or mutton he was so partial to. To this he solemnly assented. I then turned to sprinkle him, saying as I did so, 'Ah Sing, your name shall be no more Ah Sing, but, as a Christian, you will be henceforth known as Andrew.' So Andrew was baptised, and went on his way rejoicing. But it came to my ears that he was by no means a very consistent Catholic, inasmuch as he ignored the Friday fast.

"This he denied; but I took an early opportunity of dropping in upon him just as he sat down to his Friday dinner, and there, sure enough, was a savoury chop! I at once proceeded to reprove; but still he denied, persisting in saying, '*This no pork, this fish!*' Exasperated at the fellow, I demanded an explanation.

"'Well,' said Andrew, with an air of extreme meekness and innocence, 'before I cook, I take to spout and I sprinkle with water, saying, Your name no longer pork, you *fish!*'"

I often think of that padre and his proselyte, and wonder which is the greater rogue or greater fool.

Notwithstanding certain drawbacks, Chicama seems on the whole very healthy and enjoyable, particularly in the early mornings, when the dust lies moistened by the nightly dews, and the sweet flowers just opened are still fresh and bright: or in the glorious

moonlight when all is hushed, and the temperature, neither hot nor cold, permits us to forget that we have sensitive bodies subject to the influences of variable climates.

The absolute certainty of fine weather is itself an exhilarating change to those who have been accustomed to the ever-changing elements in the British Isles, the treacherous climate of India, or the dangerously sudden variations of temperature in Australia. The marvel is that men should ever become feeble and die in such a perfectly even temperature as this. But die they do, or kill themselves off, apparently much about the usual age.

When I think of the pathetic attempts at pic-nicking, or pageantry, which we see amidst the rains and squalls so common in North Britain, I am struck with the immense superiority of such a country as this for out-door enjoyment, and it is an advantage of which we ever feel disposed to fully avail ourselves.

While living in this neighbourhood, I was induced to make sundry excursions towards Caxamarca, the ancient capital of the Inca Atahuallpa, now, alas! a poor little township of some seven or eight thousand souls, which lies in a fertile valley or plateau over 100 square miles in extent, lat. 7° S., an altitude of 9,400 feet above sea level, and about 80 miles from Truxillo. The climate seems exceedingly healthy and agreeable, the soil rich and fertile, the remains of many a once well-cultivated garden still marked out by willows, daturas, mimosas, and many beautiful examples of the rosacea. Around the ruins of what is pointed out as the residence of the last Inca monarch, are clusters of thriving fruit trees, and verdant fields of Alfalfa, while at a little distance columns of smoke are still rising from his warm bath. The "Banos del Inca" has a temperature of 160°, sufficiently hot, one would think, to scald any one, but Atahuallpa is said to have spent a large portion of his time at these baths.

Humboldt, who passed through Caxamarca in 1802, gives the following interesting account of his visit:—"We were shown steps cut in the rock, and also what is called the Inca's foot-bath (*el lavatorio de los pies*). Minor buildings, designed, according to tradition, for the servants, are constructed partly like the others of cut stones, and provided with sloping roofs, and partly with well-formed bricks alternating with siliceous cement (*muros y obra de tapia*). In the principal building the room is still shown in which the unhappy Atahuallpa was kept a prisoner for nine months, from November, 1532,

and there is pointed out to the traveller the wall on which the captive signified to what height he would fill the room with gold if set free. This height is given very variously by Xerez in his 'Conquista del Peru,' which Barcia has preserved for us, by Hernando Pizarro in his letters, and by other writers of the period. The prince said that 'gold in bars, plates, and vessels should be heaped up as high as he could reach with his hand.' Xerez assigns to the room a length of 23 and a breadth of 18 English feet. Garcilaso de la Vega, who quitted Peru in his 20th year, in 1560, estimated the value of the treasure collected from the Temples of the Sun at Cuzco, Huaylas, Huamachuco, and Pachacamac, up to the fateful 29th of August, 1533, on which day the Inca was put to death, at 3,838,000 Ducados de Oro. The Licentiate Fernando Montesinos, who visited Peru scarcely 100 years after the taking of Caxamarca, even at that early period gave currency to the fable that Atahuallpa was beheaded in prison, and that stains of blood were still visible on the stone on which the execution had taken place. There is no reason to doubt the fact, confirmed by many eye-witnesses, that the Inca, in order to avoid being burnt alive, consented to be baptised under the name of Juan de Atahuallpa by his fanatic persecutor, the Dominican monk, Vicente de Valverde. He was then put to death by strangulation. After a mass for the dead, and solemn funereal rites, at which the brothers Pizarro were present in mourning habits (!), the corpse was conveyed first to the churchyard of the convent of San Francisco, and afterwards to Quito, Atahuallpa's birthplace. . . .

"The son of the Cacique Astorpilco, a pleasing and friendly youth of seventeen, who accompanied me over the ruins of the palace of his ancestor, had, while living in extreme poverty, filled his imagination with images of buried splendour and golden treasures hidden beneath the masses of rubbish upon which we trod. He related to me that one of his more immediate forefathers had bound his wife's eyes, and then conducted her through many labyrinths cut in the rock into the subterranean garden of the Incas. There she saw, skilfully and elaborately imitated, and formed of the purest gold, artificial trees, with leaves and fruit, and birds sitting on the branches; and there, too, was the much-sought-for golden travelling chair (*una de las andas*) of Atahuallpa. The man commanded his wife not to touch any of these enchanted riches, because the long foretold period of the restoration of the empire had not yet arrived, and that whoever should attempt before that time to appropriate aught of

them would die that very night. These golden dreams and fancies of the youth were founded on recollections and traditions of former days. These artificial 'golden gardens' (*Jardines Huertas de oro*) were often described by actual eye-witnesses—Cieza de Leon, Sarmiento, Garcilaso, and other early historians of the Conquest. They were found beneath the Temple of the Sun at Cuzco, in Caxamarca, and in the pleasant valley of Yucay, a favourite residence of the monarch's family. Where the golden Huertas were not below ground, living plants grew by the side of the artificial ones, among the latter, tall plants and ears of maize (*mazoreas*) are mentioned as particularly well executed.

"The morbid confidence with which the young Astorpileo assured me that below our feet, a little to the right of the spot on which I stood at the moment, there was an artificial large-flowered datura tree (*guanto*), formed of gold wire and gold plates, which spread its branches over the Inca's chair, impressed me deeply, but painfully, for it seemed as if these illusive and baseless visions were cherished as consolations in present sufferings. I asked the lad—'Since you and your parents believe so firmly in the existence of this garden, are not you sometimes tempted in your necessities to dig in search of treasures so close at hand?' The boy's answer was so simple and expressed so fully the quiet resignation characteristic of the aboriginal inhabitants of the country that I noted it in Spanish in my journal. 'Such a desire (*tal antoja*) does not come to us; father says it would be sinful (*que fuese pecado*). If we had the golden branches with all their golden fruits our white neighbours would hate and injure us. We have a small field and good wheat (*buen trigo*).' Few of my readers, I think, will blame me for recalling here the words of the young Astorpileo and his golden visions."

As showing the lasting attachment of the people to their former sovereign, my attention was attracted to a village where the whole of the inhabitants are still attired in sombre black—mourning for the death of Atahuallpa, 360 years ago! One wonders if it would be possible to find such an example of loyalty in any other part of the world. Imagine an English village still in mourning for Henry VIII., or any living creature to-day wearing sackcloth for our own beloved Mary, who lost her beautiful head about the same time! These poor descendants of the Inca race still abstain from intermarrying beyond the limits of their own blood relations. And herein lay, perhaps, the one weak point which led to the downfall

of the Inca dynasty. The priests and Pizarro were merely the miserable tools used to do the hangman's work—and with devilish delight they did their part—but in any case the attempt to build up and hedge in a privileged caste must ever end in disaster.

A story is still current here which gives a peep into the Inca court life of 500 years ago.

Ollantay was a young, handsome, and brave general, despatched to subdue the troublesome Chunchos in the Amazon valley. Often had the Inca before attempted this, and again and again planted fruit gardens in these warm, sheltered spots, only for them to be demolished and the husbandmen massacred and eaten by these terrible savages, who even made raids amongst the industrious, peace-loving inhabitants in the upland glens. Ollantay had driven the Chunchos into the backmost recesses of the forest, carrying the power of the Inca farther than had ever been before accomplished. Returning full of glory, he was honoured, decorated, and lionised. Unfortunately for his own peace of mind, Ollantay fell in love with the monarch's only daughter, and, of course, she was deep in love with him, but as Incas could only marry Incas, there was no hope for the misguided couple. The General might be the bravest of men, and the Inca princess as devoted as she was beautiful, but the union could not be tolerated. And now we come to the old, old story—the clandestine meeting, the discovery, the separation, the weeping maiden, the banished lover. Ollantay is apprehended, judged guilty, and condemned to death, but escapes, exclaiming in mellifluous Quichua, what has been interpreted to me as—

> "O Cusco! most beautiful of cities!
> Thou art the seat of my worst enemy.
> But his perverse breast will I tear open,
> And give his churlish heart to the condors.
> He will yet ask me on his bended knees,
> To take his beautiful daughter to wife."

Ollantay now raised a rebel army, and for ten years the hitherto peaceful country was torn by internecine strife. The rebels surrounded the capital, and the humiliation of the Inca was all but accomplished, when the general was betrayed, taken prisoner, and handed over to his enemy. He is again tried, condemned, and about to be beheaded, when the old Inca monarch dies, leaving an amiable son, who not only pardons Ollantay, but sanctions the marriage with his sister, so that for once, at least, the Inca rule was honoured in the breach.

I am more interested, however, in tracing the footprints of the illustrious tropical traveller and discoverer, than concerned to recount the history of the Inca, which may be read in the faithful chronicles of Prescott. Humboldt may be said to have been the discoverer of tropical America, and pursued his botanical researches with unceasing industry wherever he went. Here, in a warm valley, he discovered the brilliant *Bougainvillea*, now the glory of Colombo and other tropical cities.

"Not far from here" (Caxamarca plateau), he says, "we were surprised by a very unexpected sight. We saw a grove of small trees, only about 18 or 19 feet high, which, instead of green, had apparently perfectly red or rose-coloured leaves. . . . The trees were almost entirely without true leaves, as what we took for leaves at a distance, proved to be thickly crowded bractes. The appearance was altogether different in the purity and freshness of colour from the autumnal tints, which, in many of our forest trees, adorn the woods of the temperate zone at the season of the fall of the leaf."

Crossing over the Cordilleras from Caxamarca, Humboldt saw the Pacific Ocean for the first time. "After many undulations," he says, "we finally reached the summit of a steep ridge. The heavens, which had long been veiled, became suddenly clear. A sharp west wind dispersed the mist, and the deep blue of the sky in the thin mountain air appeared between narrow lines of the highest cirrous clouds. The whole of the western declivity, as far as the seashore near Truxillo, lay beneath our eyes in astonishingly apparent proximity. We now saw for the first time the Pacific Ocean itself, and saw it clearly. . . . The view was a peculiarly impressive one."

The great traveller now passed through the celebrated valleys where it never rains nor thunders. Resting for a day at Truxillo, and then passing onwards along the sterile shores of the Pacific towards Lima, Humboldt no sooner reached the capital than he began to institute important climatic enquiries. Like many puzzled travellers before and since, he was struck by the comparative coolness of the climate as compared with any other part of the world in a similar degree of latitude. The solution soon dawned upon Humboldt, and seems simple enough when we know it, consisting of a cold antaretic current which strikes against Chili, and, flowing along the coast of Peru, branches off due west before reaching Ecuador. This cold current of sea water has ever since been

known to science as the Humboldt Current, in appreciation of his discovery and his merits as a philosopher, and it sufficiently accounts for the thermometer on the coast of Peru rarely rising above 70°, while in Columbia and Central America the heat is often over 100°.

I must now bid farewell to Peru for the present, with the conviction that though there are few countries for which there are greater possibilities, yet it seems highly improbable that any great development will take place there during the *régime* of the Hispano-Peruvian. What though the mineral wealth rivals that of Australasia, and the vegetable riches surpass that of Ind, the present feeble Government, supposed to direct the destinies of the unfortunate nation, is more likely to obstruct progress than extend the frontiers of civilisation.

CACERES, PRESIDENT OF PERU.

ALTITUDE OF STATIONS VISITED,

WITH APPROXIMATE DISTANCE FROM LIMA.

Direction from Lima	Miles from Lima.	Name of Station, &c.	Feet above Sea Level.	Mean Tem. (approximate).	Remarks.
		Lima (distant from seaport, CALLAO, 8 miles)	499	69	Rainless.
E.	10	Santa Clara	1,311	73	..
..	25	Chosica	2,800	70	..
..	39	San Bartolome	4,959	69	..
..	43	Aqua de Verrugas	5,839	68	..
..	55	Matucana	7,788	65	Dry.
..	70	San Mateo	10,534	60	..
E.N.E.	79	Chicla	12,215	53	Showery for 3 months.
..	87	Casa palca	13,606	49	..
..	100	Monte Meiggs	17,575	40	Snow limit, 16,500 ft.
N.E.	120	Pacha Chaca	13,420	50	Dry for 9 m'ths.
..	128	Oroya (present terminus of railway)	12,178	52	..
..	148	Tarma (chief town of the Sierra)	9,800	58	..
..	152	Acobamba (perfect climate)	8,900	60	..
..	172	Huacapastana	7,500	62	Rainy.
..	197	Chunchamayo (La Merced)	2,400	76	Moist.
..	222	San Luis	2,200	70	Wet.
E.N.E.	242	Metraro	4,600	64	..
..	253	King Chockery's	2,100	77	Moist.
..	300	Cascades	1,050	79	..
N.E.	183	Junin	13,200	50	Snow showers.
..	203	Carhuamayo	13,300	51	..
N.N.E.	230	Cerro de Pasco	14,518	48	..
..	254	Huarrica	9,600	59	Rains Nov., Dec., & Jan.
..	290	Ambo (delightful climate)	7,400	64	..
..	305	Huanaco	6,075	65	..
N.E.	210	Inca pilka	13,300	47	Snow showers.
..	175	Banios	13,800	45	Frost at night.
N.	240	Chimbote (on sea coast)		68	Rainless.
..	280	Suchiman (on the Santa)	200	67	Dry.
..	300	Truxillo (7 miles inland)	150	71	Rainless.
..	350	Casa Granda	200	68	..
..	360	Cartavia	250	64	Dry.

Of the three aneroids we took with us, one only (Mr. Clark's) remains in order, but the best aneroid is not so much to be depended upon as the boiling point thermometer, which is always reliable.

FLORA OF PERU.

Abutilon. *Venosum* and various, abundant up to 10,000 feet above sea level. Indigenous.

Acacia. *Corniegera*, *Guayaquilensis*, &c. Common.

Achimenes. Numerous, rare, and beautiful varieties on the Perené, 1,500 feet above sea level. Indigenous.

Acineat. *Humboldtii.* Orchid. Crimson and dark brown flowers.

Achras Sapota, or wild plum.

Æchmea. *Mucroniflora.* Common by the wayside. (Bromelworts).

Acrocomia. A pretty palm, growing about 35 to 40 feet in height.

Acrostichum. Climbing ferns, common in moist localities.

Actinomeris. Aster-like plants growing at a considerable altitude.

Adenotrichia. A kind of groundsel.

Adesmia. (Legume.) Evergreen shrub.

Adiantum. The well-known maiden-hair fern. Numerous varieties on the eastern side of the Andes.

Agáve. A very numerous variety of these plants in all the dry regions. Varying in height from 1 to 30 feet, and from sea level up to 14,000 feet. "*Rigida*" produces *Sisal hemp.*

Ageratum. The composite weed which costs Ceylon planters so much to keep it down; growing here from an altitude of 8,000 to 12,000 feet above sea level. Indigenous.

Allamanda. (Dogsbane.) Handsome flowering but poisonous plants.

Alona. Pretty shrubs with large flowers.

Alonsoa. Shrub with scarlet flower. The prettiest seems to be "*Matthews*," about 18 inches in height.

Aloysia. The well-known "Scented Verbena" growing freely in the temperate portions of Peru.

Alströméria. A lovely amaryllid; scarlet and crimson. Native of Peru. Tubers edible.

Alzatea. An evergreen about 20 feet in height.

Amyris. From which resin is extracted. Exotic.

Anacardium. Producing the Cashew-nut and a gum like gum-arabic. Lima gardens.

Ananassa. The *Pine Apple*, and the finest in the world; much superior to any produced at Kew or in India.

Anchieta. A climbing violet.

Andromeda. Pretty heath-like shrub, probably exotic.

Angelonia. Figwort. Herbaceous plant, blue flower.

Anguloa. Pretty pinkish orchid.

Anguria. A creeper of the cucumber family; common.

Anona. (Cherimoyer). The famous fruit of Peru, or indeed of the world. Found in perfection at Huanuea.

A. Muricata, or Sour Sop, is refreshing but much inferior to the above. There are numerous other varieties of Anona.

A. Reticula is the Custard Apple. *A. Palustris*, the Alligator Pear. All indigenous.

Aphelandra. (Acanthads.) Handsome plant with var. leaf and golden pointed bracts. Hot, moist places.

Anthurium. There are numerous varieties of this plant more curious than beautiful, the spathe being the chief ornament. Perené valley.

Apeiba. Genus very common in Peru, but probably exotic.

Araucaria. One of the few conifers to be found on the Cordilleras.

Arbutus. Heath-like shrub occasionally seen on the Plateau.

Areca. On the Montana sometimes seen, but not so common as in Ceylon.

Aspasia. One of the very numerous orchids, chiefly yellow.

Astrocaryum. A graceful dwarf palm, with peculiarly well-marked rings. Common.

Attalea. Another of the palm tribe considerably taller than the above. Nuts used for toys, door handles, &c.

Azara. A Chilian shrub with yellow flowers. Nat. order, Bixads. Lima.

Aristolochia. (Birthwort.) Climber with large flowers, often 1 foot in diameter, worn in play as caps by boys.

Arracacha. An excellent vegetable, similar, but superior, to the parsnip; extensively grown in Peru.

Avocado. *Pear. (Persea Gratissima.)* A much and deservedly esteemed fruit, eaten at every meal when obtainable.

Apples of excellent quality. *Apricots*, and most other European fruits abound all the year round, thanks to the diversity of climate. Even the blaeberry finds a congenial home on the Andes (near Junin).

Alfalfa. The Peruvian name of a first-rate fodder for cattle, an inferior variety of which is known in Europe as Lucerne (*Medicago Sativa*).

Avena. The wild oat, covering whole mountain sides, giving a golden tinge to the landscape near Matucana.

Anemone. Found near the snow limit.

Baccharis. A plant from 2 to 3 feet high with white aster like flowers. Roots sometimes used in flavouring wine.

Bactris. A small palm, common on the Montana, of the same family as the "Penang Lawyer."

Batatas. A convolvulus—the sweet potato.

Barnadesia. (Composites.) A pretty shrub, growing about 4 feet and evidently deciduous. Cordilleras.

Begonia. There are numerous varieties of Begonia in Peru, chiefly bulbous and herbaceous. A common undergrowth in the moist valleys of the Upper Amazon.

Bejaria. Heath-like shrubs, growing to a height of 8 to 12 feet. Indigenous to Peru. Flowers purple.

Berberis. An evergreen variety of this well-known plant is common in the higher regions of Peru. Flowers yellow.

Bertholetia. From which we get the Brazil nuts of commerce. On the Amazon. See specimens in Lima Botanical Gardens.

Besléria. Small undergrowth shrubs, with yellow flowers; growing in the low country.

Bignonia. Gorgeous flowering climbers; found growing near Tarma, Huanuco, and elsewhere on the eastern slopes.

Billbergia. Pretty yellow flowers; herbaceous; native.

Bixa. The Arnatto, used for colouring cheese, &c. Very common and luxuriant all over Peru where any vegetation exists.

Blechnum. A pretty little low country fern ; on the Perené.

Bomarea. An amaryllid with red flowers, the roots of which are sometimes eaten ; triangular seed pods.

Bombax. Silk cotton, like Kapok. Several varieties of this giant tree found on the Perené river.

Brassia Peruviana. This and innumerable unnamed and undescribed varieties of Orchids are found in great profusion in the Pampa Hermosa.

Bromelia Sylvestris. Crimson flowers ; found near Tarma.

Brownea. Red-flowered shrub.

Buddleia. Several, very common by the wayside ; 10 to 15 feet high.

Bougainvillea. A gorgeously beautiful plant found wild in the warm mountain valleys, or with its beautiful rose-coloured bracts covering and hiding many a deformity in Lima. Common in Colombo now.

Byrsonima. A moderate sized evergreen tree, the bark of which is used in tanning.

Bidens. A yellow, aster-like mountain flower.

Bœhmeria. A kind of nettle which affords the valuable *Rhea* fibre ; growing very luxuriantly near Lima.

Cacao. The native home of the Cacao tree—pronounced *Kakow* by the natives—from which we derive our cocoa and chocolate of commerce ; found growing wild from 1,000 to 2,500 feet above sea level.

Cactus. Peru seems also the chief home of the Cacti family. Tens of thousands of acres on the dry precipitous mountains are covered with little else, the grotesque forms and brilliant flowers being alike remarkable.

Caladium. Numerous and beautifully marked.

Calceolaria. This familiar flower is indigenous to Peru, the yellow variety particularly covering whole mountain ranges on the west slopes.

Calliandra. Leguminous plant ; abundant on the Perené.

Canella. A sort of wild cinnamon ; growing freely in the Pampas.

Capsicum. The Chili or Cayenne pepper, "Aji" of the Spaniard, and as necessary to him as salt.

Carica. The Papaw ; a most valuable tree, from which is obtained the papaine ; finest near Lima and Pampa Hermosa ; edible fruit.

Caryota. A noble palm ; found on the Perené. *Horrida*, the "*Katu Kitul*" of Ceylon.

Caryocar. A gigantic tree with large flowers, followed by edible nuts.

Castor Oil Tree (*Ricinus*). May be seen growing wild anywhere below 12,000 feet.

Cæsalpina. Leguminous ; pods used in Lima for making ink ; a variety of our Sappan wood of Ceylon (*Diri Diri*).

Cattleya. Orchid ; abundant in moist valleys, the Perené being especially rich in this plant.

Cecropia palmata. Natural order (*atocarpads*) ; found growing near King Chokery's hut on the Perené.

Centroclinium. Pretty little annuals ; composites.

Cephaelis. The ipecacuanha of the shop ; dwarf creeping plant ; found near San Luis.

Ceratosemma. A kind of tropical cranberry.

Cereus. The best known varieties of the Cacti tribe ; also, some curious monsters.

Calathea. Herbaceous perennial; leaves worked into baskets; tubers used as substitute for potato.

Ceroxylon. Palm, 150 feet in height, producing wax, from which candles are made.

Cinchona. All the best varieties, for which the rest of the world is indebted to Peru; abounding in the Montana.

Chlorophora tinctoria. Tall branching tree, the milk from which is used as a yellow dye—sometimes called *fustic*.

Chrysophyllum. The famous star apple.

Clematis. The white variety, evidently indigenous, but there are many beautiful exotics.

Clitanthus. Native of Peru, seen near Lima; nat. order, Amaryllid; yellow flower.

Clitoria. Leguminous plant; much admired on the Perené.

Coburgia. Scarlet lily, common on the Cordilleras.

Coccoloba. Buckwheat.

Coca. (See Erythroxylon.)

Collania. A very beautiful cream coloured amaryllid; indigenous to Peru.

Colletia. Dwarf evergreen; berries used in dyeing.

Colocasia. Arad; producing eatable tuber.

Commelina. Roots like dahlias; eatable when cooked; and other varieties are evergreen creepers.

Conocarpus. Sometimes called *Mangroves*; evergreen; growing about 10 to 12 feet; used in tanning.

Copaifera. Leguminous plant, varying in height from 10 to 60 or 70 feet; yielding the Balsam of Copaiba.

Cummingia. A pretty little lily-like plant growing in the cooler regions—named after Lady Cumming of Altyre.

Convolvolus drasticus. Growing near Tarma; strong purgative.

Cuphea. Our familiar little bedding friend peeps up at every roadside on the hills of its native Peru.

Carludovica. The screw pine; indigenous; "*Panama*" hats are made from the leaves of this tree.

Calandrinia. Herbaceous perennial, rose-coloured flowers; growing chiefly on Cordilleras; common in our gardens.

Callipsyche. Amaryllid; very pretty.

Cotyledon. Only one variety of this house leek has been found in Peru, viz., "Decipiens" with white flower.

Citharexylum. A verbena; sometimes called fiddle-wood; blue fruited.

Cyphomandra betacea. The "tree tomato"; indigenous to Peru.

Cedrela. Similar to the *Toon* of India, as seen frequently from the Perené.

Cucumis. The cucumber in great variety. A few months previous to my visit to Chimbote the country was flooded the first time for centuries; one result was a crop of rare Cucurbits. Where had the seed come from?

Camellias. Though exotic, in great profusion and perfection.

Cherries. Abundant and good.

Cape Gooseberry. Called "Cape" because it has a hood—a *Solanum* and miserable substitute for the gooseberry; now common in Ceylon, introduced into Australia, and even found by H. O. Forbes on the Keeling islands; indigenous to Peru, however, like many more of this family.

Coffee. (Coffea Arabiea.) Though not indigenous, grows and bears as it was never known to bear in the old world. On the eastern side of the Andes it succeeds admirably from 7,000 feet down to 1,000 feet above sea level, and even at Lima, a few feet above the sea, it bears enormously with judicious culture; the quality is superior. The Pampa Hermosa specially adapted for its culture.

Croton. In great variety, public and private gardens.

Dahlia. Chiefly yellow.

Dalea. Shrub; pale blue lupine-like flower.

Desfontainia. A lovely little evergreen Solanum; common on coast; like gentian, with scarlet flower.

Dicliptera. An evergreen shrub; nat. order, Acanthads; purple flowers.

Drimys. Up country evergreen, with white flowers. *Winteri* is well known as the bark specific for scurvy.

Datura. Nightshades; seeds a powerful poison; showy trumpet flowers; indigenous to and common in Peru.

Daucus. A variety of the carrot found on the Andes.

Dieffenbachia. Nat. order, Araceæ. Perennial, with pretty dark foliage; poisonous plant; grows by river sides.

Displadenia. Dogsbane; climber; purple.

Disteganthus. Bromelia; scarlet flower.

Duguetia. A kind of Lancewood.

Dalbergia. The *Rosewood*, growing at Metrara and Perené.

Dipterix. The tree yielding the Tonka bean.

Divi Divi, or Casalpinia.

Dandelion. Found disputing the snow limit at 16,000 feet above sea level; peculiarly short stalks.

Duranta. Verbenace; evergreen shrub; about 4 to 7 feet high; dwarf variety found on the Andes.

Echinopsis. One of the numerous and curious Cacti family growing on the mountains, and looking like couching sheep; seen at Junin.

Elæis. One of the finest oil palms.

Elder. (Sambucus.) Our *Bourtree*; doubtless exotic, but growing luxuriantly near Chicla, 12,000 feet altitude.

Elisena. A tall, beautiful, and rare amaryllid, growing in Lima.

Encelia. A little yellow aster.

Epidendrum. One of the numerous orchids growing on the trees in the moist valley of the Perené.

Erythrina. Magnificent legumes; the most conspicuous and brilliant flowers on the Perené, growing to a gigantic height.

Eucrosia. A beautiful Amaryllis; native of the Peruvian Andes, near Lima.

Eucalyptus. Though a native of Australasia, grows freely on the mountain plateau, particularly at Tarma; a decided acquisition; several varieties.

Eucharis Amazonica. (Amaryllid.) Fragrant white flowers.

Erythroxylon Coca. One of the most precious plants of Peru. A bush about 3 feet high, the leaves of which seem to sustain the natives for days without any other food, enabling them to undergo fatigue. The leaves are simply chewed with lime or may be drawn like tea. 30,000,000 lbs. are exported from Peru, yielding the world's supply of Cocaine. I found this shrub growing in the Pampa Hermosa, 60 miles from Tarma. Indigenous.

Escallonia. Evergreen shrub; the predominating plant from 8,000 to 10,000 feet above sea level on the east side of the Andes; seems to take the place of Coniferæ.

Ebenaceae. Well represented by a kind of satin wood; abundant near Rio Perené.

Eugenia. (Rose Apple.) A pretty myrtle with pinkish flowers and pleasant fruit; growing on the Cordilleras. A species of Eugenia yields our All-spice.

Eriocaulon. (Pipewort.) A very curious marsh plant with dwarf aloe-like leaves, and long, straight flower stalk.

Eriodendron. (Allied to Bombax.) A large tree growing in the Montana, with red flowers; yielding a kind of wool which might be useful for pillows, &c.

Euterpe. A slender and very beautiful palm which abounds in the Montana, yielding a fruit of similar taste to the chestnut.

Fabiana. Nightshade—but looks more like a conifer. An evergreen shrub; credited with many remarkable virtues; locally known as Piché.

Fuchsia. Peru is the home of this familiar plant, though "*Corymbiflora*" seems the most common; the European florist has, however, certainly improved upon the original.

Ficus. Numerous varieties, but none so gigantic as in India. F. Carica (common fig) does well when irrigated on the coast. I saw large trees near Chimbote.

Fevillea. A rather rampant climber of the cucumber family; seeds yielding good oil.

Fittonia. Evergreen perennial, with pretty coloured leaves.

Fourcroya. A gigantic lily rising to 40 feet in height.

Fragaria. The strawberry; abundant all the year round in Lima; though neither in size nor flavour equal to those supplied during the short season in Aberdeen. Indigenous.

Galipea. Rueworts, from which we get the Angostura bitters, prepared in Port of Spain, Trinidad, and universally appreciated. A small evergreen shrub.

Gaylussacia. A kind of cranberry.

Gossypium. The cotton, some excellent varieties of which are indigenous to Peru; the mummy clothes show that its use had been known thousands of years ago. The best cotton is found near Payta.

Gesnera. The well-known scarlet flower of our green-houses; allied to

Gloxinia. Both found in the Perené valley.

Goethea. Malvaceæ; small evergreen, with crimson flower.

Godoya. Yellow flowering shrub; allied to tea.

Gymnogramme. A beautiful Peruvian species of this fern.

Gentiana. Found near the snow line.

Geonoma. A dwarf palm.

Grias. The Anchovy pear; edible.

Griffinia. Amaryllid; blue.

Gronovia. Climbing annual.

Gustavia. Something like a myrtle.

Gynerium. The Pampas grass; now introduced to and quite common in Australasia.

Gulielma. A curious fruiting palm, growing on the Andian slopes. Bates compared the fruit to a mixture of cheese and chestnuts.

Habranthus. (Amaryllids.) Common on the dry side of the Andes.

Heimia. (Loosestrife). Evergreen shrub, with yellow flowers.

Helianthus. Sunflowers of various kinds, but all yellow flowered.

Heliconia. Allied to *Musa*. 3 to 6 feet high; yellow flowers; found in moist valleys.

Heliotrope. Too well known to need description. This favourite is a native of Peru, adorning and scenting the hill sides near Matucana. All the care of the British gardener has not improved this plant.

Hippeastrum. A bulbous rooted plant growing near Lima, with pretty red and white flowers.

Hippomane. A moderately-sized tree; used in boat building; poisonous.

Hoffmanseggia. A trailing legume; Lima.

Hydrotænia. Flowers like Fritillaria; yellow and purple; seen near Lima.

Hymenocallis. Amaryllids.

Howardia. Evergreen shrub; nat. order, Cinchonacea.

Huntleya. An orchid.

Hibiscus. Malvacea. Many varieties of this have been introduced and thrive but few, if any, are indigenous. *Sinensis*, the shoeflower of Ceylon, grows everywhere.

Hevea-braziliensis. This is the most valuable of all the rubber trees growing in the Perené valley.

Hæmatoxylon. Logwood; found growing in Chanchamayo and Pampa Hermosa.

Hura. Sand box tree; popular remedy for bowel complaints.

Inga. The native Inca name; a large tree of the Acacia family; abundant in the interior. The *Inga Samen* was introduced into Ceylon, and is now being extensively planted near Kandy, forming a refreshing shade by the wayside.

Ionidium. A kind of violet, but used as a substitute for ipecacuanha.

Ismene. The Peruvian daffodil.

Isochilus. A very large-flowering orchid.

Ipomæa. Very numerous and various; from one of which our Jalap is obtained; all convolvulus-like flowers.

Indigofera. Though chiefly natives of East India, I. tinctoria has been introduced into Peru, and is now a troublesome weed in Chanchamayo.

Ixora venusta. (Cinchonads.) Most lovely evergreen shrubs, with rich orange-salmon coloured flowers. See Tangapoo.

Ilex. The holly. Though chiefly indigenous to Britain, there are a few tropical varieties growing here; one called Paraguay tea, another South Sea tea.

Jacaranda. Stove evergreen; nat. order, Bignonia; blue flowers; tree about 20 feet.

Jatropha. (See Manihot.)

Justicia. Evergreen shrub, with violet flowers; tender plant.

Jubæa. Palm, about 30 feet high, the small round seeds of which are sometimes seen being sold in London; called by the Cockney "Little Cokernuts."

Juglans. A splendid, but not yet fully described, species of walnut, growing abundantly in the Perené valley; meanwhile named "*Juglans Gladstonia.*"

Kidney bean. (Phaseolus.) The bean called the Lima bean is a large whitish variety abundant all along the Pacific coast, and a very nourishing food it is—like our haricot.

Krameria. Nat. order, Polygalacea; evergreen shrub; a powerful astringent; useful in dysentery; called Rhatany root in Peru.

Lantana. A pretty Verbena-like flowering shrub, better known in Ceylon than in its own native country.

Laplacea. Nat. order, Theads; a twiner, with serrated leaves and white flowers.

Leopoldinia. A beautiful palm of moderate size, the fibre from which is valuable.

Lettsomia. Nat order, Theads; white flowers; Pampa Hermosa.

Lipostoma. Nat. order, Cinchonads; dwarf shrub; growing in low country; blue bell-shaped flower.

Loasa. A great variety of these curious plants around Lima; interesting and pretty flowers, but poisonous leaves.

Lobelia. Square miles on the mountains are covered with the beautiful blue Lobelia.

Lucuma. (Sapolads.) An indigenous evergreen tree, producing a fruit sometimes called the marmalade plum; grows also in Ceylon.

Lupinus. For all the finest varieties of Lupine the world is indebted to Peru. Covering immense tracts of country at about 10,000 feet altitude.

Lycopersicum. The tomato; a herbaceous variety, and several annuals are indigenous; the so-called tree tomato is not a true tomato. (See Cyphomandra.)

Liabum. Alpine plant; yellow flower; common on Andes.

Lycopodium. Club moss; similar to what we see in every tropical country where there is sufficient moisture.

Logwood. (See Hæmatoxylon.)

Mauritia. Perhaps the most social palm in South America; it abounds in the Pampa Hermosa of Peru, rising to 100 feet; fruit eaten by Chunchos, and the pith yields a kind of sago.

Manihot. The "Juca" and chief food of the Chunchos, yielding the cassava and tapioca of commerce; growing freely in the Pampa. The Ceara rubber is also a species of the Manihot.

Melia, or Bead Tree. Supposed to be a native of India, but common in Peru, as it is in Ceylon or Australia; sometimes called Pride of India or Holy Tree. The famous Margosa oil is a product of this tree.

Macleania. Named after a Scotch merchant in Lima. A species of cranberry; evergreen shrub, with reddish yellow flowers.

Malva. In great variety; annuals; herbaceous perennials; shrubs and trees; many very useful, and all beautiful.

Maranta. Arrowroot; a small shrub growing in the Montana.

Marvel of Peru. (Mirabilis.) Never could see anything particularly marvellous about this common herbaceous plant.

Mahogany. (Swietenia). Too well known to need description; found growing near Metraro.

Maytenus. Nat. order, Spindletree; evergreen shrub with white flower, growing near Lima.

Mimosa. This curious family is well represented in Peru, including the "Sensitive Plant," which, however, does not seem so vigorous as it is on the hills surrounding Kandy.

Maximiliana. A palm resembling the cocoanut tree, named after Maximilian. Lima Botanical Gardens.

Mimulus. The "Monkey Flowers" of our British gardens, including the musk plant, are indigenous to Peru; adorning the ditches by the wayside.

Monnina. (Polygalacea.) A large shrub growing in the Montana, the bark of which is highly prized by the Lima ladies, who ascribe much of their beauty to the use of it.

Myrospermum. Which produces the "Balsam of Peru." A leguminous tree about 40 feet high; Pampa and Huallaga.

Musa. *Plantains*—or, as some are pleased to call them, *Bananas*—grow freely in all the moist valleys of Peru, particularly Chanchamayo; the quality of the fruit exceptionally fine. Named *Paradisiaca*, on the supposition that it is the veritable apple which brought so much woe on mankind. Supposed to be a native of Ceylon, where it certainly grows wild, but had also been known to the Incas of Peru for centuries before Columbus' discovery. Grown in moist sheltered valleys. The leaves are amongst the noblest in the vegetable kingdom, while the fruit is a favourite with every tribe of mankind—the wildest savages I ever saw appreciated their plantains.

Mutisia. *(Aster).* Red and yellow. Chicla.

Maize. To Peru what rice is to India. Several varieties growing from sea level up to 12,000 feet, producing from 200 to 400 fold. Innumerable ways of cooking it, and the chief drink of the country, called "*Chicha*," is prepared from maize.

Matico. (Piper Augustifolium.) A Peruvian pepper abundant on the eastern slope; leaves found useful in stopping haemorrhage.

Mimusops. A gigantic tree, the timber of which is valuable; sometimes called "Cow Tree," as it yields a cream said to be wholesome, but this I think doubtful. Nat. order, Sapotads.

Nicotiana. An immense variety of these poisonous plants, from the *tabacum* to *giganticum*, rising to a tree of 15 or 20 feet.

Nolana. (Solanacea.) Pretty little creepers with bell-shaped flowers: a native of Peru.

Norantea. Handsome evergreen shrub.

Nectandra, or Greenheart. See specimens in Lima: according to Wallace, common on the Rio Negro.

Neodryas. One of the many epiphytes; purple; growing in the forests.

Oca. The tubers of oxalis eaten like potatoes; plentiful on the wayside from Pasco to Ambo.

Ochroma. The light wood of which we formed our balsas (rafts); growing plentifully by the river side.

Œnothera. (Evening Primrose.) Herbaceous, native, and annual variety.

Opuntia. A very curious group of Cacti, growing in tufts upon the highest plateaux. *Cochinillifera*, abundant about Tarma.

Old Man's Cactus. Near Ambo. *(Cereus Senilis.)*

Ornithogalum. A kind of Star of Bethlehem lily.

Oxalis. Numerous varieties of woodsorrel.

Olea. The olive, though not a native, produces abundance of first-rate fruit never tasted finer.

Oleander is also an exotic, but thrives luxuriantly.

Oranges. In great perfection at all seasons.

Orchids. "These flowers," said Humboldt, "sometimes resemble winged insects, sometimes like birds; the life of a painter would not be long enough to delineate all the magnificent orchidaca which adorns the mountain valleys of Peru." While *en route* for Ambo, we met a collector who had succeeded in gathering together from 400 to 500 varieties of these highly-prized flowers. No botanist could desire a more magnificent sight than some of the huge trees on the Perené and Huallaga, the trunks and arms of which are laden with orchids, mosses, lichens, ferns, and Vanilla in the greatest possible profusion and luxuriance. The Odontoglossum variety seems especially rich and plentiful.

Palm. Peru is particularly rich in palms. The wax palm (Ceroxylon) is the loftiest, rising to a height of from 160 to 180 feet; as a contrast others are stemless (Nipa). Between these two there is an immense variety of feathery canes, and the more majestic specimens of this noble family.

Pampas Grass. (Gynerium.) Occasionally to be seen, but not very common.

Passiflora. A great wealth of these beautiful creepers, with their lovely flowers and luscious fruit; varying in size from a pigeon's egg to 8 lbs. in weight. The Granadilla and Pomme d'Or may both be seen in perfection at Huanaco, also at Truxillo.

Pentlandia. (Amaryllids.) Peruvian bulbs.

Perilomia. Evergreen shrub.

Pareira brava. Woody climber; extract used as a tonic.

Persea gratissima. The much-esteemed Avocada pear—sometimes called Alligator pear: eaten at every meal in Peru when obtainable. The Ceylon variety poor in comparison.

Pereskia. Allied to Cactus. Sometimes called Barbadoes gooseberry.

Petunia. Our well-known garden flower in great variety; allied to tobacco—the Brazilian name of tobacco being "petun."

Peumus boldus. Valued chiefly for its scented evergreen leaves.

Phycella. Beautiful little Amaryllid, which might be cultivated like tulips.

Piper. Our pepper, of which there are several varieties, but amongst the Chuncho Indians the best known and appreciated is the *Piper Methysticum*, from the root of which they prepare their *Kava*, by chewing it and ejecting the saliva into large bowls, allowing it to ferment. Ugly old women are constantly employed in the manufacture of this delicacy.

"The Pepper Tree." (Schinus Molle.) So much admired in Australia. Is one of the most beautiful indigenous trees in Peru, seen in great perfection near Ambo. Nat. order, Perebinthacea.

Pitcairnia. (Bromelworts.) A herbaceous perennial with scarlet flowers, growing near Lima.

Platyloma. One of the characteristic ferns of the Perené Valley.

Plumeria. (Dogsbane.) Evergreen trees, about 20 to 25 feet in height.

Polianthes Gracilis. A lily, plentiful around Tarma.

Podocarpus. (Taxads.) A Chilian tree, but common in Peru; evergreen: cone-bearing; 40 to 50 feet high.

Porliera. An evergreen shrub; the peculiarity of which is its sensitive leaves always closing on the approach of rain. (Bean Capers.)

Portulaca. A tuberous rooted evergreen, as its name implies, carrying a milky juice; flowers of various colours; growing in arid places; and used as pot herbs.

Potato. The world has been indebted to Peru for many of its choicest vegetable foods, chief amongst which is the Potato; cultivated by the Incas under the name of "*Papa*" for centuries before the barbarous conquest.

Pteris. The *bracken* is in Peru, as everywhere else.

Puya. (Bromelworts.) Herbaceous perennial, with yellow flowers.

Pyrolirion. The flame lily; indigenous to Peru: golden flowers.

Physalis. (See Cape Gooseberry.)

Phaseolus. The Lima bean.

Poinsettia. Adorning with its scarlet bracts every plaza in Peru, as it does every tropical garden; few plants are more striking to a stranger.

Parasites are the unique feature in Peruvian vegetation. To see a noble monarch of the forest, whose huge trunk and arms are covered with shining Tillandsiæ and a whole host of climbing plants, while high up amongst the branches are brilliant orchids, contrasting with the dark green foliage, is altogether a very marvellous, interesting, and beautiful sight.

Phytelephas. Ivory nut palm; abundant in the Perené valley; yielding the nuts from which we now get our "horn" and "ivory" buttons, &c.

Paullinia. (Soapwort.) Moderate-sized evergreen, yielding the *guarana*; used both for food and physic. Another variety of the same gives us our walking sticks called "Supple Jacks."

Quillaja. (Rosewort.) An evergreen shrub, the bark of which is valued as a hair wash, and to remove grease from cloth; a hardy-looking plant.

Quinoa. Important article of food amongst the Cholos on the mountain slopes of Peru; the seeds of *Chenopodium.*

Quassia. Rather rare, but the tree is occasionally met with in the upper valleys of the Amazon. (Simarubea.) Named after the slave who discovered its use as a poison for flies and a substitute for hops.

Randia. (Cinchonads.) A roundish-leaved, white-flowered shrub; abundant in the Montana.

Rauwolfia. Another common shrub of the *Dogbane* order, with yellow flowers.

Retanilla. (Rhamnads.) Dwarf shrub, with yellow flowers; indigenous to Peru.

Rubus. Several very beautiful and prolific varieties of the *Bramble* growing around Metraro; now introduced into Ceylon by Mr. Clark.

Ruellia. (Acanthads.) A blue-flowering herbaceous plant, rising about 3 feet; Montana.

Rue. There are several varieties of this bitter and strong smelling shrub.

Rhatany Root. (See Krameria.)

Rushes. Around the lagoons there are gigantic rushes—"*Juncus*" and "*Scirpus*"—which, when tied together, make boats or balsas. The Cholo fishermen at Santa I saw going to sea in these curious crafts.

Roses are quite a passion with the Limians, and many fine varieties are cultivated in their gardens; may be said to be their national flower, as Rosa is their Saint.

Salix Humboldtiana. One of the most beautiful of our willow trees; common at moderate altitudes.

Salpianthus. Allied to Marvel of Peru.

Salvia. Both red and blue in great profusion.

Schinus Molle. (Terbinths.) A kind of wine is made from the pungent seeds of this very beautiful tree. (See Piper.)

Sciadophyllum. A pretty large-leaved climber related to the Ivy; yellow flowers.

Scutellaria. (Lipwort.) Scarlet flower.

Smilax. This gives the Sarsaparilla of commerce. A creeping, rather prickly plant; several varieties; most abundant in the Amazon valleys.

Siphocampylos. Allied to Lobelia; bright scarlet flowers.

Siphonia. The best india-rubber is obtained from these trees, the chief home of which is in the Amazon valley. The collecting of rubber is simplicity itself. A tree yields from 2 to 8 gallons a year.

Solanum. (Nightshades.) The number and variety of Solanums, for which we are indebted to Peru, are past being computed: from the lovely little creepers, cultivated only for the flowers, to the now universally appreciated potato—from the microscopic weed to the giant tree.

Stenomesson. (Amaryllid.) Bulbs, producing beautiful yellow flowers.

Sarmienta. (Gesnera.) A creeping red flower.

Schlumbergeria. (Bromelia.) A perennial, with pretty greenish-white flowers; on the Andes.

Senecio. A peculiar variety of groundsel called *Barris's*, with yellow flowers.

Sobralia. Another of the numerous orchids with pink flowers.

Spathiphyllum. Nat. order, Araceæ; evergreen herbaceous perennial; growing in moist, hot valleys.

Schizanthus. (Figworts.) Elegant pyramidal flowers of various colours.

Sanchezia. (Acanthacea.) Sub. shrub; yellow, crimson; very choice; several varieties; in moist valleys.

Syagrus. A cocos-like palm, growing in warm, moist places to a height of about 20 feet.

Swietenia. The mahogany growing abundantly around the Metrero Patenas.

Saccharum. Probably nowhere else in the world does sugar cane grow to such rich perfection as on the irrigated lands near the coast of Peru.

Tabernæmontana. A very remarkable tree growing on the Perené, about 40 feet high, yielding good fibre, also good milk.

Tacsonia. The Peruvian name of a beautiful and useful passion flower, lovely rose and scarlet flowers, and delicious fruits; it makes a grand greenhouse climber.

Theobroma. This well-known native of Peru yields a delightfully refreshing fruit—poetically "Food for Gods"—and commercially affords us our cocoa.

Thibandia. A kind of small-leaved whortleberry; Andes; pretty pendant flowers.

Tecoma. A showy *Bignonia.*

Telanthera. (Amaranthus.) Various; herbaceous.

Tillandsia. Peru is peculiarly rich in this epiphyte; its silvery foliage and beautiful bluish flowers adorn many a trunk and branch around Ambo and Matucana.

Tradescantia. (Spiderwort.) A dwarf annual with blue flowers, growing near Lima; also various kinds with rose flowers.

Thunbergia. These exquisite creepers are common in Peru: the *Laurifolia* with blue flowers around Lima; the pale yellow with dark eye along the roadsides in the interior.

Tropæolum. The Indian cress; often, but erroneously, called *Nasturtium.*

Tangapoo of the Tamils, with its golden pendants. In Lima gardens. [Ixora.]

Tree Tomato. (See Cyphomandra.)

Tomato. Now so well known. Is indigenous to Peru, but we have improved upon the original.

Urceolina. (Amaryllid.) Common amongst the undergrowth on the Montana; yellowish flowers.

Urospatha. Nat. order, Araceæ. A plant growing in the low country with peculiarly pointed spathe.

Vaccinium. Very like our blaeberry; growing up to 14,000 feet above sea level; also as a parasite.

Vallesia. (Dogsbane.) White-flowering evergreen shrub.

Vanilla planifolia. A parasitical orchid, chiefly valued for the perfume yielded by its pods—the Vanilla of commerce; these vines are abundant in the Perené valley.

Verbenas. In great variety; annuals and perennials.

Violas. Various; but chiefly very diminutive.

Vitis Vinifera. Grapes either for table or wine, of a quality rarely produced in the tropics.

V. Amazonica, which we found growing on the Perené, was merely a pretty deception.

Walnut. (Juglans.) Several undescribed varieties on the Perené.

Warrea. An Orchid; abundant.

Weinmannia. Evergreen shrub, with white flower; low moist localities.

Welfia regia. A handsome palm.

Witheringia. (Nightshades.) Dwarf solanum; Montana.

Xanthosoma. Like Caladium, or Yam; yellow flowers; low marshy places.

Xanthoxylon. Sometimes called the toothache-tree.

Xylopia. (Anonads.) Bitterwood; evergreen shrub, with rough-looking unpalatable fruit.

Yucca. The Peruvian name of a well-known lily (Adam's Needle) growing abundantly on the slopes of the Cordilleras.

Zamia. In low hot localities. Nat. order, Cycadaceae.

Zea. Indian corn. Marvellously prolific in the valleys of the Andes; giving amazing returns, and with little toil affording abundant food and drink of the very best quality.

Zinnia. Nat. order, Compositae.

Zygopetalum. Curious orchid; near Cascades.

KINGSTON, JAMAICA. [See Page 122.]

THE WEST INDIAN ISLANDS.

"Oh! Palms grow high on Aves and fruits that shine like gold,
And the colibris and parrots they are gorgeous to behold;
And the negro-maids in Aves, from bondage now set free,
Will welcome gallant sailors a sweeping from the sea."

—*Lay of the Last Buccaneer.*

In returning home, we again passed through Panama, and soon found ourselves once more in the Caribbean Sea. Here we were seized by a desire to see as much as we could of our own West Indian islands. After our sojourn amongst Peruvians and Chunchos, there was now a positive pleasure in moving under the British flag. Our rule may be far from perfect, but I only wish all discontented colonists abroad, and blatant Socialists at home, had an opportunity of carefully contrasting the conditions of life in the South American Republic with that in our British Colonies—the happy laughing negro in Jamaica with the poor dejected Cholo in Peru. Historically, our West Indian Colonies are amongst the most interesting of our possessions, and, though intrinsically of less value than some of the lands we have visited in the upper valleys of the Amazon might be made, as gems of picturesque beauty these islands are not surpassed by any scenery in the British Empire.

We are apt to think of the Bahamas, Jamaica, and Trinidad, &c., as a group of islands almost adjoining: little realising that they are from 1,000 to 1,500 miles apart, and that the number of these West Indian islands have scarcely yet been computed. They are supposed to form the tips of submerged mountains, some of them higher than Chimborazo; that is to say, the water surrounding them is over four miles in depth. Therefore, the rich valleys lying at the bottom of the sea, it follows that we have only got the poor gravelly ridges to deal with! Taking the Bahamas to begin with—our oldest tropical colonies, and the first western land discovered by Columbus—they number hundreds, nay, thousands, the actual number being over 3,000, though only 30 are thought worthy of being inhabited. These lie just outside the tropics, but the Gulf stream flowing in the narrow channel which separates them from Florida, keeps the temperature up, and permits the cultivation of every tropical product; while, as winter resorts, these islands are becoming every year

more famous, the moderate rainfall of 40 inches per annum, and the mildness of the perpetual summer, rendering the climate one of the very finest. The chief industry hitherto has been the gathering of sponges, though the export of fruit comes in a good second. Pine apples, oranges, plantains, cocoanuts, and tomatoes are shipped annually to the value of about £50,000, while sponges amount to over £58,000. There are also some valuable timber trees, such as mahogany, lignum-vitæ, mastic, ironwood, and logwood, though there does not seem to be much enterprise in the direction of utilising these. There has, however, of recent years been introduced an industry eminently suitable for the soil and climate, a product which promises at no distant date to become the leading export. This is sisal hemp, first introduced by that prince of practical Governors, Sir Henry Blake, now worthily succeeded in the Bahamian islands by Sir Ambrose Shea.

Before Sir Henry Blake's time, sisal had only been known in the Bahamas as a troublesome weed. What the Bathurst burr is to the Australian, the ageratum to the Ceylon planter, the sisal plant was to the Bahamian. From time to time vigorous efforts were made to eradicate the nuisance, but without success. The tenacity of the plant was something astounding—

> "The more you tried to pull it out,
> The more it stuck the faster."

The poor islanders gave it up in despair as an irremediable, irremovable pest; and it is not surprising that, when first told of the fortunes that might be made out of the despised weed, the information was received with incredulity.

The best variety of sisal is, however, the *agave rigida*, var. *sisalana*, plants of which were imported by Sir Henry Blake, and freely distributed in the Bahamas, when the value of the fibre and importance of the industry were soon established. The *agave rigida* grows wild in several parts of South America. I found it abounding on many of the poor, dry, gravelly slopes of the Peruvian Andes. There is another plant which yields a large quantity of similar fibre—*fourcroya gigantea*; but the quantity only amounts to 2 or 3 per cent., whereas the *agave rigida* gives 4 per cent., equal to half a ton of merchantable fibre per acre, worth, say, £40 per ton. The only risk is in overstocking the market.

As to suitable land, there is any amount of this beyond the limits of the Bahamas. Many millions of acres seem fit for little

else, and ought to be had for the asking, in both West and East Indies, Australia, and New Guinea. Any poor, rocky, gravelly soil will answer, and the poorer the soil the better the fibre. Rich, moist land must be avoided, as, though producing abundance of leaf, the fibre is inferior, albeit the sisal plant has the property of enriching rather than impoverishing the soil it grows in, as if intended by Providence to prepare the way for other plants.

We reached Jamaica on a pleasantly cool and absolutely calm Sunday evening. The sinking sun glittered on the house-tops, and the bright green foliage of the numerous trees sparkled after a refreshing shower. The grand old blue mountains which rose behind were topped with mist, but we could see just below the edge of the cloud the eerie homes of the soldiers, while on the nearer slopes nestle the no doubt charming homes of the Kingston merchants. "Kingston is just lovely," said a lady at my elbow, and I can only echo her words. To me the scene came as a surprise. I had never heard, or had forgotten, about the natural breakwater which so effectually protects the beautiful harbour. It is eight miles long and from 30 to 60 yards broad; is closely planted with palm trees, which, near by, look like a magnificent hedge; in the distance, a thread of green. On the one side the Carribbean Sea roars, but never breaks through; on the other, all is placid as a mill-dam.

At the point of the peninsula we pass Port Royal—of evil repute—and move on towards the charmingly-situated city itself, half-hidden by the rich and splendid trees, typical of the most favoured of tropical lands. Only an occasional spire, a few big hotels, and the Exhibition building can be seen, with some ugly warehouses, by way of contrast, in front of the picture.

The church bells were ringing—so home-like—as we stepped ashore, but we had had service on board, so I preferred to pass into the public gardens. Crowds of cheery, laughing negro girls walked along the pavement, Bible in hand. I spoke to one, asking my way to the gardens. She volunteered to accompany me, and did so chatting away in the most unsophisticated strain, telling me her life-history in five minutes. Born eighteen years ago, educated at a Presbyterian school, now a dressmaker during the week, a school teacher on Sunday; spoke English fluently and well—knew no other language. We walked into and across the garden. She showed me her church door. I lifted my hat, and we parted, never likely to meet again in this beautiful and not altogether bad world. I now sauntered

through the gardens, and sat down on a seat to rest and ruminate. No! it is not altogether a bad, and it is a wholly beautiful world! The diseased ruffians who speak of it as a "howling wilderness" are most unlikely ever to see a better! Notwithstanding occasional backslidings, as in Peru, the world is unquestionably getting better and more beautiful as it grows older. The men who take delight in a garden like this cannot be wholly bad. A due appreciation of such gifts as we see around us is in itself a song of thanksgiving—more acceptable perhaps to the Giver than the ritualistic chants of many a trained choir.

The brilliant electric lamps threw a kindly light over the shrubs and flower-beds, bringing out the various colours in somewhat subdued shades. The *Dieffenbachia*, under which I sat, showed to great advantage its bold and beautifully-variegated foliage, while the *Dracæna* and *Poinsettia* contrasted so delightfully with the dark-green leaves of the loftier *Magnolia*. "A red leaf, except in the autumn before it falls, is a kind of monster," says Froude, and no doubt he writes with authority; but let him speak for himself. Ordinary mortals love bright colours, and Nature is not niggardly in supplying them. When Humboldt—a much greater authority in these matters—first discovered the *Bougainvillea* in the upper valleys of the Amazon, and *saw that it was not merely a withered leaf*, he fell into raptures over its rose-coloured bracts.

We returned to our cabin in the "Atrata" for the night, but next morning were early astir and ashore to escape the coaling, and to "do" the neighbourhood. The suburbs of Kingston might be the suburbs of Colombo or any other old tropical city. The drive to Gordonstown might be the drive to Hangwella, in Ceylon, or the suburbs of Panama. The vegetation is the same; only, there are some exceptionally fine peeps by the wayside in Jamaica. The ferns are very beautiful, and the palms very noble. The fruit trees are most prolific, and the flowers unusually rich.

The famous Blue Mountains are merely Central Ceylon, with a slight difference. They rise to 7,000 feet, and are not very inviting to a man who has spent the best part of his life in climbing tropical mountains. I can see that much that had at one time been under cultivation is now abandoned, and can guess the rest. Certainly, I had no desire to climb for climbing's sake. Nor did the sugar estates much interest me here. Sugar-cane, except under exceptionally favourable circumstances, is a decaying industry, and the

planters I met here were invariably men with grievances, disappointed with the Home Government, abusing the beet, and swearing by their rum. Probably, as they say, it was easier for Ceylon planters, with less capital locked up in expensive plant, to start a new industry; but, in any case, there is little pleasure in meeting men who have "tint heart." Their chief grievances are the beet bounties, and consequent cheap sugar, and the uncertain supply of labour. What a change since the days of Tom Cringle! Quassie, the negro, has also got his grievance, though no one to see him could suspect that anything in the shape of a skeleton could be found in his cupboard. Yet such is the case; and I am sorry, for I am sure he is in the wrong, and, if he persists in wrong-doing, suffering must ensue. Quassie, in short, hates Ramosamy of Madras, and would have him expelled from the island, not because of any glaring vices, but because his virtues, in the shape of superior industry, usefulness, and general intelligence, are out of all proportion to what he (the negro) has yet to offer; but as the negroes number 40 to 1, it is very necessary to be careful in handling them, and assiduous in guiding them by example and precept.

Of course, we have before heard of such selfishness, even amongst those who consider themselves the most enlightened of nations. Australians, for instance, do not receive the Chinese, nor the "Assyrians," as they call our loyal fellow-subjects in India, with open arms. On the contrary, they put a prohibitory tax upon them, not because they are paupers or an inferior race, but because they (the Australians) are a jealous people, and fear to compete with honest industry. We have seen the same thing in Peru, and there is an attempt even nearer home to get in the thin end of the wedge of exclusion, which may Heaven frustrate! for Britain owes much to the strangers she has had within her gates. Therefore, we need not wonder that the negro should also display this human weakness of jealous exclusion. If happiness be "our being's end and aim," he has, judged by this standard at least, made very considerable progress, and if we can only help to graft on a little of the civilisation of the ancient Eastern world, our object in retaining the guidance of these islands may be something more than defensible. The majority of these blacks are as yet but children, and will be equally happy under any just, firm, and beneficent rule. With a better organised labour supply, there ought to be a great future for Jamaica. Its position is

important, its capabilities great, and now that planters are ceasing to pin their faith exclusively to sugar and rum, progress may be very rapid. Already sugar is taking a subsidiary place amongst exports.

Fruit, dyewoods, and spices are coming to the front, with coffee and cocoa also improving their position. Fruit growing is a very important industry here, sure to develop; the oranges particularly are very fine, much superior to the fearful rubbish sold to passing ships in the East Indies; plantains are a specialty; pines and chirimoyas—though not quite equal to the product in Peru or Guayaquil—are very abundant, and are good enough for the New York market. Cocoa is not so decided a success as one would expect; while the recuperation of the coffee fields hangs fire mysteriously. With present prices one is at a loss to know the reason why. The total exports now amount to £1,903,000; imports, £2,189,000, of which 56 per cent. is with the United Kingdom.

Like most tropical cities, the best part of Kingston is the suburbs. The shops are poor, and the public buildings unsightly. There is a museum, however, in which the curious will find much to interest, amongst other things "the Bauble," which Cromwell ordered to be taken away. It will be remembered that it was in Oliver's time that England acquired Jamaica, hence the possibility of this relic being the genuine "Bauble." Jamaica is peculiarly fortunate in her present Governor, Sir Henry Blake, one of the most energetic and capable of Colonial administrators.

I returned to the "Atrata" a few hours before sailing, and was reclining on a deck-chair vainly meditating on what might have happened had Robert Burns come out here as a planter (as was at one time arranged). Scotsmen think he would have been lost for ever to them and to the world. But who knows? It might have proved a brighter turning point in his life than did the introduction to Edinburgh society. Certainly, if Robbie had ever "ran about the braes" on yonder Blue Mountains, they would have sung a sweeter song to-day. But, hark! the band on a troopship lying alongside strikes up "Auld Lang Syne." Even now the spirit of the poet hovers around us, and breathes a loving goodwill through this now universal anthem—universal wherever the English language is spoken—giving expression to the kindliest fraternal feelings amongst the West Indian negroes as truly as it does at a Scotch

fireside. All English-speaking nations will not join in "God Save the Queen," but I never met the man who could resist "Auld Lang Syne."

The troopship weighs anchor and moves off. Off to Sierra Leone, and few of the poor fellows will ever see Jamaica again. And now we too are off, *en route* for Barbadoes; very little worth noting occurring during this voyage of 1,200 miles. We called at Dominica, taking on a passenger, and had an opportunity of photographing a crew of Carib boatmen. The passenger himself was a full-blooded negro, but dressed in a black frock-coat, evidently a product of Bond Street. He was received on board by a few of the superior beings, who exhibited their Cockney breeding by bawling out, "Where did you get that 'at," and a few such choice quotations.

Having arranged his baggage, the new arrival walked into the music saloon, amidst whispers of "What's the world coming to?" ask him for "Susannah, don't you cry," &c.

After a time, as if to while away a weary moment, our dark friend seated himself at the piano, and with perfect self-possession began to look through the music, which, being all of the "Hall" order, he found nothing to suit. Throwing it aside, he played from memory some of Mendelssohn's overtures with a delicacy of touch which took the company's breath away. He received but few thanks, but I heard several suppressed exclamations of "Well, I never!"

In this small world I believe I afterwards had the pleasure of meeting this gentleman in England as Editor of *Fraternity!*

At Barbadoes we were transferred to the "Dee," bound for Trinidad, where we arrived in time to eat our Christmas dinner.

Trinidad is our next largest island in the Carribbean Sea, but in real intrinsic value I would be inclined to give it the first place amongst our West Indian island colonies. A more recent slice from South America—the distance being only sixteen miles from the mainland—we have here something better to deal with than the mere ridge of a submerged mountain. The contour of the island may be described as undulating, no part rising higher than 3,000 feet. The soil, evidently richer than the average of Jamaica, and, less liable to hurricanes than any of the other islands, is more suited for those very remunerative products—cocoa, nutmeg, cocoanuts, plantains, &c. I say nothing of sugar, as I am disposed to think that it has been overdone on these islands, and that the day will

soon come when they cannot possibly compete with the Pacific coast in the production of this commodity.

The climate of Port of Spain, the capital, is Colombo over again. Meteorological observations place the "means" at the Trinidad capital 3° lower as regards temperature and 5 inches less rainfall. That is to say, the mean average temperature of Colombo is 80 8—about the highest average of any city in the world—the Port of Spain following close upon it with 77°; and while Colombo seems to enjoy 88 inches of rain, the chief city of Trinidad gets an average of 83 inches. The difference is not appreciable by the European visitor, to whom anything over 75° Fahrenheit is misery, and a few degrees more only makes him "miserable still," as Carlyle said when he gave up smoking.

It is generally supposed that the warm waters of the Orinoco, which strike against the island, intensifies the heat of Trinidad, but observations do not bear this out. The maximum heat is exactly the same as at Colombo, but the variations are greater. Moreover, the Port of Spain will hold its own with any city in the world for the rankness of its smells and the viciousness of its mosquitoes. Sanitation is a much-neglected science in the Western tropics. The sluggish, sleepy-looking Turkey buzzard is as inferior to the active, little crow of Colombo as the big-boned negro is to the lithe Tamil coolie.

The population of the city numbers 35,000, of which about one-half seem absolutely idle, but all sleek and fat. Few cities present a greater mixture of races. Every nation is represented, from the grave but ever-diligent Chinaman to the merry but ever-indolent African. To the Tamil coolie this is indeed a veritable paradise, with "Sam blam" 200 per cent. higher than in India, easier work, and, for him, a delightful climate. Nor is Ramosamy slow to take advantage of his opportunities. As the savings bank shows, the Tamils have a much better balance at their credit than any other race in the West Indies. The pity of it is that the habits and general deportment of our good friends the Tamil coolies do not seem to improve with prosperity.

Ramosamy here ceases to hide the tobacco pipe when he meets master, and, shocking to say, even the beautiful Mootama disfigures her pretty mouth by smoking a dirty clay pipe! In vain she dresses in her showiest attire, and loads herself with jewellery more precious than any Canganie's daughter in Ceylon can boast of. It is

simply impossible to look comely with a clay pipe in the mouth. But for these excrescences I might fancy myself on the Bund, in Kandy, Ceylon. The surroundings here are equally beautiful. In situation more favoured than Colombo, the Port of Spain claims, and with some reason, to be the loveliest of all the beautiful little cities of our West Indian colonies. The rich tropical scenery in which it nestles is rarely equalled, and could scarcely be excelled. The buildings are nothing to boast of. The Roman Catholic Cathedral is the best, and the English Church is also a good substantial-looking erection; but both look all the better for the stately palms that stand guard around them. The best hotel—absurdly called the "Ice-House"—is nothing more nor less than a huge drinking bar, with a few bedrooms attached. There is a very fair Public Library, presided over by a young Irish lady, who makes an admirable librarian.

Probably the most prosperous industry of this city is, however, the manufacture of Angostura bitters. These popular bitters, which give relish to the finest "cock-tails," are made, and made only, in Port of Spain from the bark of a small shrub (*Galipea trifoliata*), belonging to the Rue family. We called at the large factory in passing, but found that there was some difficulty about admittance, and did not feel sufficiently interested to persevere. The old Government House was burned down some years ago, but His Excellency now very snugly puts up in a beautiful house in the midst of the Botanical Gardens. These gardens are the prettiest of all the gardens in the West, and second only to that paradisiacal spot on the banks of the Mahavillaganga, Ceylon. Mr. Hart, the superintendent, is the very beau ideal of a useful, obliging, and laborious director, a born botanist, enthusiastically fond of his calling, and a keenly intelligent man generally. A visit to the gardens with such a guide is a valuable object-lesson, in itself worth going thousands of miles to enjoy. Mr. Hart is no mere bookish collector and dry classifier of all sort of plants; his chief aim seems to be to find out the most useful of our economic plants, and thus, by making himself practically useful to planters and agriculturists, to advance the best interests of his adopted colony. Trinidad has a number of strings to its bow, and ample room to extend. Almost any tropical product will thrive luxuriantly in such a climate, but the best thing at present is—and probably for many years to come will be—her cacao.

The climate is peculiarly adapted to this shelter and moisture-

loving tree. The humid heat and fairly good soil of Trinidad produce such cacao trees as are rarely to be seen even in the upper valleys of the Amazon, and never yet in Ceylon. Nevertheless, as Mr. Hart very pertinently points out, in his annual report for 1890, it would be most unwise for planters to confine their attentions to any one special product, however profitable it might promise to be.

"We have it in history," says Mr. Hart, "that in Jamaica cacao was once extensively cultivated, but that it was destroyed by a blast. We have it that in several other portions of the world cacao has been afflicted with various diseases when cultivated in large areas. Though far from wishing to become a prophet of evil, I would ask the question, whether such blast (of whatever character it might have been) may not be liable to occur again? History teaches that when large areas of a single product are continuously cultivated, the balance of nature is upset, and when an enemy makes its appearance, the field for its growth is so large that it is impossible for man to contend against its ravages.

"The coffee leaf disease in Ceylon is a familiar instance, which resulted in the almost total destruction of an industry at one time perhaps the most thriving of the present century. What would be the state of Trinidad were such an affliction to fall upon our yeoman's industry. Our cacao walks? Such would be too fearful to contemplate, and should urge us at all risks—in season and out of season—to do our best to seek out other suitable 'subsidiary industries' and to form *nuclei* of other products, if nothing else, which could be extended readily on signs of approaching trouble becoming apparent to our cultivators. For although cacao is to-day the second industry of the island, and soon likely to become the first, it will probably have its bad times as well as sugar, and happy will be the proprietor who was wise enough in time of prosperity to provide against future evil by having his eggs in several baskets."

There are indeed many "subsidiary industries" by which the planter might profitably supplement his cacao-growing here.

Coffea Arabica, for instance, has evidently never had a fair trial. The attempts one sees to grow it by the wayside, choked by weeds and under the drip of jungle trees, is enough to convulse an old Ceylon man.

Coffea Liberica, however, would probably be found much more

suitable for this climate, the vegetation of which is all of a low-country type. "There is," says Mr. Hart, "unmistakable evidence that coffee can be grown in Trinidad if only properly cultivated, but I find a general disinclination to cultivate it in anything but a desultory sort of way."

Amongst the other industries and products he suggests are:—Cardamons, pepper, gambir, tobacco, rubber, nutmegs, Ramie, maholtine, Tobago silk grass, Gunjah, plantains, and numerous tropical fruits.

Cardamons we know something about, and although they grow and yield here quite as freely as in their native home in the East, the market for the product is but limited.

Pepper of various kinds might doubtless find a ready market, and *gambir* is a tanning substance evidently much in demand. The plant (*Uncaria gambir*) grows here without any special care, and it is said to be advantageous to combine black pepper culture with that of gambir. The product is prepared for the market by simply boiling the leaves, the preparation being worth about 27s. per cwt.

Tobacco is, of course, a weed; especially on the adjacent island of Tobago, from which it—either the island or the weed—derived its name. The plant is not much cultivated in Trinidad, being chiefly confined to the south of the island. The tobacco cultivated is solely of the Cuban variety, remarkable for its kid-glove-like appearance, its small veins, its fine aroma, being, in short, a good cigar tobacco.

Rubber.—There is, Mr. Hart says, an increasing demand for the various kinds of rubber trees, especially the *Castilloa*, which is doing well both in Trinidad and Tobago, and there is every encouragement to persevere in this industry, the demand being unlimited. *Ficus elastica*, from India, grows splendidly, and so, of course, does *Hevea Braziliensis*, and the various *Manihots*.

Nutmegs grow and bear much better than in Ceylon, and these West Indian islands might easily supply any demand ever likely to arise for this product without fearing competition from the East.

As to fibres, Mr. Hart does not share the sanguine hopes of the Bahamians with regard to *sisal*. Circumstances alter cases. The climate and soil of Trinidad is unsuited for the *Agave rigida*, not certainly for its growth as a plant, but the fibre would be inferior to that produced on a poorer soil and in a less humid climate.

Ramie (*Boehmeria nivea*) and *Maholtine* (*Abutilon periplocifolium*) are specially recommended, one of the points in favour of the latter being the ease with which the stems of the plant submit to decortication and ultimate preparation.

Tobago Silk Grass (*Fourcroya cubensis*), which grows so freely both in Tobago and Trinidad, has been experimented upon by Death and Kennedy's machine, and proved to be the most promising of plants under trial, the quality and quantity of the fibre being such that it seems doubtful if any plant grown in these islands can compete with it. In cheapness and in quality the indigenous *fourcroya* is said to be here superior to the exotic *agave*.

I approach the next product indicated in the above list with some trepidation. "During the past year I have been asked," says Mr. Hart, "for information with respect to the cultivation of a drug called Gunjah."

Gunjah, or *Ganja*, is a preparation from the flowering tops of the hemp plant (*Cannabis sativa*), introduced into the West Indies by our Tamil coolies, who, sad to say, are very fond of indulging in this stimulant, albeit, amongst the most useful and loyal subjects of a Christian nation. We, their superiors, while, for our own gain, gladly supplying them with oceans of new rum, think it our bounden duty to dictate to them on the subject of ganja, and forthwith pass what we hope may be a prohibitory law, imposing "a duty of £100 on every acre or part of an acre grown." "Yet," adds Mr. Hart, "it is quite possible to grow and sell the drug at a large profit. Estimating the return of crop on an acre of land at one thousand pounds weight; by selling at 16s. per pound, the large sum of £800 stands clearly revealed, and as the cost of cultivating and curing the crop from an acre of land would at the outside not exceed one fourth of this amount, it would leave a clear profit of £500 per acre after paying the licence." It is curious to find this old friend cropping up in the West as a new product. Cultivated in Asia and Europe from time immemorial—in the latter country for its valuable fibre, in the former for different purposes, but chiefly for the resinous secretion which gives its narcotic or intoxicating qualities to the ganja of the Tamils, and the bhangie or hashish of the Mahometan. Europeans in India, while enjoying their own special beverages, have a great horror of the hemp product, and during the silly season editors find it a prolific subject to comment upon. Yet, for one man to

be seen dazed by bhangie a hundred may be seen drunk with alcohol. Speaking of the use of ganja, the "Official Guide to Economic Botany," published at Kew, says:—"To a beginner two or three pulls are sufficient to produce intense giddiness and prostration for five or six hours, followed by a refreshed feeling. Habitual consumers feel no inconvenience." Dr. Moreau, of Tours, who has written an elaborate work on the subject of hashish, based not only on general observation but personal experience, describes the sensation as "really happiness . . . and by this I imply," he adds, "an enjoyment entirely moral and by no means sensual, as we might be inclined to suppose. The hashish eater is happy, not like the gourmand or the famished man when satisfying his appetite, nor the voluptuary the gratification of his desires, but like him who hears tidings which fill him with joy." On the other hand, as already indicated, there are many experienced old residents in India who have everything that is bad to say both of bhang and opium. The fact, however, remains that the Tamil, next to the Chinese, is the soberest, thriftiest, most useful and industrious tropical labourer in the world. All the more reason perhaps why he should be protected from undue temptation: but, at the same time, it would be well if over-zealous reformers would more frequently turn their attention to those beams in our own national eyes.

Of *Plantains* and other fruits there are a superabundance in Trinidad, particularly the plantain *Musa sapientum*, familiarly enough known here as "Gros Michel fig"; and *Musa Cavendishii*, called "Governor fig," or "Figue Trinidad"! The plantain, being grown upon many of the young cacao estates for shade purposes, the fruit is simply allowed to run to waste; and we fully sympathise with Mr. Hart in his desire to see this valuable food utilised. A very profitable and important industry might here be developed by the manufacture of *plantain meal*. It is well known that from the dried fruit of any of the genus *Musa*—call them plantains, bananas, or figs—there may be made a most wholesome and palatable meal, capable of sustaining life for long periods. It is easily digested, and, in the form of gruel, is a perfect food for infants and invalids. I have noted samples shown at several exhibitions, and always most highly commended, but there the matter ends. No capitalist seems to have as yet taken to advertising it, like Rava lenta, Mellin's, or other vaunted, but probably less palatable and less nourishing, foods.

The *Orange* is, however, the pet product of the present Governor, and the efforts of His Excellency to induce proprietors to plant up large areas of this fruit find full expression in the following pithy placard sown broadcast over the island:—

"TO AGRICULTURISTS OF ALL CLASSES.

"Have you ever heard of the oranges of Florida? Perhaps not. Well, they are a most sweet and luscious fruit. Florida is the most southern of the United States of America. Orange culture is an industry of comparatively recent growth there, but it is now well established, and thousands of people, both large and small planters, are making plenty of money by it. The oranges grown in some of the Bahamas Islands, and especially in Andros Island, are quite as good as those of Florida.

"Millions of oranges are sent every year from the Bahamas, Jamaica, and Florida to New York, and they find a ready sale. Two or three years ago England imported in one year 180,000,000 oranges from the Azores. That only means six oranges for every man, woman, and child in Great Britain. More are wanted for England, for America, and for Canada especially. The population of these great countries is increasing most rapidly. The demand for oranges is increasing. Where is the supply to come from? Trinidad can grow fine oranges! How many people grow them? We have not enough for our own wants! Is there any man in the valleys of Diego Martin, Maraval, Santa Cruz, St. Joseph, or Couva that has 100 trees in bearing? I do not think so; and yet these shady and well-watered valleys and districts would yield their millions, and these millions, if properly picked and packed in paper and in crates, would find a ready sale. Mr. Russell Murray, of Port of Spain, will buy all you can send him at 55 cents per crate of 155, and he will supply you with the crates, paper, and nails for nothing. 200 orange trees are sufficient for one acre of land.

"A good orange tree will give you between 400 and 1,000 oranges a year. An orange tree will bear for 60, 70, or even 80 years. Mr. Hart has at the Botanical Gardens over 2,000 young trees; these are being sold at two cents each.

"I much wish to encourage the growth of this and other fruit, and the Agricultural Board, of which I am President, will give a prize of £50 to the first man who can show the best acre of growing orange trees three years old, and £25 to the first man who can show the best half-acre. Whilst the trees are growing you can raise pumpkins, melons, and other vegetables between the rows. By these small industries every man who has a cottage and a few square yards of garden can improve his condition. He can get money enough to pay his children's school fees, to buy for himself and his wife some good clothes for Sunday to go to church in, and he can after that put the remainder of his earnings into the savings bank,

and thus have what is called a 'Nest egg,' which, perhaps, in his old age he may much want.

"Between September 1st and December 31st last year, we sent 853,000 oranges to America. I want 85,000,000 to be sent, and it only remains for you to grow them. If you want any instructions as to soil, cultivation, picking, or packing, come and see me or the Superintendent of the Botanical Gardens.

"WILLIAM ROBINSON.

"GOVERNMENT HOUSE,
"12*th January*, 1891."

The Botanical Gardens are altogether admirably kept. Nature has, indeed, done her part so ungrudgingly that there is little left for art to mend, beyond the clearing of little vistas to show the stateliness of the noble trees in all their beautiful proportions. We have seen the Tasmanian trees rising to twice the height of any plant here, but what coarse, ragged giants they were compared with the superbly graceful forms around us. One of the most striking is the *Palmiste* (*Oreodoxo oleracea*), standing with its straight polished pillar over 100 feet in height, but there are many others of more elegant habit and delicate drapery, and many with flowers of brilliant hues. There stands the *Erythrina* with vermilion and the *Eriodendron* with bright scarlet flowers towering 150 feet above us; the very curious cannon-ball tree (*Couroupita Guianensis*), with any amount of ammunition hanging ready around its hardy, massive trunk; the *Andria* with purple buds, and *Acacias* of untold varieties; the very stately travellers' tree (*Ravenala Madagascariensis*), with its plantain-like leaves so symmetrically arranged; our friend the toddy tree (*Borassus flabelliformis*), one of the most important and most beautiful plants on earth, grows here in as great perfection as it does in its native Ceylon; *Latania*, with its broad, feathery leaves, and *Licuala*, a dwarf palm, both from the East Indies. Amongst the smaller shrubs, I note the *Erythroxylon coca*, curiously enough imported from Ceylon instead of from its native and neighbouring Peru. The most marvellous plants in Trinidad are, however, the *Lianas*, creepers or climbing plants, apparently endless in length and variety, embracing the biggest trees, and climbing to the top of the loftiest, dropping down to the ground again, then going up another tree trunk, and yet another, intertwining amongst the branches, and thus weaving an interminable jungle as impenetrable as it is gorgeously beautiful. The *Lianas* are

the plants which specially aid tropical vegetation in exhibiting the extraordinary luxuriance for which it is so highly extolled. Perhaps it is because of this that one has here been named the "Scotch Attorney!" and another in Ceylon the "Colombo Agent," or *possibly* it may be because they often kill by constriction the trees which originally supported them, or ultimately take the place of the old decayed stumps by whose aid they were able to rise. It is the morbid apprehension of this which leads old planters to speak of all new arrivals as "Creepers." Amongst the *Lianas* peculiar to this locality may be mentioned: *Passiflora*, *Bignonia*, *Banisteria*, *Paullina*, *Aristolochia*, *Bauhinia*, *Calamus*, the *rattan* of Ceylon, which the Singalese say has neither beginning nor end. Amongst the more minute plants and flowers which form the spacious carpet upon which we tread, the "sensitive plant" is often repeated. The ferns and grasses——. But why should I attempt to picture these Botanical Gardens in detail. Did not that master of words and most admirable of men, Charles Kingsley, spend his Christmas here? And yonder is the identical *Inga Saman* tree, under the grateful shade of which he leisurely blocked out his delightful book; in the recollection of which I hasten to explain that we are merely passers-by—poor prosy planters commissioned to report upon certain cacao lands, and the sooner we find our way up yonder valley the better.

But planting life in Trinidad differs somewhat from that of Ceylon, and the comparison is not always in favour of the former. The Trinidad planter has evidently not yet arrived at that stage of civilisation when "the boy" daily puts down a couple of extra knives and forks for the travellers who may drop in, and the best bedrooms must always be ready for the strangers who come within the gates. They manage things differently in Trinidad, and a day after our arrival we got word that it would take two or three days to sweep out the estate bungalow for our reception. Moreover, it was Christmas, and everyone was more or less excited. The races were on, and all Trinidad and the adjacent islands were *en fête;* just as it happened a quarter of a century ago, when Charles Kingsley wrote his delectable description of the scene, from which I cannot do better than quote:—

"I have been to the races: not to bet, nor to see the horses run, not even to see the fair ladies on the grandstand in all the newest fashions of Paris, *viâ* New York, but to wander *en mufti* among the

outside crowd, and behold the humours of men. And I must say that their humours are very good humours; far better, it seems to me, than those of an English race ground. Not that I have set foot on one for 30 years, but at railway stations and elsewhere one cannot help seeing what manner of folk affect English races, or help pronouncing them, if physiognomy be any test of character, the most degraded beings . . . which our pseudo-civilisation has yet done itself the dishonour of producing. Now, of that class I saw absolutely none. I do not suppose that the *brown* fellows who hung about the horses, whether Barbadians or Trinidad men, were angelic mortals, but they looked like heroes compared with the bloated hangdog roughs and quasi-grooms of English races. As for the sporting gentlemen, I can only say they looked like gentlemen, and that I wish in all courtesy that they had been more wisely employed.

"But the negro was in his glory. He was smart, clean, shiny, happy, according to his light. He got up into trees and clustered there, grinning from ear to ear. He bawled about Barbadian horses and island horses, and sang *extempore* songs. The (Tamil) coolies seemed as merry as the negroes. Even about the faces of the Chinese there flickered at times a feeble ray of interest. The coolie women sat in groups on the grass—Ah! Isle of the Blest! where people can sit on the grass in December!—like live flower-beds of the most splendid and yet harmonious hues. As for jewels of gold and silver, there were many there on arms, ankles, necks, and noses, which made white ladies fresh from England break the Tenth Commandment.

"I wandered about, looking at the live flower-beds, and giving passing glances into booths, which I longed to enter, and hear what sort of human speech might be going on therein; but I was deterred, first by the thought that much of the speech might not be over-edifying, and, next, by the smells, especially that most hideous of all smells—new rum.

"The hobby-horses swarmed with negresses and Hindoos of the lower order. The negresses, I am sorry to say, forgot themselves, kicked up their legs, shouted to the bystanders, and were altogether incondite. The Tamil women, though showing much more of their legs than the negresses, kept them gracefully together, and sat coyly, half-frightened, half-amused, to the delight of their husbands.

"As I looked on, considered what a strange creature man is, and

wondered what possible pleasure these women could derive from being whirled round till they were giddy and stupid, I saw an old gentleman, seemingly absorbed in the very same reflection. He was dressed in dark blue, with a straw hat. He stood with his hands behind his back, and a sort of wise, half-sad, half-humorous smile upon his aquiline, high cheek-boned features.

"I took him for an old Scot; a canny, austere man; a man, too, who had known sorrow and profited by it; and I drew near to him. But as he turned his head deliberately round to me, I beheld to my astonishment the unmistakable features of a Chinese. He and I looked each other full in the face, without a word; and I fancied we understood each other. We walked off in different ways, but that man's face haunts me still; and I am weak enough to believe that I should know the man, and like him, if I met him in another planet a thousand years hence."

And who knows? dear, old Charles Kingsley and his contemplative Chinaman may have met and had many a confab by this time in some bright planet beyond. Ay! who knows?

Meanwhile, the same annual tomfoolery goes on at Port of Spain! On the whole, the scene in the paddock adjoining the beautiful gardens is a poor farce. The villains of the play seem chiefly supplied by the military depôt in Barbadoes, and, having had the companionship of some of these "hang-dog roughs" on board the mail steamer, I had ample opportunity of studying the character in all its bluster and bumptiousness previous to the races. It was after the races, however, that the "hang-dog" look became fully developed, and, as I looked upon the repulsive specimens of humanity returning homewards, I could only mutter to myself, Poor wives! poor mothers. God help *them!*

But here at last comes the trap to take us to —— estate. A lovely ride, past the reservoir, and some miles up the valley, through abandoned sugar estates, and at length we come to a *cul de sac*, when a short walk takes us to a rather pretty little bungalow on a knoll, with a tiny garden in front choke-full of *Crotons*, *Dracænas*, *Vincas*, *Dieffenbachias*, &c. The bungalow itself we found to be cleanly swept though not garnished, and there was a somewhat musty smell of fermented cocoa or something worse. Our host, a good-natured Irishman, was very hospitable, and did his best to make us comfortable by providing a decent dinner, and one good, large bed, to which we retired before the evening was far spent. But as the

hot night advanced the smells increased, till sleep was out of the question. In vain we opened the window and left the door ajar. Still the stinks waxed stronger. Daylight at length came to our relief, when a search revealed the fact that a dead hen lay below the bed and a dead dog on the door-steps—both supposed to have been bitten by snakes. Somehow we didn't enjoy our breakfast, but were glad when we saw mules saddled to take us to the top of the ridge.

This is said to be a cacao estate, and here and there we came upon patches of that valuable product in a half wild, but wholly luxuriant, state, smothered in weeds and jungle, yet bearing enormous crops wherever the tree has sufficient freedom. Spasmodic attempts had also been made to grow coffee along the sides of the path, but the weeds had proved too many for this more tender exotic. By and by we come to a "new clearing," so-called, a perfect chaos and jumble of weeds, fruits, and vegetables, the most sightly being the always beautiful banana leaf. The explanation is that, according to the old Spanish custom, the planters in Trinidad still do their planting by contract, allowing the contractor to grow anything he likes amongst the young cacao plants until the fifth year, when the new plantation is handed over to the estate superintendent. It is a slovenly system, and it says a great deal for the climate and soil of Trinidad that cacao struggles through the treatment and thrives as it does even in patches. We thoroughly enjoyed the lovely look-out from the top of the ridge, and especially the pure air, and were it not that we know the danger of "sitting down to cool" in the tropics, we would have lingered longer over the scene. As it was, we took ample notes for an elaborate report to the proprietors in London, which, I hope, proved of interest to them, but would scarcely be suitable for these pages.

'Twas afternoon ere we returned to the bungalow, and the rain was pouring heavily, as it must often do here, where they get 100 inches a year, and never a dry month. We were scarcely seated in the verandah when my ever-active fellow-traveller was up again, seized with a desire to have another ride, but I feigned weariness, though, I must here confess, I was no sooner left alone than I crept away into the jungle, passing *en route* the coolies' garden. I had often looked into a coolie's garden in the East, and it was not without interest that I went to see what Ramosamy had by way of vegetable food in the West. Plantains, of course, prince of

fruits, and noblest of leaves, are there, and are always a glad sight. The *Mandioca* or *Jatropha* also—here greatly appreciated, for the coolie soon comes to know a good vegetable; then the *Granadilla* twines round his fence, and the great coarse pumpkin takes up no end of space, while the sweet potato creeps along the ground, and the more robust yam grows in odd corners. There are other plants not quite so common in Ceylon. The Cho-cho (*Sechium edule*), a kind of cucumber, only introduced the other day from Jamaica; the Lima bean, a first-rate vegetable; and the earth nut (*Arachis*). But here is a tuber I never before saw; the coolie calls it "Topinambour," and runs into the hut for a half cooked root. Why! it tastes like chestnuts and potatoes mixed! Yes, Ramosamy knows what is good for him; and look at his array of herbs, "Cheddeys," which no man but a Tamil would tackle. He evidently pitied my ignorance, and followed me into the jungle, watching my movements as you would a child, and calling out words of warning as I looked at the fruit of the *Datura* and other poisonous *Solanums*. "Don't eat that!" was repeated over and over again, both in broken English and half-forgotten Tamil. It is marvellous how much a coolie knows of botany compared with the ordinary English labourer, or even with men with very much grander pretensions. J. A. Froude, for instance, tells a sensational story of being tempted by a companion, while here in 1888, to taste some nice-looking ripe fruit from the *Strychnos nux-vomica*, and his life was only saved by a gardener, who stopped him in time. It would probably be *infra dig.* for an illustrious *litterateur* to profess to know *Strychnos* from a strawberry. Albeit, it is a curious confession. I like the coolie none the less for his practical knowledge of economic botany, and it might not be altogether out of place here to give a few hints as to the rules which chiefly guide him in the choice of unknown fruits. Some say, "Oh, you have only to watch the birds," but that won't save you, for birds eat freely of *nux-vomica*. The result of Ramosamy's experience is briefly given as follows:—

1st. Avoid all brilliant colours, bright blues, crimson, and especially jet black.

2nd. See that the remains of the calyx, *i.e.*, the outer shell of the flower, is sticking firmly on the fruit, as we find it on the gooseberry or apple, and you may eat without hesitation. The fruit may not be very palatable, but it will not be poisonous.

3rd. When the fruit of a tree is quite smooth—like the cherry—*and has no stone inside*, ten to one it is rank poison. The cherry has no remains of the flower upon it, but it *has a stone*, and it is quite wholesome. The potato plum is smooth and has no stone, and is therefore poisonous.

There are some exceptions to the last rule, and the tomato is one of them. Though long considered poisonous, people have within the last 40 years acquired the habit of eating it with safety and some imaginary benefit.

The "coolie" is a born herbalist, and his native tropical land furnishes him with numerous resources—their very number forming an *embarras de richesses*. A Canganie, whose wife was ill, once told me he had given her seventeen different drugs, and still she complained! I prescribed another, viz., *Ipecacuanha*, which had the desired effect. My self-appointed guide points out a weed which, he declares, if applied to the tongue, has the property of clearing the eyes of sand; but I had no opportunity or inclination to test this. Another, which has the marvellous virtue of thickening skimmed milk! a well-known plant, which, for obvious reasons, I decline to name!

Here, by the way, I made the acquaintance of these most curious of insects, the parasol ants, *Atta Cephalotes* (*Œcodomo*), which, after denuding a tree of its foliage, were marching in myriads, each holding up a portion of a leaf, like the Kandian carrying his talipot. It has been discovered that these proverbially wise and industrious insects actually cultivate a nursery garden in which they grow for food certain kinds of fungi on these leaves. One wonders if *Hemileia Vastatrix*, or coffee leaf fungus, would suit their purpose. If so, I should much like to give them an introduction to Ceylon!

My sable friend now quite entered into the spirit of my adventure, pulled down an *Aristolochio*, and placed the flower gaily on his head; helped me to some of the fragrant *Pothos*, or white flowers from the *Tabernæmontana*. The scarlet *Aphelandra*, rich *Begonias*, and tall *Bignonias* are there; as also tree ferns, maiden hair and mosses, *Heliconias*, several kinds of *Pitcairnia*, and strange-looking *Lianas*—which in the dusk look like great boa-constrictors—while over all the motherly *Ceiba* (*Erythrina umbrosa*) throws her grateful shade, and nurses on her great arms many a brilliant orchid. I could wish I had days here instead of hours. But I had now to seek shelter from the pouring rain, and, fortunately, I was not far from the bungalow. For the tenth time that day I found my host running in his tray with the

damp, musty cocoa nibs. Surely there is something wrong with this system, or, rather, want of system. In these days of improved appliances, one would expect to find a patent drier, or, at least, a Clerihew. The present antiquated mode of drying is both costly and very uncleanly, and whatever may be said as to the necessity for the elaborate and lengthened fermentation, the barbarous and filthy method of rubbing over the mouldy beans with earth is indefensible. Ceylon planters, at least, having a dislike to "dirt in the wrong place," have never adopted the practice, and the price they get for their produce in Mincing Lane is the best comment on their system of curing. Still, the planters of Trinidad, as Mr. Hart says, are very conservative and slow to move. Some, however, have written to the Director of the Botanical Gardens, Ceylon, for information on the subject, and they elicited the following reply :—

"Many inquiries have been addressed to me by persons interested in the West Indies as to the causes of the much higher prices reached by the Ceylon product. So far as I am able to judge, I believe it to be almost wholly due to the greater care and skill employed in the processes of manufacture, and especially to the copious washing and thorough drying of the beans. I do not think it possible to attribute it to any general superiority in the cacao here grown, both as to the 'Old Red' and 'Forastero' varieties, though no doubt it is the former sort alone which exhibits the peculiar light colour of the interior so appreciated by the chocolate maker."—*Dr. Trimen in his Report on the Royal Botanic Gardens of Ceylon for 1891.*

From the letter of an experienced Ceylon cacao planter, addressed to the *Tropical Agriculturist*, I quote the following reliable information *re* cacao curing :—

"The plan of curing generally adopted by Ceylon planters is as follows, and is simple, expeditious, and cleanly :—As a rule no cisterns are built, though boxes or troughs are sometimes used, and there is no testing with a thermometer to ascertain the degree of heat in the mass. Pods are always gathered ripe, and are brought and heaped on the nearest roadside ; an hour or two before knock-off time they are broken with wooden mallets, the beans being scraped out by hand and put into baskets or sacks and carried by the men to the fermenting house. This may be a room or two with mud walls and thatched roof, a lean-to to the store, or the cisterns of an old coffee pulping-house. A wooden cistern is always

attached for washing the beans after fermentation is completed. Upon a platform of reepers and coir matting raised a few feet from the ground, and which allows the free escape of the liquor brewed during sweating, the green beans are heaped two to three feet deep, and covered over with old sacks and coir mats. Fermentation is completed in from five to seven days, according to the state of the weather and the thickness of the heaps; the heaps being turned over with wooden shovels and re-covered on alternate days. This is for Criolo cacao; forastero should have 24 hours less fermentation. The beans are now thoroughly washed in several waters to free them from all trace of the sour mucilagenous matter adhering to them, and if the weather is fine they are spread thinly on coir mats laid on barbecues to dry in the sun; to ensure even drying and to prevent blistering, they are turned frequently by hand, and in three days are dry enough for dispatching. Should the weather be wet, the washed cacao is at once taken to the drying-house, which is a long ceiled room with two or three lofts of reepers and coir matting; upon these it is spread, and hot air supplied from many iron tubes, heated by a furnace outside, is drawn over and through the cacao and out at the bottom at the other end by means of a Blackman's or other fan. Twenty-four hours in this drying-house—called a Clerihew—is sufficient to dry it thoroughly. The American fruit drier has also been used with success. When there is no drying-house, or where the quantity to be cured is only from 3 to 5 cwt. at a time, it is dried on a reepered staging covered with coir matting raised about 3½ feet above the ground; under this fires of dry wood are lighted and kept burning for about 36 hours, the beans being constantly turned. To concentrate the heat the space within the staging is enclosed: when perfectly dry wood is used the colour of the husk is hardly affected. Cacao fermented and dried as described is on the outside in the Criolo of a rich brown, and in the forastero of a golden colour; while in both, when sectioned, the colour is warm, dark, a ruby red, and the flavour agreeable. I have never seen any cured cacao in Ceylon having, when sectioned, the rich cinnamon colour said to result from fermentation carried out after Mr. Strickland's method. To meet the requirements of some Continental markets, where a lighter colour, both inside and out, is desiderated, I am told that cacao is fermented for three days only. Our prepared cacao, having no substance on it

to sour or damp in wet weather, fungus does not readily grow upon it. The proof of the pudding is in the eating, and the proof of the value of an article is the price it commands in the market; and as Ceylon cacao generally fetches the highest prices, I think we may fairly claim that our system is a rational one, and, if not superior, is equal to the best that is carried out by our Trinidad brother planters."

Since the above was written an improvement has taken place in the curing of Trinidad cacao, and prices in London have lately come nearer to that of the Ceylon product, which is chiefly used for the popular sweetmeats.

We visited the celebrated *cacao walks* of San Antonio, situated about six miles from Port of Spain. Passing through a peculiarly-formed gap in the range of low hills which encircle the capital, we found ourselves in a long, narrow, shaded, and sheltered valley, with irregular rows of massive cacao trees on either side; the trunks were covered with lichen and moss, which did not, however, seem to affect their marvellous fruitfulness, the branches also bearing many a pretty parasite, which they seemed rather to enjoy. The huge trees rose to a height of from 30 to 40 feet, and from the root upwards were literally covered with magnificent pods. Improving as we proceeded, the scene as a cacao walk has not perhaps its equal in the world. As perfect specimens of individual trees, we saw nothing to surpass them in the upper valleys of the Amazon, and I doubt if Ceylon can ever show anything equal to them. There is no attempt at cultivation. Such trees are above and beyond the stage when the mere scraping the soil can much affect them, but the undergrowth seems to be occasionally cut down, and the litter it leaves helps to keep the soil moist.

There is nothing remarkable about the rich, loamy soil, but the hot, humid climate, the partial shade, and perfect shelter seems to be the whole secret of the superiority of San Antonio cacao. This, however, only applies to certain pockets, or small sheltered basins, here and there. Judging generally by the appearance of the district, I would say that Trinidad, though not quite so patchy as Ceylon, is, like all tropical lands—very unequal; and in selecting land for cultivation great discrimination is necessary. There is ample scope, even on this small island, for investors; hundreds of thousands of acres are open for selection, but, though all looking equally luxuriant, there are

many bare and hungry ridges which, if once denuded, could not again be clothed in half a lifetime. This warning has been so well expressed by that prince of natural philosophers and keen observers, Charles Kingsley, that I cannot refrain from again quoting him:—

"The luxuriance of this jungle, be it remembered, must not delude a stranger, as it has too many ere now, into fancying that this land would be profitable under cultivation (land being soil, mostly poor sand and white quartz, which would in Scotland or Devonshire grow only heath, but here is covered with impenetrable jungle). As long as the soil is shaded and kept damp, it will bear an abundant crop of woody fibre, which, composed almost entirely of carbon and water, derives hardly any mineral constituents from the soil. But if that jungle were once cleared off, the slow and careful work of ages would be undone in a moment. The burning sun bakes up everything, and the soil, being without mineral staple, becomes reduced to aridity and sterility for years to come. Timber only, therefore, is the proper crop for such soils."

The method of curing the cocoa at San Antonio is simply typical of Trinidad. I can see little in it to recommend and much to amend. We carefully examined samples of the clay with which the beans are besmeared prior to shipment, and found it to be very similar to the clay eaten by low-caste coolies in India and the savage tribes in the Amazon valley. I can conceive the possibility of getting consumers in England to acquire the relish for this clay, but surely it is, to say the least, a somewhat depraved taste.

We left the island of Trinidad—beautiful as it unquestionably is—without much regret. The climate is evidently perfect for the cacao tree, but for the average Briton so enervating that, as Froude found, there is a constant "craving for cock-tails," and the viciousness of the mosquitoes shows that there is something very far wrong with the sanitation. Moreover, the Spanish element is still too strong to be pleasant for a free-born Briton. After all, the best man in Trinidad, and the hope of the future, is the so-called Tamil "coolie." Why "coolie" I cannot conceive.

Tobago we were not able to visit, though strongly urged to do so by our friend, the obliging commander of the "Dee." In his opinion, Tobago offers the best opening in the world for active young

men with a little capital, and he marvels that bank and mercantile clerks do not pitch away their pens, buy an umbrella, and come here. So luxuriant is the vegetation, yet so cheap is the land and the living that a £5 note, he thinks, would start a man on the road to prosperity. This idea of colonising the West Indian islands by Europeans is, however, one of the wildest of dreams. As managers or instructors, the proper men have a very important and responsible part to play, but as permanent settlers, *Never!*

I note that both Charles Kingsley and J. A. Froude lay the scene of Robinson Crusoe's exploits in Tobago. It matters little, I suppose, which island is selected for the scene of Sandy Selkirk's yarn—*to be too inquisitive would only spoil the story;* but most people place it on the other side of the Continent.

George Town, the beautiful little capital of Grenada, was our next port of call. I shall not readily forget the dawn of that first of January (1892). A harbour like glass, a lovely little toy township nestling amongst the sweetest of flowering shrubs, noble magnolias, and quivering palms, the picturesque suburbs rising step by step, completes a picture such as I never expect to see surpassed on earth. Perhaps the hospitality of our reception has something to do with the pleasant recollections of this sweet spot. It certainly was very delightful on that balmy morning to find the luxurious carriage of the Governor awaiting our arrival on the wharf, enabling us to make the most of our time, and particularly to pay a pleasant visit to Government House, upon the steps of which the Governor, Sir W. F. Hely-Hutchison—to whom we had letters of introduction—received us very warmly. Sir Walter evidently takes a keen interest in the affairs of his islands—for he rules over several smaller isles, the Grenadines—and altogether, according to common repute, makes a most conscientious Governor. Having been trained under that Nestor of successful administrators, Sir Hercules Robinson, to whom he acted as private secretary, we had something congenial to say about old Ceylon and its greatest Governor ere we passed on to the products of Grenada. These comprise cocoa, nutmegs, sugar, cotton, coffee, and various minor industries. Although the total acreage in cultivation is only 20,418, the exports of cocoa alone is four times that of Ceylon, or over 8,000,000 lbs. The pet product of the Governor is, however, the nutmeg, and the picture he gave us of the beauty of these plantations, the pleasant, easy life, and profitable returns, made our mouths water. He ridiculed the pessimism of Mr.

Froude, and had figures at his finger-ends to show how a careful man might soon have an income of ten shillings per tree from nutmegs, to say nothing of other products. Indeed, every tropical plant worth growing seems to thrive on this favoured isle.

One curious difficulty has cropped up with regard to nutmeg planting. The number of trees of the male sex are found to be too numerous, and as the proportion of male to female trees should not exceed one in thirty, planters have had to cut down a considerable number of the male sex, though one would think that budding or grafting might answer the purpose. The nutmeg requires a considerable depth of good soil. In Ceylon, owing to the experiments having been made in poor, shallow soil, the industry has proved a failure. Under favourable circumstances, the tree comes into bearing in seven years. The rugged nature of this island has been its salvation; preventing its being monopolised by the sugar-cane. The eggs are in different baskets, but, if anything, the cocoa basket is rather heavy in proportion. The value of cocoa shipped last year was £200,267; of spices, £12,598.

Altogether, we found the Governor very sanguine as to future prospects, and so enthusiastically fond of his beautiful isle that he sent a message to the captain, asking him if he would kindly take his steamer close inshore, and move along leisurely for the first few miles, so as to show us as much as possible of the plantations and scenery.

On leaving Government House we were met by some of the leading planters, with whom we adjourned to their very pretty little club, and drank success to Grenada—the gem of the West Indies!

The captain most obligingly adopted the suggestion of the Governor, and the water being deep, took us so close along the shore that we could almost see the *ipomœa* in flower. The thriving plantations were a very interesting sight, and the whole scene such as words are useless to describe. The near mountains rise to over 2,000 feet in height, covered with a varied vegetation to the very summit. In the foreground stands the extensive stone forts, from which, happily, the last soldier has long since been withdrawn. In keeping with this, there is in the background an extinct volcano, in the ancient crater of which, we are told, is the Great Etang: a deep lake thirteen acres in extent. The forts were built by Frenchmen, and, notwithstanding the beauty of the spot, many, I think, will sympathise with Lord Brassey's paper read to the Colonial

Institute, in which he says:—"It is difficult to realise that it should ever have been thought worth while to expend so much blood and treasure on a barren contest for remote islands, which bring so little profit or glory to a great European Power."

Like children fighting for a pretty toy, this seems to amuse nations; but it is difficult to see where the glory comes in. And while there was an immense continent lying waste and unoccupied within a day's sail, one cannot, without some amazement and shame, contemplate the savage Europeans killing each other for the possession of a picturesque islet. The only consolation is that if the "gallant soldiers" were anything like the military men who attend the races at Trinidad, the world was not rendered much poorer by thinning them out.

Barbadoes, to which we now returned, is less picturesque in appearance than any of the neighbouring islands, but it has the redeeming feature of being the best cultivated and most thickly populated colony of the group. Measuring only 106,470 acres, it contains a population of 182,322 souls, or 1,100 to the square mile. The more I see of Barbadoes, the more I am puzzled at the desponding tone adopted by the great historian J. A. Froude with reference to this island in his recent work on the West Indies. And to my untutored mind, it seems as if even our greatest men may sometimes get beyond their last. Tropical agriculture was evidently not the *forte* of Mr. Froude. Supposing the sugar-cane did come to utter grief—that all the sweetness we require be obtained from beet or extracted from coal; suppose that natives should give up drinking rum and take to tea and cocoa—we have seen greater calamities—even though these might involve the ruin of a few dozen old conservative planters. Few colonies, indeed, have less to fear than this green little island of the glittering sea, with its good and easily-worked soil, forcing climate, and abundance of cheap labour. There are many products more needed than sugar; and for the profitable cultivation of these, Barbadoes offers, as far as it goes, a most favourable field.

From the "Dee" we were now transferred to the "Don," under the command of the veteran commodore Captain W——, so admirably described by Mr. Froude as being like a pine-apple—rough, knotty, and prickly outside, but inwardly delightful. Crusty enough is he to the inquisitive gentleman who puts on "side," but he is a kindly and interesting companion to those who suit him.

We had the good fortune to gain his favour, and enjoyed many interesting cracks with this grand old salt as we patrolled the deck of the homeward-bounder. For forty years long he had faithfully served this Royal West Indian Mail Company, during which time he had, of course, weathered many a terrible blast. Of these he had little to say, but as to the characters he had met during these forty years, his log was as interesting as that of Tom Cringle. He has but one grievance against his employers, and that is that—forgetful of the adage that "forced prayers are not devotion"—they insist upon him doing what he calls "acting the parson on Sundays." One regrets to hear that this duty is not congenial, but the old captain goes through the form with becoming gravity, though it must be confessed that, from his after comments, one would not rank him as a very edifying or orthodox commentator. He had been reading of Jonah's adventure, when he turned to us and rather irreverently exclaimed, "I'm —— if I can believe that fish yarn!"

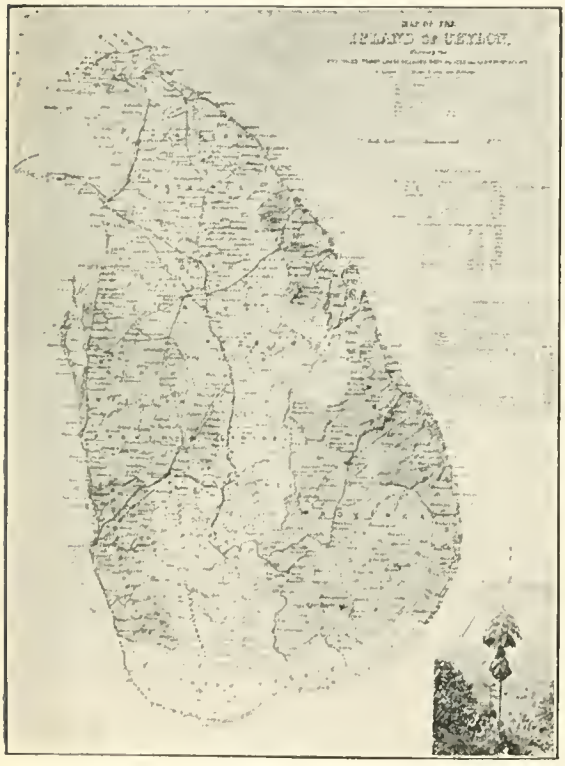
We had a very stormy passage. The January winds blew their worst as we approached the English Channel, but the seamanship of the old commodore proved better than his theology; and in due time he was enabled to deliver us safely at Southampton.

The troubles of a tropical traveller do not, however, end by his being pitched into the middle of a cruel English winter. We may sing of our "Merry England," or boast of our "Land of brown heath," while sweltering in the torrid zone, but a taste of London fog, a puff of Edinburgh wind, or a peep at the cold, grey granite of Aberdeen soon dispels the illusion, and confirms the truth of the saying that, after all, "the Scotsman is never so much at home as when abroad"; and so I felt as I once more booked my passage by the familiar P. and O.

CEYLON.

"So on he went from zone to zone,
Till he came to the Garden of Eden—Ceylon."
—*Diabolus.*

"A land of wonders! which the sun still eyes
With ray direct, as of the lovely realm
Enamoured, and delighting there to dwell."
—*Thomson.*



The Red Sea route to "India's utmost isle" being now one of the greatest highways in the world, any description of the voyage is needless. Yet old stagers cannot help contrasting the once weary voyage of six months, through desolate seas, *via* the Cape of Good Hope, with our present rapid runs of three weeks, touching at Gibraltar, Marseilles or Malta, Naples or Brindisi, and on through the big ditch into the historic, but once dreaded, Red Sea, now shorn of its terrors by the very rapidity of our movement and the luxuriousness of modern appliances; so that, indeed, on entering it passengers begin to feel that life is better worth living. There is a charm in the clear, dry air which electrifies the youthful, while the warmth revives the more elderly traveller, and all are capable of such enjoyment as would have been thought impossible a week before. Sailing in the Red Sea is not, of course, at all seasons equally comfortable. During the months of July, August, and September the heat is all but unbearable. During this season I have often sat watching the thermometer, feeling that with one degree more the

little spark of life left within me would go out. Alas! many a poor consumptive sufferer, sent out by his doctor as a last resort, ends his voyage here during the hot season. But in winter and spring anything more enjoyable than the climate of the Red Sea can scarcely be conceived; and in the clear, bright evenings, when the distant mountains of Sinai and the picturesque coast glitter in the moonlight, new visions of the Arabian Nights excite the imagination.

By this time passengers are becoming old acquaintances and intimate friends. Occasionally the friendship develops, under such favourable surroundings, into something more, and it is a remarkable fact that baggage is sometimes re-addressed soon after this stage. What fantastic scenes yon silvery moon has witnessed on board many a P. and O. during the last half-century! If, as Pope says, "the proper study of mankind is man," here is an opportunity where life is focussed for weeks together as if under a microscope. The actors, indeed, change, but the same old game goes merrily on. The circumstances are somewhat altered. We are no longer wafted by auspicious gales, but place reliance on the revolutions of our screw.

"Our ships of oak are iron now,
But still our hearts are warm."

The same flirting and spooning goes on in the quiet corners, the same old game at "bull" goes thumping away on deck, while below the chronic gourmand still grumbles at the fare. But of all pastimes the most popular and engrossing is ever the matrimonial! Probably nowhere in the world are more matches made than in the Red Sea. And, shocking as it may seem, even young ladies already wooed, won, and consigned to others, have been known to enter upon a second engagement during the fatal first week in the Red Sea. Seldom, perhaps, does a P. & O. ship go out but something of the kind occurs, and I can hardly resist the temptation of giving, in *confidence*, one case in point, which occurred some years ago under my own observation.

A young merchant in India, wearied of his bachelor life, resolved to "indent" for a wife. It has sometimes been remarked that this is done in the same cold, matter-of-fact way that they order jams, and that in the same way they sometimes get pickles instead! Be that as it may, in this case the friends of the young gentleman did the best they could for him. A lady with the requisite qualifications was selected, photographs exchanged, the outfit prepared, and after the would-be mothers and sisters-in-law had duly cried over

her and *promised to write*, she was consigned to the tender care of the P. & O. The poor expectant doubtless carried her photo next to his heart, and anxiously counted the days and hours he would have to await the arrival of the steamer. But alas! those lovely moonlight evenings in the Red Sea were too much for her. A young P. & O. officer stole her heart; her boxes were re-addressed! and the pair were married on the first opportunity. The Company, however, always careful of the interest of their customers, dismissed the officer from their service. Whether the discomfited consignee went into an asylum, or tried again, I never heard, but the newly-married couple settled on the mountains of Ceylon, and lived happily together for years. There are, perhaps, on this fair earth few more enjoyable spots than this mountain home of the enterprising Briton; few more pleasant occupations than the cultivation of a tropical garden. Nevertheless, we can never wholly escape from trials and sorrows. This poor lady sickened and died. No man ever more sincerely mourned for a wife. For many months afterwards the bereaved man was hardly sane, and would travel for a hundred miles to throw himself upon her grave. But time is said to take the edge off the keenest sorrow. Our hero was still young, and life there is very, very solitary. In short, will you be surprised to learn that he, too, sent home a commission to his friends? Well aware, however, of the dangers his intended would be exposed to on board the P. & O., he arranged that she should be brought out under the strictest surveillance of an old lady friend of his own who happened to be returning to the colony. In this case, too, every care was taken in the selection. The young lady was known to be a highly proper young lady, and, moreover, what is called "a scripture reader." All went well with the chaperon and her charge until they arrived at Suez, when a sick soldier was carried on board, apparently to die. The young officer's health was so shattered that, as a last hope, a short sea voyage had been recommended. Our young lady friend naturally got interested in the dying man, and asked leave to be allowed to read to him. There could be no possible objection to this; indeed, her guardian highly commended her zeal. The sea voyage had the desired effect, the invalid daily improved, and, somehow, as he improved, the readings got prolonged, until fellow-passengers began to shrug their shoulders, and the danger at length dawned upon the old lady—too late, however, to caution! The matter had been arranged, and the

bride's boxes had to be re-addressed! In due course the vessel arrived, where the expectant bridegroom was the first to row out to meet her, with a face all over with smiles, and waving a white handkerchief in his hand. As he drew near, however, his old friend put her head out at a porthole, and made ominous signs of distress. "For Heaven's sake!" he said, "put me out of suspense. Is she dead?" "No, no," said the old lady, "worse than that; she's to be married to another." Now, I've seen a few men get out of temper in my day, but I never did see a poor fellow in such a towering rage as this man, who was being so terribly punished with his own weapons. The gay deceiver refused even to see "the horrid man," and I never heard of her afterwards. As for him, his rage, like his grief, gradually subsided, and he very wisely took his passage home by next P. & O. steamer, and in due course selected an excellent wife for himself.

As a rule, however, matters are very circumspectly conducted on board our model passenger ships, in which we glide comfortably, pleasantly, and even merrily along. Old Neptune, to say nothing of the spirits of drowned Egyptians, must often envy our life on board the P. & O.; and it is well we have all the conditions of comfort and enjoyment within ourselves, for there is little to be got or seen on the inhospitable shores of the Red Sea. For 1,300 to 1,400 miles, we sail almost constantly in sight of land, though, with the exception of a lighthouse, there is not a human habitation to be seen, far less a tree or blade of grass. Poor Israelites! no wonder though you remembered the onions and leeks and garlic which you did eat in Egypt freely!

At the end of five days we arrived at Aden, the Gibraltar of the East, and quite as essential to Britain, as a strongly-fortified coaling station, important in its position at the entrance into the Red Sea. It possesses great natural strength, which has been taken every advantage of. Aden is, moreover, a very ancient and still populous town, containing some 40,000 inhabitants. But of all the miserable, rugged, sterile-looking places we have seen, none can compare with Aden. Originally volcanic in its nature, there is not a particle of soil, much less vegetation, to be seen on its grim, naked rocks, not a drop of fresh water to be had for love, and precious little for money. My coachman asked me for a sixpence to treat his horse to a drink—an appeal which few could have the heart to refuse; and to see how the panting animal relished the pure

beverage is a sight to cheer the heart of Sir Wilfrid Lawson. But, alas! for "Araby the blest," and the faith of that prince of abstainers, Mahomet! I actually saw some time ago a number of camels, each loaded with fifteen dozen Guinness's stout, toiling away into the interior, intended, I fear, for some "Arabian Night's entertainment." Aden gets a shower once in about five years, and the precious drops are carefully collected in immensely large and very ingeniously constructed tanks. These have been repaired and extended, at great cost, since the British took possession, and are well worth a visit. Of general interest, there is very little else. The public buildings are substantial, but the style of architecture is by no means imposing. The largest building seems to be the jail, and very necessarily so, I should say, unless the natives are libelled by their appearance! Ostrich feathers seem to be about the only commodity worth investing in here, and ladies usually lay in a supply for the rest of their lives before returning to the ship. "What do you think of Aden?" I said to a Yankee tourist whom I had observed stalking over the place for half a day without opening his mouth. "What do I think of Aden? Why, I guess Satan must have somewhere to throw out his cinders!" We now start on the longest voyage we have yet had at a stretch, viz., right across the Arabian Sea—a distance of 2,134 miles. Passing down the Straits of Babel-Mandeb, we soon bid farewell to the coast of Africa, along which we have sailed for over 3,000 miles, and have looked upon almost daily for a week. Passing the island of Socotra, with its meagre vegetation and its population of a few shepherds, we emerge into the open ocean, and are soon far beyond the sight of land. To those who have never made the long voyage by the Cape, six days in the open sea seems a dreadful prospect! and every modern device for killing time, as it is called, is now resorted to. But on board ship life is curiously conservative. There has literally been nothing new invented in the shape of recreation for many a day. Lord Macaulay has told us how his hero, Warren Hastings, was unable to resist the charms of a certain baroness during the tedious voyage round the Cape. And we have seen that even in these days of high pressure people still find time for such frivolities as falling in love. Macaulay's nephew, the present Secretary for Scotland, has left on record a clever sketch of life on board the P. & O. 35 years ago, which I take the liberty of quoting to show how little change there has been since then, and how little amuses the average

voyager. Sir G. O. Trevelyan, then a "Competition Wallah," while here, on his way out to the scene of his great uncle's triumphs, amused himself by writing to *Macmillan's Magazine* as follows:—

> "Fair dames, whose easy chairs in goodly row
> Fringe either bulwark of the P. & O.,
> Whose guardian angels, with auspicious gales,
> Swell the broad bosoms of our outward sails;
> Or, as a metaphor more strictly true,
> Direct the revolutions of our screw.
> As the long day wears on and nothing brings
> To break the dull monotony of things;
> No fresh delight, no genial Christmas fun,
> Save water ices, or a casual bun;
> Just like our watches, as we eastward go,
> We're getting slower and more slow,
> In search of sport we join the circle full
> That smokes and lounges round the game of Bull;
> Chaff if Smith gets a B., and marvel when
> Jones, flushed with triumph, scores a lucky ten.
> Some loftier natures court a nobler care,
> And sit on judgment on the bill of fare;
> Sigh for fresh butter, and abuse the ghee,
> Sneer at the oxtail soup, and praise the pea;
> And for discussion find a boundless field
> In Irish stew hermetically sealed."

But the longest voyage comes to an end, and seems but a very brief space when we look back upon it. On the morning of the seventh day from Aden we awake to find ourselves in Colombo Harbour—the finest artificial harbour in the world. The transition from Aden to Ceylon is such as no words can convey a correct conception of. The contrast from bare arid rocks to rich, moist greenery is suggestive of a change from Hades to Paradise. At Aden it is only by a cunning artifice that a plant can be grown; here, every little islet that lifts its tiny head above the water is like a basket of flowers. The very stones and beams on the old jetty and walls of the Custom House spontaneously throw out a variety of glossy evergreens at every seam and crevice. The noble palm trees lean lovingly over the smooth beach, while the warm waters of the Indian Ocean wash their feet and play with the cocoanuts which have dropped into the sea. It may be at once conceded that there is not on this fair earth a richer scene than is presented by this fairyland. Lying in the lap of the Indian Ocean in its moist atmosphere, and basking in

COCONUT AND FLOWER.

everlasting summer, the island has been a centre of attraction for thousands of years; hence the unique variety of its vegetation, which has been culled from every tropical and sub-tropical country under the sun, till now no man can tell what trees are indigenous and what are exotic. Almost every plant worth growing finds a congenial home in some part of the island. We have seen and admired the varied vegetation of other tropical lands, where the feet of civilised travellers had never before trodden, but here, where visitors have for ages been adding to its riches, and where one of the best botanical gardens in the Empire has for the past century been nursing and scattering the most interesting of exotic treasures, the hills and valleys are clothed with a vegetation so diversified that the lifetime of a man is too short to enumerate its varieties. Within a short morning's walk from Kandy one may cull many hundreds of wild flowers which must have found their way originally from another hemisphere, while, no doubt, Ceylon in her turn has contributed very considerably to the vegetable wealth of other countries.

Amongst indigenous trees one may safely, I think, place the Talipot palm *(corypha umbraculifera)*, "the noblest of all palms," says Dr. Trimen. Its leaves are the largest, while its flowers are the loftiest, in the vegetable kingdom. Towering 40 feet above other trees, these pyramidal flowers can be seen and admired at a distance of several miles. The palmyra *(borassus flabelliformis)* may also be reckoned amongst the native products, in beauty and usefulness second to no other tree in the world. The native tradition with regard to this tree is that long, long ago, while the world was yet young, it was discovered that to complete the comfort and

happiness of mankind there was still awanting a perfect tree, growing spontaneously, ever beautiful, every particle of which would be useful, furnishing medicine in sickness, and something to cheer the heart in sorrow. For this boon the people earnestly besought the great god, who at once sent for the angel whose vocation it is to watch over the botanical department of the universe, and, after rebuking him for the omission, ordered the palmyra to be transplanted direct from Paradise! The wine—which is very wholesome in the morning, but ferments by midday—is called *toddy*, and gushes out from the wounded spathe at the rate of from 20 to 100 pints per day. "Man," said a Scotch farmer who had listened with apathy to everything else I had told him of Ceylon, "Man, I *would* like one of those trees!"

Many of the pretty succulent plants, such as balsam *(impatiens)* and coleus, are unquestionably indigenous, and so, I suppose, is the pitcher plant *(nepenthes)*, from its abundance in the outlying swamps, but it is not always safe to jump to conclusions on these matters. I well remember accompanying the eminent tropical botanist, William Ferguson, to hear a lecture given by a country clergyman on the wonders of tropical vegetation. The clergyman took for his text the pitcher plant, a rude illustration of which he had on a screen, and the burden of his sermon was the marvellous provision of Providence in filling those pitchers with the purest water in their arid native country, where no other water was procurable!—the unadorned fact being that the plant grows in swamps, where water is but too plentiful, and that the pitchers are usually filled with dead flies and a filthy liquid only fit for manure. In vain I nudged the botanist and the botanist nudged me—neither of us had the heart to spoil the minister's "application"!

Beautiful, also, beyond description are the wild ferns of Ceylon, though here, too, the exotic far exceeds the native in numbers. Of 265 species enumerated by Dr. Trimen, Mr. Ferguson found only 36 to be really indigenous. In *lycopodsiaceæ* and *selaginellaceæ* Ceylon is peculiarly rich. I have never seen anything of the kind equal to the selaginella, so abundant in the ravines of Matale East.*

* Ferns and mosses indigenous to Ceylon, as enumerated by the late W. Ferguson, F.L.S.:—

Cyathea, sinuata.	Trichomanes, Wallii.
,, Hookeri.	Microlepia, majuscula.
Amphicosmia, Walkeræ.	Lindsæa, orbiculata.

To see Ceylon at its best one must needs ascend the mountains, and into these highland valleys I would fain straightway lead the reader. The journey to Kandy by rail is itself a revelation in tropical scenery. Those who enjoy it for the first time are to be envied. For the first 30 miles we have such a labyrinth of palms, paddy fields, and hot-house greenery as we never before dreamed of; then the wonderful ascent through hanging gardens, compared with which those of Babylon were but the work of pigmies. Then comes the great undulating plateau upon which the famous tea gardens are chiefly cultivated, and beyond this the dividing range, 6,000 feet above sea level, across which the steam engine now daily whistles *en route* for the central terminus, Bandarawela.

Every traveller with a week to spare ought to see Bandarawela, and every invalid in search of a really mild winter resort ought to try this paradise, with its cool, even temperature and cheery sunshine. Here there are no malarial swamps, no fever-laden breezes, no superfluous moisture, no chilling along-shore winds—in short, here is a perfect climate.

Around this patena, or beautifully green grassy sward, extending to about 400 square miles, lie some of the most promising tea estates, once the most valuable coffee plantations in the island. "God made Uva for coffee, and coffee for Uva," said good Dr. Thwaites, but, alas! the day has come when even in Uva the fragrant berry has to give way to tea. The produce from these mountains will, doubtless, greatly benefit, and be benefited by, the railway; but even supposing there had been no Badulla beyond, the Government of Ceylon would have been more than justified in

Cheilanthes, laxa.
,, farinosa.
Pteris, Hookeriana.
Diplazium, zeylanicum.
,, polyrrhizon.
,, Schkuhrii.
,, decurrens.
,, Smithianum.
Polystichum, aculeatum.
Aspidium, reductum.
,, Thwaitesii.
Lastrea, Walkeræ.
Lastrea, calcarata.
,, sparsa.
,, ,, var. minor.
Lastrea, sparsa, zeylanica.
,, Thwaitesii, J. Sm.
,, Obtusiloba, ,,
Polypodium, parasiticum.
,, mediale.
,, zeylanicum.
,, cornigerum.
,, cucullatum.
,, gladulosum.
,, Thwaitesii.
Vittaria, sulcata.
Selaginella, cochleata, } Mosses.
,, ciliaris, }
,, zeylanica, }
,, crassipes, }

making the splendid railway by which this unique Sanatorium is now rendered accessible to suffering humanity. Here there are no nauseous mineral waters to drink, nor, as yet, doctors to prescribe, all that is necessary is simply to breathe the stimulating air and live.

A veteran journalist, who visited Ceylon a year ago, wrote quite enthusiastically of its claims as a winter resort. "I shall endeavour, when I get home," he said, "to urge the claims of Ceylon as not only the Sanatorium but winter residence of the world. It is quite clear that in a very short time London will be absolutely impossible in the winter for the strongest man or woman—no throat, chest, or nerve ever invented can stand a month's continuous frost and fog in London. Everyone who can scrape a farthing together *must* get away somewhere—why not then try Ceylon? What is the use of risking the chills and night airs of the Riviera, or the difficulties of Madeira, Teneriffe, and the Canary Islands, when you can get to Ceylon almost as soon and in greater comfort? I shall, long before next winter, implore my fellow-countrymen to put themselves on board one of the P. & O. or Orient or other excellent steamers, and come out straightway to Ceylon. For you get a better Madeira at Colombo, a better Riviera at Kandy, and a better Davos Platz at Nuwara Eliya, with a change of custom, colour, and costume such as you can get nowhere else in the world."

Travellers who have time to spare will do well to visit the old Sanatorium of Nuwara Eliya, from which the ascent of Pidurutalagala, the highest land in Ceylon (8,296 feet) is easy. For a graphic description of the view from this point, let my friend the late A. M. Ferguson speak:—

"Yesterday morning we found the path up to the summit of Pidurutalagala rideable to the very spot on which the 'trig point' marks the loftiest altitude in Ceylon. Some portions were pretty steep; but there were no difficulties comparable with those in the ascent of Adam's Peak, and, we may add, the almost equally difficult descent, by far apart steps in the rock. There were other differences in the broad expanse on the top of 'Piduru,' and the close contiguity of rival and rounded eminences; while the Peak, like the Turk, "bears no brother near the throne." The view from the Peak is, therefore, less impeded by obstacles, and the phenomena of shadows on land and cloud surfaces are far more obvious.

There are also, of course, the historical associations connected with Adam's Peak; while the existence of the mountain, very nearly 1,000 feet loftier, is a matter of quite recent discovery. But the views from both are grand, and each commands objects which are not seen from the other. As we gradually rose, the successive views of the isolated Peak and its subsidiary ranges were exceedingly grand, while 'beautiful exceedingly' was the mountain plain, with its bazaars, its villas scattered over grassy glades and surrounded by groves of woodland, and with the lake reflecting the mountains which looked down lovingly on its face. From the sides of Pidurutalagala, as from the ascent of Totapala *en route* to Horton Plains, the view of Nuwara Eliya, the European settlement amidst the Sinhalese mountain solitudes of past ages, is striking and effective, giving the idea of life to the expanses of forest and prairie around. This idea of life amid the mountain solitudes is now intensified by the sight from the mountain of the railway trace to Haputale, which from yesterday morning's elevation we were able to trace more distinctly and more completely than on the previous day from Hakgala. While our vision ranged over the more familiar scenes of the Uva country and the former 'Wilderness of the Peak'—Ambagamuwa, Dikoya, Maskeliya, and Dimbula—we looked with special interest northwards to the peaks and ranges of Medamahanuwara, the 'Knuckles,' and the ranges amidst which nestle the mountain capital and the towns of Matale, Gampola, and Kurunegala. The precipitous features of Maturata, Gampaha, and Upper Hewaheta, just below, contrasted in distinctness with the dimly-seen, scattered eminences beyond the eastern rim of 'the mountain zone.' A volume of white cloud all round the distant horizon reminded us of the snows seen from the summit of the Rigi, but the glancing glaciers and the thirteen beautiful lakes of the Swiss scene were absent. Tropical beauty, however, compensated for Alpine sublimity."

On the way downwards a visit to the Royal Botanic Gardens at Peradeniya, near Kandy, ought not to be omitted. These gardens, for natural beauty, have no equal as far as I have yet seen, and, though little more than 100 acres in extent, contain specimens of almost every tropical plant worth growing.

The views in the neighbourhood are also amongst the richest in the island, and it is difficult to decide on the fairest among so many scenes of surpassing beauty.

Before proceeding further, it might not be uninteresting to

take a glance at the recent history and progress of this *model Crown Colony*, and, after our researches in the West, and the object lessons we there had, there is a positive pleasure in turning to this example of a successful government. Though here no grand naval exploits are to be recorded, we have a far more creditable story to tell of Ceylon than of anything yet accomplished in the West Indies. Those interesting natives who own our sway here—and who, moreover, possess a civilisation much older than our own—were not subdued by force of arms. They sought our protection from a tyrant king; and by, on the whole, an unswerving course of even-

VIEW FROM PRIMROSE HILL, NEAR PERADENIYA, CEYLON.

handed justice we have been enabled, not only to retain their confidence, but to contribute in a very marked manner to their prosperity and happiness. Perfection in colonial government may not yet be attainable, but while the breath of liberty blows so gently and freely from the maternal home there is a feeling of safety, freedom, and dignity to which certain colonists further south, no longer in such close touch with the mother country, are now strangers.

By a "Crown Colony" is meant a colony the government and

affairs of which are understood to be managed directly from Downing Street. India is an Empire and Canada is a Dominion, while the Colonies of Australasia have now been granted such a large measure of responsible government that they are practically independent.

Of all the other dependencies of Great Britain the island of Ceylon is the most important—in many important respects, *the leading Crown Colony.* With the single exception of the Dominion of Canada, Ceylon, in point of population, takes precedence of every other dependency of which the Home Office takes any supervision.

Ceylon has more than double the population of all the British West Indian Islands, and is nearly equal in this respect to all the Australian Colonies put together. Its import and export trade is far ahead of any other Crown Colony; and, what is more important still, the public debt and taxation per head are lower than those of any other British Colony whatsoever.

Justly famous for agricultural enterprise at home, under conditions not the most favourable to success, the patient, plodding Aberdonian has certainly shown well to the front in the tropics. Indeed, it may be safely enough said of Aberdeen, that no county in Great Britain has contributed more to the success of tropical agriculture generally, and, in particular, to making Ceylon what it is—a credit and source of profit to the good old mother (as every dutiful daughter ought to be), instead of an annual loss, like too many of Britannia's dependencies. It is necessary sometimes to remind people of this, as there are always busy men jumping to conclusions and ever ready to repeat that *all* our Colonies are more or less a burden to the British taxpayer. I well remember, for instance, the indignation caused in Ceylon by a leading Cockney journal taking the island to task for its extravagance in entertaining a British Prince at a cost of a few thousand pounds, which, it gravely said, came out of the pockets of the *English* taxpayer!

Now, it cannot be too generally known that Ceylon does not receive a penny from the Imperial exchequer, and that for more than half-a-century it has been paying, and more than paying, its own way. This is a source of very pardonable pride to Colonists, and one which most mother countries would appreciate and encourage. For this very satisfactory state of affairs we are indebted, in the first place, to an excellent system of government—an almost perfect model for Colonial Governments, the reins being held so lightly in

the Home Office as to cause the least possible friction in the local Legislative Council, the members of which are carefully selected with a view to fully represent every race and every interest in the island, the Governor of the day being President. Then, there are the various municipalities and village councils, or "gansabhawas," which relieve the Government of trifling local matters, while securing the loyalty and influence of village headmen, and satisfying the natural craving of all mankind to be allowed to settle their own local affairs. Few countries have been more fortunate in their Governors than Ceylon. The long list of pre-eminently able and conscientious men has added lustre to the British name, while contributing very much to the material prosperity of the island; and none more signally distinguished themselves in this respect than the late Governor, Sir Arthur Gordon, who, finding the colony in a state of temporary depression bordering on chaos, by a few bold strokes averted disaster, and placed it once more on the path of prosperity, leaving it in a sounder condition than ever it was before.

I have said that Ceylon has always paid its way, or never required to be subsidised, like too many others, by the mother country; but it has done more than this. Till quite recently it paid a military contribution equal to that of the whole of the other colonies put together, and that for services which no colony on earth less required. As the key to India, and a convenient depôt for other colonies, it was found convenient to have a large detachment of soldiers on this island, for which the island itself paid—though clearly the force was kept there only, or at least chiefly, for Imperial purposes! This contribution amounted to £160,000 per annum, besides the upkeep of barracks and all other outlays in connection with the various regiments. Sir Arthur Gordon was instrumental in obtaining a substantial reduction of this sum, the amount now contributed being £75,400—amply sufficient to protect and keep order amongst the 3,000,000 docile and law-abiding subjects in this sunny isle. "We cannot dispense," said Mr. Gladstone, "with military power altogether, but, depend upon it, it is by enlightened principles of government, and constant extension of those principles, that they could hope to make government in India permanent and happy. He rejoiced to think that it would be impossible for us now to hold India by the sword alone."

THE COFFEE ERA.

Charles Kingsley, in "At Last," quotes a saying of the Romans that "the first and most potent means of extending civilisation is found in *roads;* the second in *roads;* and the third in *roads still.*" If so, Sir E. Barnes, who was Governor of Ceylon from 1824 to 1831, was the first to recognise his duty to its people; for, although the Singalese Kings had reigned for 2,400 years, and the Portuguese and Dutch had nibbled away at the fringes of the island for 300 years, there was nothing worthy the name of a road in Ceylon when the British took possession. Sir Edward Barnes's first great work was a splendid macadamised road from Colombo to Kandy, 72 miles in length, and one of the best highways in the world. On this road the first mail coach in Asia was started in 1832, which continued to run daily till superseded by a railway service in 1867—a railway, by the way, cut for many miles at a gradient of 1 in 45 from the face of perpendicular rock; a piece of engineering characterised by Sir James Elphinstone as "the most magical-like contrivance he ever saw." The views from this railway are, I believe, not surpassed in grandeur, if indeed equalled, by anything in the shape of scenery in the world. This railway cost the colony close on £2,000,000, but it is satisfactory to add, the whole of this capital and interest has long since been repaid out of the direct profits of the traffic.

To return to the first road making of Sir E. Barnes. Facilities for transport having rendered profitable planting possible, the Governor next led the way by planting a coffee estate, the remains of which may still be seen on the banks of the Mahavillaganga, near Kandy. The venture was fairly successful, and was soon followed by many others still more so, so that by 1837 we find that the exports of coffee had risen to 30,000 cwts.

About this time a fresh impetus was given to the enterprise by the arrival of a practical planter, who had served his time in the then famous island of Jamaica. This enterprising youth—for he was only 18 years of age—was no other than the late Mr. R. B. Tytler, of Aberdeen. From this date the industry went on by leaps and bounds, and, seven years later, viz., in 1845, we find exports up to 200,000 cwts. A veritable boom in coffee planting now set in, which has never been better described than in the words of Sir J. Emerson Tennent. "The Governor and the Council," says Sir Emerson, "the military, the judges, the clergy, and one-half the

civil servants penetrated the hills and became purchasers of Crown lands. The East India Company's officers crowded to Ceylon to invest their savings, and capitalists from England arrived by every packet. As a class the body of emigrants was more than ordinarily aristocratic, and, if not already opulent, were in haste to be rich. So dazzling was the prospect that expenditure was unlimited, and its profusion was only equalled by the ignorance and inexperience of many of those to whom it was intrusted. £5,000,000 are said to have been sunk in as many years . . . The rush for land was only paralleled by the movement towards the mines of California and Australia, but with this painful difference, that the enthusiasts in Ceylon, instead of hurrying to disinter, were hurrying to bury their gold."

Yes! I well remember meeting in London an old gentleman who had suffered much by this wild rush. His reminiscences of Ceylon were evidently anything but pleasant to himself, and certainly were not encouraging to those about to embark. To change the subject from coffee planting, a young friend, with antiquarian proclivities, enquired if there were any interesting relics there, such as tombs of the Kandian Kings. "I don't know," was the curt reply, "but there are the graves of many a good English sovereign!"

By this time a terrible awakening had come, which I may here call crisis No. 1. Prices of coffee fell, and credit failed, and while Mr. Tytler and a few others plodded cautiously onward, those who had, without the remotest knowledge of agriculture, rushed madly in, rushed as madly out, sacrificing their estates at a twentieth part of the outlay incurred in planting them. This was the opportunity which many a canny Aberdonian seized upon, as he was perfectly justified in doing. The crisis passed over. The rash, incompetent plungers disappeared; trained men were got out from home, and slowly, but surely, the enterprise revived. Coffee flourished better than ever, prices improved, confidence returned, and from this time onwards, for fully a quarter of a century, there were few more pleasant or profitable occupations than that of a coffee planter in Ceylon. The healthy laurel-like plant itself, with its snow-white blossoms scenting the air, or cherry red berries cheering the planter, seemed, indeed, one of the loveliest objects in the vegetable kingdom; while the whole surroundings of his highland home were such that the planter had no compunction in returning home to invite his sister, or, perhaps, as Ferguson says, someone else's sister to share the paradise with him!

I find it impossible to proceed without thinking for a moment of a muster of coffee planters which took place in Aberdeen about this time (viz., 1875), when one hundred planters from Ceylon met and dined. To me every face was familiar; all were men "well to do," and all thoroughly enjoying a well-earned furlough. The Lord Provost congratulated us, and drank continued prosperity to coffee, whilst some of us waxed eloquent in declaring our implicit faith that, so long as heather grew on Benachie, coffee and Scotsmen too would thrive on the hills of Ceylon. Alas! how little did we wot the calamity that was about to overtake us. While we were thus feasting in Aberdeen, an enemy had taken possession of our estates. A tiny enemy, it is true, but, insignificant as it seemed, the work of devastation then begun proved beyond the power of mortal man to combat. Some years previous to this, I had observed little spots of fungi on the backs of the glossy green leaves, not much larger than pin points; and this fungus first appeared, not, as generally supposed, upon exhausted trees, but upon young nursery plants growing in rich virgin soil. At first I examined this more from curiosity than with any apprehension of danger, and not till I saw it spreading from leaf to leaf, tree to tree, and estate to estate, was it thought time to consult scientists on the subject; when the best authorities in England and the Continent were taken into confidence, without, it must be confessed, affording much help or comfort. The heartless men seemed delighted with the discovery. It was new, they said, at least to them. They had not even a name for it, and they forthwith coined the somewhat ominously sounding name of *Hemileia Vastatrix*. For a year or two returns were not much affected; indeed, in many cases, crops increased. It seems a law in nature—in the vegetable kingdom at least—that, when about to die, a plant makes a special effort to reproduce itself. Deluded by this, many planters ignored the presence of the fungi, and clearing and planting went on with greater activity than ever. As of old when men planted a vineyard and went to another country, men planted their coffee estate and returned home to enjoy the fruits thereof. But in this, as in other cases, the absent proprietor has not been a success. For some years the writer acted the part of the man sent to the husbandmen to enquire how about the crops. It was his duty to report the presence of this enemy, and to urge caution and economy. "Nonsense," said the absent proprietor, "the enemy must be eradicated. High cultiva-

tion is the cure; spend £20 per acre in manuring if £10 is not enough, but get rid of this pest." In vain I argued that there is no good in forcing food on a sick man. The headstrong proprietor rushed headlong to his ruin, and in a few years all was desolation and bankruptcy. The splendid industry which had risen to exports of 1,000,000 cwts. per annum, valued at £5,000,000, rapidly dwindled down to the merest fraction of this. From one side of the island to the other, not a single estate, not a single tree, was to be found free from the pest. Still, there were a few optimists left who hoped on. The world is often much indebted to our sanguine men, and, in this case, there seemed reason in their argument—"There had been such blights before, they said, the nearly allied potato fungus, for instance, but, never in the history of the world had such an industry been known to be blotted out." Coffee differs, however, from the potato, inasmuch as the latter supplied food for the fungus for only a few months in the year, whereas the perennial and evergreen coffee tree has no hope of escape while there is a leaf left upon it, and it can no more live without its leaves than can a man without lungs. The same fungus has not been found on any other plant, so that the disease will doubtless disappear with the coffee tree in Ceylon; and then, probably, after a certain lapse of time, the industry may begin anew. But, meanwhile, it seems doomed, and it is safe to say that no such calamity has befallen Scotch colonists since the Darien disaster, though in the Darien scheme the amount of money involved was not a twentieth part of the amount lost by the inroads of this very insignificant looking parasite.

At this stage not a few planters lost heart and retired to the Antipodes and elsewhere, but a goodly number, with praiseworthy pluck, stuck to the Colony, and turned their attention to

NEW PRODUCTS.

Cinchona was one of the first to suggest itself. This, as all are aware, is the tree from which the Jesuits in Peru obtained the bark which cured the Countess de Chincon of fever—hence its name. It has been said that cinchona and the potato were the two most precious plants America gave the world. One secures us against famine, the other is almost a specific in certain febrile diseases. In 1859 I visited the beautiful gardens of Peradeniya at the moment when Dr. Thwaites, the superintendent, was open-

ing a Wardian case containing the first few cuttings of this valuable tree sent to Ceylon, and which I watched him plant in a propagating frame. They grew, as plants do grow in this moist hot-house, till in a very few years hundreds of acres were covered with trees 20 to 30 feet high, all from these few cuttings. The bark was valued at 2s. per lb., and it was calculated that a good tree would yield at least 10 lbs. Here was a fortune which coffee in its palmiest days never promised us, and all eagerly went into cinchona. Thousands of acres were at once planted up, and, as the trees grew, bark was shipped home, 10, 12, 15 million lbs. a year! It was scarcely reasonable, or even charitable, to hope that the demand would keep pace with such supplies, and the natural result followed—that the bark became a *drug* in the market, in more respects than one, and, alas for the planter, the price fell from 2s. to 1d. per lb., and sulphate of quinine from 21s. per oz. to 1s.! an incalculable boon to the world at large, but to the poor Ceylon planter it meant another disaster.

Attention was now turned to *Cacao*, for the introduction of which we were indebted to our friend, Mr. Tytler; but although it grew remarkably well on his estates, there was found to be comparatively little suitable land for cocoa in Ceylon, and the exports of this "food for gods" have not exceeded 30,000 cwts., and are not likely to much increase.

Cardamons were grown very successfully, but here, too, the demand is too limited. Let cooks and confectioners tell the reason why.

Castor oil can also be produced in any quantity, but the difficulty is in getting people to drink enough of it! *Croton* also grows like weeds, but that is worse; while *Nux vomica*—but we musn't mention it. Of *essential oils*, such as citronella and lemon, Ceylon exports yearly about 11,000,000 ounces.

Spices, of course, nutmegs, cloves, pepper, ginger, cinnamon, &c., the last being by far the most important, are without doubt indigenous to Ceylon, and have been shipped from thence since the days when Solomon "once in three years sent his ships to this Tarshish"; but the taste for this famous old spice has somehow greatly fallen off in this country since it became so cheap. Mr. Thorley, I believe, is now one of the largest purchasers, he having discovered that horses and cattle still appreciate cinnamon, utterly oblivious of the disreputably low price of the article!

There are numerous other products which help to make up the total export. The *Coconut palm* alone, besides furnishing its one hundred and one boons to the natives, swells the value of exports to the extent of £800,000; while for *Plumbago*—"black-lead"—Britain pays Ceylon £150,000 a year, and, of course, for pearls and precious stones Ceylon has ever been celebrated.

But a new kingdom has arisen on the ruins of poor *Coffee Arabica*, and it is destined, I hope and believe, to stand supreme amongst the products of Ceylon for many a year to come. This now brings us to the

ERA OF TEA.

Tea we had long seen growing luxuriantly in Ceylon, and well knew that few islands could grow foliage more abundantly; but so long as coffee paid so well few cared to try the experiment of manipulating the tea leaf. Unlike coffee, tea is a native of India, *not* of China, as generally supposed, though cultivated there from time immemorial. It is altogether a hardier plant than coffee, at once taking a firm grip of the soil, as if to show it was really at home. Compared with coffee, the cultivation or production of the raw material is simplicity itself, the planter of to-day being more like a foreman artisan or factory worker than the horticulturist of old. He had, however, to fight against considerable prejudice to begin with. "You may grow the tea but you cannot prepare it." You may get quantity but never quality." "British housewives will never buy Ceylon tea." Such were a few of the encouragements hurled at the head of the already much-tried planter. The net result, however, is that the progress of the tea industry in Ceylon will bear comparison with that of any agricultural achievement during the present century. I would go further and say that, in tropical agriculture at least, there is nothing in our colonial experience to equal it. Little more than a dozen years ago a shore porter could have carried away the total export of tea from Ceylon. Now it amounts to over 80,000,000 lbs., that is to say, it would require 300,000 shore porters to carry it, supposing each carried 300 lbs., and before the end of the present decade there can be little doubt these exports will have reached 100,000,000 lbs. There are now about 300,000 acres closely planted with tea, giving employment to some 1,500 of our countrymen as managers and 350,000 Indian labourers. As to quality, the best criterion is the sale room in Mincing Lane, where the price of Ceylon

tea will be found at an average 25 per cent. higher than that of China tea, being superior leaf, much more carefully and cleanly prepared. I may here remark that the tea tree as cultivated in Ceylon is a hybrid between the vigorous native or indigenous Indian tea and the dwarf and somewhat degenerated bush in China, so that the fragrant leaf as produced in the spicy isle is blended by nature, rendering any further attempt at blending as absurd as painting the petals of the rose.

"But will this industry last?" may well be asked after the various vicissitudes the Colony has already come through. I see no reason to doubt it. In the first place, tea is not an exotic like coffee; second, no island in the world produces tender leaf so profusely; labour is cheap and abundant; and third, the crop is not exhausting like the fruit or seed crops taken from coffee or cocoa. Moreover, there are tens of thousands of acres eminently suited for tea that never would have produced coffee. The only real danger is over-production. There is a limit to the capacity of even this tea-drinking nation, but in any case the Ceylon planter deserves well of British housekeepers. The fact that the price of tea has been reduced by one half during the last decade is chiefly, if not entirely, owing to the persistent energy of our countrymen there.

I have thus far sketched, very imperfectly, the chief industries in which our countrymen have been engaged, but I feel that this chapter would be very incomplete without a reference to the native element, which, after all, must ever form the backbone of the tropical Colony; and I hold that the best test of a successful colonist is not what he brings away with him but what he leaves behind him, as an example at least, to encourage and stimulate the permanent residents.

Into the past history of the Singalese as a nation—stretching back as it does for 2,400 years—I cannot fully enter, deeply interesting as it is, but I may refer those interested to an excellent work by the late Colonel Forbes Leslie of Rothienorman, a history, perhaps the most authentic and complete which has yet been produced. This gentleman retained to the last his warm attachment to Ceylon. "I yield to no one," he wrote shortly before his death, "in the feelings of interest in that beautiful country and most valuable colony. I have continued to admire the unexampled prosperity which has crowned the energy of its planters and residents."

About thirty years ago we had the charming work of Sir J.

Emerson Tennent, and quite recently a book brimful of valuable facts by my friend, Mr. John Ferguson, a member of the firm of publishers who have done for Ceylon what W. & R. Chambers does for Scotland. Their yearly directory is an encyclopedia in itself, and is the envy of other Colonies. Yet of all the histories of Ceylon, commend me to that of Robert Knox, published in 1681, a copy of which rather rare work I recently obtained by advertisement. Robert sailed with his father, who commanded "The Ann" frigate. The Ann sailed from London for India in 1657, and getting dismantled in a storm off the coast of Ceylon, proceeded into a shallow bay to refit. For some weeks the crew were allowed to land and then return to their vessel without interference; but, ultimately, a wily Kandian chief, by order of the king, contrived to decoy the captain, his son, and 18 of the crew into the interior, where they were made prisoners. Both father and son suffered much from fever and ague, which ultimately carried off the father. In those days, alas! there was no cinchona bark in Ceylon; had there been, peradventure the good old ship captain's life might have been prolonged—and, by the way, had the virtues of quinine been but known in England then, the life of the Protector, who also passed away about this same time from the same cause, might have been spared yet awhile. "Which we may compute," as Carlyle says, "would have given another history to all the centuries of England."

But to return to Robert Knox. Crushed with grief and suffering from fever, he, with great difficulty, dug his father's grave. For many months afterwards he was seriously ill, but youth and a good frame favoured him, and he recovered. A noble fellow was Knox. Though left entirely to his own resources by the apathetic but not unkindly Singalese, he, by the very purity of his life, made a name for himself which lives by tradition to this day: a spot a few miles west of Kandy being still pointed out as "the good white man's garden." For well nigh twenty years Robert Knox wandered out and in amongst the Singalese in their native glens, and he has left a record which, for fidelity of description, is simply admirable. Nothing could exceed the keenness of his observation, the retentiveness of his memory, or his inflexible veracity. His picture of village life as it was two hundred and thirty years ago is just as it is now, and as I believe it was three thousand years ago, for the Singalese do not change their fashions like the restless European. At the end of twenty years Robert contrived to escape. Fortitude and firm

religious faith enabled him to overcome many temptations and misfortunes; still the longing for home never left him. As a boy, his mother had taught him to knit, and to this he owed his escape. Being an adept at weaving caps, he was permitted to hawk them. He gradually extended his beats until he at length got beyond the Kandian kingdom, and managed, though at no small risk, to reach the Dutch settlement, whence he was sent home. Robert published his invaluable work in 1681, and subsequently getting command of a vessel in the East India's Co.'s service, he returned to the East; and it is somewhat curious and interesting to read in some dusty Dutch MSS., discovered only last year, that Robert Knox, on his return to India, twenty years after his escape, showed that he had not forgotten his luckless countrymen still in captivity, but contrived, it appears, to send a letter and his portrait to them through the Dutch governor, who forwarded the missive in the usual red-tape style of the Hollander, getting back a reply from the Kandian Court. which is worth quoting as a specimen of the balderdash eastern potentates were so prone to use in those palmy days of unlimited monarchy.

Here is a translation from Singalese of the opening paragraph :—

"HEALTH AND PROSPERITY.

"Sent from the Palace of our Lord the King, descended from Maha Sammata, otherwise called Vaywaswata Manu, born of the pure solar race, a King who clove the heads of foreign enemies as a fearless lion that crushes the heads of elephants—who is fully conversant with the rules of Law which a King has to perform—equal to the harvest moon that expands the water lilies— who is pleasing to the sight—a King of Kings—resembling the sun in glory—who is crest jewel of Kings, sovereign lord of all other Rajahs and chief god of this terrestrial globe, &c., &c."

He then condescends to come down to the business in hand, viz., the letter of his late prisoner, and sums up by graciously permitting its delivery. I shall have occasion further on to refer again to His Mightiness or his descendants.

Meanwhile we may take a passing peep at the village life, so admirably depicted by Robert Knox. Not only is the description perfectly true of to-day, but I would have no hesitation in recommending anyone wishing to see life—simple pastoral life as it was in Old Testament times—to repair to the highland glens of Ceylon.

Probably nowhere else in the world can this be now seen to such perfection—certainly not in degenerate Egypt nor in Palestine, from which the glory has departed. In these beautiful valleys the Singalese have cultivated their rice fields, ploughed, reaped, and thrashed, just as men did in the days when Nebuchadnezzar turned vegetarian.

On approaching a village the first indication of life we come across is the howling of a poor fellow perched on a pillar or on the branch of a tree, with just sufficient covering to shelter him from sun or rain. Around is a little cultivated plot, recently cleared from the jungle, in which seeds of gourds, cucumbers, and other vegetables have been planted. To keep off birds and four-footed animals a constant noise has to be kept up night and day; so here we have, to begin with, "a solitary watchman in a garden of cucumbers." A mile or two further on you will come upon the first house in the village, always cleanly swept if not garnished. Ten to one you will find the easy-going head husbandman sleeping on a mat in the verandah, but, roused by his wife, he respectfully rises, "takes up his bed and walks." Or, perhaps, if a busy time of the year, the husband may be afield, and you will then have an opportunity of observing how the household duties are performed. The lady may be carrying a baby, though never in her arms but astride her hip, and presently you will see her take a cloth, tie it to the rafter or overhanging branch, and, placing therein the "punchy lamia," sing it to sleep; then calling upon "Nona hamy," they will sit down with a pair of small, flat, circular stones between them—and there you have "two women grinding at the mill."

Let us now move on and inspect the village—if village you can conceive it to be, without streets or visible houses. Nothing to be seen save trees and fields—trees, the most beautiful in the vegetable world; fields which strikingly remind you of pictures you may have seen of certain pink and white terraces now blotted out of existence, only that here they are richly green, golden yellow, or covered with clear sparkling water. Into this water you will see the husbandman casting the grain—literally "casting his bread upon the waters," in the hope of seeing it return before many days. In this climate there are no seasons, as we understand them in Scotland, but one everlasting summer and autumn, so that ploughing may be going on in one part of the village, sowing, harvesting, or thrashing in another. Look at the process of thrashing out—here there are no vulgar, snorting steam engines, nor mills of any kind, nor has the laborious

flail ever been introduced into Ceylon, but as of old, the bullocks tread out the corn, leisurely walking round in a circle, always eating without stint as they go. "For thou shalt not muzzle the mouth of the ox that treadeth out the corn." There are about 150 different varieties of rice suitable for all soils, aspects, and seasons.

The winding paths through these so-called villages, or more populous centres, are probably the same paths as existed thousands of years ago; and now, as then, the coy, dusky maiden may be met carrying her water chatty upon her erect and comely head, the bonnie, black bairnies playing under the palms as innocent of clothes as Adam and Eve when "naked and not ashamed." And see the unpretentious village school, just as it was centuries before the Christian era. No Jonathan Tawse here to uphold the dignity of parish schools; no modern school board; no palatial buildings burden the taxpayer. The schoolhouse is merely a few rustic pillars supporting a thatched roof, quite sufficient to protect the students. The furnishings are *nil*. There is nothing but a smooth, level earthen floor upon which the extempore dominie and his disciples squat. A handful of sand is thrown over the floor, and on this the little fingers are trained to trace the letters, as they, at the same time, learn to read or intone the alphabet. By and by, as they get more proficient, they learn to write upon leaves, scratching the letters with a stile—like a bodkin—in which style all the records of Singalese history are preserved, and thus, I presume, all records were kept prior to the manufacture of these kinds of paper which we still call "leaves."

Such is village life in Ceylon, and who will say that in these days of hurry and scrambling it is not a pleasant relief to come across such a primitive spot? On the whole, I believe there are few healthier, happier races than the highlanders in Ceylon. As a rule, they are by no means a wealthy people, but then their wants are so very few. Their simple life shows us what a great deal there is in this world that we could do without. That this interesting country is really prospering better than it ever did under its own kings is fully proved, not only by the commerce created, but by the rapidly increasing population. When the first census was taken after the British took possession, the population was only about 850,000; it is now over 3,000,000. I have said the Singalese are not a wealthy people, but we can at least point to one millionaire and several very wealthy families amongst these natives who have, so to speak, been

the architects of their own fortune; educated gentlemen, well known for their liberality and philanthropy, whose sons now take good positions at our universities, and go out into the world as barristers, doctors, and clergymen. On the occasion of the Duke of Edinburgh's visit to Ceylon, it was a Singalese gentleman who entertained him in a style which no European in the island—not even the Governor—could have afforded to do. The magnificence of this banquet I have rarely seen approached by anything of the kind in any part of the world.

It might not be unprofitable now to enquire how the British became possessed of this island. It is not very ancient history—not yet quite one hundred years since we ousted the reluctant Hollander from Colombo, which, with the cinnamon gardens and a few miles inland country, he had possessed for one hundred and fifty years, governing in a selfish spirit of rigid conservatism, such as has ever characterised Dutch attempts at colonisation. Cinnamon was the staple Dutch trade, and not only was it a monopoly, but the penalty for peeling a twig without authority was death! The treaties that led to their dislodgment by the British do not concern us here. During the Dutch occupancy Ceylon was still reigned over by the king of Kandy, with the exception of a few fringes on the coast; and how the dynasty of these kings (whose chronicles date back to five hundred and forty-three years before Christ) came to an end is worth more than a passing notice.

It was in 1803 that a British force of some three thousand men mustered on the banks of the Mahavillaganga and marched into Kandy, to find it deserted and on fire. Not a shot was fired by the Kandians, and not a life was lost in taking possession of the capital, and yet there are few more melancholy chapters in the history of Greater Britain than the fate of this little company. In a few weeks fever had claimed its victims by hundreds, the disheartened remainder being literally to a man cruelly and treacherously butchered by order of the inhuman king. I have stood beside the tree near to where the infatuated British, trusting in the Oriental word, laid down their arms; and I have looked into the hollow below, where the butchered bodies were thrown. Only one man, himself wounded, managed to wriggle out of the heap during the darkness of the succeeding night and escape to the coast to tell the tale.

The tale is too long and too sad to dwell upon here, and it is one which no British historian cares to recount. There can be no doubt,

in the first place, that we had no business there, though, in the next place, there can be no possible excuse made for the diabolical cruelty of the Singalese, acting under the orders of that monster, the last king of Kandy. But we had our revenge—a noble revenge! No doubt there were "jingo" spirits in those days who howled for summary vengeance, just as they did a few years ago, after a disaster in South Africa; but wiser counsels prevailed, or probably, in this case, Britain had more pressing business on hand at the time—to wit, the settling of accounts with Napoleon Bonaparte. At anyrate, for twelve years little more was heard of Kandian expeditions, and it was not till the memorable year 1815 that our golden opportunity came. The tyrant king had by that time developed his taste for cruelty to such a pitch that his chief amusement seemed to be in training elephants to tramp his courtiers to death; cutting off ladies' heads: compelling mothers to pound their babies to paste in a mortar, and then finishing up the entertainment by drowning the distracted parent in the lake. The limit of endurance had been reached; the Singalese could stand it no longer, and a deputation waited upon the English Governor, earnestly beseeching him to relieve them of this monster. The opportunity had now come, and Governor Brownrigg embraced it in a right manly and generous spirit. The tyrant king, the last of his ignoble race, was dethroned and sent to end his days on a distant island, while ever since we have been heaping coals of fire upon the heads of the Singalese, who have proved themselves in every respect superior to their rascally kings, and may now be safely counted amongst our most loyal fellow-subjects. It has been remarked of one of our own kings that "he never said a foolish thing, and never did a wise one." This cannot be quite said of the last king of Kandy. He, at least, did one good action. He made the beautiful Kandy lake, which is still the admiration of every visitor. Also, he made one wise speech. While groaning under his loss of liberty, he remarked, "Ah! the chief difference between me and your kings is that they have always wise men about them who prevent them doing anything in a passion."

I may mention in passing that there is a race in Ceylon much older than the Singalese, a remnant of the aborigines whom the Singalese themselves subdued 2,500 years ago, and who remain wild as zebras but harmless as sheep. These interesting Veddahs, as they are called, are estimated to number somewhat over 2,000. They have existed in the interior of Ceylon from a period so remote that

no trace of their origin can be found. Yet though entirely destitute of clothing or houses, and living on uncooked food, they are looked upon by the Singalese as of high or even royal caste. Their mode of doing business is curious and primitive. When, for instance, a Veddah purchases arrow blades from a Singalese smith, he rarely comes in actual contact with him, but deposits the price in deer's flesh, wax, or honey, at a given spot, retiring to a distance, and woe to the smith if the arrow blades are not placed there in exchange within a reasonable time! *

In conclusion, I may be permitted to remark that, although we congratulate ourselves, and with some little reason, upon our success as colonists, we are not everywhere equally successful; and, by way of contrast, I may instance the case of another beautiful island, almost exactly the same size as Ceylon, and bearing the same relations to Australia as Ceylon does to the continent of India. I mean Van Dieman's Land, now called Tasmania, and sometimes termed "the garden of Australia," as Ceylon is "the garden of India." But here the resemblance ends. It is curious to note that, in the same year, 1803, while General M'Dowal was forcing his way up through the jungles towards Kandy on his ill-fated errand, another British officer with a motley company had set sail from Botany Bay to take possession of Van Dieman's Land. A few days' sail brought the ship to the mouth of the noble river—since known as the Derwent—on the beautiful banks of which this mongrel crew of settlers, soldiers, and convicts pitched their tents, to the great astonishment of the natives. Of these natives we have recently had some most interesting details from Dr. Tylor. What their religious aspirations were we have but a very misty notion, and I much fear that their contact with this Christian nation did not do much to elevate or enlighten them. At the time I speak of they were comparatively numerous, and, as far as we know, perfectly harmless. Shortly after the arrival of Lieutenant Bowen and his gang, these awe-struck and wondering aborigines gathered around the intruders in great numbers—men, women, and children, entirely unarmed, and offering no violence—when, be it repeated to the everlasting shame of this British Officer, the inhuman idiot in charge ordered his men to fire a volley amongst the

* The curious may learn all that is known about this interesting remnant of a race by consulting a voluminous work recently published at Wiesbaden, entitled "Ergebnisse Naturwissenschaftlicher Forchungen auf Ceylon in den Jahren 1884-86."

inoffensive natives, by which half-a-dozen were killed. Need we wonder that there were reprisals; to a dead certainty, Lieutenant Bowen and his ruffians would have been slaughtered had not Collins arrived with reinforcements. The work of extermination then began and went on for years. It was far, far away from home, and it is only of recent years that the truth really came to light.

Now, mark the contrast. The same British prince, whom the Singalese millionaire entertained so magnificently in Ceylon, a few months afterwards visited the island of Tasmania, where he had the satisfaction (if satisfaction it was), of seeing the last man—the last living Tasmanian. Poor, drunken Billy! simple and unsophisticated as his forebears, came tottering along the streets of Hobart, and was permitted to take the arm of the Duke. "You king," he said, "and I king." A few months more and poor King Billy too was gone!

I am not a superstitious man, but when I look at the prosperity of the one island and the continued adverse struggle against decay in the other, the moral suggests itself—wrong-doing in nations or individuals is ever followed by suffering.

TYPICAL FAILURES.

"What though the spicy breezes."
—HEBER.

MR. J. FERGUSON, the author of that admirable work, "Ceylon in 1893," estimates that of all the Europeans who go out there as planters probably not more than 10 per cent. succeed. This being so, it would be interesting, and perhaps not unprofitable, to enquire what becomes of the 90 per cent. who fail, and what is the reason annexed for such a large percentage of empty returns. Despite good Bishop Heber's much quoted line, it may be safely remarked that *vileness* is not more peculiar to Ceylon than to our old mother country. It is the evil we carry with us that usually proves more formidable than anything indigenous to the isle where "every prospect pleases"—though the prospect of getting home again is, to the average planter, the most pleasing of all. The early history of our enterprise there was alike creditable to the European and advantageous to the Singalese. But with the opening of the Suez Canal, there came a new race of men less suited for a tropical colony, men more allied to the class of emigrants who have done so little to develop the magnificent lands of Australasia, whose chief desire has been to distinguish themselves as sportsmen and successful gamblers.

By way of warning it may be worth while to take a passing glance at the type of men who came rushing out to Ceylon during the latter days of coffee planting, and this I cannot better illustrate than by simply relating the "owre true" story of Davie Hacket and his compeers:—

Davie was the only son of the fairly well-to-do tenant of Glenmurchas, a farm of fifty acres lying a few miles west of the bonnie toon o' B——.

B—— itself might be looked upon as almost unique in its way. Sleeping for centuries in its sheltered little corner at the mouth of a river, it is proud of its antiquity, and cares little for the changes which have transformed its sister "toons" into grand modern cities. While the new towns of Aberdeen and Edinburgh were rising in striking contrast to the "auld toons," B—— boasted that it had been finished 500 years ago, and, as a matter of fact, the only

additions of any importance during the present century have been a grammar school and a lunatic asylum—both much needed.

To the former of these establishments "oor Davie" was sent at the age of twelve, and it was while here that he imbibed the first idea of going abroad.

In those days the great event of the day in B—— was the arrival of the "Earl of Fife" coach, and so on a certain cold spring afternoon, when Davie and his compeers were lounging about making faces at the watchmaker opposite the hotel, the coach drove up containing a family with a crowd of large and foreign-looking portmanteaux. The new arrival was none other than a rich and industrious ex-M.L.C. from Ceylon.

Davie looked on in wonder and amazement as the gathering gamins briefly reviewed the history of their successful townsman, and from that moment he resolved that he too would go to Ceylon and return with large portmanteaux.

Years passed on; he had left the grammar school, cut two "hairsts," and gained a prize at a ploughing match, but the idea of going to Ceylon never left him for a single day; it was the bright star that cheered him on and lightened his toil. Why he should select Ceylon he never troubled himself to enquire, but his heart was centred in it and to Ceylon he would go.

'Twas in vain his mother wept over him, and sadly predicted he "micht dee an' nane to close his e'e"; her laddie was the pride of her poor auld beating heart, and she would sob for hours as she darned—she feared for the last time—the socks her ain hands had knitted for him. The father, less demonstrative, sat very uneasily in "the ingle nook" lighting and relighting his pipe, muttering something about getting frail, and if the "laddie wad only stop at hame, he micht seen be the head o' the hoose;" but tears and entreaties were of no avail with Davie, he would be a gentleman, and make "lairds and ladies o' them a'." The last parting scene arrived; a bleak, biting Monday morning, the wind blew "snel," as it well knows how, o'er the Hill o' Doon; he had taken an affectionate farewell of his sweetheart at the bridge the evening before, and kissed his auld mither, who was unable to leave her bed this morning, and could only whisper "Noo min' an' vreet an' dinna forget to say yer prayers." The bare and rather forlorn-looking railway station, which had by this time taken the place of the coach office, was hurriedly reached. Not a word had passed between the

father and son, but as Davie took his seat a pocket-book containing the savings of the past year was handed to him. "Noo, min' fat yer mither said," was all the poor old man could utter as he brushed away the only tear that had dimmed his eye for forty years.

My first introduction to Davie was on the steps of the Queen's Hotel, Kandy. A mild, rather spare-looking Scot, without the orthodox sandy hair—he had walked from the railway station through the blazing glare of the streets, with no other protection than a Glengarry cap—and the perspiration streamed down his crimson cheeks as he walked warily up and accosted me with "Can you tell me faur Mr Sackum bides?" "You mean Mr. Sackum, the visiting agent, I presume?" "Yes, I have got a letter for him." "All right, I will show you his office, but are you not going to breakfast first?" "Well, I widna be the waur o' that," he said reflectively, and involuntarily putting his hand to his vest pocket as if to feel its weight, he walked up to the table and took his seat. I sat opposite to him, and could not help taking an interest in the new arrival, whose face brightened up at the sight of the victuals, and who, unlike most Scots, was open and communicative to a degree. In a few minutes I was in possession of his history, and the fact that he had come to Ceylon armed with a letter on which he solely relied to procure him employment. "Do you know Mr. Sackum?" I enquired. "No, but my father knew somebody's father who got a place from him, and I got the letter from the gentleman who was once Member of Parliament in Ceylon."

I told him of the risks he ran: how many of his countrymen I had known come out here, and in a few months or years become utterly and for ever ruined for any useful purpose; that his chances of success seemed rather uncertain, Mr. Sackum might or might not have a place for him, or might not feel disposed to help him. I did not know the gentleman myself, but he was said to be rather a crotchetty individual, in fact, belonging to that class of inquisitive functionaries who were, and often still are, open to receive unlimited abuse. Proprietors, as of old, plant their estates and retire to a far country, and agents sent to enquire about the crops are still liable to rebuffs from the husbandmen in charge.

My advice to Mr. Hacket, however, was—"If you have no other means of getting on, stick close to Mr. Sackum; don't be content with a promise that he will put your name on his list and keep you in view; stick to him until he gets you a berth."

Davie took my advice literally, stayed at the bungalow of the visiting agent for weeks, during which time I often saw him, and our acquaintance improved. A curious composition was Davie—no youth ever had better intentions, or dreamed more of the competence on which he was to retire ten years hence; yet Davie was purely what is known in his native land as a "Jock Hack," and his coming to Ceylon could only be regarded by his best friends as a mistake; his character was colourless, flabby and unformed, ready to be moulded by whatever class of men happened for the time to surround him. I could not help, however, taking an interest in him, and sincerely sympathised with his desire to get into harness. "Oh, if I could only get a beginning," he used to exclaim, "nae fear of getting on." At length one morning, while taking my walk by (the Ceylon) Arthur's Seat, I met Davie on horseback looking more important than I had before seen him, and he called out before I got near, "A' richt now, sir; I hae gotten a place at the lang length." I warmly congratulated him, and inquired the name of the locality for which he was destined, at which he pulled out a letter and read the address of his future P.D. :—

PETER ODGER, ESQ.,
Yakoo Galla.

Before proceeding further, I may here be permitted to introduce to you the Peria Dorie to whom Davie was now consigned. Peter Odger, Esquire, was considered, at least by himself, one of our gentleman planters. He was fond of boasting he had never done a day's menial work in his life, and no one who knew him would ever accuse him of having done much work of any kind. Born and reared in the heart of Cockneydom, where his father was a thriving grocer, Peter's early years were of the most luxurious description. There was, it appears, a tradition in the family that his grand-uncle (after whom he was named) had been a much respected clergyman, and at an early age Peter was dedicated to the Church.

His fond mother believed that he was indeed destined to adorn a city pulpit, but partly from an inveterate habit of misplacing his "h's," acquired from his father; partly from a hankering after the gin bottle, which some backbiting friends traced to the mother, Peter was at length declared ineligible for holy office. The poor Scotch tutor who, at 1s. a lesson, had attended him for six months, gave him up in despair, and to the great grief of his loving mamma, he fell

into "bad ways." For days and nights he would disappear, and more than once poor old Odger had to "pay the piper" to save his own credit. What shall we do with Peter? became the all-absorbing topic at Souchong Villa. At length a happy "idear" struck the afflicted father, and he suggested to the "old woman" one night that they should at once fit him out as a gentleman and send him abroad "My esteemed friend Mr. R—— ——, the coffee broker, has great influence with merchants in the East, and I shall see him in Mincing Lane to-morrow." The result, as anticipated, was that the thriving grocer had no difficulty in obtaining a letter of recommendation for his son to a Colombo firm. Great was the joy at Souchong Villa when it became known that Peter was about to reform, and go out to the great coffee-producing country as a planter.

In due course Peter presented himself at a well-known Colombo office, and handed in the letter introducing him as "the son of an esteemed correspondent who has long had a desire to obtain a situation on a coffee estate," and that "it will be considered a personal favour if," &c., &c.

His appearance was rather in his favour, and his address by no means against him; the good opinion of the head of the firm was gained, and in a short time the situation of Assistant Manager of "Yakoogalla" was bestowed upon him. His progress upwards was rapid, for I found him at the end of two years in full charge of that valuable property. Moreover, by this time Peter stood high in certain circles of our Colombo society, a member of the Grand Masonic Lodge, and likewise a leading spirit in the Ceylon Turf Club. Peter's "'orse," in fact, became the one-absorbing topic of his conversation. Coffee and coolies, as he was ever fond of remarking, were "only fit for cads and clod-'oppers."

Such was "the planter" to whose tender mercies "oor Davie" was consigned. Two men who had less in common it would be very difficult to find; and yet for a time all went well. Peter was proud to have an assistant, while Davie, to whom the work on a coffee estate was a capital joke, was well worth his hire. The coolies were delighted to have their names so regularly taken, and the estate generally began to look more tidy and to improve in condition. The assistant was seldom out of the field by day, never out of his room by night, never as yet forgot the parting advice of his mother, and regularly wrote his two letters by every mail.

These were, perhaps, the purest and happiest months of Davie's

life, his interesting and affectionate letters to his home circle even occasionally approached what his fond parents accepted as poetic fire, as when he wrote to them on his twentieth birthday :—

"This nicht, I think, 'tis twenty years
Since ye wi' hope, an' some sma' fears,
Embraced a peevish, greetin' boy,
Wha 's proved to you mair wae than joy ;
For since that dreich December nicht,
Fan in yer faul' I claimed a richt,
I 've been, as bairn, a feckless cretur,
An' noo, as man, yer helpless debtor.

"O, you, whose brow frae aff the sweat
Has flowed to pay my claes and meat ;
An' you wha made my slips and breeks,
Whose apron aft has dried my cheeks,
Forgi'e the bairn's whine, the boy's pranks,
Accept contrition an' the man's best thanks."

Few kings can hope to be happier in prospect than Davie at this time. The present, new and pleasant ; the future, simply splendid ; the idea of £300 a year at no distant date, and a bungalow of his own : ha ! what would his mother think when she hears of it, and Nancy when she sees it ? So Davie worked and dreamed during the first year. Peter, meanwhile, relieved of the hateful drudgery of looking after coolies, indulged his tastes as beseemed a gentleman planter ; he grew in favour with his Colombo friends, who frequently required a change to the hills, and as frequently pronounced him a "very good fellow." It was on one of these occasions when poor Davie's troubles began. The P.D. had determined upon what he called a "regular blow-out" at Christmas, and accordingly invited some of his choicest friends, the Right Worshipful Master and other minor Masons with some rather elegant swells whose parlance smelt of the stable. Peter's difficulty was how to dispose of his assistant for the night, a holiday "to go and see his friends" was offered in vain ; Davie did not feel so disposed ; and it was ultimately found there was no help for it but to admit him into the presence of gentlemen.

These grand carousals were indeed something far beyond any previous experience of Davie's, the wine was abundant and good, but the chief feature of the "tomasha" was the oratory. Old "Moonstruck" once on his legs could descant for half an hour on the pig-sticking

prowess of Mac, while Mac in reply could talk for an hour about—nae-thing in particular. The eloquence of "the Duke" brought tears to the eyes of his silvery-tongued senior, Fagan blethered out his best bulls, while Odger drank the health of the gallant hofficers present. On no one had the champagne a more remarkable effect than on Davie, who, though usually quiet and cautious, broke out, and showed several times the bad breeding to interrupt his worthy P.D., who did the honours of the table so gracefully. Peter, by the way, had grasped about half a dozen Latin quotations, which he invariably contrived to make use of on such occasions as the present. A discussion had arisen regarding certain renegade members of the Turf Club, when the host, drawing himself up in his chair, exclaimed—"*Hawdi halteram partem!* Eh, what do you make of that, Mr. 'Acket?" looking towards his assistant, with a knowing wink to the others. "I dinna weel ken fat to mak' o' t," said Davie," but I 'll wauger a saxpence the h's are in the vrang place." "The idear!" shouted Mr. Odger. "D—— your himpudence! Speak Henglish, sir, and don't address me again in that barbarous jargon. Are there no charity schools about Haberdeen w'ere the native boors could be partially heducated before being let loose amongst gentlemen?"

The champagne went fizzing through Davie's veins; he lost all control of his tongue, as he testily retorted —"Speak English yersel', man! Ye canna pronounce yer ain name, lat alane mine. I wyte an' ye wad need to speak o' eddication! It 's only the ither day ye speirt at me if there were twa 'hens' in Aberdeen, an' fan I tauld ye there were hundreds o' hens and cocks tae ye swore ye wad get me the sack. Jist try yersel', noo!" The answer was a glass thrown at the offender's head by Mr. Odger. "Try him with a horse-whip," cried one of the guests. "Ten to one the dog won't fight," cried another, and a scene ensued, of which, however, Davie had a very meagre recollection when he awoke with a roaring head ache next morning.

Matters somehow did not long continue to improve upon Yakoogalla. Mr. Odger found it necessary very often to go to Kandy to bring out money, yet somehow the coolies discovered that pay day came but seldom. The visiting agent had incurred his serious displeasure by reporting his frequent absence and the un satisfactory arrears shown by the pay list, but warnings were thrown away upon the superintendent of Yakoogalla. Somebody must look after the training of "Bijou," the race horse in which he

had a share, and as leave was not likely to be conceded, a surreptitious journey was often necessary.

The great event of Peter's year was drawing nigh, viz., "The Colombo Races," a holiday which he looked upon as a perquisite, never dreaming even of giving notice of his absence. Imagine his indignation on getting what he termed a "cheeky" intimation from the agent that his leaving the estate at this time was disapproved of, and that in future he must obtain leave.

Being about to start there was no time for correspondence on this occasion, and he determined at all hazards to *take* leave. "Who knows," he said to himself, "But I may be £1,000 richer by the end of the week." Alas! how often do our most promising pleasures turn out but "poppies spread." The "race week" came to an end. "Bijou" did not win, and Peter lost by bets what he could very ill afford. To add to his cruel misfortune the inevitable "sack" awaited him on his return to the estate. Peter drank deeply at most times, but for several weeks after this he fell into a profoundly maudlin state, which only terminated in a case of "blue devils," in which condition he was carried into Kandy.

There are few more harrowing sights in this world than a genuine case of D.T. Peter's particular idiosyncracy was that he was a female blondin condemned to dance on a rope stretched over a pit filled with cobras, and to hear his yells as he feared he was about to slip was something not easily forgotten. As soon as possible he was removed on board ship; but he never quite rallied, and died of "heat apoplexy" in the Red Sea.

To return to my friend Davie, who was now installed as full-blown manager of the estate (at least two years too soon), I confess I began to feel anxious about him. He knew his work and how to do it, but Davie did not know himself, and already began to feel giddy at the sudden rise. One of the first friendships he formed after his promotion was with little Tommy Fagan, a garrulous Irishman, whose specialty lay in managing the "Guid-auld-has-been" estate, and doing the district visiting at the same time. At first Davie described his new friend as a "ganjin gangeril bodie," but Tommy was plausible as well as persevering, and gradually overcame scruples. The general factotum of the district was Tommy: ever ready to gallop over when a dinner had to be arranged or a raffle got up. "*A raffle!*" said Davie, when first asked to take a ticket; "why it's only puir wivies that raffles are got up for in my

country. Guid preserve 's! isn't it gambling and against the law?" "Bless your soft heart," said Tommy, "the law against gambling is only applied to 'niggers' in Ceylon. Almost every gentleman has his raffle now and again, and you will see the most respectable shopkeeper in the province having raffles daily." Davie's scruples were overcome; he took a ticket, and to his great misfortune gained a horse! Old Dame Fortune, he now imagined, had taken quite a fancy to him, and he had only to submit to her caresses to be carried triumphantly to wealth. Daily he grew more important in his own eyes, fond of seeing and being seen. He and his little friend Fagan might be observed twice a week, like postboys, riding the round of the district.

The next time I saw Davie in Kandy I was amused, if somewhat alarmed, at the change that had come over our quondam ploughman. The head of the firm of Messrs. Mixem & Co. was now treating the rising planter to a glass of champagne. Davie had been purchasing rather extensively, but when old Mixem suggested a hogshead of beer of last October's brew, which they would be happy to bottle off for him, Davie remarked, "He could not weel afford it." "Nonsense! my dear sir. Great saving; beer at 7d. instead of 1s. 3d. per bottle; besides we don't hurry you. Only too glad to have you on our books."

It was some months before I heard from Davie again, and by this time he was sinking into trouble. Mixem & Co. had sent their bill at the end of three months, and he could not meet it. A summons followed. What was to be done? I wrote him a long letter commenting on his danger, and advised him to lay his case at once before Mr. Sackum, who might probably write something very disagreeable, but who was sure to see him out of his troubles for this time. I was not mistaken. Davie was pulled out of his difficulty, got a warning, and even Mr. Fagan acknowledged that the only piece of superfluous advice the letter contained was the hint that he ought to sell his horse. But warning had no good effect upon Mr. Hacket, who had now got unsettled and restless. Strange to say, he had not written a home letter for many months.

About this time, too, poor Davie began to form connections which no decent young planter ought to do. Poor Nance was nowhere now, while she whose needle and shears had done such wonders for him in his boyhood was seldom thought of.

And yet Davie was not wholly bad—God help us, no!—but he

was tempted and fell. Like more men than we dream of, Davie had two sides, two selves as diametrically opposite as Dr. Jekyll and Mr. Hyde, and, unfortunately, the bad side was now rapidly taking entire possession. Brandy was the chemical that developed the loathsome self, and now the course was steadily downwards.

About this time a letter had come to Mr. Sackum addressed in a trembling hand. It was from Davie's mother, imploring for information regarding her darling laddie, who must be either dead or "unco sick," as he had not written for many a long day.

Now, Mr. Sackum was a very old-fashioned man, and had a superstitious notion that the man who forgot his mother ought not to be trusted with a check roll, and in a long letter of expostulation and advice he wrote to explain this to Mr. Hacket. Unfortunately Mr. Fagan was present when the letter arrived, and after an extra glass of Mixem's beer the matter was discussed. "Take my advice," said Tommy, "and do not stand this 'cheek'; write and tell him you do not recognise his right to interfere with your private affairs," and a letter was accordingly concocted in which Mr. Sackum was curtly told that so long as his letters referred to estate matters they would receive attention, but he (Mr. H.) was quite capable of managing his own family matters without his interference. Does it surprise anybody, as it surprised poor Davie, that the return post brought an intimation that he would be relieved of his charge in a month from the date thereof.

Another letter by the same tappal was even more appalling to Davie, bringing him the terrible tidings that his chum Fagan, in returning home the other night, had been pitched from his horse and had broken his neck.

Poor Hacket's regrets were as useless as his applications for employment elsewhere; *down*, *down*, *down* he went until his best friends got tired of him. And I shall never forget the last morning I met him, walking with a boot on one foot, and a canvas shoe on the other, sunburnt, footsore, filthy, and weary, trudging on through the wilderness of Saffragam towards Morowaka, where he hoped for a time to hide from the "cheeky" letters of Abram Saibo & Co. and the inquisitiveness of others; but even here he was not safe, and the next I heard of him was that he had got on board a coal ship at Galle and worked his way—Heaven only knew where!

Let us now for a moment take a parting peep at the poor old

parents at home. The seasons had been adverse, and the price of oats had fallen from 25s. to 15s., while fat cattle had sunk from £28 to £20. In short, the profits were no longer sufficient to meet the rent of the farm, but these were minor matters compared with their ever-present grief and suspense regarding their absent laddie. Mr. Hacket was no longer young, and men remarked when they saw him at the market on Friday that "Glenmurchas was ageing unco faist." Mrs. Hacket also was there, for she persisted in her weekly pilgrimage, bringing a few pounds of butter and a few dozen eggs which she could have readily sold at home. But Baubie —as unsophisticated friends called her—had another object in view. She hoped against hope that peradventure a letter might be found at the Post-Office, and week after week she called, till the official began to jeer at the "crazy auld wife." Friday after Friday the two went home together, and the burden of their discourse was ever "oor Davie" and the missing letters.

Ah! my dear fledged youths, little do you think, when you thoughtlessly miss your first mail, of the danger you are drifting into, and the grief you are brewing for the hearts that dote upon you. So simple, too, is this sacred duty, and so easily pleased is the indulgent mother, that, if it be only a scrawl saying you are well and busy, she is satisfied; and should it be a discursive Sunday letter, telling her of the pretty flowers or the bonnie black bairnies, she is delighted. Anything to show that the heart still clings to home, and that the other correspondence, even more essential to success, is still kept up, viz., a correspondence fixed, as our national bard has aptly put it, where it is "sure a noble anchor." Give up this, and sooner or later ruin will as assuredly overtake you as grief will crush the over-fond father and mother you are enjoined to honour. No careful employer who studies mankind will long continue to trust a youth who neglects a duty so sacred, and there is no cure for a parent's heart broken by cold ingratitude. "Nothing to write about!" God help the born idiot who is reduced to this excuse!

Poor old Mr. Hacket was a taciturn man who said but little at any time, but his wife more than made up for the deficiency, and, it must be acknowledged, occasionally became a trifle tiresome. "I wish we could sometimes talk about something else," he remarked to her, in reply to the usual tirade as they trudged homeward. "Speak about something else!" retorted Baubie, "that's a' ye care, but

everybody hasna a hert o' stane. I wyte it sets ye weel to say that; if the laddie has a faut it's weel kent fa he tak's it o'. Ye ken yersel' ye was at Strathpeffer for the feck o' a fortnicht an' never vrat a scrap." And so the poor woman went on till exhausted, when she puckered up her lips and sulked in silence for the rest of the journey. It was not a cheerful home to arrive at. The servant "deemie" had been dismissed for venturing, in an unguarded moment, to say "Davie maun be an ungratefu' scooneral," and the neighbours had ceased to call, as they wearied of having the loon, as they said, thrust down their throat every minute. But the poor old guidman had no such escape; he had reached, too, that critical time of life when a man most needs comfort and attention, yet often gets the least, and when the incessant harping on a discordant string so affects his health and happiness that he is left with but little desire to continue the struggle.

Baubie was a busy, bouncing bodie, with resources of her own which never failed her. Unfortunately her means of consolation were of a kind which added sadly to the discomforts of the guidman. The washing tub was her weakness, and on this particular night she discovered she had a few "duds" to scour, and soon she raised such a steam and smell as fairly drove her husband out to take a quiet pipe in the cart shed. This had often happened before, but it occurred once too often; he caught a cold, and the day came, alas! too soon and unexpected, when a greater grief befell Baubie than the loss of her Davie—the poor, old, self-denying and much-enduring man's cold rapidly developed into pneumonia, and the end came before the bewildered wife could believe that he was really ill.

This was more than poor Mrs. Hacket could well endure. Davie no longer occupied all her thoughts, and there was a tinge of remorse in her hapless grief which made it all the harder to bear. Lonely she lived through the winter; but when the spring came and the birds began to sing as if nothing had happened, Baubie declared they would "brak her verra hert." Preparations were now made for her removal from the farm, but before Whitsunday came there was another funeral from Glenmurchas, and Baubie herself was laid beside her dooce, honest man.

About the end of August following the coal ship, upon which Davie had worked his way home, returned to Cardiff, and through the generosity of the owners he was furnished with sufficient funds to pay his fare north. Doubtless it was with but slight misgiving

that Davie counted the hours that would elapse before he was again at the old home, never dreaming for a moment but that he would find all just as he had left it. True, he had not written for three years; but he knew he could soon make it "a' richt wi' his mither," who in her turn could manage the father, and as for Nancy a few kisses would bring her round! "An' fa kens," he remarked to a fellow-passenger, "but anither fatted calf may be killed the morn." "Auch, man, there will be sic fiddling an' dancing till a' be blue aboot." It was eight o'clock ere the train came creeping round the hill on that autumn evening, but it was not dark, and as Davie crossed the bridge one or two turned round, thinking "surely we have seen that face before," but, bearded as he now was, he was allowed to proceed unaccosted.

It was gloamin' when Davie found himself within a few hundred yards of the familiar steading, his heart dunting audibly as he went round the peat-stack and listened for the sound of some well-remembered voice. The old collie dog barked, wagged his tail, and barked again as if he was doubtful what form his welcome should take Davie knocked at the door, and a strange girl opened it.

"Is my mither—I mean Mrs. Hacket—at hame?" he said, as he pushed past her.

"Na, she disna bide here."

"Fat do ye mean? Faur is she?"

"Gude sake!" said the lassie. "Mrs. Hacket's deid and buried, and saes her man tee."

Davie dropped on a chair in the kitchen, while the lassie ran for the mistress.

"Mercy on's!" exclaimed the mistress, "is that you, Davie Hacket?"

Davie lifted his eyes, but, dazed as he was, he did not at once recognise Nancy; now the thrifty wife of a thriving young farmer.

Poor Davie was thoroughly floored, and all power of speech seemed to leave him on hearing the brief but sad details. Nancy felt for him as much as it was "proper" for one in her position to do, and would willingly have sheltered him for the night, but the stern guidman took a different view of the matter, and broadly hinted that Davie must seek other quarters. "But where will I go?" pleaded the poor wastral. "Ye may gang to the deil if you like, but you saunna be here," said the inhospitable young farmer. Davie gathered himself together as best he could, and strode out into

the darkness. The dumfoundered collie dog looked after him and whined. A cold wind now blew from the top of the Knock Hill, black clouds chased each other across the moon, and by and by the rain fell in fitful showers. The shivering waif took shelter under a dry bridge, and, overcome by events, fell a-dreaming, if not asleep. One can imagine how he was haunted—first by the tappal podian (postboy) in search of letters that never were written; then a strange array of Odgers, Fagans, father, mother, and Nance; after which there came a hopeless blank.

In this state poor Hacket was found by another tramp of a very different type, a man who had never been out of Scotland, and who was not even "passing rich on £40 a year," yet who was making a name to be honoured all the world over. Tam Edwards, the naturalist, in his nocturnal wanderings came upon the wretched outcast, and, rousing him up, handed him over to the nearest policeman.

From that date for several years I lost the thread of Davie's history. Indeed, I had forgotten his existence, till one day during 18—, in driving round the district with my good friend, Dr. M——, we visited the now fully-equipped asylum, and there in a separate paddock, with a keeper all to himself, was the most repulsive-looking wreck I had ever beheld. I looked again, and—God guide us!—I recognised all that remained of poor Davie Hacket!

Yes, my dear Lord Bishop, you may well sing that in this beautiful world—

"Only man is vile."

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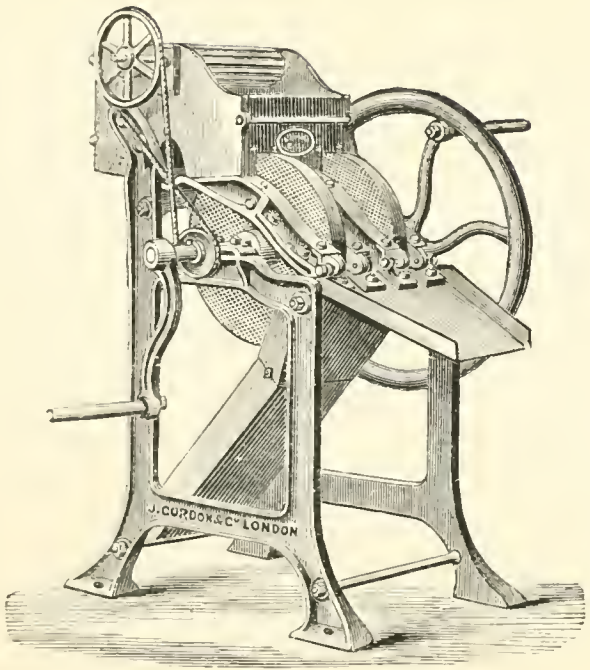

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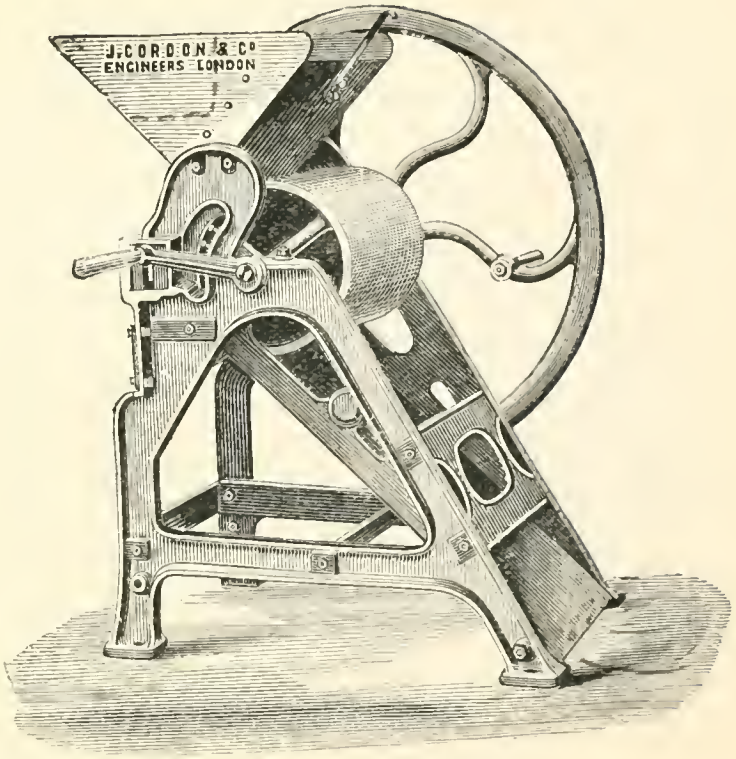

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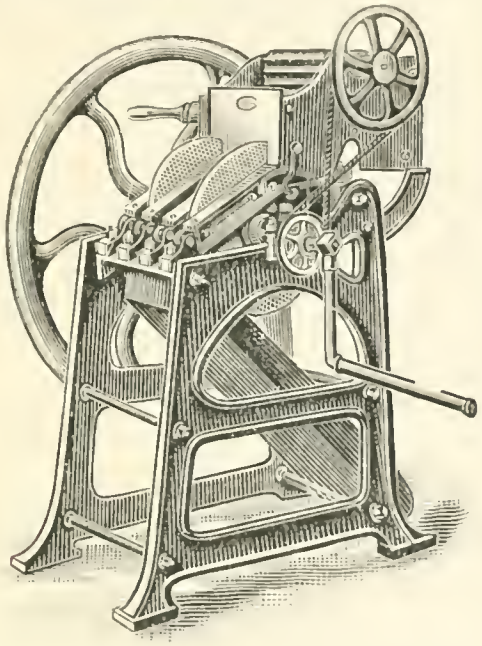

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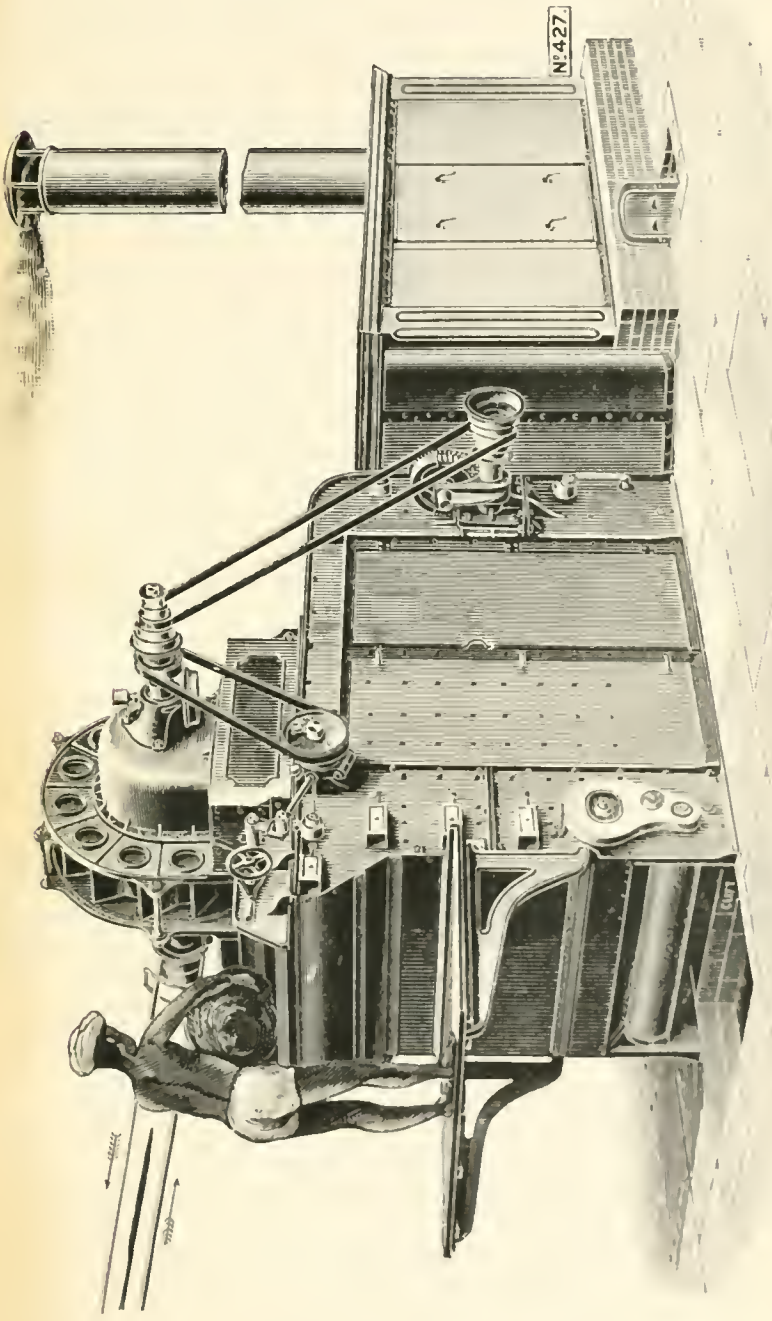

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