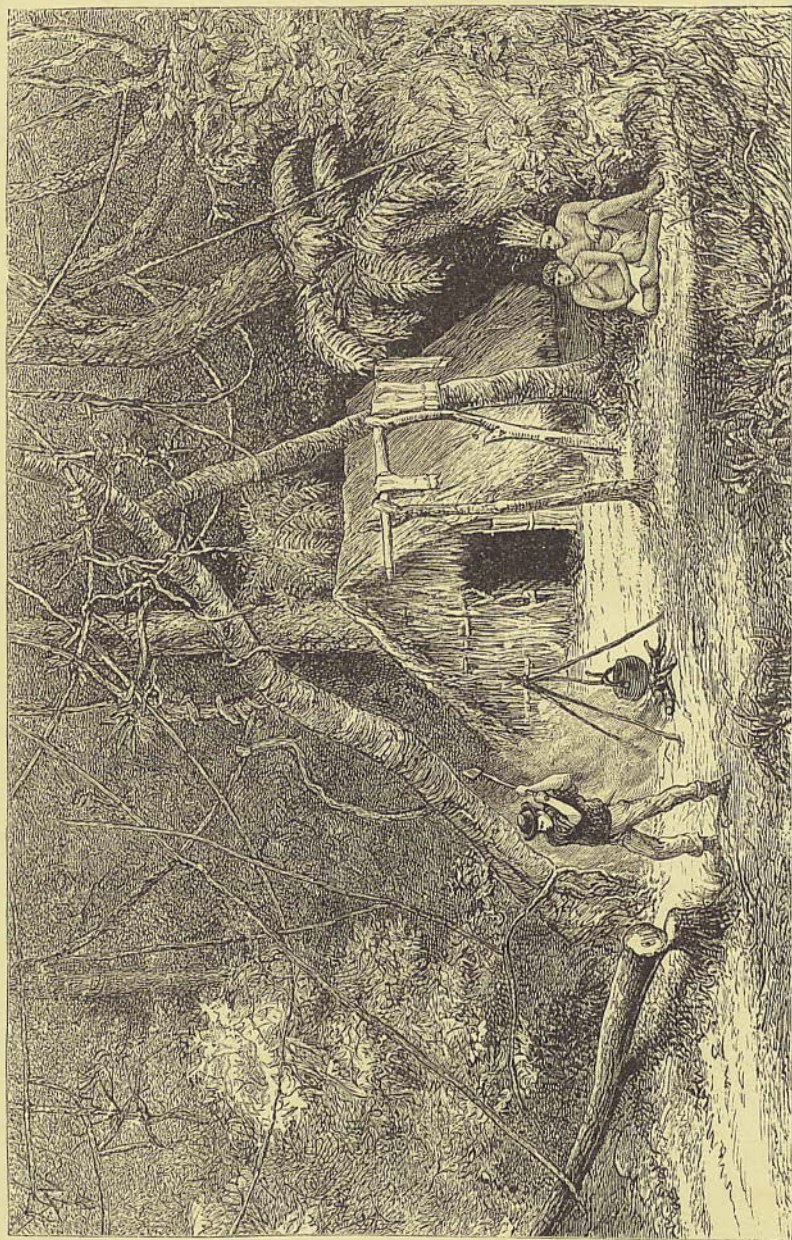


PIONEERING IN SOUTH BRAZIL.



AN ADVANCED CAMP IN THE FORESTS OF THE IVAHYZINHO.

[Frontispiece to Vol. I.

PIONEERING
IN
SOUTH BRAZIL.

THREE YEARS OF FOREST AND PRAIRIE LIFE
IN THE PROVINCE OF PARANÁ.

BY THOMAS P. BIGG-WITHER,

ASSOC. INST. C.E. ; F.R.G.S.

IN TWO VOLUMES.—VOL. I.

WITH MAP AND ILLUSTRATIONS.

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TO

HIS EXCELLENCY THE VISCONDE DE MAUÁ,

TO WHOM

THE AUTHOR IS CHIEFLY INDEBTED FOR THE OPPORTUNITIES
OF TRAVEL AND OBSERVATION IN A LITTLE KNOWN COUNTRY,

THE RESULTS OF WHICH, ACCORDING TO THE AUTHOR'S BEST ABILITY,
HAVE BEEN RECORDED IN THE FOLLOWING PAGES.

INTRODUCTION.

THE general character of this book is that of a Narrative of Travel and Adventure in hitherto unexplored regions; nearly one-half of the time over which its pages extend having been spent by the author in the great forests of the remote interior of Brazil, in the midst of wild scenes of savage nature, where no civilised man had before penetrated, and where, for weeks and months together, the normal condition of existence was an unceasing struggle with every natural surrounding.

On the other hand, nine months were passed in travelling about amongst the various colonies and settlements formed on the border-lands of the still untamed forests, and some pains were taken to collect therefrom such information as might be of more especial interest to the emigrant or colonist, or indeed to all who have the welfare of our large surplus population at heart.

It is hoped therefore that the pages now offered to the public will have the effect of throwing a little

more light upon a country which of late years has gained, somewhat unreasonably, an unenviable reputation amongst this same emigration class in England, than that which has hitherto been reflected from the writings of aggrieved or indignant correspondents in our journals.

A few words with reference to the illustrations which accompany this work. The majority of these are from original sketches made on the spot, and as such, therefore, may fairly lay claim to being more than usually accurate representations of the scenes and subjects they profess to portray. The best thanks of the author are due to his friends Mr. G. Selwyn Edwards and Mr. John H. Morant for the prompt kindness with which they placed the contents of their portfolios at his disposal for this purpose.

The Map at the end of this volume is in great part original, and is wholly compiled from recent surveys of competent and responsible engineers, namely, the brothers Keller, Herr Swartz, and the various members of the Paraná and Matto Grosso Survey Expedition. It is inserted here by permission of the Council of the Royal Geographical Society, to whom the draft was originally presented by the author.

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PIONEERING IN SOUTH BRAZIL.

PART I.

CHAPTER I.

On board the "Lusitania."—The members of the Expedition.—Passing visions.—Magnificent spectacle.—Introduction to the New World.—Rio de Janeiro in the past.

ON the 29th of May, 1872, the good ship "Lusitania," bound for Brazil and the River Plate, was lying at anchor in the broad Mersey, with steam up and passengers and cargo on board, ready to start down the river with the next turn of the tide.

Amongst the multitude of nondescript passengers (many of whom had, to judge from the darkness of their complexion, and a certain suspicious curl in their hair, something more than a mere sprinkling of the tar-brush in their composition) might have been noticed several little groups of fair-skinned Saxons, who were talking and laughing together, and to all appearance in the highest possible spirits, as though bound on some holiday excursion, instead of to the other side of the globe, to face years of toil and hardships such as are only to be encountered in new

and distant lands. These were some of the little band of explorers who had been collected together from different parts of England and Sweden, to be the pioneers of civilization in the wild interior of Brazil, and who were now on their way to that far-off country, to commence the great work there prepared for them.

Amongst the many remarkable men on board—for I may here parenthetically observe that on this particular voyage the "*Lusitania*" numbered amongst her passengers no less noteworthy individuals than the four men who a few months later appeared before the world as the joint authors of the great "*Bank of England swindle*"—a something more than a nine days' wonder—there was one especially who could not long escape notice. Not so much was he remarkable in mere figure or feature, as in the wonderful expression of his countenance. The character of the man could be read in it at one glance. Unbounded self-reliance, strong will, and an earnestness which seemed to want but a worthy subject to develop at once into enthusiasm, united to an unmistakable vigour of intellect, were there strikingly indicated to the most casual observer.

This was Captain Palm, an officer in the Swedish army, and a man especially favoured by the friendship of the present King of Sweden, who had early recognized and encouraged the rising genius. This was the man who was to be the chief of the little band of explorers above referred to.

It was to Captain Palm that the idea of opening up

a road right through the centre of the South American Continent, from the Atlantic to the Pacific, had first appeared capable of realization, and of becoming, in the course of a few years, an accomplished fact. Not only was he the first who had seriously entertained this idea, but he had also proved his convictions of its practicability, by throwing his whole life into the task of actually carrying it out.

Single-handed he had overcome all the preliminary difficulties and obstacles, and had succeeded in gaining over the Brazilian Government to his views, and also in enlisting the substantial sympathies of the Baron Mauá (a man to whom Brazil was already indebted for many benefits) in the furtherance of his great scheme.

The battle was half won. The plan of operations for carrying out the explorations and survey through more than one-third of the breadth of the continent had already been drawn up and approved by the government, and the necessary capital obtained. Captain Palm was now starting with a staff of sixteen English and Swedish engineers, furnished with ample stores for a prolonged residence in the wild interior of the continent, to commence the long-planned work.

Nine months later the success for which he had so long and so energetically striven—a success which then seemed no longer doubtful—was suddenly and abruptly denied him. The yellow fever, often so fatal in Rio de Janeiro, had claimed another victim, and it is not too much to say that the untimely death of Captain

Palm was deplored throughout the capital as a public calamity.

Minutes wore on, and the big screw of the "Lusitania" had been for some quarter-of-an-hour or more revolving spasmodically, with no other apparent result than the churning up of a sea of froth and foam under the stern of the vessel. Suddenly "crack!" went something forward, followed by the rattle of chains, and then—an ominous silence. The donkey-engine had broken down, and there was no getting off this tide; so, here we should have to lie till two o'clock in the morning, suspended between the past and the future, within sight of both, but enjoying neither. The feeling was not pleasant. I retired to the cabin in disgust, and turned in and slept.

Some hours later I was aroused from my dreams by the noise of shouting, of tramping of feet, and clanking of chains overhead. Soon after, the dull methodical beat of the huge engines, and the trembling vibration of the screw, told that we were at last under way, and bidding a long farewell to the old country.

.

Nearly three weeks have passed away. Visions of many things have come and gone. First, a weary rocking in a close cramped cabin, when all the world seemed to the sore-tried spirit to be centred in a basin; then a long dream of never-ending sea and sky, broken by a fleeting vision of a great city on a noble river,—a soft still bay, backed by rugged snow-

clad mountains,—then a great storm, with darkened sky and wildly rolling billows, and tossing vessel.

Once more a calm,—a deep calm, unbroken even by the monotonous drone of the engines.

For two hours the iron heart stopped beating. The spell was broken, and we awoke to find our ship floating like a log, motionless in the midst of the wide Atlantic.

The sensation was novel and strange, but it did not last long. Once more the great ship was ploughing her way steadily on under the clear star-lit southern sky, leaving a broad phosphorescent track behind her.

Thousands of miles now separate us from our former homes, and years seem to have elapsed since the day of our departure from old England. As I write this and strive to recall how each day had been passed since then, I cannot. A medley of impressions—the one half obliterating the other—alone answer to my call. Eating and drinking by day, music and dancing by night—these seem to be the only tangible recollections that remain. I remember, however, that this is the 18th day of June, and, looking at my watch (which by the way has unaccountably gained about three hours on the voyage!), I calculate that in ten minutes more all lights will be extinguished, and I shall be left in utter darkness in the great saloon. I close this, my first and last attempt at diary keeping on board ship, in despair, regretting only the hour wasted in the futile effort; and, setting my face a point or so to the south of due west, bear straight down upon

my cabin, which hails about two minutes off in that direction. Soon sleep, heavenly sleep, brings another weary day to a happy close.

“Land! land! Glorious sight! Tumble up quick, and come on deck,” shouted Edwards (one of the younger members of the expedition), as he came bounding into our cabin early in the morning of the 19th of June, all fresh and sparkling from his daily “tub” at the mouth of the big deck hose. “Come up quick, or you will lose half the sight!”

No second summons was necessary. Almost before the last words were out of his mouth, slumbers had been cast aside, and I was half-way up the gangway in Pyjama costume.

What sight can be more welcome to prisoners on board ship, who have been shut up for weeks, beholding nothing but an everlasting expanse of sea and sky, than land, in any shape! Still more excitingly welcome is it, when it comes as the “land of promise”—the unknown country which the imagination, for days and weeks perhaps, has been diligently working upon, and clothing with all the wonders, real and unreal, of fact and fiction gleaned from a host of authors—the new home and the beginning of a new life.

I confess to being predisposed to go into raptures over anything that would relieve the monotony of the last few weeks, and, consequently, to invest with

charms more than their own the scenes now gradually breaking out into view before us through the grey morning mists. Nevertheless, I think that what we beheld in the next few hours would bear comparison with any of the bits of scenery generally considered to be "*chefs-d'œuvre*" of Nature.

On reaching the deck and looking forward, the first thing that struck my eye was a dark mountain mass looming through the drifting mist and vapour, right ahead of the bows of the "*Lusitania*." At its base the darkness of night still reigned, unrelieved by even the tiny glimmer of a star. We seemed to be pointing at the portal of Hades. As the eye travelled upwards from these gloomy nether regions through layer after layer of continually brightening mist and cloud, it came at last upon a scene of the most enchanting loveliness.

A long array of many lofty peaks and mountain caps stood out glittering-bright against the warm sky above, already tipped with the glow of early dawn. Above them fairy clouds of fleecy pink were floating. Below, and resting against the broad flank of the yet darkened mountain, a belt of sombre grey clouds slumbered, cold and motionless, untouched as yet by the life-giving morn.

While we still looked and wondered, changes were ever going on above. Each moment the tints were growing brighter and brighter, as "*rosy-fingered morn*" touched peak after peak, then mass after mass. . . . Suddenly, as it were by magic wand,

the whole assumed the form of a recumbent giant, with clouds his couch, and sky his covering. Then, as the first golden rays of the sun itself struck the long line of summits, giving light and shade to the whole, the marvellous likeness could no longer be mistaken. There was the full length model of the "Iron Duke" as we are all familiar with him in our pictures and statues, cast in giant mould by the hand of Nature herself, an imperishable monument to all ages.

At this moment the chief officer came up. "You fellows had better go below and make a more respectable toilette, unless you want to frighten the ladies. Some of them will be up on deck directly." This recalled us to the sober present, and we recollected that "Pyjamahs" and bare feet were something beyond a mere "négligé" style of dress, and accordingly at once dived below, to render ourselves a little more presentable.

When I again came on deck, all was changed. Day had fully broken, and we were gliding through a narrow strait, with lofty mountains towering up on both sides, and obstructing the view. One of these mountains was especially remarkable, rising up cone shaped from the deep water, and attaining to a very great height. This was the famous "Sugar-loaf" mountain—the "Matterhorn" of Brazil—which, tradition says, was first climbed by a daring young English "middy," who, by way of a frolic, planted the "Union Jack" on its summit, and descending,

left it waving royally in full sight of every house and building in the city, and of every ship in the harbour. The disgust of the natives may be imagined; they did not see the joke at all, and not one of them dared climb the mountain to remove the offending rag! They appealed therefore to the captain of the ship to which the young "middy" belonged, and the captain, as a punishment, ordered the offender himself to go up again and take the flag down. Not a second time, however, were those giddy heights to be scaled with impunity. Tradition goes on to relate that the bold "middy" paid for his mad freak with his life. Let us hope that tradition lies, and that in after years he reaped the reward ever ready to be bestowed on the brave by the hands of the fair.

Surprises were not yet at an end. Another treat was in store for us early risers. The strait, through which we had been slowly steaming for the last quarter of an hour terminated suddenly in a vast lake-like bay, entirely surrounded, except at this one narrow entrance, by the most magnificent mountain scenery that the world can produce.

The surface of this vast bay, which covers an area of more than a hundred square miles, was still and glassy, and undisturbed by wave or ripple. The mountains and scenery around were reflected in it as from a surface of polished steel. Here and there green islands were scattered about, throwing long deep shadows across the water. Not a breath of air was stirring. No mast nor sail was seen. All

seemed still, calm, and deserted, as when the first happy vessel, three long centuries and more ago, broke the thralldom of savage nature in this spot.

On one side rose the green wooded slopes of the far famed Corcovado,* with here and there tiny clouds of fleecy white, chasing each other up the rifts and watercourses. On the other side, long undulating hills and mountains clothed in the deepest green, with the morning mists still slumbering in their sheltered hollows, white, like fields of the purest snow. In the distance, at the far extremity of the bay, enveloped in a dreamy haze of purple and gold, appeared the great range of the Organ Mountains, their lofty peaks towering up towards heaven, like the gilded domes and spires of some great city. Such was our preliminary introduction to the "New World."

A little farther, and, on passing a slight promontory on the left, the beautiful city of Rio de Janeiro itself came into view, lying low down on a level plain at the foot of the mountains, looking at this distance like some lovely village, buried in a mass of palm-trees, orange-groves, and other luxuriant tropical vegetation.

A forest of masts crowded the bay close in front of the city, dispelling the more than half formed illusion of the whole being some enchanting fairy-scene instead of one of the every-day busy haunts of men. .

. Half an hour later, the "Lusitania"

* "Corcovado," "Hunchbacked," so called from the peculiar crook that appears in the shape of the mountain when observed from certain points.

dropped anchor opposite the city, and was immediately surrounded, though at a respectful distance, by a hungry swarm of row-boats, which seemed to have risen up from the deep, like tadpoles round a dead carcase cast into a stagnant pool; so suddenly had they made their appearance.

Nearly all these boats had awnings rigged up over the stern, to protect their occupants from the heat of the sun. It was amusing to see how many of the names on the stern-boards had been borrowed from our own seaside watering-places. Such familiar appellations as the "Mary Ann" and the "Sarah Jane" looked somewhat out of place beside a shiny black nigger, or a yellow-skinned Portuguese. Neither was the strange jabbering of an unknown tongue altogether calculated to make one fancy that these were English waters. While we are awaiting the arrival of the police boat, whose non-appearance is still keeping the crowd of small boats at bay, it will be a good opportunity to take a slight retrospective glance at the history of the city before us, with which we are soon to form a nearer and more intimate acquaintance.

It is probable that the bay of Rio de Janeiro was discovered within a year or two of the date of the first discovery of Brazil, in 1500. It was not, however, till the year 1567, that the foundations of the city of "St. Sebastian"* or Rio de Janeiro were laid.

* So called in honour of the saint on whose day (20th January) the French had been finally expelled the place: also as a delicate piece of flattery to the young king Sebastian of Portugal.

Under the mistaken idea that the bay was the mouth of a great river, the early explorers named it "Rio de Janeiro" or "January River." There proved however to be no river flowing into it, but only a few small streams from the mountains, which scarcely sufficed to make any perceptible difference in the saltness of the water in the bay, as compared with that outside.

For the ten years immediately preceding the foundation of the city, the bay had been more or less in the possession of the French, who, having allied themselves with one of the fiercest of the Indian tribes of those days, namely, the "Tamoyos," resisted for that space of time all the attempts of the Portuguese and of their Indian allies to expel them. On their ultimate expulsion, however, the first stone of the city was laid. For the next hundred years or more it made but little progress. In 1711, it was in imminent danger of coming to utter ruin, as in that year it was taken by French privateers, who, however, were content to release it, on the payment of a heavy ransom. After this narrow escape its real progress commenced. In 1750 its population numbered 25,000 which at the present day has increased to upwards of a quarter of a million; and, notwithstanding the annual scourge of yellow fever, which for the last twenty years has carried off its hundreds, and often its thousands every summer, this number still goes on being augmented.

The reason of this persistent growth is not difficult

to understand. A glance at the map of the World, will at once show what an enormous natural advantage Rio possesses in its position, with reference both to its own empire, and also to other countries. No capital town of any other nation occupies so central a position for commerce with both old and new worlds. Add to this the possession of a harbour which for size and security combined is unequalled, and we have a sum total of natural advantages which are sufficient to account for any rate of increase of population, however great, notwithstanding the drawback of the climate.

Such, very briefly described, is the history of Rio de Janeiro, the capital of the great empire of Brazil. While we have been considering it, the police boat has come and gone; the hungry swarm of boats is no longer kept at bay by dread of the strong hand of the "chef de police." Many have already seized their victims, and have taken them away bag and baggage to the Custom-house. S. (another of our party) and myself have taken upon ourselves the by no means light task of passing the private baggage of every member of the expedition through that most disagreeable of ordeals, and a big barge is already alongside, piled up with boxes, trunks, and portmanteaux. We station ourselves upon the top of the pile, and two brawny niggers seize upon an enormous "sweep" each, and under the direction of a rough looking Portuguese who stands at the stern, and whom the niggers address as "patrão," we slowly leave the side of the ship. During the morning

Edwards joins us in the custom-house, and by our united efforts everything under our charge is passed through, by about four o'clock in the afternoon; and we hail a boat, and row back to the ship, to take a final leave of the captain and officers, and of the passengers that remain. Some hours later we are standing all together upon one of the many landing places of the city. We have said "farewell" to the good ship "Lusitania" and the last link between us and the Old World is snapped.

CHAPTER II.

First impressions.—Strange silence.—Deathlike appearance of people.
—Hotel Cintra.—The Custom-house.—“Nigger” versus white man.—On some peculiarities of appearances and customs of Rio de Janeiro.—The Aqueduct.—The Corcovado.

As we walked up from the wharf into the town, the glare of the streets, the babel of unknown tongues, the strange appearance and costumes of the negroes (for every second person we met was a negro), with the many other unfamiliar sights and sounds (and I may add, “*sotto voce*,” smells,) which crowded upon the senses, made the whole scene appear like a dream. Our long imprisonment on board ship no doubt made us more than usually susceptible to new impressions. If anything at all seemed real, it was that we were indeed strangers in a strange land. The very pavement we were walking upon seemed strange, and there was an unfamiliarity in the very air we were breathing. After a time, it struck me that these mysterious sensations were in a great measure caused by the total absence of carriage traffic in the streets. I had never before been in a great town-thoroughfare that was so entirely given up to pedestrians, and from which even the sound of wheel traffic was excluded. Moreover, there

was not a woman to be seen. No wonder that there was an air of unreality about the place; we were walking in the main street of the city,—the “*Rua Direita*”—the hour was barely eight p.m., and yet there was not a woman nor a carriage to be seen, but only a hurrying crowd of strange men, whose faces (excepting those of the negroes) seemed to me to be wan and sickly, as of persons who had just been discharged from a lazaret-house.

This was my first impression of Rio de Janeiro, gained in the short walk from the landing wharf up the broad *Rua Direita*. First impressions are seldom accurate, but still they have their value, and sometimes give a better general idea of new scenes than a description grounded on the most careful examination and study.

We had now arrived within the region of hotels, and the whole body of us turned up out of the *Rua Direita*, into the “*Rua do Ouvidor*,” which, as I afterwards discovered, was the “Bond Street” of Rio, and swarmed with tailors, hatters, and jewellers, whose scale of charges would not have shamed even their hundred per cent. brethren in trade at home.

We first visited the hotel “*Cintra*,” which, as its name implied, was kept by a Portuguese. Sallow, lean, dirty, and servile was this specimen from the “Old World.” His hotel was better outside than in, but did not strike me as being altogether worthy of the capital of a great empire like Brazil. However, in comparison with a cabin on board the “*Lusitania*,” the apartments

were palatial. There were five rooms available for our accommodation, and a sixth adjoining, which latter was apparently set apart for the use of chickens and pigeons, but was only separated from the room next to it by an open lattice-work partition. Five of us decided to take up our abode here; and I was careful to secure a room as far as possible from the poultry department. The remainder of our party went to try their luck farther on up the Rua do Ouvidor.

All our rooms were on the first floor, and were divided off, not by walls, but by cloth and paper partitions. These partitions were about seven feet high, and above was the open unceiled roof common to all. This arrangement seemed highly satisfactory, as far as ventilation was concerned, but was perhaps scarcely private enough to suit the tastes of most people. In our case, however, there was nothing to object to on this score, as conversation from one room to another was thereby much facilitated.

The floor in every apartment was uncarpeted, and in the one I occupied the boards were very shaky indeed, being full of ruts and hollows, and in some parts worm-eaten and rotten. This was not pleasant, as I knew, from the height we were above the street, that the room below was very lofty, and that therefore, in case the floor gave way, we should have no slight distance to drop.

After we were all in bed, and candles extinguished, I noticed that the stars were shining brilliantly

through several holes in the roof. The proprietor of hotel was evidently determined not to run any risk whatever of his guests being suffocated; nevertheless, I inwardly resolved, while lying watching the stars twinkle through the various ventilators above, that I would seek less airy and more secure quarters with as little loss of time as possible.

Very early on the following morning, at what exact hour none ever knew, a cock in the chicken apartment started off crowing. His voice, which seemed preternaturally loud and shrill, in those small hours, rang out amongst the rafters overhead, rude and overpowering. He would not stop. Muttered groans were coming thick and fast from the two next rooms to mine, till at last the storm burst. "D—— that cock," shouted one, whose name shall be mentionless. "Wring his neck," exclaimed another. "By Jove! I *will* if he crows once more," emphatically answered the first. The cock crew again. A sudden jump was heard in the next room, followed by the striking of a match—a groping along the passage—an ominous pause—a sudden stifled shriek or scream—a fluttering of wings—and then a satisfied "He's all right now," from a well-known voice, told that the *foul* deed was done! and I turned over and fell asleep once more, and did not awake until it was broad daylight.

On going down to breakfast, "Senhor Francisco"—this, as we discovered being the name of our little Portuguese host—appeared with a very sulky face and a very poor repast. We could not understand what he

said, though he kept talking and gesticulating for a long time. Guessing, however, that his disturbed aspect was connected with the last night's iniquity, we got out a dictionary, and discovered that "cock" was *gallo* in Portuguese. Someone therefore said "*gallo?*" interrogatively. Senhor Francisco's face grew attentive. The doer of the midnight deed, after another reference to the dictionary, then ventured upon the word "*dinheiro*" (money). A broad glow of satisfaction lit up the small yellow face; a volume of sounds which, though understood by none, were yet felt by all to be highly gratifying, poured from the wizened mouth, and, amidst a profusion of smiles and gestures of delight, the little man bowed himself out of the room, and this little business was thus amicably settled.

For some hours in the early part of this our first day in Rio, I was engaged in passing stores through the custom-house, and seldom have I had to go through so unsatisfactory a labour. To those who are accustomed only to the methodical arrangements for conducting this, at all times, disagreeable business, as adopted in many European countries, an experience of the custom-house at Rio de Janeiro would be "unique." Certainly, no exalted idea of the business capacities of its authorities and officials would be carried away. On this occasion, order and method seemed conspicuous by their absence. Instead of the officials themselves ordering the arrangements for the common benefit, each man who, like myself, had

goods to pass, conducted his own business, with the two-fold objection of continually clashing with his fellow sufferers, and being himself utterly powerless to obtain the attendance of an official at the right moment.

If this day's experience was a fair average specimen of what goes on all the year round in this custom-house, it is somewhat more than surprising. A stranger knowing that about one third of the total revenue of the Empire is obtained through this one custom-house alone,* would naturally expect to find it a model of business order and method.

That it is not so, many personal experiences of my own sufficiently prove. For example, certain important stores of mine were lost there from August, 1872, to December, 1873. Absolute proof of their having been delivered into the custom-house was again and again produced, but here all trace of them vanished for a period of *sixteen months*, when at length, after I had given up all hopes of ever seeing them, they were delivered up to me in a dilapidated condition. I was able to obtain no satisfaction whatever.

It is perhaps impossible to insure perfect honesty in every individual official in a large public office, but there must be some very radical defect in the administration, when such grave instances of neglect, and even of appropriation, as report and my own experience tell of, are possible.

* In 1871-2 the total revenue of the Empire was £10,095,490, of which the Rio custom-house yielded £3,480,198.

In the afternoon, glad enough to get out of so irritating an atmosphere, I employed an hour or two in strolling about, and exploring the city. One of the first sights that strikes the eye of a stranger walking through the streets of Rio, is the immense number of "niggers" to be seen squatting on the door steps, all engaged in the same occupation of plaiting straw. Every spare moment seems to be devoted by them to this work. I afterwards learnt that by this means many slaves are enabled, in the course of years, to save up sufficient money to purchase their own freedom.

The contrast between the powerful, healthy physique and the happy, careless manner of these negro slaves, and the stunted growth and worn-out look of their lords and masters, is so general as to strike even the most casual observer.

What is the reason of this? Is it that the climate is more suitable to the African race than to the Portuguese, or even to the so-called Brazilians themselves? or is it that the latter wear themselves out prematurely in the pursuit of Mammon?

Whatever be the cause, the fact remains, and is most striking to the stranger. Still more remarkable is the general appearance of the negresses. I never saw in any European race such perfect development and wonderful symmetry of form as these women almost universally exhibited. Tall and erect, with bare bosoms and arms which literally glistened as they moved like some glossy and beautifully woven silken texture, there was an air of perfect natural grace and

dignity in their every motion, which is absolutely indescribable, but which many a highborn lady in our own country might well have envied. Their typical ugliness of feature was forgotten in the rare perfection of form. When one reflects for a moment, and remembers that these are a race of slaves, the thought leaves a certain unpleasant flavour behind it. More than ever applicable in their case, seems to be Swift's Satire on his own kind as conveyed in the story of Gulliver's Travels to the Houyhnhms. Master and slave, in Rio de Janeiro, might well change places with each other, as far as physical superiority is concerned.

Another generation will see all this changed. Slaves are now no longer born in Brazil. Silently but surely the law of 1871* is working to root out slavery from the country. No violent disturbance of the long-established laws of society either has or will take place, but yet, year by year, the race of slaves is dying out, and a new population of free people is growing up in its stead.

After a long and, to me, amusing ramble through the countless narrow, straight streets and byways of the city, I found myself once more in the Rua do Ouvidor. This is a very fair type of the generality of streets in the city proper. Straight and narrow, and bounded on each side by lofty houses furnished with balconies and deep overhanging eaves, it differs much from the style that we are accustomed to see at home.

* See Appendix, note A, "Abolition of Slavery in Brazil."

The idea was to obtain the minimum amount of sun upon the street during the day that was consistent with a barely sufficient width for ordinary traffic ; but it is an open question whether the stagnation of air produced by the narrowing of the streets to this minimum is not a worse evil than would be an additional hour of direct sun heat. Apparently the question is decided against the old theory, as in all the newly built suburbs wide streets are the rule, and narrow ones the exception.

In the Rua do Ouvidor, and many others, the curb of the foot-pavement is flush with the pitching of the carriage way, the gutter running down the centre of the street. This arrangement is no doubt convenient, indeed I may say absolutely necessary, for the carriage traffic in these narrow streets, because it allows vehicles to run on to either pavement when passing each other; but it is certainly less pleasant and convenient for humble pedestrians. In fact it is more than unpleasant. To a man with metropolitan ideas, who has been accustomed all his life to consider the foot-pavement his castle, and therefore inviolable, it is intensely irritating to be suddenly startled by a loud "hiss," followed immediately by the wheel of a "Tilbury" cleaning itself against the sleeve of his pet coat. Fortunately the carriage traffic in Rio de Janeiro is very light, or the nuisance to the foot-passengers in some streets would be quite intolerable.

The custom of attracting attention by hissing seemed to be more highly developed here than in

any European town with which I am acquainted, and certainly there can be no possible doubt but that it is most effective and economical in its action. Amidst the noise of traffic or of a multitude of voices a shout will very frequently pass unheeded, but one short, sharp "hist" or "pist" will have as much effect as the report of a pistol. It requires also much less effort than shouting, which must always be a consideration within the Tropics. The negroes especially seemed to be adepts at this practice.

My second night in Rio was passed undisturbed by crowing of cock, or by any sound whatever; and when, early in the morning, I went out on to the balcony overlooking the street, and from thence inhaled the delicious morning air, I almost repented of my resolution to seek other quarters.

A very interesting operation was being performed in the Rua do Ouvidor at this early hour. The street was entirely empty of carriages and even of pedestrians, and from the balcony where I stood, I could see from one end of it to the other without interruption. Its sole occupants were five black and white cows, each attended by a calf and a man. Each calf was attached by a rope to its mother, in such a manner as just to prevent it from gratifying its natural cravings. This seemed very hard upon the poor creatures, but the benefits thus secured for the populace of Rio far outweighed any considerations for them.

Doors were rapidly being opened on both sides of the street, and jugs and mugs were being handed out,

and returned again brimming over with fresh foaming milk, pure and free from any taint or suspicion of the iron cow. As each three or four houses were supplied, the obedient quadruped, at a word from her master, moved on a few yards farther, happy in the delusion that she was all the time satisfying the wants of her own offspring, and altogether innocent of the hoax that was being played on her meek and trusting nature.

This I found was an every morning operation, to be seen going on in all the streets in the city. Most assuredly the inhabitants of Rio are wiser in some respects than ourselves. They object to being served with adulterated milk as much as we do, and therefore they employ the only effectual preventive, which we do not do.

The institution of balconies is a great luxury. Both morning and evening, it is delicious to sit outside in the cool air; and, to the stranger especially, the various phases of life to be seen in the street below, afford a fund of amusement. One of the most comical sights to witness was the oft recurring one, of the meeting between two slaves who happen to be acquainted with each other. A black man is at all times a more or less ludicrous object to the uneducated eye of an Englishman, but when the black man puts on the finished airs of the white man—the town dandy, and salutes his fellow slave with a ceremonious doffing of his tattered straw hat and a "*Bom dia, Senhor,*" followed, as this generally is by a perfect imitation of

the Cockney's well-bred shake of the hand, and by many courteous enquiries as to how "*Vossa Mercè*" passed the night, and sincere hopes that "Your Grace" is enjoying good health, no unaccustomed observer can possibly refrain from laughing. Of course, at this time, I understood very little of what the words of these salutations were, but the visible mode in which they were conducted was amusement enough. And what Cockney would not have envied in his heart of hearts the absolute perfection of the bow on both sides with which the casual meeting would terminate? In the evenings the balconies all along the street were always crowded, chiefly with the women of the households, who never seemed to appear in public, except at this one hour.

After we had been in Rio some few days, four of us made an excursion to the "*Corcovado*," which is one of the highest peaks in the immediate neighbourhood of Rio, and which we had especially noticed on the day of our arrival, when steaming slowly up the bay. We started early, and got into the carriage road which follows the course of the Great Aqueduct up to as far as the source of its supply. This aqueduct, which is nearly six miles long, is one of the wonders of Rio, both in beauty and in utility. It was constructed more than a century ago, for the purpose of supplying the city with pure water, and it has ever since remained in good working order. It is built of stone, which, in the course of time, has become covered externally with lichens, mosses, and magnificent maiden-hair ferns.

Some of these latter are superb, bearing fronds eighteen inches in length, of perfect shape and colour. The road, for the first part of the way, follows the west slope of a spur of the "Corcovado" itself. For the last two miles it winds along the eastern slope of the same spur, following, bend for bend, the course of the aqueduct up to its source. This part of it is most lovely. The deep shade of the thick foliaged trees, the variety and beauty of the numberless palms and myrtles, flowers and ferns everywhere growing in tropical luxuriance; the perfumed air, and the cool rippling sound of the water in the aqueduct, all lend their charms to enrapture the senses. Leaving behind us this enchanting bit of road, we passed the reservoir, and struck into a narrow path to the right, which wound zig-zag up through the dense wood with a rapid ascent. After two hours' rather hard pull up this path we reached the summit, and there our labours were repaid tenfold.

It would be useless to attempt to describe the view from this mountain top. All, and far more than all, that had entranced us, on first entering Rio bay, was here to greet us again. Every beauty of colour, of contrast, of varied distance, and of delicate lights and shades which an artist loves, was now before us. We threw ourselves down upon the ground to rest and drink our fill of the magnificent panorama.

On the seaward side of the mountain there is a precipitous drop of more than a thousand feet, and tradition tells the usual tale of faithless mistress and

despairing lover who madly cast himself down from this giddy height on to the forest-clad slope below.

We remained on the summit several hours, till, in fact, we began to fear that night would be upon us before we could again reach Rio. Then we all raced down to the head of the aqueduct, feeling as we descended, a very sensible change taking place in the temperature. A strong sea breeze had been blowing upon the top of the mountain, and the air had been very cold; but here, not a breath was stirring, and the atmosphere felt ten degrees warmer than it had been above.

We arrived at the hotel "Ravôt" a little after sunset, very well satisfied with our day's excursion. No visitor to Rio should miss doing this "lion." It is labour well repaid; but it must be remembered that the ascent cannot be accomplished from the town in much less than four hours, and it is therefore advisable to take a supply of provisions with which to restore exhausted nature when the summit is reached.

CHAPTER III.

Senhor Chico.—Tramways.—The Botanical Gardens.—A Brazilian Post Office.—The British Consulate.—“Madame.”—The Rio shopkeeper.—Yellow fever.—The true rationale of the unhealthiness of the city.—Filthiness of the inhabitants.—Curious facts of disease.—Preparations for a start.—A battle royal.

ALL this time we have been entirely forgetting *Senhor* Francisco and the hotel “Cintra.” I am afraid that both house and man were very much unaccustomed to eccentricities of guests such as we were.

“Five baths every morning! the *Senhores* were surely joking! he did not think he had even such a thing as a bath in his house.”—“Very well, then, we must try somewhere else.” Next morning appeared a “nigger” in each room carrying on his head the half of a wine-cask, evidently as an apology for a bath, and containing about three pints of water. For this luxury the sum of 2\$000, or more than 4*s.* per day, afterwards appeared in the bill. *Senhor* “Chico” was determined that such unreasonable demands on our part should be met by a like scale of charges on his side.

Then came the food. “Bife” steaks, hard and tough as leather, were served up for every meal in

the day. We objected. Mine host was astonished. —“Were not the *Senhores* English, and did they not like ‘Bife?’” In short, nothing fit to eat could be got in the hotel. “Chico” was not an enterprising man, and consequently on the third day he lost four out of his five guests. The solitary individual who remained (a Swede, by name Lundholm) lived ever after like a prince; there are therefore some hopes that on that day the policy of the hotel “Cintra” underwent a radical change, and that future sojourners under its roof have reaped the benefit of the lessons first taught by us. I joined the other members of the expedition, Edwards, Faber, and Morant, who were established at the hotel “Ravôt” in the same street and who had reported somewhat more favourably of their quarters.

The one great institution of Rio de Janeiro, patronized alike by all classes of people, is the tramway. It was not long before most of us discovered the far greater comfort and convenience of this means of locomotion, as compared with all others. The cars are light and airy, and are drawn, not by the lumbering animal which we see at home, but by wiry, active little mules, running in pairs, and full of energy and “go.” It is a pleasure to see the manner in which they bound into the collar at the given signal, and go off at once into a gallop, as though they thoroughly enjoyed their work. Their rapid pace causes a cooling current of air to circulate through the car, which, in contrast to the otherwise still and stifling atmo-

sphere, is inexpressibly delicious. All other traffic in those streets through which a tramway runs is subordinate to this. At the sound of the warning bell attached to the tram-mules, carts, cabs, and even private carriages, open up right and left and allow the car to dash past with unslackened speed. Powerful breaks are fitted to each pair of wheels, and the car can thus be brought up short at any moment. The ordinary fare is 200 reis, or about fivepence for any distance within a certain radius. For twice that amount a person can travel to the farthest limits of any of the lines yet open; that is to say, to a distance of four miles or more from the city.

We took advantage of this mode of conveyance one day, to pay a visit to the famous Botanical Gardens, which are situated at the foot of the Corcovado, some five miles out of Rio. They are certainly one of the sights of Rio, and well deserve a visit.

Here I first saw a humming bird flying about in the open air; the way in which it darted and poised, visiting each flower in turn, like a bee in search of honey, was most interesting to watch. Gorgeous butterflies too were everywhere disporting themselves in the hot sun, rivalling the many-coloured flowers in the brilliance of their array. The numerous fountains and waterfalls, scattered about in various parts, gave a sense of coolness to the atmosphere, which was most refreshing. The number of people in the gardens was very small. It appears that the great majority of the people out here are quite as incapable of appreciating

quiet enjoyment of this kind, as we are in England, where the Crystal Palace would be preferred to the lovely Kew Gardens by ninety-nine out of every hundred holiday-makers.

I wonder whence the Brazilians obtained their ideas of post-office management! Professedly, the system under which this important public department is conducted, is borrowed from the most advanced European nations. If indeed so, European nations have no reason to be proud of their pupil. A day or two after the arrival of the mail from England, I called at the British Consulate, to enquire for letters which I knew would be directed there. On receiving from one of the clerks in the office the not very civil reply, that they had enough to do without taking in letters addressed to their charge, and that they always returned letters so addressed to the post-office, I went to the "*Correio Geral*"* to find out what had become of mine. On giving my name and particulars to one of the officials, he absented himself for a minute, and then returned, saying, "No letters." I explained that I had been given to understand that some had been returned from the British Consul's. A large packet of letters was then produced, and put into my hands to examine. They were not there. After some delay, another packet was given me, which I examined with like result. The clerk then said there were no more English letters at all, and that therefore there could be none there for me.

* *Correio Geral*, General Post-office.

However, feeling confident that he merely said so, to save himself the trouble of looking them out, I still persisted, till yet a third packet was handed to me, and there I found not only my own letters, but also several for other members of the expedition, of all of which I took possession, without remark or formality of any kind.

This little episode speaks volumes as to the detail management of this important office. It is no longer surprising that so many complaints of letters being lost are made against it, when one considers the lax manner in which their distribution is managed. Like the custom-house, this department would be none the worse for a little closer attention to detail. However, the fact that it does not yet pay its own expenses may be taken as some slight excuse for its present rather slipshod mode of working.

I found that my letters had all been sent to the British Consulate according to the manner in which they were addressed, but that they had been returned with the words: "Not known at the British Consulate" written upon their covers. It is difficult to see what excuse our Consul could possibly make sufficient to justify such scant courtesy towards his fellow countrymen. We English naturally look to our own Consul for small acts of civility, which cost nothing, but which are most valuable to those who, like ourselves, have come out as utter strangers to a foreign land. The plea of "too much to do," advanced by the clerk, is, or was, simply ludicrous—as the office did not open before 11.30 A.M. and there was no admit-

tance after 3 P.M.!! It is to be hoped that the physical powers of the officials have increased a little, since the year 1872, and that they do not continue to find that three hours and a half's work in the day is too much for them. In the contrary case, I would recommend a little change of air to England as a very good remedy for their dilapidated constitutions, and a corresponding importation of new blood, to take their place.

At the "Ravôt," to which hotel I had moved after leaving the "Cintra," the accommodation was a good deal better; and it had the great recommendation of having a series of bath-rooms attached to it—a luxury almost indispensable to Englishmen.

The proprietor was a jovial sort of fellow, very different to Sr. *Chico*. He did not seem to trouble himself much about the management of the hotel, leaving everything to "Madame," his spouse, who was a veritable shrew. One very dirty little waiter, who spoke French as well as Portuguese, assisted by several black slaves, performed all the work of the establishment between them, while "Madame" sat in a tall box in the "sala de comer" all day and made out the bills.

After we had been here about a fortnight we thought it might be as well to ask for our accounts; and it was fortunate we did so, as, when they appeared, we found that "Madame" had not sat up in her tall box all day for nothing. It seemed that she had been unable to learn our individual names, consequently, in order that

equal justice might be meted out to all, whatever one man had ordered, she had religiously put down to all; and this was doubtless done on the principle of equality, and not, of course, with any intention of defrauding. The consequence was, however, that the bills one and all presented most wonderful totals. Some little difficulty was experienced in convincing "Madame" of her mistake; but, in the end, a judiciously worded intimation to the effect that another part of the city might perhaps suit us better, made everything come right. And it was a noteworthy fact that from this day forth the food was better and the waiter more intensely civil than ever.

As in the hotels, so in the shops, a newly-arrived Englishman is considered fair game for plunder, and unless he happens to possess more money than he knows what to do with, he soon finds himself forced to adopt the universal custom of "haggling" over every purchase that he wishes to make. Indeed, the shopkeepers expect you to do so, and always allow an ample margin in which to be beaten down. The process is both tedious and disagreeable to most Englishmen, but not more so than the feeling that you have been deliberately swindled.

Prices for all European manufactures are naturally high, on account both of the distance of transport and of the heavy import duties. As a general rule, the cost of everything in Rio de Janeiro is from 100 to 200 per cent. higher than it is in England. Take the practical value of the milreis as a shilling, and then

for all European goods add 100 per cent. for cost of transport and import duty, and a very fair calculation can be made as to what it costs to live in this city. It is not surprising therefore that the Portuguese (who form the great bulk of the shopkeeper community in Rio) usually succeed in making their fortunes in five years, if only they can escape the yellow fever for so long a time.

A few words here about this dreadful scourge may not be uninteresting.

There is no doubt but that yellow fever, now that it has once got a hold of this city, will never be entirely eradicated. Year after year it has reappeared ever since its first visitation some twenty-five years ago, scarcely dying out even in the winter; and it is absurd to affirm, as the government does, that it is imported each year from other parts. The germs of the disease, wherever they may have originally come from, are now firmly rooted in the spot, and are called into activity each summer as it comes round by the increase of temperature; the severity of the scourge at the same time varying inversely as the rainfall during that season. The season of 1872 and 1873 was an exceptionally dry one, and the fever assumed in consequence the form of an epidemic. A fortnight's hot sun without rain in the summer months will, in any year, cause the death-rate from this source to rise frightfully. And then if rain does not quickly come, an epidemic is certain to follow.

Why is Rio de Janeiro an unhealthy city? That it is so, nobody who has lived in it for any time can

possibly doubt, though books published under the inspiration of the government persistently deny this truth.

The rationale of its unhealthiness lies partly in natural and partly in artificial causes. In the first place, the city is built on a perfect flat, on ground which was once a swamp, elevated only a few feet above high water, consequently there is no sufficient fall for the drainage; and, as a matter of fact, the drainage system is very far from perfect, though great improvements have been carried out of late years. Until, however, the inhabitants themselves become more alive to the essential benefits of cleanliness, and practise this virtue with the same zeal which they devote to money getting, the government will continue to have enormous difficulties to overcome, in putting the general sanitary arrangements of the city into anything like a respectable condition.

The state in which the hotels—to speak only of what I have myself seen—are kept in certain essential points of cleanliness, is beyond all description disgraceful to the city. Of those with which I am familiar, namely, the “Cintra,” the “Ravôt,” the “França,” the “Europa,” and the “Frères Provençaux,” any single one would of itself be sufficient to breed a fever even in a temperate climate. And yet, though year by year yellow fever, small-pox, and other loathsome diseases carry off their thousands, and permanently injure the health of thousands more, these hotbeds of fever are allowed to remain, tainting

the atmosphere, and spreading death around. What the state of things in this respect is in private houses, I am unable to say; but probably there is not much difference, and, if so, no words can be too strong to condemn the whole race of people inhabiting this city as unfit to be called civilized.*

Though, as I have shown, sufficient causes for disease are to be found in the sloth and neglect of the people themselves, yet there are natural causes besides, which, when once the city has become unhealthy, tend to keep it in that condition. Stagnation of air caused by the bay (on whose immediate shores Rio is built) being landlocked on every side by lofty mountains; stagnation of water in the bay, which cannot get changed except by very slow degrees, owing to the narrowness of the communication which connects it with the outside ocean; these are the two great natural conservators of disease in this case, and therefore it is that when any disease such as yellow fever has once laid hold of the city, its extermination cannot but be a matter of extreme difficulty, if not of absolute impossibility.

It is a strange thing that negroes, and the Brazilians themselves, are almost entirely exempt from the attacks of yellow fever, though there have been years when its ravages have been so terrible (especially in the more northern seaport towns) that the popula-

* There is now a newly-opened English hotel in the Botofogo suburb, kept by a Mr. Carson, which is a model of cleanliness and comfort.

tion has been decimated twice over without distinction of colour or race.

The great mortality is always amongst the lowest class of the people, chiefly Portuguese and Italians, who are proverbially the most dirty in their habits. The English and Germans, of all the foreign population, seem to suffer least; but this is probably due to their being generally of a better class in life than the first-mentioned people, and therefore not subject to the same inducing causes of sickness.

It may be useful here to give some account of the principal symptoms which give warning of the approach of an attack of this dreaded enemy. First comes a violent headache, with intense throbbing pains in the back of the head; then follows a feeling of sickness, often accompanied with aching in the limbs. *Now*, if not done before, is the time to take instant remedies. Swallow a strong dose of castor oil and go straight to bed, piling on blankets, rugs, coats, anything that comes to hand, so as to produce free perspiration. If at once obtainable, a very hot bath should be taken before getting into bed, as very often perspiration will not commence without it. If these simple remedies have been recurred to in time (and all depends upon this), in a very few hours the threatened attack will have passed off, and nothing but great weakness remain. It is always best, of course, to send at once for a doctor; but by no means wait for his arrival before taking the above measures. Delay is often absolutely fatal. The great thing is, to at once take

some efficient purgative, and also to get the pores of the skin thoroughly opened. A doctor could do no more than this, and an hour's delay makes all the difference.

A very good system is adopted in the Rio papers, by which the daily course of an epidemic may be watched by those most interested in it. Instead of the ordinary death column, like that which we have in our daily papers at home, each death is put under its own denomination, and each day's obituary is kept distinct, so that all the world can at once see whether any particular disease is becoming stronger or weaker. In ordinary seasons, such as that of 1874-5, the death rate from yellow fever is from 10 to 20 a day, and the number of attacks is from 30 to 50. In exceptional seasons the death rate has been known to be as high as 200 a day, but a fall of rain at once reduces this to a much lower figure.

Besides yellow fever, small-pox and consumption carry off a large number of victims every year. Small-pox confines its ravages principally to the negroes, and consumption is chiefly fatal in those years when yellow fever is least developed; the sort of inverse connection that exists between these two latter diseases being very remarkable.

It is strange to think that one of the most lovely spots that nature ever created, should also be one of the most fatal. But so it is.

Even at the present season, which was comparatively cool, Rio could not be called a healthy place. English

blood grows thin and poor in it, and even the few weeks that had elapsed since we had landed there, Rio had taken the colour and freshness out of not a few cheeks, and put a yellow tinge in many a formerly bright eye! Most of us longed, even after the first fortnight, to be out of the place. There was something peculiarly depressing to the spirits in the still motionless air, and in the living in a temperature which never varied, from one week's end to another. When, however, the order to "pack up traps" and march did at last come, it did not leave us much time for preparation. On the 24th of July, the news arrived that the difficulties with the government, which had been hitherto delaying the expedition, were settled, and that we were to start the following day for Paranaguá, the port of the province of the Paraná. Never were we so rejoiced. We had been pent up now five weeks in Rio, and were pining for the more active life to come.

These were the plans:—The force of sixteen engineers and assistants were to be split up into four staffs, each composed of three engineers and a map-maker, or draughtsman. Staffs I. and II. were to sail with their stores to Paranaguá, and thence travel together to Antonina and on to Curitiba, the capital of the province. From this point Staff I. was to commence operations, taking for its section the country between Curitiba and Colonia Thereza. Staff II. was to go on to the last-named point, and to take up that part of the Ivaí Valley which lay between Colonia

Thereza and the Corredeira de Ferro (a point on the same river, presumably about three hundred miles below Colonia Thereza). Staffs III. and IV. were to take between them the exploration of the country between Miranda and the Corredeira de Ferro, and were to start their work from the Miranda end. All four staffs were to go together in the government steamer "Bonifacio," which had been partially put at our disposal for the purpose, as far as Paranaguá, where the first separation would take place; Staffs I. and II. disembarking, and Staffs III. and IV. continuing the voyage round by Monte Video and the river Plate, up the Paraguay river and its tributary, the Mondégo, to Miranda.

As it was found, however, that the "Bonifacio" (being already loaded with a large amount of government stores) could not take more than half those belonging to the expedition, it was settled that Edwards and myself should take the stores of our two Staffs (Nos. 1 and 2) by the mail steamer "Camoëns," which was to start some hours before the "Bonifacio." We worked all night at loading the vessel, and managed to get the last packing case stowed away in her capacious hold a little before sunrise. We then returned to shore to visit our hotel, and get our personal baggage packed up and taken on board, as we were to start at ten o'clock precisely.

But before this could be accomplished, we were destined to fight a battle royal. Once again had "Madame" followed out her convenient ideas of

equity, in the drawing up of our accounts, and the sums total were this time more astounding than before.

On occasions like these one does not mind being swindled in moderation; but when the attempt is made in such a barefaced way, that to pay would be for ever to stamp one's self a fool in one's own estimation and also in that of others, wrath gets the upper hand and rebels against the imposition. So, I confess, it was with me. I refused to be swindled at all. Edwards did the same, and war was declared.

"Madame" began to storm and rave, and vowed that no baggage of ours should leave the hotel until her demands were satisfied. The "niggers" whom we called to take our belongings, shrank from her shrill voice and violent gesticulations, and were afraid to touch them. Time was getting short, and we could not afford to wait till our shrew of a hostess should have calmed down; so, while I kept guard in the hotel, Edwards went out into the street to procure further assistance. He soon returned, bringing three strapping big niggers in with him. These we loaded up and started on their way along the passages which led down to the street door. Before, however, they had reached the head of the stairs, "Madame," on her side, had assembled her niggers to bar the way. The affair was now becoming exciting. Edwards led the van, while I brought up the rear, and "quick march" was the order of the day. But it soon became evident that the hotel niggers were not at all keen in the affair, and were disinclined to offer resistance.

“Madame,” seeing that they gave way before us, let loose the reins to her fury, and, herself now coming into action, sprang like a tigress upon the unfortunate “nigger” just in front of me. He was carrying a heavy portmanteau on his head, all unsuspecting so sudden an attack from the rear. The shock of “Madame’s” frantic onslaught sent the startled son of Ham flying to the wall, and the huge portmanteau came tumbling down from aloft, making “confusion worse confounded.” Down the stairs bolted the poor nigger like a shot out of a gun, scared out of his senses, and was out of the street-door before his fellows knew what had happened.

The scene was so ludicrous that Edwards and myself roared with laughter, notwithstanding that the discomfiture had been on our side. Just at this moment Morant (another of our party) appeared upon the scene, and a truce was called. The very sight of his face had a magic effect upon “Madame ;” she calmed down suddenly and completely, and the remainder of our baggage was got out with no hindrance whatever on her part. Morant’s persuasive look and tongue not only effected this service, but eventually succeeded in bringing her to acknowledge her little miscalculations, and in making her perfectly satisfied with an offer of 40 per cent. as payment in full of our two accounts. This last proof of rare financial ability on the part of our Irish friend was not exhibited till long after our departure, we having left the matter in his hands to settle for us. The landlord wished us a

cordial farewell as we were leaving, and by no means seemed to consider us such heinous offenders as did "Madame" his spouse; but on the contrary made some apology for her frantic outburst.

Two "Tilburys" were awaiting us outside, and we jumped in, and, turning a corner, soon left the hotel "Rabôt" out of sight, and out of mind. Three years after this day, I walked into the same hotel and found "Madame" still sitting in her tall box making out the bills; the Senhor, at his old place at the head of the stairs, smoking the same long pipe, fat and jovial-looking as ever, and the little scrubby waiter unchanged in the smallest particular. I alone felt myself a different man; so various and so strange had been the events of my life in those three years.

We soon arrived at the wharf, and putting our luggage into a "big-boat-sir," were presently being pulled by two sturdy black "niggers" out into mid-harbour, where lay the "Camoëns," with steam up and the "Blue Peter" dangling at her mast-head.

Half an hour later we were once more gliding beneath the tall "Sugar Loaf," and Rio had been left behind without a regret.

CHAPTER IV.

Delights of quitting Rio.—Paranaguá bay.—The “Bonifacio” and her Captain.—Paranaguá.—A triumphant landing.—An Antonina hotel.—A parting entertainment.—The town.—Its inhabitants.—Means and cost of baggage transit.—A discovery.

THOSE whose hard fate it has ever been to be imprisoned in smoke begrimed London, through the sweltering months of July and August, and who have then been suddenly released and turned loose on the fresh stubbles of the southern counties, or better still, on the breezy moors of Yorkshire, can form some idea of how intense was our delight, after having been pent up for five weeks in a tropical city like Rio, where the air is still and stifling, and where all nature lies for months together in a state of motionless, almost deadly, torpidity, to find ourselves once more tossing about on the foam-crested waves, and feeling again the cool refreshing sea breeze stirring up the blood in our veins, and bringing back the colour to our sallow cheeks.

Each bounding motion of the “Camoëns,” as she sped along at a rate of twelve knots an hour, sent a thrill of pleasure through our hearts such as nature alone knows how to impart.

Evening came, and found us full sixty miles out at sea, with the coast line of lofty mountains, resplendent in sunset array of purple and gold, grandly looming upon our distant right. Almost equal in magic beauty to the sunrise that had greeted our first approach to the New World, was the scene that Edwards and I sat watching for the next twenty minutes from the deck of the "Camoëns." Not until the last tints had died away in the fast falling mists of night, did we begin to feel that we had neither of us been to bed or slept for the last thirty-six hours. Now that the excitement of the day was over, the fact was remembered, and we retired below. Our cabin was a most spacious one, far bigger than any on the "Lusitania." Messrs. Lamport and Holt (the owners of the vessel) received many blessings from us, as we turned into the comfortable berths, in a state of perfect content, both of body and mind. Had we known what miseries and discomforts our less fortunate companions on board the "Bonifacio" were at that very time undergoing, our self-congratulations would have been even more fervent and heartfelt than they actually were.

During the night the wind and sea rose, and the "Camoëns," which, in addition to having a deck saloon, was not laden to within some feet of her load line, rolled very greatly. In the morning, after dressing, we found that it would be more prudent to remain on our backs, than to attempt going on deck. The following night the rolling and pitching continued with unabated force till within an hour of sunrise,

when it suddenly ceased. We turned out at once, and found ourselves in comparatively smooth water, slipping quietly along past a lighthouse, and steering straight for a black mass ahead, which loomed through the darkness like some huge mountain, but which on the nearer approach of day, proved to be a group of islands, round which we presently glided, following the course of a winding channel, which a little farther on brought us to within a stone's throw of a promontory of the main land. This promontory rose up almost vertically on our left, protecting, with its tall palm-covered slopes, from southern wind and sea, the entrance to Paranaguá bay. A few minutes more and we dropped anchor in front of the town itself.

The bay was pretty, though not to be compared with that of Rio. A long reach of water stretching away to the westward, marked the direction of Antonina, which lay at the farther extremity of the bay, about twelve miles distant from Paranaguá. Vessels of a thousand tons and more occasionally go right up to Antonina, but they run no slight risk of getting aground, as the channels in places are less than two hundred yards wide.

At Paranaguá, on the contrary, it appears that any vessel capable of passing the bar at the entrance of the bay can find a safe and commodious anchorage; as, at a little distance from the town, there is a basin of some miles in extent, which has depth of water sufficient to float any sized vessel, and which also possesses a good anchorage bottom. There is, how-

ever, one objection to it as a harbour, which is, that it is not fully sheltered seawards. For instance, a stiff east breeze makes this part of the bay decidedly rough, so that on such occasions lighters cannot with safety approach a vessel at anchor there.

These facts I ascertained in the course of a short residence at Paranaguá in the year 1874, when, through the kindness of M. Scherer, the promoter of certain improvements in the place, I had an opportunity of consulting a very complete chart of the bay, and also of gaining a variety of information upon other interesting points with reference to this harbour. M. Scherer, who, at the time I saw him, was in a bad state of health, has since died; but endeavours have been made to get up a company in England, with the intention of carrying out the schemes first commenced by him. These include not only local improvements, but also the construction of a railroad between Paranaguá and Curitiba—an undertaking by no means difficult in these days, notwithstanding the 3000 feet or so of difference of level that exists between these two places.

To return, however, from this digression. Our first thought, on dropping anchor, was to get our stores on board lighters, which could take them up to Antonina; from which place there was supposed to be a good waggon-road up the Serra do Mar to Curitiba.

Communication with Curitiba also exists direct from Paranaguá viâ Morretes; but it is by means of a mule-track only, and therefore was not to be thought of for us, with our forty tons, more or less, of bulky stores.

Just as we had completed the operation of loading the lighters, the "Bonifacio" came in, and anchored about a quarter of a mile from us. Edwards hailed a nigger's canoe which was paddling about, and got into it, and went on board. I stopped behind to get our personal baggage together, and then bidding farewell to the captain of the "Camoëns," who had been very civil to us, in giving information and rendering other valuable assistance in getting our big cargo safely shipped to the lighters, I hailed another canoe, and was soon likewise on board the "Bonifacio."

On stepping on deck I was struck with the dirt and disorder everywhere apparent; and when I caught sight of some of our party I was still more astonished to observe their altered appearance. They looked as though they had not been in bed for a week. Captain Palm alone seemed not to have suffered.

The story they told of all they had undergone since leaving Rio was simply piteous; though, so selfish is man, instead of condoling with them, we two fortunate ones gave a glowing account of the comforts of our own voyage, and by so doing made them more miserable still by the contrast.

It came out that the "Bonifacio" was filthy beyond description—that her captain, officers, and crew were each one more dirty and uncivil than the last—that nothing decent could be got to eat—that there was no water for washing—and that the berths were uninhabitable. Consequently, for two days and nights all had suffered not only the pains of sea-sickness, but

also aggravated discomfort and wretchedness in every form.

Long after we learnt the explanation of all this. It seemed that the captain, whose name I have forgotten (but which ought to be handed down to eternal obloquy), was in the habit of doing a little trading on his own account during these voyages between Rio and the Paraguay. The unexpected influx into his ship at the last moment of our large expedition, with its bulky stores, had considerably interfered with his calculations, and his own private stock-in-trade had to be reduced or turned out. Neither could he take in any more at any of the ports he touched at, without turning out some of the expedition stores. This he actually did when going up the Paraguay river; putting these latter into open barges and towing them behind, while his own private stock of merchandise was made room for in the vessel. But it is a satisfaction to be able to record that he met with his just reward.

Haire, the chief of the third staff, on his arrival at Miranda, represented the case to head-quarters; and, the evidence being overwhelming, on his return to Rio the captain was summarily dismissed.

The steam-tug arrived at about three o'clock. She proved to be a tiny paddle-boat of perhaps twenty tons, and it was very evident that short as was the distance from Paranaguá to Antonina, we could not expect to do it under four hours at least, seeing that we should have five heavily laden lighters in tow.

We stopped at Paranaguá for about a quarter of an

hour. I should say from further acquaintance with this town that it cannot be very healthy, as it is surrounded by swamps; and not only that, but at low water large areas of mud banks in front of the town are exposed for several hours every day to a powerful sun. The inhabitants, however, do not complain of its being unhealthy; but neither do the inhabitants of Rio de Janeiro complain of *their* city.

The truth is, nobody likes to talk about such unpleasant things. So long as each individual can make his money, and escape "Yellow Jack," he is only too glad to persuade himself (and others too, if he can) that he lives in a very paradise of health. When, however, his own turn comes, he finds out his mistake, and then no doubt, when it is too late, regrets the selfish apathy which refused to see a danger that he had fondly hoped was not for him.

Paranaguá as yet is a small town; but were it ever to attain to the dimensions of Rio, it would doubtless become another similar hotbed of disease.

The whole country round, stretching away inland for many miles, up to the base of the Serra do Mar, appeared to be one immense swamp, with here and there a low mound rising up in the midst. All this part, was, of course, entirely uncultivated, and almost gave one the shivers to look at. On the opposite side of the bay, the ground was hilly, and cultivation was carried on there to a small extent. These observations were made as we steamed laboriously up the long reach towards Antonina, with the lighters in tow,

at the rate of about three miles per hour. All the sixteen members of the expedition, with the chief, Captain Palm, were on board; for the "Bonifacio" was not to start again till daybreak the next morning, and the third and fourth staffs were only too glad of even a day's respite from such a vessel.

Never, I should think, has even "the oldest inhabitant" of Antonina witnessed such a big arrival of "*Capitões*" and "*Doutores*" (we discovered hereafter that it was necessary to take one or other of these titles to one's self, in virtue of being "*Engenheiros*") as was ours.

In order to give our landing in the province of our future labours a suitable *éclat*, we had opened one of our boxes of signal fireworks, and had arranged a programme for letting them off just before reaching the town. It was long past sunset when we got within a mile of the place, and the night was dark and favourable for the display. At a given signal the little steamer burst out into a blaze of rockets, roman-candles, blue lights, and catherine-wheels, and at the same moment a volley of British cheers was let off from a score of stentorian lungs. Whilst the display was still at its height, we suddenly cast off our tow-rope, and the little tug, relieved of her long, wearying train of heavily laden barges, came steaming up to the wharf in grand style, with rockets blazing above and all around her. Thus triumphantly we landed once more on the shores of Brazil.

The pyrotechnic display had brought a small crowd

down to the landing-place, for nothing does a Brazilian love more than letting off a cracker, squib, or rocket, or seeing them let off by somebody else. Indeed, what would their Saints' days be, if it were not for the happy invention of fireworks ?

Amongst the multitude was a Sr. Hargreaves, who introduced himself to us in perfect English, and offered his services in obtaining without delay the necessary accommodation for our large party. He spoke both English and Portuguese with equal fluency, and being well acquainted with Brazil in general, and with Antonina in particular, was of very great assistance to us during our short stay in this town. In less than an hour from the time of landing, we were, through his kind aid, safely installed, with bag and baggage, in the only hotel in the place, which it is my firm opinion merely took upon itself that name temporarily for our better contentment, dropping it again when we left the town.

The proprietor, Sr. Pascoal, received us with enthusiasm, professing himself and his house capable of accommodating us all with perfect ease ; which assurance I for my part looked upon rather as a mathematical problem requiring demonstration, than as an article of faith to be unhesitatingly accepted, for on inspection the " hotel " proved to consist of four rooms, with six beds altogether, and our number was 17 !

Our first order was " dinner " or rather " supper for twenty as soon as possible," as we were all famished.

Mine host took the order with inimitable assurance

and sang-froid, as if he had been accustomed to receiving such orders any day for the last twenty years, though it appeared that he had to send out all round the town, to buy or beg pots and pans, plates and dishes, and all the other requisites for a large dinner. He wisely refrained, however, from disturbing our peace of mind by letting us know of the shortcomings of his house, but on the contrary bestirred himself with a will to satisfy our wants; and showed that he looked upon us in the right light, namely, as guests to be entertained and not as strangers to be robbed. One has a respect for a man who can thus run superior to his every-day groove when occasion requires.

In somewhat less than two hours from the time the order was given, a big table laid for twenty was groaning under the weight of piles of stewed beef, boiled chicken and rice, and black beans; while a row of bottles—some with the well-known label of “Bass and Co.” conspicuous upon them—adorned the centre, and Sr. Pascoal himself appeared at the head, ready to do the honours of his house in the good old-fashioned style.

We all sat down, and each man helped himself or his neighbour from the nearest dish, without regard to its contents. To judge from the buzz of conversation commenced and continued on all sides,—the uproarious jokes and laughter, and the rapid disappearance of both viands and liquors, never had a more jovial or contented party met together at a dinner-table; and

notwithstanding the diverse nationality of the company, all amalgamated perfectly, like brothers.

Just before the conclusion of the repast, the host rose to his feet and delivered a long complimentary speech (translated by Mr. Hargreaves), in which he congratulated, first the "Expedition" upon its safe arrival thus far on its long journey, and next himself, as having had the pleasure of first welcoming it to the province, which indeed he did most heartily, in the name of all Antonina—wishing it every success in the great work it had undertaken.

Captain Palm made a suitable reply, then other speeches followed, till in fact midnight arrived and found us still seated round the festive board. But this was only natural, seeing that the occasion combined a compliment to the expedition as a whole, paid by Antonina, in the persons of Sr. Pascoal and his two supporters, and also a farewell feast to the members of the third and fourth staffs, who were to start again at 3 A.M. by lighter for Paranaguá.

Soon after midnight we broke up, to snatch, if possible, an hour or two's sleep before the start; and dead stillness soon reigned in the hall of previous festivity.

I think that none of us will soon forget this, the first and last occasion of all meeting together as one body engaged in one common work; and if ever these pages meet the eye of any of those who were then gathered together, but who are now scattered abroad in the four quarters of the globe, they will, I trust,

recall no unpleasant memories of former days and former companions.

It fell to my lot to sleep on the festive board itself; and accordingly, wrapped up in my rug, with a log of wood for my pillow, I there turned in. My slumbers seemed to have lasted but a minute, when once more all was bustle and movement.

The hour for the departure of the third and fourth staffs had arrived. We went down in a body to the jetty or pier at which we had landed in the evening, and found a lighter all ready to start back with the tide. Our late companions were soon on board, and we gave them three farewell cheers as they slowly drifted away into the dark cold mist, and disappeared from our sight, and then we ran shivering back to our hotel. I discovered a vacant bed, and, without making any troublesome enquiries as to who might have been its owner, tumbled into it, and was soon wandering in the happy land of dreams.

We had now arrived at another stage of our travels, and sea voyages were over for many a long day. Our next point was to be Curitiba, the capital of the province of the Paraná, distant about fifty miles from Antonina. We knew that there was a waggon-road nearly if not quite completed, for the whole distance; and we were not long in ascertaining what were the resources of the place we were now in, with respect to conveyances.

The town itself was soon explored, and proved to be what we in England should rather call a village.

It boasted of one main street with a few smaller streets or alleys, running off it at right angles. The houses were mostly only one story high, and were built chiefly of granite rubbish (which was brought as ballast from Rio) laid dry and then plastered with mud and whitewashed over. But a very small proportion of the windows were glazed, and, as in Rio de Janeiro, not a chimney appeared above the low-tiled roofs. In the better class of houses an iron pipe might perhaps be seen, just protruding its nose out through the back wall, beneath the overhanging eaves; but more generally the smoke of the kitchen-fire was allowed to find its own way out through the interstices of the tiles.

On the south side of the town, perched on the summit of a little hill, stood the church, keeping watch over her little flock below.

It was evident from the appearance of this, the chief building of the place, that architecture had not yet progressed much beyond its most primitive form, namely, four walls and a roof. Yet, notwithstanding the simplicity of its individual edifices, Antonina as a whole would certainly be called a pretty and even a picturesque little place, situated as it is between land and water, at the foot of the gigantic range of mountains, the "Serra do Mar," and on the shores of the beautiful bay of Paranaguá.

There is no doubt that were the anchorage ground at Antonina less limited in extent, the town would have a great future before it; but it appears that

there are only two comparatively narrow channels in which vessels of any size can anchor. At present Antonina has the advantage over the rival town of Paranaguá, of possessing a waggon-road communication with Curitiba. Should, however, the proposed scheme of a railroad from Paranaguá to Morretes, and thence to Curitiba be carried out in preference to the opposing plan which takes Antonina as its starting point, there can be no question but that the balance of advantages would then be transferred to the former town. When last I visited these two little towns a fierce paper war was being carried on between them on this very question of the railroad.

At this time Antonina might have numbered perhaps 1200 inhabitants, of whom no inconsiderable proportion were Germans, and we soon discovered that the whole waggon traffic between this place and Curitiba was in their hands. We accordingly turned to them and engaged as many of their waggons as we could the first day, loading them up with stores, and starting them off to Curitiba as soon as they could be got ready. These waggons were small, though very strongly built. Their owners we found to be a stiff-necked race, with an obstinate objection to having their conveyances loaded beyond a certain amount. In fact, they would not take more than half a ton as a load. We looked again at the vehicles—they were stout and well made; we looked at the horses—they indeed were small and puny, but still there were no less than *five* to each waggon, and the more we looked,

the more we wondered at the apparently absurdly small load they would take. We remonstrated, but to no purpose; the invariable reply being, "If you put up more than we say is a load, we will take our waggons home again," which threat one or two did actually carry out. We were therefore forced to submit to their terms at such a rate, that the transit of a ton of stores over but fifty miles of road cost about ten pounds! What would be the price of coals in London at that rate of carriage?

Had our stores been packed in such a manner that they could have been carried by pack mules, as they undoubtedly should have been before they ever left England, we should certainly have been able to beat down the waggoners to a more reasonable price; but as it was, we were very greatly at their mercy.

By the end of the third day more than half our stores had been successfully got off, and *two hundred* horses were already toiling with them up the steep slopes of the "Serra do Mar." The remainder we decided to leave at Antonina till a future day.

It was a relief to have heard the last of the deep gutturals of these German waggoners, and to feel that yet another onward step had been taken.

During these three days of our stay at Antonina we found time occasionally to take out our guns, but it was not until the evening of the second day that we made the discovery that certain swampy meadows just outside the town were literally teeming with snipe. Faber (chief of the first staff) and myself

happened to be strolling home on that particular evening from a short expedition in the woods, when we saw several of these birds flitting about. We did not at once recognize them (never dreaming of meeting in the "new world" so homely a bird), but on shooting one, out of curiosity, we were astonished to find what it really was. We at once set to work to make up for lost time, and managed to bag several couple in the short half-hour of daylight that yet remained. A select party of us discussed them that same evening over a bowl of egg flip by way of an appetizer before supper.

It was very unlucky for us that we had not made this discovery sooner. Had we had the least idea of the mine of wealth that was all this time lying at our door, we should doubtless have made deep inroads into it; for though mine host's provender was good, yet it was a trifle monotonous, breakfast, dinner, and supper being all served up exactly alike. The third and last day of our stay in Antonina was altogether too busy a one to allow us to profit by the discovery made the previous evening, but Sr. Pascoal did his best to comfort us by the assurance that there were any numbers of the "long bills," as he called them, on the Curitiba plateau, and that we might shoot them there from the very doors of the houses of the town!

That night I loaded fifty cartridges with No. 8 shot, wondering greatly what kind of place Curitiba (a capital town, be it remembered) could be, where snipe could be shot with such marvellous facility.

CHAPTER V.

Sr. Pascoal's bill.—The Gracioso road.—A bit of corduroy.—A "venda" par excellence.—A new world.—Bird life in the Pine Forest.—A delicious toilette.—Sr. Rebouças.—A fearful mule ride.—Sweet repose.

HAVING thus seen the last of the long train of store waggons started on its way to Curitiba, we returned to our quarters to prepare for our own departure on the following morning.

Sr. Pascoal was requested to get his bill ready, and for several hours after he was to be seen sitting at the head of the long dining-table (the same on which I had passed part of my first night in Antonina) buried in the deepest calculations, and entirely surrounded by inkpots, pens, and long strips of paper. Evidently, the preparation of so big a bill as ours was an event in the life of mine host.

When at length the document was produced, we no longer wondered at the time its concoction had taken.

According to mine host's calculation, we and our guests had consumed three hundred bottles of beer in three days! Suppose we put down forty bottles as having been given from time to time to the men employed in loading and unloading stores—that would

still leave our consumption at the rate of nine bottles per man per day!

Unfortunately, no account had been kept by ourselves of the amount used; and mine host assured us, with many deprecating gestures of injured innocence, that he had kept an exact account of every bottle, which no doubt he had, and then multiplied their sum by three, according to the practice of "Madame" at the hotel "Ravôt," Rio de Janeiro. In other respects the bill was reasonable enough, as the food supplied had been both abundant and good—far better, in fact, than what we had been accustomed to for the previous five weeks. We therefore submitted to being convinced that Sr. Pascoal's figures were correct, and paid his account in full.

Next morning early our two waggons, each drawn by five of the small horses of the country, appeared at the door. Three riding mules accompanied them; one for the "tropeiro" who was to act as guide, interpreter, and groom all together, and the other two for Captain Palm and Curling (chief of second staff), who preferred riding, as making them more independent than they could otherwise be.

Our few remaining "traps" were soon stowed into the waggons, and we turned to take leave of mine host. The parting was most affectionate; whether it was our own good qualities, or the meek manner in which we had paid his lengthy bill, that had won his heart, I do not venture to decide. But certain it was, that

he embraced us one and all again and again, and with tears in his eyes wished us all good luck and a safe return from the perils before us, earnestly begging us to think of him now and then. I, for my part, can safely say that I did not soon forget him. The sight of a bottle of beer was generally sufficient to recall him vividly to my mind for months after.

For the first ten miles after leaving Antonina, the road wound along nearly on a level, hugging, for the most part, close into a big spur of the "Serra do Mar," which came down far into the plain towards the town. The plain itself was nothing but a series of big swamps, separated by occasional small hills and ridges, upon which cattle were browsing. Of cultivation of any sort whatever there appeared to be little or none.

In about three hours from the time we left Antonina, we came to the little village of St. João, which is situated close to the foot of the "Serra do Mar" itself; the ascent of which we were now about to commence.

Most of us preferred walking to being jolted along in the springless waggons, though (except for one length of about five miles, where the metalling had not yet been put down) the road was first rate, and did great credit to the engineers who had planned and constructed it up this difficult Serra. It is a pity that so fine and costly a piece of work, the good condition of which is so important to the interests of the province, should have been allowed to fall into the ruinous state in which I found a large portion of it two years after.

The misappropriation of the sums arising from its two toll-gates would not be permitted in many other countries besides Brazil.

These five miles of unfinished road gave us a fore-taste of what we were hereafter to become more intimately acquainted with: namely, the "corduroy" road of Brazil. The reality was certainly as bad as, or worse than, any of the descriptions of these roads that I have ever read. It was as though big trees had been felled across a rough lane at short intervals, and the spaces between filled in with thick pea-soup mud. Over this most atrocious *caminho* the horses floundered and the waggons groaned for nearly three hours. How these latter held together under the tremendous strain and jerks to which they were submitted during those hours, is now, and ever will remain, a mystery to me. The few lazy ones of the party who had, up to this time, been taking life easy in the waggons, after the first one or two jolts, did not wait to feel any more, but speedily tumbled out, preferring the alternative of getting their legs smothered knee-deep in mud by walking.

We now saw the use of having so many as five horses to each little waggon, which had hitherto been so puzzling to our notions of just proportion. We were even inclined to wonder now how anything less than a team of elephants could pull the waggons along at all.

At last we got safely over this bone-breaking quagmire, myself, and one or two others of the first staff,

with some of our European men, having remained behind with the waggons for the whole time, fearing lest some accident might happen, and damage be done to any of the valuable instruments which we had brought out with such care from England. As it was, the horses were very much done up, and without occasional assistance from us, I doubt if they would have got over the difficulty in less than double the time that it actually took them.

We now passed on to overtake the others, leaving the waggons to follow more leisurely. Since commencing the ascent, the road had been keeping an almost uniform gradient of 1:16, so that we were already a considerable height above the sea, and most splendid views were growing behind us, as we mounted still higher and higher.

From one point, at an altitude of about of 2300 feet, the view was especially magnificent. Below us, was lying stretched the broad flat plain along the edge of which we had skirted in the morning. There was our road, looking like a fine thread winding through it. There, too, was the little village of St. João nestling close in under our feet; and in the distance, the white houses of Antonina itself, shining out clear and distinct; and still further off to the right, the windows of the houses of Paranaguá glittering like diamonds, in the rays of the setting sun. And the bay, dotted here and there with islands and little bright specks of sails, was looking its very loveliest by contrast with the massive sombre looking mountains in the background.

This was the last peep of salt water that many of us were to have for two long and eventful years. The next time that I myself looked on the sea, was from this same spot twenty-seven months later, though not in company with any of my present comrades. Death and other causes had thinned our ranks before that time; and of the remainder, some were yet bravely struggling on in the far depths of the forest wilds, against difficulties and dangers, which they who have not gone through such, are apt to underrate.

It was beginning to get dark before we succeeded in overtaking the others. When, however, we did come up with them, we found there was yet another half hour's pull before us, to reach what our German "tropeiro" called "the hotel!" at the top of the pass.

We walked on almost in silence, for we were both tired and hungry, and when at last a faint glimmer of lights appeared through the darkness ahead, we congratulated ourselves upon the near prospect of a well-earned supper and bed.

Upon entering the little wooden chalet, at which we had now arrived, we found ourselves in a little shop, with the walls fitted up with shelves all round, upon which were arranged a most curious variety of articles: such as wooden shoes, spurs, with rowels four inches in diameter; knives of dimensions unknown in civilised countries; an assortment of dusty chemical bottles, which seemed to contain nothing but red, yellow, and white powders; some cracked and dirty looking

crockery; a bundle of rusty bill hooks; and a small pile of sardine tins: these, with a roll of coloured cotton print, with very dirty edges, stowed away in a corner, and a string of tin cups and cans hanging from the ceiling, completed the visible stock in trade of the "hotel," which was really nothing more nor less than a third-rate *venda* used by the *tropeiros* and waggon drivers as a convenient half-way house between Antonina and Curitiba.

The owner of this establishment, a rough-looking German, was questioned as to what accommodation he could give us. It then appeared that he could produce nothing in the way of supper but the above-mentioned sardines and a piece of a loaf of brown bread. Our hearts sank within us at the prospect. The proprietor must have seen our dejection and pitied us, for he presently disappeared, and shortly after re-entered, dragging in with him a huge leg of an ox, raw and dirty. This he offered to let us have if we liked to cook it ourselves, telling us, at the same time, that there was a *rancho*, or hut, outside, where we might light a fire for the purpose. We gladly accepted the ox-leg, thinking more of our men (who were most of them still a long way behind with the waggons, and who would probably arrive hungry enough) than with any intention of ourselves partaking of it. We were too tired to wait for our dinner while the meat was being cooked, so, after a mouthful of the bread and a few sardines each, we sought what accommodation there was, and were soon asleep,—some

on the table, some between ox-hides on the floor (or rather ground), and a few lucky ones on bedsteads of stretched cow-hides, cut in strips, upon which reed-matting was laid, in lieu of a mattress. Faber and I were fortunate enough to get one of these beds between us, and we laid ourselves down upon it without undressing, and, covering ourselves as well as we could with a stiff bullock-hide, which refused to be "tucked in," slept peacefully till morning.

I never before or since passed a better night than I did this night on the summit of the "Gracioso" Pass.

Next morning on going outside we found the grass by the sides of the road white with hoar-frost. I think most of us had supposed that we had left "Jack Frost" behind us for the next few years—I confess to having till now been under that delusion myself.

We were only just outside the tropics, and but the day before had been in the land of orange and palm trees, bananas, and coffee, now we were surrounded by gigantic pines, such as one imagines would grow only in the latitude of the Baltic. We had mounted since yesterday into an altogether different zone of life, and were now more than 3,000 feet above the level of Antonina, and the whole climate was completely changed.

Not seeing much prospect of getting a breakfast where we were, Curling, Faber, and myself started away at daylight to walk to the next stage, which we had ascertained was about three leagues farther

on. The delightful freshness of the air reminded me strongly of one of those bright October mornings which we occasionally get in England. We seemed to be breathing in the very essence of life as we walked along. Everything around seemed to participate in this enjoyment of living. The pine forests were swarming with different kinds of birds—chiefly wood-peckers and birds of the jay tribe. The most common of the former genus was a yellow bird, spotted with black, about the size of a missel-thrush, which, though evidently a true wood-pecker, as the well-worn tail abundantly testified, was more often found in little flocks in the grass-grown clearings by the sides of the road than on trees themselves. These birds looked invitingly plump, so we shot several, intending to cook them for breakfast if the next halting-place should prove as barren as the last. Another kind of wood-pecker, slightly bigger, with a brown body, and most magnificent scarlet crest, gave us several tantalizing chases before we could get a specimen. This bird was of solitary and retiring habits, and seemed to spend its life running up the trunks of the pine trees, or flying from one to another. It was very shy and wary, and when startled by any slight noise, or when in any way suspicious of danger, would stand out from the tree perfectly stiff and motionless, with crest erect and head held well back from the trunk, evidently listening intently; the slightest renewal of the noise would then send it off, and in a few seconds its quick “tap, tap” would be heard again, far away in the

forest. I never saw one of these birds on any other tree but the pine, and I have no doubt but that they are only to be found in the pine forests.

Occasionally, when the road passed through some bigger clearing than ordinary, we were able to get a view of the country.

It appeared to be a vast undulating plain, almost entirely covered by the dark green pine tops, and intersected in all directions by little valleys and hollows, each, probably, with its running streamlet of pure fresh water. One of the characteristics of the country, as we afterwards found, was this abundant supply of water, capable of being utilized to any extent as a motive power for machinery. Those days, however, are yet to come, and are not likely to precede the construction of a railway.

There were but few other trees that grew to any size besides the pine itself. Many of these latter were of gigantic dimensions, measuring 20 and 22 feet in circumference at the base, and, by rough calculation, from 120 to 140 feet in height, rising perfectly straight and branchless to within a few feet of their summits, when they spread out into a broad flat head, about 35 or 40 feet in diameter. Seen from a distance the general effect was very curious, the trees looking like a forest of enormous toad stools. They were the lords of the soil in this part, and were used exclusively in every kind of construction; the timber being considered superior to "Baltic."

After about four hours from the time we had started,

we arrived at the promised habitation, which soon proved itself better provided with the necessaries of life than we had dared to expect, after our late experience. A big dish of chicken and rice was soon before us, and as soon disappeared. No more being forthcoming, we told mine host that he had better kill at least ten more of his chickens, as there was a bigger and hungrier party coming behind. The remainder of our appetites we appeased with bowls of milk, and *farinha*,* and all agreed that it was the most delicious repast we had sat down to since leaving Old England. Certainly, we had scarcely tasted food for twenty-four hours, and hunger is always the very best sauce.

We had finished our meal before any signs of the rest of our party appeared; so Faber and myself went down to a little stream close by and enjoyed a most luxurious toilette, standing on a big flat rock in the midst of the cool rushing water, with ferns and lovely water plants all round, and a canopy of young slender bamboos overhead. A bath under these circumstances could not fail to be most refreshing, and so we found it. We were beginning to form quite a different opinion of Brazil from that which we had held in Rio de Janeiro. What could be more glorious than the life we were now beginning to lead. I think the foundation of all the love and appreciation of this country, which I came to acquire in the course of my next two years' wanderings therein, was laid this day. Certainly,

* Flaky flour, prepared from Indian corn, and the common substitute for bread in the backwoods of South Brazil.

life had seldom felt more pleasant than on this our first day in the Highlands of Paraná.

Shortly after our toilette was completed, the main body of the party arrived; some riding, some on foot, and some in the waggons. The ten chickens we had ordered for them soon vanished, not to speak of the milk, and eggs without number, that also disappeared. After a short rest, the march was continued for another two hours, when we arrived at some saw mills belonging to Sr. Antonio Rebouças.*

Sr. Rebouças himself received us with great cordiality, and insisted upon opening bottle after bottle of "Bass" in our honour. We were no less delighted with the friendly and hospitable reception which he gave us, than we were at finding ourselves not yet quite out of the land of beer. Healths were mutually drunk, and good wishes interchanged, Sr. Rebouças evincing the most lively interest in each and all of our individual experiences of his country. It was with great regret that we heard of this gentleman's untimely death some two years later.

There was not much time to inspect the saw-mills, but I confess to being surprised to find that the motive power was steam, and not water. The difficulty and consequent cost of getting the various pieces of the engine up the Serra, before the road was completed,

* Sr. Antonio Rebouças was a gentleman of colour, and a man of great enterprise and general capacity. He was held in high estimation by the Emperor. He was also one of the Concessionaires of the Paraná and Matto Grosso Railway Surveys.

had been enormous; and I cannot but think that water-power could have been applied as efficiently, and with much greater economy. But in any case all praise is due to Sr. Rebouças, as being the first who had endeavoured to utilise systematically the splendid timber of these parts.*

Captain Palm and Curling accepted the invitation to remain with Sr. Rebouças till the next day, and Faber and I took their mules, with the intention of pushing on before the others to Curitiba, to give warning of their approach, so that accommodation might be ready for them the moment they arrived, a very necessary precaution to take when travelling so large a party in this country.

Curling's mule fell to my lot, Faber mounting Captain Palm's, and now was to commence our experiences of those oft-described animals.

The first mile or two of our ride was over a "corduroy" road, similar to that already spoken of. On emerging from this slough of despond, I made the awkward discovery that the mule that I bestrode did not apparently understand any other pace but the walk. Neither of us was equipped with spurs, and blows even from an extra stout hunting stock fell all unheeded on the mulish flanks. Faber was more lucky; his mule was a very superior animal, and required but

* These saw mills have now passed into the hands of a company (Comp^{ia} Florestal). The prices of sawn pine of dimensions 17 ft. x 10 in. x 3 in. in 1874 were 18\$000 a-dozen on the spot; 36\$000 a-dozen at Antonina; and 60\$000 a-dozen at Rio de Janeiro. The company is not a very successful one.

little urging. I therefore transferred my hunting whip, which was furnished with a long heavy lash, into Faber's hands, and placing my mule in front, he managed to whip it up into a tolerable trot; but when the lash ceased the trot ceased, and Faber presently got tired of his share of the work, so it became necessary to try some other expedient. I accordingly dismounted, and having tied a long picket rope to the reins, the other end of which I still kept in hand, by dint of a vigorous use of the whip, got the animal well under way. I then jumped on its back while still at this speed, and found that the crack of the whip alone was sufficient to keep the beast at a canter for several minutes after, until he had discovered that the lash was no longer being applied to himself. This programme was repeated again and again, and thus we managed to progress at a fair average rate for the next two hours. I was getting very tired from the severe exertion, and we were still a long way from Curitiba; so, as a last resource, we tied my mule by the same useful picket rope to the tail of Faber's animal, which was still fresh enough, and for another long hour the latter had the double work of pulling itself and its brother mule along at a trot. This could not go on for ever, and presently Faber's mule began to show evident signs of having had nearly enough of it, and to add to our discomfort it was now beginning to get dark. We had left the pine forests behind us, and were now going through open prairie land, flat and swampy. To our constant inquiries of "*Quantos legoas d'aqui á*

Curitiba?" the everlasting reply had been, "A league, more or less." We never seemed to be getting over this last league, and our mules were almost done up. Both of my stirrups had broken, and the saddle itself seemed to be in the last stage of dissolution; my discomfort was consequently complete, and many and deep were the vows I made never again to ride a mule as long as I remained in the country.

But all things have an end, and about two hours after dark we reached Curitiba, and rode through the dimly lighted street to the solitary hotel of the place, too dead-tired to notice anything on the way. We found Edwards, who had preceded us some days from Antonina, there to greet us, and seldom had we been more delighted to get rid of a mount than we were now. Dinner presently put some life into us again; Herr Louis, the jolly German proprietor, showing himself all that a host should be, in providing for the comforts of his guests. About two hours later the rest of the party arrived. Faber and I arranged to sleep in the same room, and notwithstanding the little mishap of the bottom of my bed coming out during the night, and depositing itself and its burden on the floor, I slept the sleep of the just, till long after daylight next morning.

CHAPTER VI.

The Capital of Paraná.—Observations thereon.—A morning's sport on the Prairie.—Cattle breeding.—Why sheep farming is pronounced a failure.—Life at Curitiba.—Preparing for an advance.—The inhabitants of Curitiba.

WE had now arrived at one of the starting points of the exploration. For the present, at all events, the travels of Staff No. 1 were over. Soon we shall leave them to take care of themselves, while we, the more fortunate members of Staff No. 2, journey on another 200 miles into the vast interior, and then pause for a brief space before taking the final plunge into the wild unknown depths beyond. First, however, we have to describe a little what Curitiba is like, and ascertain whether it is a worthy capital of so great a province as that of Paraná.

In the year of which we are speaking (1872) the town of Curitiba might have numbered 9500 inhabitants, of whom 1500 were immigrants, chiefly Germans and French. It was therefore by no means a large place. The streets were laid out in the strictly regular manner peculiar to foreign towns. In the centre of the town was a large square of, perhaps, 200 yards in the side, in one corner of which stood the

church. Even in this town (the capital of a province, whose extent is greater than that of the whole of England) the architecture of this edifice was very weak. Only in point of size was it superior to the common buildings around.

The president of the province also resided here. His house, which was by courtesy called a palace, was a three-storied building, commodious, but very plain in appearance. It was situated in the main street of the town, and was surrounded by shops. These shops were apparently ruled by great minds: they did not confine themselves to one, or even to two, kinds of goods, but did business in a thoroughly cosmopolitan style, and were equally ready to serve a customer to a roll of tobacco or a yard of calico. All the bigger shops seemed to be owned by Brazilians or Portuguese, while the great majority of the smaller ones were held by Germans.

These few observations were made in the course of a first morning's walk round the town.

After breakfast, which meal was not served up till past ten o'clock, four of us—Curling, Faber, Edwards, and myself—shouldered our guns and cartridge bags, and started for the open prairie around, to see if we could not get some of the snipe that Sr. Pascoal had told us so much about. Directly we got outside the shelter of the town we felt the full force of the fresh invigorating sea breeze, which came sweeping up through the passes of the "Serra do Mar," whose blue peaks were seen some ten miles off to the east.

Mine host of Antonina was not far wrong when he said that the "long bills" could be shot from the doors of the houses. We had not got a hundred yards from the termination of the main street before one snipe had been bagged. We, however, did not linger so near the town, but made away for a large, flat tract of country which lay about a mile distant, and which looked likely ground.

And so it proved. No sooner had we reached its outskirts than the snipe began to get up; at first slowly, in ones and twos, and then in "wisps" of twenty and thirty at a time. At last it appeared as if every bird, far and near, had been flushed, for the sky was now literally black with them, wheeling round and round high up over our heads, loath to desert their favourite ground, and yet evidently afraid to return. Presently, as we stood quiet for a little time, they began to descend in flights of ten or a dozen at a time, dropping down into the very centre of the swamp round which we had been beating. Edwards and I volunteered to go in after them, trusting to our big thigh boots to save us from getting uncomfortably wet. Edwards managed to get across his line of country without much difficulty, and drove clouds of the birds out once more. I was less fortunate, and got into a regular quagmire, where I sank in over my high boots, and only got on to "terra firma" again after a most exhausting struggle of nearly an hour, with my boots left behind, my gun choked full up to the muzzle with mud, and myself smothered from

head to foot with mire. I had the additional satisfaction too of hearing the others banging away all around, and having rare sport all the time that I was in this unpleasant predicament.

Fortunately a young lad, hearing the firing, had come out from the town to see the sport, and he, being of light weight, for the bribe of a *milreis*, went in after my boots and recovered them. After having a good rub down all over with bunches of grass, and the barrels of my gun washed in a little stream close by, I was once more able to join in the sport myself.

From this ground we next went across the main road, which laid on our left, to some big lakes surrounded by brushwood. Here we found wild geese, duck, and other water birds in great abundance, but they were very shy and wary, and it was impossible to get near them by ordinary means. We therefore resorted to driving, and by this means managed to bag two couple of ducks. All this sport was obtained within sight of Curitiba: in fact, our guns must have been heard from the town the whole time.

The lakes spoken of appeared to be the sources of the river Iguassú, near to whose head waters Curitiba is situated. We had good opportunities on this little shooting expedition of observing the general aspects of the country round.

It was thus seen that the town itself was situated quite on the open plain, though at a little distance from it on the north side, pine forests, with occasional open bits of pasture land amongst them, commenced.

To the south all was open prairie as far as the eye could reach, and both east and west showed long ranges of prairie land, dotted however, at frequent intervals, with clumps and patches of wood. The absence of any tall spires or high buildings, or even of the homely chimney pot, gave to Curitiba, when seen from a little distance, an appearance very unlike any English town. One almost imagined it to be an array of tents and huts, forming the camp of an army liable to be marched on to some other locality at a day's notice; the almost universal custom of painting, or colouring the buildings white, strengthening this resemblance.

On the long undulating slopes of the plain around, cattle in some numbers were browsing; whilst sheep, on the contrary, were conspicuous by their absence, notwithstanding the evident suitability of both climate and pasture.

I afterwards learnt that attempts on a small scale had been, and were still being made to introduce sheep into the country; but hitherto they had not been found to pay. One reason given for the failure was, that the dogs got at the sheep and worried them night after night, so that no fair chance was given them. This may no doubt be the truth as far as it goes, but it certainly should not be made an excuse for giving up the attempt of their introduction. A small annual expense could easily find an efficient remedy for so simple an evil. This brings us to the real point

The average Brazilian does not care to invest his

money in anything that will not at once bring him in an enormous percentage. His whole education unfits him for laying out a pound in order to get but twenty-one shillings, especially when any care has to be exercised meanwhile. There are so many simpler and more directly profitable ways in which a man of capital may invest his money, that there is no inducement for him to go out of the beaten track to obtain a merely moderate percentage. Cattle-breeding requires very little brains, and but moderate capital, to yield, at all events, fifty per cent. per annum. Shopkeeping, when once the shopkeeper (or merchant as he is here called) has succeeded in allying himself with some Rio house that will give him credit, is an even simpler mode of making money. He has nothing to do but to buy a £100 worth of suitable goods from his Rio agent, and sell them piecemeal to his deluded fellow countrymen for £300. This is why a small bottle of "Bass" often costs four shillings in Curitiba, and a yard of common calico half-a-crown.

There is another reason (which, however, may at first sight appear paradoxical) why sheep-breeding in this province has not succeeded; and this is, that the government has shown a disposition to take it up, and has in fact made several experiments on a small scale, which, unfortunately, in every instance, have resulted in a dead loss, and have therefore served in nothing but to discourage private enterprise. The following is a sketch of the *modus operandi*, as related to me by an impartial but "'cute" looker on.

A certain gentleman (Brazilian, of course) patriotically offers his land to the government, free of charge, for the purpose of the experiment. The government gets a cargo of sheep from the south, and pays all expenses of transport, and lands them, without cost, on the patriotic gentleman's estate. After a time this gentleman, who is very solicitous about the well-being of his delicate charges, discovers, or fancies that he has discovered, that one of them is ill. He at once orders it to be killed, in order to prevent any chance of the disease (whatever it may be) spreading. After a time his anxious eye again discovers the insidious approach of disease in another member of the flock. Prompt stamping-out measures are again taken, and his table is once more furnished with the delicate joint. The fame of his good dinners is spread abroad amongst his friends and acquaintances; and what more natural than that they should express a desire to be remembered on the next occasion of necessary slaughter. This goes on for some months, and the flock diminishes in number, day after day, till finally, in despair of being able to keep the few remaining animals through the summer months, which, as he plainly foresees, they cannot possibly get through alive, the *fiat* goes forth, and the butcher's knife puts all the ill-fated animals out of their misery at one fell onslaught, and thus the curtain falls upon the last Act of the experiment (!). The government has lost a few "contos" of reis, and the "patriotic gentleman" and his friends have become familiar with the taste of mutton, and sheep-

breeding in the province of the Paraná is pronounced a failure.

As an article of food I do not think it would pay to farm sheep in this province, because cattle-breeding can be carried on at a far cheaper rate. But for wool-farming there seems to be no reason why this province should not compete favourably with the Buenos Ayres market; on the contrary, the European markets being so much the nearer, the profit, *cæteris paribus*, should be so much the greater. The only question to be decided is, whether the climate is suitable? As far as can be gleaned, from the few genuine experiments as yet made, the answer on this point is altogether favourable. With the introduction of sheep on an extended scale one great economic problem of the province would be solved; which is, how to utilise efficiently the vast extent of prairie that now, year after year, grows a large proportion of its pasture to waste? The indirect advantages to the province would be beyond calculation.

Men now out in the country, who have had experience in sheep-farming in Australia, have expressed themselves confidently as to the suitability of these prairies for the same purpose. It remains, therefore, for a capitalist and a man of business to make the experiment on a large scale. Every ordinary facility would be given by government, which is only too anxious that such an experiment should succeed; and doubtless also special privileges and exemptions would be granted to the promoters of an enterprise

likely to be so important to the welfare of the province.

I am, however, forestalling considerably the order of events ; as, it may well be imagined, I had not at this time become much acquainted with this much vexed question of sheep-farming in Paraná. I may have other opportunities later on of again referring to the subject.

We got back to the hotel tolerably early in the afternoon, with our pockets laden with snipe, which, together with the ducks, were made over to Herr Louis to be cooked for dinner. Captain Palm and Curling arrived soon after, bringing with them Sr. Rebouças, the owner of the saw-mills. Our dinner on this evening was luxurious. The long table groaned from end to end under the weight of the piles of comestibles with which it was laden. Certainly the greater part, by weight as well as by bulk, consisted of rice, without which vegetable our experience up to the present had led us to believe no dish in Brazil could be considered complete. There were soup and rice, chicken and rice, beef and rice, snipe and rice, duck and rice, beans and rice, and rice *pur et simple*. In the drinking line there was bottled beer and bottled porter, *vinho de Lisboa*, a dark wine, and *vinho branco*, a wine the colour of sherry, but with, alas ! by no means a like flavour. Appetites were found to be keen at this elevation, more than 3,000 feet above the sea, and before very long the load on the table was sensibly diminished. Mine host here did not sit at the board with us, as did Sr. Pascoal at Antonina, but waited upon us instead.

This was sufficiently accounted for, however, by the difference of nationality of the two men.

On the following morning there was frost upon the ground, and the air felt almost keen enough for a bright Christmas Day in England.

We had now to prepare for the separation of the two staffs,—No. 1 consisting of Faber, Edwards, Morant, and a Swede, Von Sydow by name, who were now landed on the scene of their labours; and No. 2, to which belonged Curling and myself, and two others, namely, S—— and the Swede Lundholm. Our destination was Colonia Thereza, a backwood settlement 200 miles further westward into the interior.

The first difficulty, as usual, was to obtain sufficient means of transport. Roads, properly so-called, beyond Curitiba there are none. Everything would have to be carried on the backs of mules for the next 200 miles. This was an eventuality which had by some strange mistake been overlooked when packing the stores in England. Consequently, in nearly every case, the packages were unsuited either in size, shape, or weight, to the new mode of transport; and no inconsiderable amount of drudgery had to be gone through in order to reduce them to the proper dimensions. Our own tools brought out from England here came in useful, and many of us turned up our sleeves and worked away with a will at this practical branch of our profession, carpentry, in order that we might be able the sooner to resume our journey.

Our staff had brought up from Antonina about ten

tons of its stores. A mule load is from 200 to 240 lbs. Consequently we required about 100 mules to take on even this reduced supply, our full complement having been twenty tons. Finding, however, that it was impossible to get more than thirty mules for the present, we again had to decide to leave a large amount behind, and to take on only the more necessary stores for immediate use.

Every evening, after the day's work with the stores was over, we met together in a new German hotel that was building at the bottom of the town, which possessed the modest attraction of a brewery of its own attached to it. These evenings were usually devoted to talking over the plans and arrangements for carrying out the work of the exploration before us, and to discussing the country generally. Occasionally men would drop in who had themselves travelled in the interior, and lived wild lives in the forest. Herr Leitner (the landlord) would bring out his best beer, and would, when called upon, add to the amusement of the evening by playing on his *zither*, on which he was a most proficient performer.

On one of these occasions we met two gentlemen who were on their return to Rio from an exploring excursion in the province. They were full of a scheme for establishing an English agricultural colony somewhere on the banks of the Iguassú, at some distance from Curitiba. This scheme is now before the public, under the ear-grating title of "The Colonization of Kittolands," and I shall, on a future occasion, have

to say something more about it, not, I fear, altogether favourable. Its chief promoter is a certain Mr. Kitto —(Do, Mr. Kitto, find some more euphonious way of handing your name down to posterity, than by spoiling the romance of such names as Paraná and Iguassú by associating with them such a terribly modern word as “Kittolands”). We did not manage to extract much information about the country from these gentlemen. They seemed to have picked up very little during their travels.

There was, however, a German engineer, by name Swartz, who had accompanied an exploring expedition of Sr. Rebouças some years before through the great “Sertões,” or forests of the Ivahy Valley. He could spin yarns by the hour of their wild life during that time, and through him chiefly we got some idea of what our own life in those regions would probably be. In some details Herr Swartz’s stories were not enticing, and he did not hesitate to prophecy that we should none of us return alive from the Ivahy; for that, if the Indians did not kill us, the insects would. On looking back, now that all is over, to the horrible stories of this insect-plague in the forests, which Herr Swartz delighted in relating, I cannot say that they were much exaggerated, though, at the time, they appeared to be enormously overdrawn and coloured.

It was now the month of August, and the sun during the day was very powerful; yet each morning, when we turned out, the ground was white with hoar frost. It is a very rare thing for snow to fall at Curitiba, the

reason being, not that it is not cold enough, but that the cold season is also the dry season, and therefore there is but little moisture to be condensed, either in the form of rain or snow.

On the 8th of August, after we had been at Curitiba about a week, news came that the promised mule troop would be at our service on the following day : and our stores were still strewing the floors of two houses in different parts of the town, not yet repacked ! Their new cases were, however, nearly all completed, and by working all that day and far on into the night, we managed to finish off the whole repacking of the ten tons of stores, belonging to us ; so that there would now be no difficulty in having those which could not accompany us on the morrow, sent on by other mules as fast as these latter could be procured.

One difficulty had been the tent-poles belonging to the marquee tent ; they were seven feet long, and we knew that no mule would take them. We therefore cut off the iron fittings, and packed them up to take with us, intending to fit them on to new poles when we reached the end of our mule journeys. In the meantime, of course, that comfortable little tent would be useless ; however, we possessed our big bell tents, which had been brought out for the use of the workmen of the staff, so that we should not want for shelter during the march.

Before concluding this chapter, a few more words ought to be said on the subject of the foreign population of Curitiba, and more especially the German por-

tion of it. As has been before explained, the Germans had already obtained a good footing in the place. The only two hotels in the town were owned by them. Many of the shops likewise were in their hands, and they had actually succeeded in gaining and keeping the entire monopoly of the waggon traffic over the great road down to the sea. If we turn to the suburbs of the town, we see gardens well cultivated and kept, with most of the familiar European vegetables growing in them; and a Brazilian passing by, will say: "That is a German's habitation." If you ask how he can tell, he will at once reply: "The garden tells." Again you see a man working on the road with shovel or pick, and, you need not to look upon his face, you at once address him in German. All work that we in England call navy work, is done in this province exclusively by foreigners, of whom nine-tenths are Germans.

The Brazilians despise these men who work with the pick and spade, and call them disdainfully, the *trabalhadores do Brazil*. But if they wish to hold their own in certain towns of their own country, it is time that they dropped this sort of pride, or the despised *trabalhadores* are not unlikely to beat them out of the field altogether.

The construction of the Gracioso road up the Serra do Mar was the beginning of German prosperity in this part. The frugal habits of life of these people—their steady, honest labour, soon enabled a great number of them to save money on this work. This they, for the most part, invested prudently; some

in the Brazilian fashion of opening a shop, whence by their more moderate prices they soon drew increased profits; and others, in the purchase of horses and waggons for making use of the very road they had themselves helped to construct. The climate and the country both seem to have suited them admirably, and their progress has been proportionately rapid. Not so with the French. There is one part of the suburbs known as the French quarter; and there a number of families of that nationality live and have lived for years, making no show and no progress, and not amalgamating at all with the spirit and life of their adopted country. They appear to be perfectly stationary, doing neither good nor harm, nor influencing, in any way, the progress of the town.

It would be well if the same negative praise could be given to the English of Curitiba. It is true that our countrymen form but a floating population in this town, on their way to and from the colony of Assungui; but this floating population is both dreaded and detested by the Brazilians. Their coming and going are always marked by some more or less disgraceful disturbance. "These English are all drunkards" is the common and only too true saying of them in Curitiba. I will not, however, here say any more about them, as I shall have another opportunity when relating my visit to the colony of Assungui, of entering more fully into the whole question of the English in this province.*

* See Vol. ii. Part III. Chap. 3, also Appendix, note F.

A batch of English emigrants arrived at Curitiba while we were there, and as there seemed some doubt as to whether we should be able to obtain a sufficient number of men for our requirements at Colonia Thereza, we engaged three of them, thereby increasing our European rank and file to nine men in all. Whether it was good policy to thus cumber the march with so many untried men, remained to be proved. Certainly we could not congratulate ourselves upon the appearance that some of them presented.

CHAPTER VII.

Brazilian *tropeiros*.—Difficulties of the start.—“Danger.”—The pack mule “par excellence.”—A prairie camping-ground.—Our first camp.—Sport “en route.”—Our Europeans.—A prairie-hen.—The first shot at a deer.—The Serrinha.—Scene and view from the summit.—The great Prairie.

NOTWITHSTANDING all our efforts of the previous day to get the stores ready for an early start, we did not succeed in moving away till long past noon. First it was, that a mule had strayed, and could nowhere be found ; then, that the baggage was not all together, but must absolutely be all brought up to one store, because the mules must be all loaded at the same time, and the troop could not be divided ; then, that this package was too heavy, or that one too long, and a wearisome discussion in every instance had to be gone through before the *tropeiros* could be got to take the articles in dispute. But no amount of persuasion could induce them to load up a certain package of instrument legs. Hard and soft words fell equally powerless. In this case they proved themselves more stubborn than the stubbornest of their own mules ; consequently, at the last moment, the case had to be

opened, and the legs distributed amongst the Europeans, to be carried by them.

We had thought the German waggons at Antonina troublesome enough to deal with ; but a glass of beer, coupled perhaps with a word or two of chaff, was ever a convincing argument with them (up to a certain point!). We had evidently not yet discovered the way to win the hearts of these stubborn, hard-featured Brazilian *tropeiros*. What would we not have given to have had once more at our disposal those despised waggons ! But, alas ! even could we have bought up every one in the place, it would not have been possible to have made use of them, as Curitiba was at this time the absolute terminus of all such advanced luxuries as roads. Henceforth every store, other than the common productions of the country, that might be necessary to the prolonged existence of our staff in the great *Sertão* would have to be transported laboriously for about 200 miles on the backs of mules.

All difficulties were at length surmounted, and the troop of twenty-three mules, led by their foster-mother, an old gray mare,* across whose sharp bony back a big bare-legged "nigger" strode, filed slowly through the

* Every mule troop is obliged to be furnished with an individual of the nobler quadruped, either a horse or a mare ; otherwise the mules will not travel or remain together, but will scatter and go each its own way. The affection that the mule has for the foster-parent thus supplied is a most remarkable phenomenon in mule nature, especially as the affection is by no means reciprocated by the nobler animal, which, on the contrary, invariably salutes its devoted followers with hearty kicks whenever they presume to approach within range of its heels.

main street of Curitiba on the commencement of its long journey across the wide prairie.

I was mounted on a shaggy little chestnut horse, or rather pony, which, mindful of past experiences, I had taken care to secure for myself at the time of engaging the troop. Curling too had managed to get hold of a very fair looking horse; but our other two companions had not been so fortunate, and were accordingly forced to put up with mules. Two spare riding mules, and three spare pack mules were taken with us, to allow for contingencies. Our European *camarados* marched on foot. Various dogs, some belonging to Curling and others to the *tropeiros*, enlivened the start by their fierce contests. One of Curling's dogs was a small but very powerful and "plucky" bull-terrier, rightly called "Danger." He had commenced operations betimes in the morning by pinning and almost killing a big mongrel three times his own size, the property of one of the *tropeiros*. For this he had been duly whipped and tied up, but was now again loosed, and clearly considered it his duty to fight and, if possible, kill each and all of the strange dogs. Very soon, however, these latter learnt to respect "Danger," and henceforth kept at a proper distance from him.

The first Staff were already engaged on their work, which lay at some distance from the town, and we had taken leave of them all that morning after breakfast. Captain Palm, however, accompanied us for the first hour; and Edwards had previously promised to ride

over to our camp in the evening, and be our guest for the night, to speed us forward on the following morning.

For the first league, after getting outside the town, our road lay through an open and almost level plain, similar to that immediately on the other side of Curitiba. The "road" consisted of a network of narrow, deeply-sunken paths, worn by countless hoofs, and scoured by many a torrent of tropical rain. A few timber houses and huts appeared at intervals by the way-side, inhabited by herdsmen and *tropeiros*; but even these poor habitations gradually disappeared as we advanced on our way.

We were not destined to go very far before commencing our experiences of the especial qualities of the pack mule *par excellence*. Without any apparent cause, one of these beasts, which was carrying two big packing-cases of general stores, suddenly shot off at a tangent to the curved line of march, galloping frantically. The two heavy cases, each weighing about 120 lbs., bounded up and down upon the pack-saddle like feather-weights. The noise on its back seemed still further to terrify the already frantic animal, and it began to plunge and kick with such energy that strap after strap gave way, till, with a final effort of vicious madness, both cases were sent spinning up into the air, to come down with a crash on to the ground, scattering their contents in wide confusion upon the prairie. The moment the animal had thus disencumbered itself of its load, it began to browse peacefully

amongst the wreck which it had made, as though it was quite accustomed to the performance of this sort of feat.

We looked on at the whole proceeding in utter amazement; the two *tropeiros*, on the contrary, like the animal itself, seemed to take it quite as a matter of course, and almost before any of us had sufficiently recovered from our astonishment to say a word, the offender had been caught, the scattered contents of the cases (which fortunately consisted of nothing more fragile than tins of potatoes and split peas) collected and roughly repacked, and the whole once more secured upon the back of the now meek-looking quadruped. "*A mula ainda não e bem mansa, logo mais ha de ficar boa,*"* was all the explanation the head *tropeiro* deigned to bestow upon us. Evidently, we had much to learn yet.

This and other similar instances of free and easy behaviour on the part of the mules, beguiled the time till nearly sunset, when we arrived at the camping ground, which was situated close to a small *chacara*, or farm-house. We had already passed two or three camping grounds, which were easily recognised as such by their fresh green sward, instead of the usual long coarse tufts which formed the general covering of the prairie, and by the dozen or so of tall poles which were invariably to be seen stuck up in their centre. We now learnt the use of these long poles. They were the

* "The mule is not yet quite broken in; he will be all right by-and-by."

posts to which each pack mule is attached by its halter of raw hide, during the process of loading and unloading. This precaution is very necessary with most mules, otherwise they are apt on these occasions to abruptly swing their bodies round, and leave the marks of their heels in the stomachs of the men who are loading them.

It was dark before the tents were pitched, and the camp in proper order, for our Europeans were as yet very "green" at their various new duties, and the mule-men had enough to do to look after their troop. The prospect of getting any supper before midnight, from our own resources, looked doubtful under the circumstances, so we called upon the *fazendeiro*, and soon came to terms with him on that point. Just as all the necessary arrangements for the night were completed, Edwards, with his guide, came riding in, in good time to partake of the supper of boiled chicken and rice prepared for us at the *chacara*. A huge fire was blazing on the floor of the room as we entered, and we sat down to the table, prepared to thoroughly enjoy everything. After supper, the *fazendeiro*, who was a very civil individual, pulled up sundry logs to the fire, to serve as seats, and offered us the "pipe of peace," in the shape of cigarettes made of native tobacco rolled up, not in paper, but in the dried leaf of the maize or Indian corn. We each smoked one of these for courtesy's sake, and then betook ourselves to our own more substantial pipes.

On going back to the camp, we found that another tent had been pitched during our absence by the *tropeiros*. They had besides lit a big fire close to its open end, and three pairs of large black feet were appearing out from under a mass of blue and red cloth, or baize, which were evidently luxuriating themselves in the pleasant warmth of the fire. In the centre of the camp appeared the dark mass of luggage, which was all piled up in a heap, and covered with hides. We saw no sign of the troop itself, but the tinkling of a bell not far off told us where it was.

It was a glorious moonlight night, still and frosty, and our little camp, with its two tall bell-tents, and the little ridge-tent of the *tropeiros*, gleaming white against the sombre background of pine-trees, formed a very pretty picture. The effect, however, was somewhat marred by the "groggy" appearance of the two bell-tents, which the unaccustomed hands of our men had pitched at too wide angles from the vertical; neither did the broad Warwickshire dialect, which was heard proceeding from one of the tents, seem altogether to harmonize with the surrounding scene.

We soon found out the difference between passing the night in a house and under canvas. The cold was intense. Nobody could sleep. Our camp-beds, made of canvas stretched on wooden frames, seemed to chill our very bones, and it was necessary to put at least three folds of thick blanket beneath to lie upon, thus diminishing grievously the supply available for top covering. Thus we passed our first night in camp,

now and then snatching a little sleep, only to wake up after each nap, colder and more miserable than before.

Early in the morning Edwards rode away back to Curitiba, carrying with him three good British cheers, and also, I fear, a not very pleasant impression of the delights of camping-out. It was as well he was not with us some two or three nights later, or his ideas of camp life would have been still more unfavourably influenced.

By nine o'clock all tents were struck and rolled up ready for the "pack," and we ourselves and our men had finished breakfast, and were ready to start by the same time. But no mules had as yet turned up, though the *tropeiros* had been on the quest since daybreak. An hour later they returned, and then it appeared that the troop had strayed some miles back on the Curitiba road, led by the lean grey mare. Why the *tropeiros* did not hobble this animal on turning the troop out the evening before, did not appear.

Riding with the troop, which of course could never go beyond a walking pace, was slow work, and I, for one, soon began to cast about for some way of enlivening the march.

The country through which we were travelling was about equally divided between wood and prairie. The latter was generally very swampy, though the swamps did not appear such as would impede walking. One of the men was carrying my gun (a very heavily made double-barrelled breech-loader) and was groaning under its weight. I put this man on my horse, with instruc-

tions to keep within sight of me, while I took the gun, with the intention of walking the ground at some distance from the mule-track, for snipe. Curling's dog "Danger," who had already at Curitiba proved himself to be as keen after sport as he was for a fight, accompanied me, and together we marched through the swamps. In an hour or two I had filled my pockets with long-bills, "Danger" thoroughly entering into the sport, acting as spaniel and retriever alternately, and never leaving off working the whole time.

Returning on to the track again, I rode after the troop, which, however, had not got far ahead, as I had occasionally been able to take short cuts across swamps, which the mule track, of course, was obliged to skirt. On joining it I found that several of the men were missing, neither had I seen anything of them behind. Luckily we were just approaching a camping-ground, so the order to halt for the day was given; while I, having the best mount, rode back to find out what had become of them. Half a league back another mule road branched off from ours, and some way along this road I discovered the missing men, all tired and dispirited, and, after the manner of their kind, ready to put the blame on everyone and everything, rather than on their own want of "pluck" in not keeping up with the march, and so losing their way. However, in these cases, a little judicious humouring does more good than hard words. I put the weakest of them, a Warwickshire lad named Miles, (who, it so happened, had come out to Brazil as an

emigrant, in our own vessel, the "Lusitania") on my horse, gave a sip of brandy and water out of my flask all round, and cheered them on with the news that the troop had already camped. We took a short cut, in the direction in which I calculated the camp to be, and before long, rising up against the dark border of a little wood, half a mile off, appeared the welcome sight of the thin blue smoke of the camp-fire, gladdening all our hearts.

There was not much work to be got out of the men this evening; they were done up by the march, short as it had been (three and a half leagues), neither were any of them accustomed to the various details of camping arrangements, two of us, therefore, each taking an axe, went into the wood behind to get fuel, and soon collected a sufficient supply for the evening's requirements. Presently a good fire was burning in front of our tent, with a pot boiling on the top of it. The snipe were soon singed and spitted, and supper began to look hopeful. The men, who were some of them not bad fellows, grew ashamed when they saw us putting our own shoulders to the wheel, and soon began to bestir themselves in like manner.

It is curious what little sense of the pleasures of wild life there is in the average British lower class individual, and how little capable he is of roughing it out of his own particular groove. A man who, in England, will work ten hours a day with pick and shovel for 2s. 6d. or 3s., and will be content with his hunch of bread and cheese, or bread and bacon, and a pint of

beer at his regular hours, will, on going out to a new country, grumble at the hardship of having to light his own fire, or cook his own food, or of having to walk for five hours, instead of working with a pick for double that time; even though he may be earning (as some of our men were) at the rate of £5 a month, clear of all expenses. The truth is, no doubt, that the European working man lacks the power, in a very marked degree, of accommodating himself to circumstances. This is because his previous life has been, to a great extent, that of a machine. A ploughman has usually no ideas beyond his plough, a bricklayer few besides his bricks and mortar. Thoughts, ideas, and habits, have all worn themselves into a groove more or less narrow and deep, according to the circumstances of his training. I was beginning already to think, that we had made a mistake in bringing these Europeans with us, and that they would prove more trouble than they were worth.

Warned by the experience of the previous night, we unpacked our full supply of blankets, in anticipation of the thermometer again falling to freezing point, notwithstanding that it must have stood during the day considerably above 65° in the shade. And sure enough, in the morning, there was hoar frost on the ground outside our tents. These great changes of temperature during the twenty-four hours are most remarkable. They are due, of course, to the rapid radiation of heat produced by a clear sky, and continued for the many hours during which the sun is

below the horizon. Only in countries where the days and nights are so nearly equal, can this wide range of diurnal temperature be so commonly experienced.

This day we made an earlier start, having arranged with the *tropeiros*, for the sake of our Europeans following, to take a short midday rest, instead of continuing the usual practice of starting late in the day, and travelling right away without a halt to the next camp. In order to shame the grumbling spirits amongst our men, at least, into silence, if not into absolute cheerfulness, I gave up my horse to one of them for the day, and myself marched along on foot. This had, to a considerable extent, the desired effect.

On the previous day we had passed a few straggling houses, such as *chacaras* and *ranchos* of the poorer class, and fourth-rate *vendas*, which sold nothing but that vilest of all spirits *cachaca* (made from the sugar cane). This day, however, we passed no habitation at all for the first three leagues. The country at first continued to present the same general character as that through which we had passed the day before. Wood and *campos* alternated in about equal proportions, and water was abundant everywhere; the swamps, however, were becoming less frequent.

I kept a little way behind the troop, off the track, in the hope of getting another bag. The prairie grass was in parts very thick and high, being often above the knees, and consequently the walking was laborious enough; but the excitement of expectation was quite

sufficient to prevent any feeling of fatigue at the time, as I could not tell at any moment what might get up. As I was wading through one of these open bits of *campos*, knee-deep in the long brown grass, a big bird got up with a loud whirr from close under my feet. It was so startlingly different from the almost noiseless rise of the snipe, to which I was most accustomed, that I missed with the first barrel, though the bird offered a splendid mark, as, after rising a certain height, almost vertically, like a pheasant topping a coppice, it poised a moment in the air. The second barrel, however, caught it under the wing just as it had got well under way, causing it to turn several rapid somersaults in the air, and come down to its mother earth with a bang, at about forty yards from me. On reaching the spot where it fell, I found a bird which at first sight I took for a hen pheasant. On closer inspection, however, many marked points of difference were evident. In size it was slightly smaller than a hen pheasant; its legs were shorter and thicker, and its beak or bill much longer and far less strong than that of our familiar bird. Our *tropeiros* called it a *perdix* (partridge). It was in reality a *tinamon*, or South American prairie-hen, and was destitute of anything worthy of being called a tail.

I had not long finished examining my spoil when I heard a double shot about a quarter of a mile ahead, and a little to the right of the troop I saw a horseman galloping at full speed, in the direction of a small patch of wood, about 100 yards to my right, and close

in front of him two other objects appearing and disappearing above and beneath the tall grass, as they came bounding along towards the wood. I soon made out the hindermost of the two to be the dog "Danger," the other was a deer. I rapidly slipped a couple of ball cartridges into my gun, determined to hazard a snap shot at the animal before it should reach the wood. At a little over 100 yards I let drive, first one barrel, then the other, at the lithe, bounding form, but, to my disgust, without any apparent effect; as before the smoke had cleared away, it had disappeared into the wood. Curling, who came riding up breathlessly behind, said the deer had got up out of the grass within twenty yards of the leading mules, but that no guns were ready except his own, which had only been loaded with No. 5 shot, which took no effect at the distance he had fired from. This was a great disappointment, as a deer would have been worth bagging, and the *tropeiros* said they seldom came across one so close to the mule road as this had been, and that we should not be likely to get such another chance during the march.

We had now reached the western limit of the lower or Curitiba "plateau." Before us at no great distance rose the lofty cliff of the "Serrinha" or "little Serra," a name with which we were already familiar, from the constant references made to it by the mule-men, who, however, usually spoke of it as the "Serra Serrinha," thus erroneously making the latter word into a proper name.

The average elevation of this second range, which formed the eastern boundary of another and still more elevated plateau, was from 800 to 1000 feet above that on which we now were. Its distance from the Serra do Mar, in a straight line, was about forty miles. Our road wound up a wide gorge thickly timbered with the gigantic pine, with an undergrowth of bamboo and smaller trees. Except in this one place, the "Serrinha" presented an almost vertical face towards the east, with a sharply defined, though broken, and deeply indented sky-line along the whole visible front, giving the appearance of a gigantic cliff that had once formed the boundary of the ocean, though now raised from 3000 to 4000 feet above it. Indeed, to compare great things with small, the resemblance in its general physical features, that the giant country in which we were travelling, bore to the south-east coast of the Isle of Wight, could not but strike anyone who was at all familiar with the latter. There were the same two cliffs one above the other, and differing only in their proportions—the silent witness of the past and present ages; also the same raised plateau separating the two, differing only in magnitude; and lastly, the same deep gorges or chines, more marked in both examples, in the lower cliff than in the upper. Surely this general similarity can be no chance coincidence of nature, but must be the result of similar natural causes. At what remote epoch in the history of the world, the sea deserted this upper plateau, a careful study of the geology of the district would no doubt

determine. I leave the discussion of this point to those more competent to undertake its solution.

One important fact may, however, be mentioned which may aid in this inquiry.

It happened, two years later, that early one morning I was riding over the "Serrinha," and lost my way in a dense fog, which suddenly came on after sunrise. When the fog cleared off I found that I was near the edge of the cliff, at a point some two or three miles from the road which led down to the plain below, which latter I wished to reach. In order to enjoy the grand view over the plateau beneath, I continued riding close to the edge of the cliff, and then observed that it appeared to have one continuous granite coping or covering. I use the word coping, because it did not appear that the whole face of the cliff was granite, but merely the summit or crown. How far the covering of granite might have extended westward, I know not. Other observations, however, led to the conclusion that this was only one of a very extensive series of granite eruptions which extended beyond the Tibagy valley, west and south. In any case, it was now sufficiently evident that the peculiar formation of the "Serrinha" itself, if not the very existence of the plateau behind it, has been due to the protecting influence of this granite shield or covering.

Except in the immediate neighbourhood of Curitiba, where garden cultivation has received a great impetus from the large German population of the town, on the whole line of our march across the lower plateau, no

signs of agriculture appeared. The woods are looked upon merely as common storehouses for timber and fuel; and the patches of open prairie, though nominally (together with the woods) private property, were in reality more used by the passing *tropeiros* as pasture grounds for their troops, than by their real owners. To breed cattle profitably (and these patches were evidently not suitable for agricultural purposes) a larger extent of prairie land is required than could be obtained on this lower plateau, where woods and swamps may be said to occupy about two-thirds of the ground.

Our old friend the scarlet-headed woodpecker reappeared amongst the pine trees of the *Serrinha*. I again succeeded in obtaining a very finely plumaged specimen. Parrots and paroquets of various colours were flying about in noisy flocks, and here too we saw, for the first time, several of the birds known as "Brazilian crows." Their colour is one uniform and rather dull blue; they are a little bigger than our English jay, and certainly in all the principal characteristics that determine genera and species, they are more nearly allied to the jay family than to that of the crow.

The climb up this *serra* was most enjoyable. The huge flat tops of the pine trees spread out over our heads formed a cool, shady avenue, which both man and beast found a most refreshing change from the hot scorching sun of the plain below. But it was not until we had reached the extreme summit that we

knew how great was the reward in store for us. The latter part of the ascent had been very steep, and both men and animals were pretty well pumped out of wind by the pull up. I was some short way behind the main body, having stopped several times to go after some one or other of the numerous strange birds with which the wood swarmed. A few yards below the summit both pine trees and undergrowth terminated abruptly, and a gentle slope of smooth lawn-like turf led up for the rest of the way to the top.

Upon the summit, which here took the form of a raised knoll or mound, the troop was resting. The tired luggage-mules, almost exhausted by the long stiff pull up the gorge, were lying about on the green sward, like a flock of sheep on a summer's day at home, with muzzles prone to the ground, panting beneath the load still heavy on their backs. The men, all of whom, wonderful to relate, had succeeded to-day in keeping up with the troop, were likewise resting their weary limbs in various attitudes, and taking wise advantage of the temporary halt to refresh the inner man. On the extreme summit of the mound, standing out in bold relief against the clear sky, stood Curling's black steed, by the side of his master, who was lying on his back, with knees and elbows well up in the air, and head supported on hands, exhaling a cloud of fragrant fumes derived from a short pipe, and looking the perfect picture of ease and contentment.

“*Venha cá, meu velho,*” said this last, in his newly acquired Portuguese, as I came toiling up the slope, laden with gun and trophies of birds; “here is something for you to see.”

I reached the top of the mound, and then my tired muscles relaxed and limbs gave way, and I dropped down on the ground exhausted.

Without any fear of being convicted of exaggeration, I will attempt to describe a little of what I saw when I recovered sufficiently to be able to look around. We were resting, it appeared, on one of the highest points of the great cliff, which in the morning we had gazed at from the plain a thousand feet below, when such an immensity of prospect as now lay before us had not then been guessed at. To the south and south-west a vast sea of golden-coloured prairie extended to the extreme bounds of vision, rolling away in giant billows, down to the deep valley of the Iguassu, far below and beyond; then rising again on the other side, continued its onward roll in gradually diminishing waves, till land and sky were lost together, in what appeared to be infinite distance. Details there were none to grasp; the eye seemed lost in the immensity of unrelieved prospect. A few stunted trees grew upon the tops of the nearest waves, and here and there the familiar pine-tree showed its dark green crown from the depths of some intervening water-course. This was all. Besides this, the great plain, almost boundless in extent, was without a landmark on which the eye could rest.

There was still another picture. To the east and south, lying beneath our feet like another world, extended the lovely wooded plain of the lower plateau, bounded in the hazy distance by the blue peaks of the "Serra do Mar." The little patches of open country, which we had hitherto dignified by the name of "prairie," sunk into utter insignificance in comparison with the boundless expanse of prairie proper, of which I have just spoken. A little village, called "Campo Largo," which we had passed on our left, early in the morning, was seen nestling between two broad belts of forest about eight or ten miles distant, giving to the scene an air of life, without which it would still have been incomplete.

This nether world, so to speak, afforded a complete contrast to the great desert of prairie, on whose borders we had now arrived. It might have been a bird's-eye view of a part of Kent or Sussex, as beheld from the top of one of the chalk downs. In general appearance it was not unlike portions of one or both of those counties. Not so the prairie above. Neither in England, nor even perhaps in all Europe, can anything approaching it be seen. What seemed to impress one most was its immensity—its seeming boundless expansion. One felt physically something less than nothing when gazing upon it, whilst on the other hand the moral part of one's being seemed to expand indefinitely. Such, at least, were some of the sensations I experienced (poorly enough described) on this our first introduction to the great Prairie.

A glorious breeze was blowing from the south-east, coming up from the Atlantic through the lofty passes of the Serra do Mar, and thence across the nether plateau to the Serrinha, on whose summit we now stood, at a height of 4000 feet above the level of the sea. Once more we had risen suddenly into a new world, altogether different from that which we had left only a few hours before. Just as, in ascending the Serra do Mar, we had left behind us the luxuriant vegetation and humid heat of the tropics, to find ourselves in the cooler region of pines and other varieties of trees belonging to more temperate zones; so now these again had disappeared, and their place was left bare of all vegetation but countless acres of stubborn and hardy prairie grass, whilst the air, sharp and invigorating, seemed to tell more of the top of some Alpine pass, than of a latitude but three degrees removed from the tropics.

Thus far at least on our journey from the sea-coast towards the interior we had had no reason to complain of monotony of scenery, though, from the accounts of our *tropeiros*, we were likely to have enough of this last of the three *dénouements* of nature before we got to the end of it.

After about an hour's halt on this delightful summit, the journey was resumed and continued for another league, when we camped for the night in a little hollow close to a running stream.

CHAPTER VIII.

The Prairie on fire.—The scene at night.—Camp arrangements.—Thunder-storm.—Its effects in our tent.—Primitive cooking.—A day in camp.—Ant hillocks and their denizens.—A farming operation.—Shooting a bullock.—Our mule troop.—An oasis in the desert.—A long day's sport.—The bag.—Lost on the prairie.—The Caracará.—Hawks and quails.—The camp at last.

WHILE lovers of sport in the old country were dreaming in their comfortable beds of startled grouse and breezy moors, and all the attendant pleasures of the first day of the season, I was standing out on the boundless Western Prairie, a silent and solitary spectator of one of the grandest and most magnificent sights that even these regions of universal grandeur can present.

It was half-past eight on the evening of the 11th of August, and therefore about midnight in England. The long-suffering mules, who had borne during the day the long, cruel march up the steep face of the "Serrinha," were emancipated, for a time at all events, from their heavy burdens, and were browsing peacefully round our little camp. Our European *canalha** were, *graças á Deos*, quiet at last, and resting alike

* "*Canalha*," Angl. Rabble.

their disorderly tongues and weary limbs in sleep S—— and Lundholm were doing ditto, whilst Curling and I were squatting round the camp-fire with the two *tropeiros*, smoking and learning Portuguese. Notwithstanding the early hour, the air had already become chilly, and the *tropeiros* were both wrapped up in their long blue and red capes or *ponchos*, whilst Curling and I had also found it advisable to throw a thick rug over our shoulders. We had both observed for some little time that the sky, which had but an hour previously been perfectly clear and starlit, was growing thick and obscured, and also that a peculiar lurid appearance was spreading upwards from the south. I drew the attention of one of the *tropeiros* to this, and he at once said, “*E o campo qu’ está queimando*” (“the prairie is on fire!”).

Wild thoughts of prairie fires à la Mayne Reid, with all their accompanying excitements of flying Indians, buffaloes, horses, deer, travellers, and hunters caught and burnt alive, or escaping in the bowels of their horses, came upon me. I jumped up, cast my blanket to the winds, and, waiting for nothing and nobody, rushed off to get on to the top of the nearest prairie wave, whence a view of the fire might be obtained.

It was very dark, but I could just make out the black outline of the ridge which we had crossed immediately before camping. I made straight for this, regardless of armadillo holes or of ant hillocks, with which the side of the hill swarmed, and soon arrived at the summit.

The fire itself was not yet visible, being probably concealed behind an intervening wave of ground. The whole southern sky was, however, lit up with a ruddy glow, which deepened overhead into a lurid unearthly darkness. Every now and then a dull muttered sound, like the distant growling of a thunderstorm, swelled for a moment and again died away.

The wind, which was still blowing steadily from the south-east, brought with it the smell of the burning grass, and occasionally small fragments of charred *capim* alighted upon my face and hands. I could not yet tell at what distance the fire was, but I guessed about six or eight miles. The wave of ground upon which I was standing had no long grass upon it, and therefore I knew the fire would not touch it; and, moreover, in the hollow between this wave and the one next in front there was an additional barrier to its approach in the shape of a broad belt of pine-trees and other green woods. On the other side of this belt the long dry grass covered all the prairie. It was to this line therefore that the fire would come, and here also it would stop.

All this time the horizon was growing brighter and brighter, and here and there tall pointed flames were beginning to show themselves, leaping up and disappearing into the lurid clouds above them. Suddenly the whole horizon burst out into a vivid, serrated array of shooting tongues of fire, appearing and disappearing above the dark outline of a distant wave. A few more seconds and these skirmishers were

followed by a great wall of living, moving fire, which lit up the hill on which I was standing, so that the few stunted trees upon it cast weird shadows behind them. The fire was yet many miles away, but was rushing forward with winged speed.

The roar was now becoming more plainly audible, and at intervals muffled explosions, caused by the bursting of trees and stumps, came booming across the intervening prairie like the noise of cannon. Fragments of burnt grass were beginning to fall thick and fast, and I fancied that I could already feel the heat of the flames.

Nearer and nearer the conflagration rolled, and I could see the tall flames bending forward here and there as each gust of wind took them, and licking up acres of the long dry grass at one fiery lap. Sparks, consisting of live fragments of *capim*, were shooting upwards in a continuous shower, lighting up the dark mass of smoke and cloud, which hovered like a pall above. The sharp crackling of the burning grass and the bursting of the stunted prairie trees aroused the birds from their sleeping-places, and many partridges, prairie-hens, and other birds came whirring past me, fleeing from the heat and glare and infernal uproar behind them. Once I fancied I heard a shriek rise above the roaring of the fire: perhaps of some unhappy animal caught by the swift pursuer before it had time to make good its escape; but whatever it might have been, it was not heard again, and the merciless flames still rolled on.

At length the belt of wood was reached. At the first contact the flames towered up high above the tree tops, and appeared as though they would swallow up everything at that one scorching touch. Suddenly they fell, and seemed to retreat for a moment, as if to gather fresh strength, then once more leapt forward against the tall bulwark of trees, only to be a second time rolled back upon themselves. Again and again the fiery torrent hurled itself against the staunch old pines, shooting its pointed tongues up towards heaven, in the vain attempt to overleap the barrier. Explosion followed explosion in quick succession, as the great trunks burst under the intense heat, rending the air with the noise of their artillery.

This was the most magnificent part of the whole spectacle. Before, it had been but one vast scene of unopposed devastation; now, a tremendous contest was being fought. Fire raging madly and furiously against forest, standing calm and immovable. All the powers of Pandemonium on the one side. "Thus far and no farther" on the other. But the battle was soon over, and Pandemonium, with all its fiery forces, was utterly vanquished.

To the mighty roar, that for the last half hour had been going on unmitigatedly, succeeded the silence of the grave. The glare of the flames which for the time had turned night into day, now gave place to intense darkness, the air being full of smoke and falling ashes. Here and there only a tall trunk stood out, still red and glowing, in the midst of

the surrounding darkness, a vivid witness of the awful conflagration which had so lately swept over it.

Our little fire was shining bright in the hollow behind, and, guided by its light, I steered my way down through the profound darkness and still falling ashes, and reached the camp in safety, with a sensation as of having just returned from a visit to the infernal regions. Curling had already turned in, and the drowsy *tropeiros* were nodding over their last cigarettes, preparatory to retiring to their couches of ox-hides, and, with thoughts still full of the tremendous spectacle of which I had been the solitary witness, I too retired into our tent to sleep.

Our first night on the prairie was not to be allowed to pass without yet another grand disturbance. Before, however, going on farther, I must endeavour to give some idea of our principal camp arrangements, in order that what follows may be better understood.

The visible and outward camp consisted of two bell-tents, one small ridge tent, and a pile of baggage heaped up on a little raised mound, and covered over, as usual, with *couros de boi*, or ox-hides. The ridge-tent belonged to the *tropeiros*, and there they slept. One of the bell-tents was occupied by our European followers, and the other by ourselves, namely, Curling, S—, Lundholm and myself. Our four camp-beds took up most of the room in it, and what space remained was strewn with miscellaneous articles of equipment, such as big boots, cartridge-pouches, and revolver belts,

besides sundry remnants of supper, consisting of unwashed plates, knives and forks, and empty sausage and biscuit tins. Our various fire-arms were all piled up in the centre, round the tent-pole, making a by no means insignificant show of warlike weapons, wherewith to repel attacks, whether of man or beast; for we were not quite sure that we might not be attacked by some fierce bison or yelling troupe of painted Indians, so difficult is it entirely to get rid of sensational ideas instilled into the mind in one's youth.

Such were the interior arrangements of our tent, which, in our innocence, we had pitched on the very lowest bit of ground in the encampment, for the sake of its even piece of turf.

I had been asleep, I suppose, about two hours, when I was aroused by a noise that even eclipsed the powerful snoring of S——, who, as usual, was keeping awake the echoes of the night, on the other side of the tent.

Thunder was rolling in the air, and big drops of rain were already pattering upon the canvas overhead. I drew my blankets more tightly around me, and congratulated myself on being so warm and snug within the tent, sheltered from the elements without. The drops came faster and faster, and the thunder grew louder and louder, and I heard my companions beginning to move in their beds, themselves also aroused by the noise. Suddenly, with a crash which rent the air, the full fury of the storm descended upon us, in thunder, lightning, and torrents of rain.

Fortunately, very little wind accompanied this outburst, or the tent would then and there have been blown down about our ears, and we should have been utterly swamped under its heavy, wet folds.

Every one was now wide awake, and even old "Danger," who till now had been lying quietly on the floor of the tent, was becoming very restless, making several attempts to get up into one or other of our beds, and then, on failing to establish his position upon any of them, whining and otherwise showing great discontent. Curling struck a light, to find out what was the matter, and now, exclamations of dismay burst from everyone. There was the whole floor of the tent covered with water, and all our boots, clothes, and other paraphernalia were lying soaking in it. We had forgotten or omitted to dig a trench round the tent, before turning in. A general scramble ensued, in the midst of which "Danger" (whose restlessness was now fully explained) jumped quietly up into Lundholm's hastily evacuated bed, which happened to be nearest to him at the moment, and coiled himself comfortably up in between the warm rugs, where he remained unnoticed for some five minutes, till a volley of Swedish exclamations, which we may safely assume (ignorant though we were of that language) to have been some strong form of abuse, suddenly made us aware of the old dog's impudence.

A roar of laughter at Lundholm's ludicrous discomfiture, in which he himself was fain to join, was the result—though, truth to say, our own beds were not

in much better condition, as the sluice-like rain was coming right through the tent, thoroughly damping everything within it. Another danger too was now threatening us. The rain had caused the ropes to tighten up to such an extent that the tent-pegs were being drawn out, one after the other, and the whole fabric was in imminent risk of coming to a total collapse. Shouts of "Adams" and "Miles," which were the names of the two Europeans especially told off as our camp attendants, brought these two individuals running in from their quarters hard by. "Here you are—pegs! mallet! sharp's the word." One ran to one side, and one to the other, and our tottering roof was just saved in time, though not a moment too soon.

All this time the rain continued descending in spouts, and the thunder crashed and boomed overhead in a manner not at all familiar to me. Under all the circumstances, therefore, no one was sorry when, after about two hours of this cannonading, the storm passed away, leaving us, however, in no very enviable condition, either of body or mind. In the first place, the floor of the tent still remained under water, and in the second place, our beds and their coverings were soaked through. The remainder of the night was therefore passed, uncomfortably enough, in cold and shivering dampness. Certainly the Great Prairies of the West, notwithstanding their boundless horizons and grand spectacles, are not altogether and at all times *couleur de rose*.

When morning came no fire could be lighted, as there was not a dry stick to be found anywhere, and we were feeling, and no doubt looking, very wretched and miserable, as we sat shivering on our respective beds, with everything around, beneath, and upon us, reeking with moisture. This state of affairs, however, was not allowed to last long. Inventive faculties were soon brought into play, resulting in the construction of two little stoves, whose powers proved sufficient to satisfy our more urgent requirements in a very few minutes. Two small pits, about six inches deep and three inches wide, were scraped out in the floor of the tent (the water in which had now been drained off), into each of which a bit of lighted candle was so placed and arranged that the point of the flame should just come above the surface of the ground. Across these pits, pieces torn from a Huntley and Palmer's biscuit tin were laid, and upon the miniature gridirons thus formed, we managed to fry some slices of bacon, and even, by the assistance of a small tin drinking cup, which one of the men had bought the day before at a *venda*, to turn out a good cup of hot coffee all round. By these primitive methods we succeeded in restoring once more a healthy glow to both body and spirit.

As may be imagined, the baggage and mule equipments had not escaped the universal deluge, and it was found necessary to remain another day in our present quarters in order to dry the pack-saddles, straps, and ox-hides.

A storm, such as the one just described, was of comparatively rare occurrence in the month of August, so said the *tropeiros*. I believe that the great fire which preceded it may have been the inducing cause in this instance.

In the afternoon, while strolling about round the camp with my gun, I came across a vein of first-rate potter's clay or kaolin, cropping up to the surface in a place where a small stream or torrent had cut a deep channel through the superficial soil. It was almost perfectly white, and when moistened and rubbed between the fingers not a sign of grit was perceptible, showing that the clay was very pure. This was by no means the only locality in which I observed this clay: for several leagues further on, veins of it continued to appear wherever a watercourse had laid bare the underlying strata for any considerable distance. Notwithstanding this abundant material for "ware," it is nevertheless a fact that all domestic crockery and pottery in use throughout the province is imported from abroad, chiefly from England.

The general character of the super-soil covering the prairie seemed poor. For the most part it was a red sandy loam, on which the grass grew in detached tufts. Here and there blocks of hard, lichen-covered sandstone cropped up picturesquely from the otherwise smoothly rounded waves of ground. This prairie country could never profitably be turned into arable land, even the hardy grass upon it seeming to suffer from the want of due nourishment.

I did not find a single head of game of any kind, though I beat the ground for a radius of two miles round the camp. This was probably on account of there being here no sufficient cover to serve as a protection against the numerous hawks of various kinds that were everywhere hovering overhead. I shot one or two of these birds, but they were generally very shy and wary, after the manner of their kind in most parts of the world.

A great number of ant hillocks dotted the prairie in all directions. These hillocks were of a conical shape, about two feet high and two feet six inches wide at the base. Their surface was as hard as brick, and none of those I saw seemed to be inhabited by their original constructors, but at the foot of each was a big hole, which seemed to have been made, less for the purpose of getting at the ants, than as a hiding place for some animal, as it was burrowed for a considerable distance under ground, where the ants would never originally have gone. I in vain tried to find a hillock which had not one of these holes beneath it, but everyone was furnished in the same way. Breaking one of them down, though not without great difficulty, I found the substance of the cone honey-combed, and a few small red ants running about in the narrow cells. These ants were evidently strangers that had taken possession of the cone *pro tem.*, as there was none of the hurry or excitement in their movements, when the hillock was disturbed, that they would have exhibited had it been their

home proper. What kind of ant was the original architect and inhabitant of these hillocks? What was the reason of their being abandoned? What was the animal that made the big burrows beneath them, and for what purpose?—were all at this time puzzles to me. Whether it was the constant fires that had driven away the original inhabitants, or whether a living enemy had devoured them, or whether some of the hillocks might not still be occupied by the original owners, I could not now decide.*

Becoming at length wearied of conjecture and of the fruitless search for game, I paid a visit to the spot from which I had witnessed the grand conflagration of the previous night.

There lay the plain over which the fire had swept so ruthlessly, all blackened and desolate. A few buzzards were hovering above it, brought there by their unsavoury instinct, in the greedy expectation, no doubt, of feasting on the remains of the poor victims that had been overtaken by the flames, some stray horse or mule perhaps, or some unwary deer which had delayed its flight till it was too late to escape. There, beneath, stood the belt of pines, their lofty heads now sadly scathed and scorched by the fiery ordeal through which they had passed, but still standing bravely erect, as though in silent protest

* I found afterwards that the constructors and rightful occupiers of these hillocks were a kind of white ant or termite, with bodies soft and thick, almost like that of a maggot. I never myself saw any of these ants.

against the enemy that had so cruelly battered against them.

Much, however, as there may appear of romantic sentiment in these vast prairie conflagrations to him who beholds one for the first time, more especially if the spectacle is seen at night, it is yet the bounden duty of the truthful traveller, when describing them, to record also their cause. They are not set alight by any chance hunter, whose purpose it may suit to burn a hundred square miles of country to enable him to get a shot at a buffalo;—nor, in these days, does a scalp-hunting Indian take this mode of adding to the adornments of his wigwam. Not even does chance often play a part in their kindling. This stupendous natural spectacle is a mere farming operation, generally carried out in the month of August once in every two or sometimes three years, for the purpose of burning off the old grass, which has grown too coarse and become too dry to be any longer fit for pasture. The ground being thus cleared, a fresh crop of young grass springs up, which forms a most delicate and nutritious pasture for cattle, which fatten rapidly upon it, especially if their digestion is aided by the judicious administration of salt at reasonable intervals.

Not even is there the element of danger or of any great destruction of animals to cause excitement. A notice of the intended burning is given to those whom it may concern, and all stock is driven off the tract which is to be fired. Care is also taken that

travellers are neither injured nor annoyed in any way. Thus, only a stray mule or bullock may possibly get caught in the fire,—a few armadilloes and ant-eaters may be turned to “roast meat,” and there the excitement ends. There is no doubt, however, that even a simple farming operation in this country may yet be, as we have seen, a very impressive sight.

When I returned to camp, I found that a young bullock had been bought from a man whose hut lay near the track, to serve as food for our large party for the next day or two, in order to save as much as possible our preserved stores, which would be invaluable to us hereafter in the far interior. The animal was more than half wild, and had been brought up to the camp secured by the horns to a long lasso, the other end of which was tied to the saddle of the *fazendeiro* himself.

Curling being anxious to try the effect of some explosive bullets upon a big animal, undertook the slaughter of the beast. His first bullet, delivered at long range, seemed to have very little effect; but the second, fired at a distance of about sixty paces, struck the skull of the animal and exploded inside, causing instantaneous death. Curling told me that he had been accustomed to use similar bullets in tiger-hunting in India; and that those royal beasts had so strong a digestion that they occasionally went away with as many as half a score of them in their insides. But to judge from the destructive effect of one shell

alone upon the hard bovine cranium, I should be inclined to doubt even the nine-lived tiger's power of digesting many of them without experiencing something more than mere discomfort.

The simplest manner of cooking the slaughtered bullock was adopted. A big fire was made, and above it, at about two feet from the ground, an open shelf or gridiron was constructed of green stems; upon this the various joints were laid, and nothing more was needed than the occasional replenishing of the fire and the periodical turning of the joints. In this manner we cooked enough meat to keep the whole party supplied for as long a time as it would keep good. This bullock cost us 38\$000, or nearly £4, without the skin, which was worth at least another 5\$000. We did not as yet know that a fair price for a full-sized fat ox was only from 30\$000 to 35\$000, including the hide; the price paid therefore, though really an exorbitant one, seemed reasonable enough to our English ideas.

After passing a more comfortable night than the last, we continued our journey on the following day, the mules looking all the better for their thirty-six hours' rest. The usual number of *contretemps* occurred on the march. Already, however, the rough treatment to which the baggage was subjected on these occasions was losing its novelty, and we no longer stood aghast at the sight of a couple of heavy packing-cases going through gymnastic performances on the back of a mule, and occasionally ending up by bounding off on to the ground, bursting like ripe seed-pods, and scattering

their contents far and wide over the prairie. Taken altogether our troop was a very orderly one, three-fourths of the mules gave no trouble at all, and we had taken especial care to have all the more important baggage loaded on picked mules, animals that would go on hour after hour in one steady walk, indifferent alike to the weight on their backs and to the mad freaks of their companions. *Bem mansa e bem forte*, is the *tropeiro's* beau ideal of what a pack-mule should be. A swift mule is no desideratum with them. The pace should never exceed a walk, otherwise the straps get loose, and the load is continually losing its equilibrium, necessitating frequent stoppages for the purpose of re-adjustment. When once the pace is increased to a trot, the wear and tear to both beast and burden increase out of all proportion to the benefit; the baggage gets shaken to pieces, and the poor animals' backs are ruined in less than one day.

As on the previous days, I walked the whole distance, with the double object of having some sport by the way, and of encouraging the men by force of example, to bear the fatigue without complaint. It is certainly no slight exertion to keep up all day with a troop of mules. Where the road is tolerably good, as is generally the case on the open prairie, their walking-pace is very fast, and cannot be less than at the rate of three and a half miles an hour.

Prairie hens and quails, as usual, made up the greater part of my bag; of snipe I did not see one all day. No doubt there were some in the patches of

swamps which occasionally appeared, but the best snipe country had evidently been left behind on the lower plateau.

The spot chosen for our camp this afternoon was quite an oasis in the desert. In the months of July and August, prairie scenes in detail are least beautiful, on account of the universal dried-up appearance of the vegetation. It is only in vast panoramas, like that which we had first beheld from the top of the Serrinha, that monotony develops into grandeur; but in the infinite number of less extensive views which we were constantly meeting with, some relief was generally felt to be wanting to the perpetual sameness of form and colouring. The camping ground we had just reached, was a complete contrast to the country surrounding it. In the distance it had looked like a clump of trees, in no wise differing from those that we had already passed, enclosing the heads of springs and watercourses; but, on a nearer approach, we discovered that what had appeared to be a thick clump of trees, was, in reality, a shell with one broad entrance, flanked by tall pines, and opening out into a wide park-like enclosure.

Here, spreading pines and cedars were scattered about singly and in pairs, and the grass was still brilliantly green and fresh as though watered daily by some kind fairy; while, without the magic ring, all was parched and dried up by long days and weeks of dry breezes and scorching suns. The clear space within the zone of wood, was, perhaps, twenty-five

acres in extent, and so thoroughly English was the general appearance of this little oasis, that one almost expected to see a good old country mansion rise up in it to greet us. At the lower side a small streamlet was rippling along, under the cool shade of many temperate and sub-tropical trees, shrubs, and ferns. On its brink, here and there, appeared numerous tracks of deer, some still sharp and fresh from the hoof of the animal. What a delightful spot this would be for a shooting box! Let me recommend it strongly to those whose *genio* tends to lead them to forsake the beaten track of the sportsman or tourist, and look around for fresh country in which to expand both mind and muscle. It would form a very pleasant ten days' halting place, whether as a half-way house to the greater hunting country—the backwoods of the Ivahy—or, as a complete substitute in itself, to the fortnight's grouse shooting in Scotland. Ample timber to build a comfortable and commodious *chacara*, abundant water and pasture for the necessary stud, the main track between two of the principal towns of the province running past the very door. No rents, rates, or taxes, and no exorbitant hotel bill to pay. Sport *ad libitum*; freedom *ad libitum*; air, than which none purer or more invigorating can be found in the whole world, old or new; and above all, and more than all, entire change and freshness in everything, which, indeed, is the mainspring of all real holiday relaxation.

Our tents were pitched nearly in the centre of this

little fairy domain, where the ground was flat and the turf smooth. A big stump of a pine-tree, which had been cut down by some neat-handed axe-man, offered its level top as an ample table, and upon it, accordingly, Miles laid out the repast, consisting of cold ribs of prairie beef, fried preserved potatoes, Curitiba brown bread, and Bass's Pale Ale. Hunger is never absent from a man at the proper time in these regions, and ere long the ribs and all besides had vanished; many scavengers, in the shape of dogs, being close at hand to assist in the operation.

I had previously had some thoughts of trying to "pot" a deer by moonlight at some one or other of their well-used watering-places in the wood; but after dinner I felt disinclined to exert myself, for I had done fifteen miles of walking during the day. I therefore gave up the idea, and spent the evening in elaborating a plan with Curling (the only one of our staff besides myself who cared for, and thoroughly enjoyed sport) for a long day's shooting on the morrow, which was to include a hunt with the dogs before breakfast, of the belt of wood round the camp.

Both of us had dressed (*i.e.*, had taken a bath in the stream and put on a dry shirt) for dinner, and the preparations for bed, therefore, consisted merely in unlacing our boots. In other respects, we had been accustomed, since leaving Curitiba, to turn in "all standing." This saves a great deal of trouble, and is altogether the most sensible thing to do under circumstances such as ours.

At daybreak we were up, and after ducking our heads in a bucket of ice-cold water, fresh from the stream below, and swallowing each a cup of hot coffee, were ready to commence operations.

The tents were stiff with frost, and a thick mist was rolling about, evidently intent upon interfering with our sport. The dogs, too, seemed frozen, and would not answer to the call; only the ever-ready "Danger," therefore, accompanied us at first starting.

Curling took the outside of the wood, I the inside, and "Danger" did the beating. A deer was soon started, but it did not break cover within sight of either gun, the fog concealing it; another broke cover outside, and Curling had a snap shot at him before he likewise disappeared in the mist, but did not touch him. We wanted more guns, as we could not see beyond sixty yards, but there was nobody else to come. The place was evidently full of deer, for the dogs, which all came trooping down at the first shot, were continually bursting out in a chorus of tongues. We returned discomfited and bagless to breakfast at 8:30, and just then the fog began to lift, thus completing our chagrin.

Notwithstanding the comparatively early hour, the mules were already tied up to the stakes preparatory to being laden, the head *tropeiro* having given out that there would be a longer march than usual on this day, to reach the next good camping-ground, and that therefore an earlier start was advisable.

Curling and I hurried through our breakfast, as we

intended to go on ahead of the troop, and to find our way to the new camp independently, shooting as we went. By the time we had breakfasted, the fog had all disappeared, and the thermometer had already risen about 10° (F.). Adams was to accompany us on Curling's horse, to carry the luncheon and game, and the charge of the march was given up to S—— and Lundholm, neither of whom being of sporting tendencies had any ambition to undertake a long day's tramp on foot.

At nine o'clock we got away, the head *tropeiro* accompanying us out of the circle of wood in which our camp stood, as far as the nearest high ground, from whence he gave us the direction of the new camp, calling the distance about four and half leagues. With this information for our guidance, we ignored the mule track altogether, trusting to compass and field-glasses to bring us home in the evening.

We shot on till past midday, following as nearly as possible the direction given us. Now wading waist-deep in the long campos grass, rich in prairie hens and quails—now skirting a swamp, and adding to our bag snipe and sundry long-legged, long-necked cranes, whose food seemed to be exclusively frogs and tadpoles—now enjoying a few minutes' relief from the powerful sun overhead, in crossing a belt of pines, which swarmed with the yellow-spotted woodpecker, with which we had first become acquainted on the top of the "Serra do Mar," and with hawks, both large and small, which evidently used these covers as centres

of offensive operations, multitudes of them going out and coming in continually, to and from the great hunting field around. There was, therefore, nothing monotonous in our travelling to-day, and the hours sped on all too rapidly.

At one P.M. we halted on the summit of a prairie wave, under the shelter of an enormous sandstone rock, from beneath which trickled a tiny stream of delicious water. Here we ate our dainty lunch of cold roast quail and prairie hen, and washed it down with the cool spring water, after which we indulged in the delight of counting the spoil, and surveying from our elevated position the wide surrounding country.

The bag was weighty and varied enough to satisfy anyone. It consisted of five prairie hens, nine and a half brace of quails, several parrots and woodpeckers, two big gray hawks, a brace of slate-coloured cranes, and three couple of snipe. Besides these, there were one or two small birds which I had shot as specimens.

We now swept the country round with the field-glasses to see whether any signs of the troop were visible ; we could not, however, discover it. A number of semi-wild cattle came up to look at us, and, dotted about the country, we could distinguish other herds feeding upon the slopes. About two miles from us stood a *chacara*, or farmhouse, solitary upon the vast prairie, perched on a summit overlooking its wide domain, and surrounded by a thick grove of what we took to be orange trees. This was the only house of any kind that we saw the whole day.

A certain big brown bird, the Brazilian buzzard, or *Caracara*, numbers of which we had noticed at Curitiba, accompanied the herds of cattle, sometimes walking about on the ground between the animals, and at other times riding upon their backs. The cattle took no notice of them whatever, though we saw the birds coolly pecking at their legs when on the ground. In appearance they are noble-looking, like the eagle; their tails are barred like hawks', and are tipped with black. On their heads they wear a black cap, from under which their eyes gleam, with the true falcon expression. Altogether they are fine-looking birds, and seem to deserve a less ignoble occupation than that of cattle-followers. At Curitiba they are protected by law, as is also the black vulture, a loathsome bird of about the same size as the *Caracara*. Both are scavengers together, and the outlying parts of Curitiba were always swarming with them. Live specimens of the *Caracara* can now be seen at the Zoological Gardens.

After an hour's rest we resumed operations. Walking straight ahead and turning neither to the right nor left, except on the rare occasions when a prairie-hen was missed, and marked down. What we much wanted, to render our sport perfect, was a couple of big pointers that would be seen above the tall prairie grass, at least in those parts where it was not more than knee high. "Danger," though of the right colour (white), was generally invisible in this grass, and it was with difficulty that the eye could follow his movements, which were indeed only to be discerned by

the waving of the long grass above him as he moved. For the kind of shooting that we were having, the value of a couple of big, wide ranging pointers would have been inestimable.

Not the least part of the sport, however, was afforded by other causes quite independent of our guns. While we were intent on filling our bag an army of robbers was floating in mid-air, ready and eager to deprive us of our hard-earned spoils. Hawks and harriers were hovering above and around us on all sides. Each time a quail was put up and not bagged, down came one, and often two of them, like a flash of lightning, on its track, and the poor victim only escaped from the gun to fall a prey to a still more cruel enemy. It was exciting to witness the sharp play that was shown on these occasions, both by pursued and pursuer. The moment that the quail discovered that he was pursued, he would double up his wings and tumble down into the grass as though shot; but so rapid was the dash of these hawks that they frequently caught their quarry before it had time to reach the ground, and would then bear it off in triumph to a neighbouring ant-hillock, there to tear in pieces and rapidly devour its still quivering flesh. It was no doubt due to the presence of these hawks in such numbers that we found both quails and prairie-hens to lie very close. They never would get up till the dog or one's foot was right upon them, and then they always rose singly. In fact, they give one the idea that life must be a burden to them from the presence of these relentless foes, ever hovering

over them, and ready to pounce upon them if they should show even a feather. These quails are a distinct species from our English visitors. They are slightly bigger, and are plumaged very like a "squeaker" partridge. Their flavour we had already proved to be most delicious. The prairie-hen (which is here called partridge) is rather more insipid in flavour than the so-called quail. Our *tropeiros* would never touch either, declaring that their dried bullock's flesh, called *xarqui*, which at this time I thought the most revolting stuff I had ever tasted, was a far better article of food. The time was coming when I too was brought to prefer *xarqui* to birds' flesh, on the same principle that a starving man would prefer a piece of bread to a handful of sugar-plums.

Another hour or more elapsed, and the sun was declining rapidly, and still we could make out nothing of the troop. Our bag was getting heavier, and the long grass seemed to cling to our legs more than it had done in the earlier hours. Time went on, and ideas of mere sport began to give way before the momentous question of, whether we might not have to sleep out on the open prairie without rug or blanket, fire or food! Even the little strips of wood and occasional clumps of trees, which had given so much variety to the morning march, had now altogether disappeared, and in every direction appeared the unbroken monotony of prairie.

It was decided that one of us should mount the horse and describe a wide semi-circle of two or three

miles' radius, to the front and flanks, to discover the mule road, as we anticipated that the troop might have got ahead of us without our having observed it.

I accordingly undertook this task, and began by taking a wide cast to the south—that is to say, in a direction nearly at right angles to the course we had been following during the day. I rode about two miles in this direction, swimming the horse across a deep but not very broad stream which came in the way, and then, riding up the opposite slope for a distance of about a mile, till I reached its summit, dismounted to scan the prospect.

To my great relief I discovered, far away on another slope, a thin black line, which seemed to be moving. By the aid of the field glasses which I always carried, I could make out that it was a mule troop, and moreover I recognised S—— by his peculiar mount, and could also see a long line of pedestrians, straggling in the rear. This settled the point that the troop was ours.

I had still got Curling in view two miles on my left, while at the same time the troop was visible at about an equal distance on the right. I made signals of “All right,” to the former, and then rode on some distance, keeping the troop in view, to ascertain exactly in what direction it was moving (which proved to be diagonally across our course). I then returned to Curling; the horse was again given up to Adams, and once more we plodded on in the altered direction, and in little over an hour we struck the mule track and recognised the

marks of the nailed boots of the Europeans. Here, after a last shot at a quail, which got up in the road from between the horse's legs, and which I brought down so suddenly as to produce a broad grin of astonished approval on the countenance of our attendant, we gave up shooting for the day, and toiled along the little narrow mule paths along which the troop had preceded us.

The *tropeiro* was right when he said that our march would be a long one, for it was just sunset before the ever-welcome sight of tall white tents, pitched under the lea of a wood, greeted us once more. I was not ashamed to confess that my legs had had enough of it for that day, and on reaching the camp I was too tired to do more than throw myself down on the ground and trust to Providence for supper.

The day was over, and man, beast, and even bird, were coming to the shelter of this little wood to rest from the numerous occupations which each had severally pursued. Flocks of screaming parrots were returning in long flights from their various excursions into other woods or orchards. The spotted prairie woodpecker was sloping in, in tens and twenties, from his insect foraging, strong in numbers and in *esprit de corps* against the hawks above. Vultures, buzzards, cranes, and hawks, large and small, were wending their way from all quarters of the heavens, to this one wood. The noise, chiefly, however, caused by the parrots and woodpeckers, with an occasional scream from the big grey hawk, was for the time deafening.

As the sun sank below the horizon, and darkness almost immediately shrouded all things, the wild clamour ceased, and the stillness of night reigned around. Thus, in this great primitive prairie world, night and day still rule and regulate all animate Creation, not excepting Man himself.

CHAPTER IX.

A character.—A strange musician.—A long prairie ride.—Ponta Grossa in the distance.—The burrowing owl.—Curiosities of life in Ponta Grossa.—Origin and history of the town.—A visit to a *Compatriota*.—Prairie farming.—“O Cavallo Inglez.”—General observations.—Journey resumed.—Benighted on the prairie.—Friends in need.—Camp by the Tibagy.—A deadly snake.—Night-jars.—Pig hunting by canoe.—A day conflagration.—Remarkable instinct of hawks.—Native prejudice.—The “Balsa.”

AFTER many years of travelling and knocking about in uncivilized lands, I have arrived at the conclusion, that the happiest moment in the traveller's day comes to him about half an hour after the order to camp for the night is given, when tents are pitched, beds or hammocks prepared, boots unlaced, a dry shirt on the back, and supper simmering on the fire.

I had now arrived at this supreme moment in the twenty-four hours, when all these luxuries were either already present or in immediate prospect. I was reclining on my camp-bed at the door of the tent, watching a big iron pot that hung over the fire, and which contained a hodge-podge of prairie-hen, quail, snipe, parrots, and wood-peckers, besides various vegetable additions, in the shape of potatoes and carrots, from our stores; the whole being presided over by Miles,

who was diligently engaged in stirring the mess with a long stick, under the directions of Curling, who was giving his instructions royally from his couch.

Miles was quite a character, and deserves a passing notice, especially as he was the one Englishman who neither deserted us, nor was dismissed during the long trials against which Staff No. 2 was destined laboriously and painfully to struggle for the first eighteen months after it commenced work. He was a Warwickshire lad, aged about twenty years, small and puny to look at, but faithful as a dog to his master for the time being, and always strong in our service. Poor boy, he was paid off when the staff was broken up, and went to Rio, where he spent his two years' savings (amounting to nearly £100) in a fortnight, and then died of yellow fever.

"Now, Miles, dish up, never mind the soup or the fish," and Miles, who enjoyed being chaffed, and loathed being unnoticed, gave a nautical "Aye! Aye! Sir," and bestirred himself accordingly.

"Miles, you've forgotten to lay the cloth." "Gone to the wash, sir," quickly retorted that sharp youth. "Miles, turn the gas on." "Half a minute, sir," and leaving the pot to take care of itself, for that short space of time, the ingenious boy, seizing the solid and weighty loaf of bread, which was already put out for our repast, with rapid knife scooped out two deep holes into its interior, and planting a composite candle in each, lighted them, and replaced the loaf triumphantly upon the canteen-table. With such a paragon

of a servant to attend to one's wants, who could not but be contented?

After supper, notwithstanding the fatigues of the day, I did not at once turn in, but sat by the fire with a rug over my shoulders, in a delightful state of dreamy ease, smoking and endeavouring to exchange ideas with the brown-skinned *tropeiros*, who delight in nothing so much as this squatting round the *fogo* after dark, warming their bare feet and legs, and lazily smoking cigarettes and sucking boiling hot "mate" (an apology for tea) out of a gourd.

The night was chilly, though not so cold as usual; not a breath of air was stirring, and all the camp was buried in perfect silence. All at once a low, plaintive cry like the moaning of a sick child, came wailing upon the ear, apparently from only a few yards off. At first, I almost believed it was a child's cry; but as it continued, it soon became evident that the tone was far too musical; indeed, I thought I had never heard a more pure and liquid musical sound than this was. The pleasing effect upon the ear was but little diminished, on learning by what animal it was produced. The vocalist was a frog,—and soon, another from a more distant spot took up the strain, and the two sang together, now in solos, now in chorus.

Curious to see this musical frog, I took a torch from the fire, and went to look for him. I arrived at the spot whence the sound was proceeding, but, as I stooped to search in the grass, the music seemed to float away to another place, some yards distant. I

followed, and still the sound moved, and nowhere could I discover whence it came. I searched for nearly a quarter of an hour, without being able to fix the spot, and then I gave up in despair.

The fact is that this frog is recognised to be a ventriloquist, of no common order. I have many a time since heard him crying, in broad daylight; and the power of ventriloquism is no doubt given him as a protection against the numerous cranes and other frog-enemies that would otherwise be guided by the sound, and soon render the species extinct. For hours after I returned from the search, the wailing sound of their monotonous, plaintive cries, charmed the still night air.

We were now about six and a half leagues from Ponta Grossa, according to our *tropeiros'* statements, which might mean anything between twenty and forty miles. On their positive assurance, however, that that town could be easily reached in one day by riding *escoteiro*, that is, unimpeded by baggage mules, Curling and I determined to ride on so as to get there half a day or so before our main body, in order to prepare the necessary accommodation, and to lose no time in looking out for another troop to take us on from thence. Our present troop was only engaged to go as far as Ponta Grossa, as none could be got at Curitiba to undertake the whole journey to Colonia Thereza, except at exorbitant prices, amounting in fact to the full price of the mules themselves. We paid 12\$000, or about £1 5s. per animal, to Ponta

Grossa, which was about half the distance, and the owner of the troop wanted 40\$000, or more than £4 per head, to take us on the whole way, giving as his reason for not being able to ask less, that the road beyond Ponta Grossa was so bad that his mules would be utterly ruined, and unfit for any work for several months after doing that part of the journey. We shall hereafter see whether or not he was wise in thus practically refusing to take us on.

Soon after sunrise we were in the saddle, and had started on our way, leaving S—— in charge of the march. Curling and I rode with our own saddles, which we had brought out with us from England; but Robertson, our interpreter, who accompanied us, was obliged to be content with a Brazilian saddle, with its sharp, ridge-like seat, square ends, and stirrup irons which only allow for the insertion of the big toe. I took my gun with me, and about half a dozen cartridges, so as not to lose any exceptional shot that might turn up in the course of our long ride.

We had no difficulty in keeping to the right road, as there was but one other track whereby we might have been misled, and of this we had been duly warned. After riding about two leagues, we saw once again the almost forgotten signs of civilization. Far away to our left, at a distance of probably more than twenty miles in a straight line, and perhaps one thousand feet below our level, a group of tiny white dots appeared on the prairie.

This was the town of Palmeira, situated in the

upper valley of a main branch of the Tibagy. At this point, the road that we had been cautioned against following, branched off our route. Our road was not to pass anywhere nearer to this town than we now were, and this was the only glimpse we obtained of it during the journey.

About two miles farther on, we forded a bigger stream than any we had yet crossed since leaving the Curitiba plateau. This proved to be the infant beginning of the river Tibagy, as it is before it has left its birthplace amongst these lofty prairie regions, and when it has as yet received only the tiny tributes of some few rills and rivulets, and is still ignorant of the grand destiny awaiting it beyond. Neither did I, at this time, dream that I was to be the first to explore its mysteries. When, therefore, two years later, I crossed this same spot, I looked with a far greater interest than now upon this little stream, whose eventful course I had then lately traced for three hundred miles, through grand mountain and forest scenery, wild and beautiful as Eden itself, over mighty falls and cataracts, till at length its waters had been lost in those of the still mightier river, the Parana-panéma.

After crossing this stream, the configuration of the country underwent a great change. The slopes of the waves became less steep, and we were able to increase our pace from the normal walk to a tolerably brisk canter. We presently noticed that Robertson was getting farther and farther in the rear, and apparently

could not keep up with us at all; so we pulled up to find out what was the matter.

He approached us with a lugubrious expression of countenance, and a peculiar twist in his seat, betokening a certain discomfort; and then it came out that all the time we were cantering merrily along, he had been made to suffer torments, the sharp angles of his saddle, combined with the rough paces of the mule, taking the skin off freely at every step. Under these circumstances I had a fellow feeling for him, from past experience of my own, and accordingly we forbore urging the pace, but plodded steadily on, at about three and a half miles an hour, trusting that there would be ample time to reach Ponta Grossa before dark, if our *tropeiros'* estimate of the distance was worth anything at all.

After another two hours, we came to a small *chacara* which stood close to the mule track, with a large orange orchard behind it, and a stock yard, in which a flock of geese were waddling, in front.

Here we halted, and asked for something to drink. The *fazendeiro* made us dismount and come in, and soon put before each of us a large soup-plate full of milk, and a basin of *farinha* to soak in it.

We then inquired what distance we were from Ponta Grossa. "*Quatro legoas, Senhor.*" Four leagues! and it was now two o'clock! and we had already ridden at least five! Woe to all who put their faith in the words of *tropeiros*.

"Are you quite sure, *Senhor?*" we again asked.

“It is quite true, the Senhores can see the *cidade* from the top of the next rise, and judge for themselves.”

Robertson's face had lengthened at least two inches during this short confabulation, which was conducted by himself. But there was no help for it—he must undergo yet a little more rubbing and chafing, or be left behind; which latter course would have been very inconvenient to us, as our knowledge of the language of the country was as yet very limited, and not sufficient to enable us to dispense with the aid of our interpreter, when so many arrangements had to be made.

We once more mounted, and soon reached the summit referred to by the *fazendeiro*, and there, true enough, perched as it seemed on the extreme highest point of a water-shed between two valleys, appeared the town of Ponta Grossa. I could not believe it was four leagues distant, so distinct and well-defined did the square white houses stand out upon its summit.

What could have induced any sane person or persons to found a town, or even a colony, up there, when all the same conditions *plus* the vast additional advantage of being so much nearer to the civilized world could have been obtained two or even three days' journey nearer Curitiba?

To the uninitiated, like ourselves, the appearance of a large town rising up in the midst of the desert of prairie, full four days' march from the civilized outskirts, seemed almost as curious and incongruous as the apparition of a flourishing village in the midst of the arid plains of the Sahara.

Never were distances so apparently deceptive as on this day. Hour after hour we journeyed on at one steady pace, and yet we never seemed to be getting any nearer the end of our journey. After a time, I could endure no longer the monotony of the slow creeping pace. I therefore dismounted, and gave my horse to Robertson in pity for his hardly used epidermis, preferring myself to walk, and get an occasional shot at some one of the many specimen birds that I had not yet obtained. I bagged two new kinds of hawks, a large slate-coloured crane, and a pair of prairie owls. These latter were not uncommon. I should say about one ant-hillock out of every five had one of these birds upon it, standing bolt upright, looking like an old gentleman with his hands behind his coat-tails, and apparently engaged in studying the surrounding scenery. When approached too near, they would either go off with the peculiar wavy flight of the field-fare (entirely different to the steady flight of our own night-owl), keeping very close to the ground till they reached another ant-hillock, or else they would suddenly dive down and disappear beneath the hillock into the hole before noticed, there to remain till the coast was again clear. Every now and then I observed them dart off their ant-hillock to catch an insect in flight, and return again to their former position, thus imitating exactly the movements of our own familiar fly-catchers. Their scream was sharp and shrill, but was not often uttered. I observed one or two actually engaged in the operation of burrowing,

which they do with their feet and claws. Yet the natives always speak of the burrows beneath the ant-hillocks as *tatú* (armadillo) holes. I confess that I am still in a state of uncertainty whether the bird or the beast is the original maker of these burrows; but, whichever it is, there is no doubt but that both owl and armadillo alike use them as habitations.

By five o'clock we had reached the outskirts of the town of Ponta Grossa, passing the first house, which was built in the same intensely modern style we had seen adopted in the suburbs of every town we had as yet visited in Brazil. The front elevation may be described as a parallelogram painted white, and adorned with flat pilasters, plate-glass windows—which, by the way, must have cost a small fortune to bring up country—and orthodox green Venetian blinds.

The owner of this "mansion" proved to be one of the partners in the chief store, or shop, of the town. The firm signed itself Ribas & Oliveira, and as I could never find out which was which of the partners, I shall call the owner of the white house Sr. Oliveira.

We had not gone far, when we met the gentleman himself, riding a well-groomed and spirited-looking horse, and no doubt just returning from his place of business. We addressed him through our interpreter, and learning who we were, he kindly turned back with us to the town, to assist us in obtaining accommodation, as Ponta Grossa did not yet boast of any hotel. By Sr. Oliveira's opportune aid, a large empty house was secured for us, with ample room in it for all our

party, and all our baggage when both should arrive. Board was also secured for the chiefs of the party at the house of a certain baker, whose name I have unfortunately forgotten, for it well deserves being chronicled;* and thus all our pressing wants were supplied, our new friend promising to send us in blankets and mattresses from his own house.

After having relieved our tired beasts of the saddles and turned them loose into a paddock close by, there to await the arrival of their owners, we adjourned to the baker's house for supper. The news of our arrival had spread. We had not sat down to the table many minutes before curious visitors began to drop in by twos and threes to stare at the strangers. None thought it necessary to apologise for intruding upon our meal, and we were rather amazed at their behaviour. Presently our friend Senhor Oliveira entered the room, and he alone seemed to have any notion of civilised customs. We had evidently travelled a good many stages farther from the polite world, even since leaving Curitiba.

Seeing that the crowd in the room (which was fortunately of large dimensions) was growing greater every minute, and that the individuals composing it continued to stare silently and not utter a word, except in a whisper to their nearest neighbour, we

* The baker's bill for "boarding" five persons—two meals a-day—for nine days was £80! the cost price to him having been about £15. His argument was that as he was not our slave he had a right to value his services at his own price. This "slave" argument we found to be a very favourite one throughout the province.

asked Sr. Oliveira what they meant. "Oh," he replied, laughing, "they have come to visit you, to compliment you!"

This was the first example we had seen of a custom that we hereafter found to be universal in all the remote towns and backwood settlements of the province of Paraná. The *passeio*, as this disagreeable process is termed, is the great popular amusement of all those settlements that may be said to lie on the borderlands between civilization and barbarism. We found in our further travels that the wild Indians of the Ivahy *Sertão* followed an exactly similar custom, and no doubt the *passeio* owes its origin to them. The Indians, however, are honest enough to confess that they do it to gratify their curiosity. Their disciples, the Brazilians, tack on another motive—which they have derived from the other side of the borderland—and say, that it is to do honour to the person visited! When, however, the object of the visit is demonstrated only by a prolonged process of hard staring, the honour conferred may be fairly said to be imaginary. I confess to a feeling of irritation developing itself in me, at our meal being thus intruded upon, and I longed for the freedom of camp-life once more.

Sr. Oliveira himself had no pity on our fatigues, but the moment he saw that our appetites were flagging, he unmasked his hitherto silent batteries, and opened upon us a merciless fire of questions—as to our object in coming to the country, how many of us

were there, whether we were going to construct the railway at once, how long it would take to make, and whether we were going to bring it through their town.

This last question was evidently the climax. Our reply to it, delivered through Robertson, was received with open scepticism and disapproval. "Not the remotest chance of its passing within a couple of leagues of your town."

When they heard that the reason of this was on account of the nature of the country not permitting it, one gentleman stood forth from the crowd and declared that we must be mistaken, that he knew the whole country perfectly, that there was a short cut from Curitiba to Ponta Grossa which would save six leagues in distance upon the road we had come by, that this route offered a perfect plain (*planicie*) between the two extremes, and that there would be absolutely no difficulties to contend with in constructing a railroad by this route.

It is almost unnecessary to explain that this gentleman had never seen a railroad, and probably not even a carriage road in his life, and was therefore, perhaps, scarcely competent to form an independent opinion on the matter. At length, after a protracted exposure to a multitude of very silly questions and observations, we were enabled to escape to our own house. Here we found rest and peace for the night.

Ponta Grossa, literally translated, means "Big Peak" or "Point," and conveys accurately enough

the appearance of the height on which the town is built, especially when seen from the Curitiba side. It is neither an old nor a large town. Its origin can be traced back through very few generations, to the time when it was merely a collection of *chacaras* or farmhouses and buildings belonging to one man, who likewise owned the whole country round, which was his cattle-breeding estate. The lofty situation of the present town is thus easily explained. All the houses of the great cattle-breeding estates were then, and still continue to be, built on the best situations for obtaining a view of the whole of the wide territory which belonged to them.

It must be remembered that estates in this country are counted, not by their number of acres, but by the number of square leagues; and in earlier days an estate of fifty square leagues in extent was by no means uncommon.

When the owner of the Ponta Grossa *fazenda* died, he left his property *undivided* to all his children alike. The result was that Ponta Grossa rapidly grew into a small colony; and, although self-supporting at first, soon commenced a little trade of its own, buying from Curitiba and selling to the various *fazendeiros*, and small *povoações*, in the yet more remote regions behind it. Thus, in course of time, it quite lost its original character, and became, what it now is, the half-way trading town between Curitiba and the scattered populations that exist further to the westward.

Its present population may be put down at about 4000, and it has already become the mother of a colony on the banks of the Tibagy, called "Conchas," which I visited a year or two later. So much for the origin and present "status" of Ponta Grossa. Its buildings and streets offered nothing remarkable. There was, of course, the usual big square with a whitewashed church at one end of it, and its houses were mostly innocent of the complications of an upper storey.

Our troop did not arrive till full twenty-four hours after ourselves, thus condemning utterly the *tropeiros'* estimate of the distance, as given to us. Instead of its being but six and a half leagues from the point where we had separated, it was more like nine.

Having heard that there was a countryman of ours, by name Edenborough, settled on a farm a little way out of the town, we took an early opportunity of going to see him. On the second day, therefore, after our arrival, we took our guns and a borrowed pointer, and set off with the intention of making his acquaintance, as well as of getting a little sport by the way. Our dog did not prove of much use, as he had never been trained to "range," and therefore contented himself with going in a straight line away from us, sometimes to a distance of a full mile; and there we would frequently have the satisfaction of seeing him make a dead point, giving us a long walk to get, perhaps, only a wretched quail, when there were probably scores of birds close round us, which might have been obtained with a tenth part of the trouble. We did not make

much of a bag, as the grass was short, not affording a sufficiently safe cover for the game when so many birds of prey were always on the watch for them. However, this did not lessen our enjoyment; one breathes pleasure in the very air of these *campos*.

On arriving nearer to the abode of our *compatriota*, we saw the first attempt at prairie cultivation which had yet greeted our eyes in this country. An area of about two acres, situated in front of the house, and enclosed by a ditch, stood out green and bright, a most refreshing contrast to the dull brown colour of the surrounding prairie. It proved to be young rye, and the ground on which it was growing had evidently been ploughed and prepared in home fashion.

We soon reached the house, first passing a grove of orange trees, all laden with their ripe golden fruit. Mr. Edenborough, a stout young fellow, evidently made of tough material, welcomed us in good old English style, and we soon got acquainted with each other. He told us he had been out in the country about seven years; that he had been home once in that time, and had brought out, on this second occasion, a large amount of agricultural implements, besides grass and other seeds, and had then set himself to work, to see what could be made of the prairie. As yet he had not been long enough at it to be able to express a decided opinion as to what success his enterprise might meet with. He however gave us to understand that he regretted having been in such haste to invest his money in this particular piece of land, when he might

have chosen other land on the borders of the forest, which would have yielded ten times more bountifully. His own piece of land, he said, was decidedly poor; and the whole country about Ponta Grossa was also subject, occasionally, to long droughts of several months' duration; and, at this elevated spot, the heavy fogs, which on the lower levels preserved vegetation throughout the dry season, were much lighter. Mr. Edenborough also informed us that he had sunk too much capital on the property, in house-building, ditching, and grubbing, to be able to give it up now.

Referring to his field of rye, he told us that the labour of turning prairie land into arable land was almost as great as turning woodlands, at home, into ploughed fields. No plough could touch it, until each tuft of grass, with its deeply-sunk, massive clump of roots, had been separately grubbed up by hand. Another considerable item of prime outlay, he told us, was the making of the boundary ditches. So heavy, in proportion, was this item, that the expense of enclosing a square tract of land of 150 acres by a ditch of the necessary width and depth to keep out cattle, would come to as much as the original cost of the land itself; and, supposing it was necessary, as it would be, to subdivide the ground into smaller tracts, the cost of the work might exceed the original value of the land to almost any amount, so that, to enclose one acre by a ditch of the ordinary size, would cost about eight times the original value of that particular acre.

Of course these proportions would vary in different

localities, depending upon the price of land and cost of labour; but in any country like the prairies of the Paraná, where land is cheap, and where timber-fencing is inadmissible on account of the annual fires, an intending settler should not allow himself to be misled in his calculations by the apparent cheapness of the land, but should bear in mind that unenclosed ground is practically valueless to its owner, for agricultural purposes, and that the cost of enclosing it will in most cases exceed the entire sum that he may have given for it in the first instance. The cost of ditching may be estimated at 1s. per yard run.

So much as to the real cost of prairie land to the intending agriculturist. Now comes the question of what it will produce. On this point also, Mr. Edenborough gave us some information.

The Brazilians themselves say that the prairie is good for nothing but pasturage. But their opinion is merely comparative, because their idea of agriculture is limited to the production of three articles, namely, black beans, *milho* or Indian corn, and rice. Now it is true that prairie land, generally, will not produce any of these necessaries; or, to speak more accurately, it does not pay to cultivate them on the prairie (except perhaps for home use, under certain conditions), when the tenfold richer woodland is, as in this province, always available within reasonable distance. The case, however, may be different with such grains as wheat, rye, oats, and barley; all of which Mr. Edenborough informed us would grow tolerably

well on average *campo* land, such as his own. English grasses did not thrive so well as might be expected; but as our informant's experiments in this direction had been prejudiced by an exceptionally dry season, continuing beyond its usual time, it is possible that it may yet be proved that home grasses may be naturalized, on a large scale, on the *campo*. In such a case, the land might become far more valuable than it now is, as stock breeding, not agriculture, must ever remain the distinguishing feature of these vast prairies, the far richer forest-land being obviously the more fitted for grain and other such-like productions.

I have before referred to the puny horses of this country. Mr. Edenborough, being struck with the vast room for improvement that there was in the breed, on his coming out the second time, brought with him a thoroughbred English racehorse; and he assured us that he had had no reason to regret his large outlay upon this head. Three times he had raised his stud-fee, so great was the demand for the animal.

The Brazilians, who are intensely fond of horse-racing, had gone mad over the *cavallo Inglez*, against which not one of their best horses could anything like hold its own. Whether in flat races, or in steeple-chases, the big English horse had proved himself unapproachable. Handicapping was no safeguard. The natives could never bring a horse on to the ground to beat him. So, after a long series of defeats and money losses, the English horse was tabooed from their race-courses, and retired upon his racing laurels,

to bring his owner in a round annual income as a stud-horse, free from the risks which are inseparable from the turf.

Before taking our leave, we paid a visit to the orchard, to try the flavour of the oranges. We found most of the different kinds perfectly delicious, and were surprised to hear that they were merely cultivated as food for the pigs. Mr. Edenborough told us that these animals are very fond of oranges, and in the orange season (that is, in July and August) they fatten merely on this fruit, without any other food to speak of. We deprived the said pigs of some dozen or so of these delicious oranges, pocketing them to eat during the remainder of our shooting excursion; and then, bidding our entertainer farewell, we set out once more for the town, arriving there in time for supper.

For the next few days we amused ourselves as best we could, while awaiting the good pleasure of another mule troop which was to take us on to our final destination, Colonia Thereza. Sr. Oliveira continued to be our good friend and go-between in all matters which brought us into business contact with the natives, and always came to visit us once a day.

On the south-west side of the town there is a large wood, in which rises a "feeder" of the Tibagy river. This wood, and the springs in it, supply the whole of the inhabitants of Ponta Grossa with fuel and water. On the west side of this *capão* is a swamp covered with low brushwood which teems with animals very like small guinea-pigs. One day we shot several of

these and had them cooked for us at the baker's. The meat was quite eatable, and was not unlike rabbit in flavour.

During our stay in this place, I kept a record of the highest and lowest points of temperature that occurred in the twenty-four hours; and I found that during the eight days, from the 17th to the 24th August, the average daily range of temperature was from 44° to 72° F.* This will give a very fair idea of the average temperature of most of the prairie lands of the province of Paraná at this time of the year, which corresponds to our early spring at home. Occasionally the thermometer may fall to freezing point, even on the last few days of August, as I was soon to learn; but such temperatures are, like our frosts in June, few and far between. We were informed that now and then snow had fallen in the month of July, enough to entirely cover the ground.

As at Curitiba, so here again we experienced considerable delay in obtaining the *tropa* that was to take us on. At last, however, it turned up; and on the 25th August, ten days after our arrival at Ponta Grossa, once more our *impedimenta* were on the backs of mules, and the order to march was given.

One or two of the more awkward packing-cases had again been rejected, at the last moment, by the *tropeiros* in charge; and this time no persuasion could induce them to take them on. As they hap-

See Appendix, Note E. "Tables of temperatures, from observations by Mr. W. Braund and by the Author."

pened to contain very important articles, we could not possibly leave them in Ponta Grossa for an indefinite period; it was therefore arranged that S—— should stay behind with them, and either hire, or, if necessary, buy animals to bring them on after us as soon as possible.

Just as we had started, we learnt that Captain Palm had that moment arrived in the town. Curling and I therefore galloped back to Sr. Oliveira's store, and found four weary-looking beasts standing outside, and Captain Palm with his factotum Danberg, looking fagged and travel-worn, in the inner room. After due greetings and exchange of news, I left them to go on with the troop, while Curling hastily decided to remain another night in Ponta Grossa and follow on in the morning.

This delay had, however, given the troop nearly two hours' start, and it was impossible to say what our European rabble, which accompanied it, might not take it into their heads to do in the absence of those whom they were accustomed to obey. I put spurs to my horse, and galloped along in the hope of overtaking them before dark. To my disgust, however, I had scarcely proceeded a mile from the town, when I came upon two of the party staggering along in a state of intoxication; and, a little farther on, yet another, sitting down on the ground in the same condition. With some difficulty I made all three of them turn right about face, and retrace their steps to the town; otherwise they would have been overtaken by night

out on the open prairie, and have probably suffered severely in consequence. No less than six of the men I thus turned back, all more or less drunk. Probably they had stopped at some *venda* just outside the town, when we had turned back to meet Captain Palm, and had there yielded to the fatal *cachaça*.

Two more loiterers I overtook, namely, Adams and Miles. As they, however, were more or less sober, and the town being now about a league distant, I allowed them to come on with me, and we pushed forwards as fast as possible. The sun set before any signs of the troop had been discovered, and for more than an hour we continued marching on in darkness, my horse stumbling and nearly coming down at every few steps that it took. Every moment I expected to make out the camp fire, and at length we saw a red light down beneath us on our left, apparently about half-a-mile off. We shouted, and a dog answered back; we shouted again, and still no other reply. They must be asleep, we thought, so I fired a shot from my big double-barrel, which effectually roused the echoes of the night far and wide,—still no answer but the barking of the dog.

For my part, I had had quite enough of travelling for this day. Since early morning I had been working vigorously to get the troop started off, and had altogether forgotten to eat; and, from being exposed to the sun for so many hours, I was now feeling sick and faint.

With an inward misgiving that the camp was not ours,

but yet being strongly disinclined to proceed further, we made for the spot, guided by the red light. After stumbling over various ant-hillocks, and being turned back once by a swamp, we approached near enough to hold a parley with the individual whose voice could now be heard keeping back the dog. "*Boa noite, Senhor,* we have lost our troop," said I, in the best Portuguese I could muster. "The Senhores can approach," was the magisterial reply, delivered in a not uninviting tone, followed by a severe "*Down, Cachorro do diabo,*" as the dog showed signs of an intention to attack. We came up to the fire, and found that we had fallen upon a *tropeiro's* camp, consisting of one little tent, two men and a dog. The tent was piled up with bags of *farinha* and pack-saddles, the men evidently intending to sleep outside by the fire. I asked for some food, and after a time a greasy concoction of beans and *farinha* was presented to us. I had not, at this time, learnt to appreciate this homely Brazilian dish; and so, after tasting a few mouthfuls, could eat no more, and only longed now for something in the shape of a bed.

The night was fearfully cold, in great contrast to the scorching heat of the sun during the day, and I had nothing besides the clothes on my back, which, from having been soaked through with perspiration, now felt icy cold, and chilled my very bones. The *tropeiros* brought out three dried ox-hides, stiff and hard, each folded once down the middle, the hair being outside, and signified that those were our beds. I drew one of

them up close to the fire and got between the hard folds, taking care that the open side faced the fire; and in this position, with my saddle for a pillow, endeavoured to forget all discomforts in sleep. The cold, however, effectually prevented the realisation of such hopes, and I passed a wretched night with head throbbing, teeth chattering, and bones aching. I envied our hosts more than I can say, their big warm *ponchos*, in which they wrapped themselves up and snored all through the night; and I made a vow never again to travel without some covering either in the shape of a rug or a *poncho* attached to my saddle.

Many experiences, besides that of this night, have taught me that travelling in this country without rug or blanket, is the most fatal thing next to killing himself outright that a man can do, and the hardy natives themselves are fully aware of the great discomfort and even danger that it entails.

At break of day I deserted my miserable lodging in the folds of the bullock hide, thankful that the weary night was over, but feeling wretchedly sick and weak. Determined, however, to shake off these uncomfortable sensations, which I guessed were more than half caused by the cold and the sleepless night, I shouldered my gun, and determinedly set to work to beat the ground between the camp and the road for quails, while breakfast was being prepared. After a time the exercise took effect, and I began to feel somewhat less miserable. The sun, just now rising above the high ground, helped also to warm the chilled blood in

my veins. Finally, the cure was made complete by a refreshing bath in the little streamlet that ran past the camp.

Miles and Adams were already pitching into the beans and *farinha* when I got back, and the *tropeiros* had both gone off to look for my horse, which I had turned loose the night before, without caring then what became of it. The men presently returned, having found it on the road some way back towards Ponta Grossa, which place it was no doubt making for.

The study of horse and mule nature is a very essential part of a traveller's education in these countries. Some men seem instinctively to know where to find a missing animal, while others will spend the whole day vainly searching for it. In this case, however, it was but natural that the horse should have made back towards Ponta Grossa—its own home.

Just before starting I made our hosts a present of some tobacco and a two-milreis note that I happened to have in my pocket. This was all I had to offer them, but they seemed quite satisfied, and, doubtless, would have done all they did for nothing. In this country hospitality is the unwritten law, which binds all classes alike, since none can tell when he may not himself be in need of it.

After nearly an hour's march we came up with our own troop, which had just started from its camping-ground; and at 3 P.M. we halted on the banks of the

Tibagy river, which was here about fifty yards wide. Tents were pitched, and all was made comfortable for Curling and the rest of the party when they should arrive. I meanwhile enjoyed a long swim in the river, after which I took my gun and in little more than half an hour had bagged enough snipe and quail to feed us all, the ground literally swarming with them.

It was not till the next day that I discovered the reason of this more than ordinary abundance. The prairie grass, it appeared, had, but a day or two before, been burnt off for an area of several scores of square miles in the immediate neighbourhood; consequently the birds had been driven thence to take refuge in the nearest untouched cover, which happened to be in this locality.

The sun was already low in the horizon when Curling and his party arrived. The men were tired enough with the long walk from Ponta Grossa, and were agreeably surprised to find the camp pitched and supper nearly ready. One of them had killed an enormous snake on the road, and he had taken the trouble to bring it on to me, knowing my partiality for animal specimens. It was a *Jararaca*—one of the commonest and at the same time one of the most venomous of all the snakes of Brazil. This particular one was about three feet six inches in length, with a very thick body. The head was intensely ugly-looking, broad and flat; its fangs were nearly three-quarters of an inch long. The colour of the skin was various shades of brown, and had a very artistic pattern

upon it, boldly marked in the darker shades. The pattern consisted of a double row of hearts ranged symmetrically down the whole length of the body, each heart being set off by a narrow border of the lightest possible shade of brown. Thus the body may be said to have been in perfect keeping with the head, which itself was very like a heart in shape.

In skinning this uninviting reptile, I first cut off the head and crushed it in the dust, not caring to feel that a slip of the hand might at any moment expose me to the risk of having one of those cruel-looking fangs in my flesh. I found in its stomach two frogs. Thus it seems that these poor animals have other enemies on the prairies, besides the cranes, against which to guard themselves.

In addition to the game that I had bagged before the arrival of the second party, which all went into the common pot, there were several fat capons and a score of eggs, which had been secured from various small huts that we had passed on the road. These, with several loaves of brown bread and a liberal stock of "Bass" and "Tennant," bought at Ponta Grossa, at the comparatively cheap rate of a milreis-and-half a bottle, combined to make a regal repast for the tired travellers.

We extemporized a table of boxes, outside the tent-door, and spread the feast thereon; and Curling, Lundholm and myself sat down with clear consciences and with the perfect enjoyment that only comes to those who are living a wild free life, away from the sorrowful

influence of the money-market and the tax-collector. We needed no sherry-and-bitters to force a jaded appetite, neither were we dependent for the exuberance of our spirits upon the effervescent merits of champagne. Even Lundholm, who, poor fellow, from having bad health, was generally of a morose and morbid disposition, could not resist the charms of the surroundings, and for once in his life appeared perfectly happy.

Just at dusk, while we were still at dinner, a large number of night-jars appeared upon the scene, flitting about in a silent ghostly manner around our heads. I shot one as a specimen, but found the greatest difficulty in getting the skin off in anything like a good condition, on account of its extreme tenuity and delicacy. This delicacy of the skin seems to be a characteristic of birds of the Jar tribe. The *Suruquá*, a sort of day-jar, which we were afterwards to frequently meet with in the great Sertão, had the same peculiarity. It was very strange that I only remember seeing these night-jars, which were so numerous on this spot on this particular night, on one other occasion, namely, at one of our camps on the Ivahy, where they again appeared in great numbers. Probably they live chiefly on one kind of insect or beetle, which is only to be found in particular localities, few and far between.

S—— not having arrived with the remainder of the baggage, it was decided to wait for him one day in our present camp.

Within a hundred yards of our tent, stood the little shanty of the ferryman, an old and decrepit-looking fellow, who lived there with his wife and daughter; the latter, a rosy-cheeked fair-haired damsel of about sixteen, being in her appearance very unlike the general run of Brazilians. Hearing that there were wild pig sometimes to be got, in a patch of wood close by, Curling and I engaged the old ferryman to take us there in his canoe, and started after breakfast, taking "Danger" with us. A small river called the "Bitumirim" ran through the wood, by following up which, we hoped to penetrate deeply into the hidden recesses of the "Capão."

On turning up this stream out of the main river, we found ourselves all at once in another world. Dark gloomy forest surrounded us on all sides; a tangled canopy of tree and branch of various kinds, inextricably laced together by *llanas* and other climbers and creepers, shut out the sky above. Perfect stillness reigned, and the silence was unbroken, save by the harsh shriek of a large king-fisher, which, disturbed in its solitude by our unwelcome approach, shot angrily away before us, up the dark avenue of the stream.

We sat down at the bottom of the canoe near the bow, and the old ferryman stood up in the stern, and with a long pole punted us up the little river, steering through the labyrinth of timber obstructions noiselessly, and with the most consummate skill. On rounding one little bend, three wild ducks got up out of the water, with a startled quacking. "Hist! don't

fire! don't fire!" exclaimed the old man, as he saw guns go up to shoulders. "*Porcos! porcos!*" We looked for the pigs, but saw nothing. What did the old fellow mean? He kept repeating words which neither of us could understand. Presently, however, his meaning became more apparent, when he drew our attention to some fresh tracks of pigs in the soft mud on the bank. A short distance farther and another low "hist" again warned us to look out. At the same moment, Curling, who was sitting in front of me, caught sight of the pigs themselves on a little mud bank, about forty yards ahead. He fired both barrels, and when the smoke cleared, we found that one pig had been killed and was lying on the bank, while the others had disappeared into the jungle. This was the first big game that had as yet been killed by any of us, and we were proportionately elated at our success.

The animal proved to be an individual of a small species of peccary. It was covered with short bristles, nearly black. The tusks, of which there were two in each jaw, were formidable-looking weapons, sharp and triangular. Those on the lower jaw projected considerably out of the line of the other teeth, and imparted a very sinister look to the creature. The old man explained by graphic signs, that these were the weapons with which, when attacked, they ripped up men and dogs, with a sharp quick upward jerk of the snout. Later on, we were to have proofs enough of the terrible power of these tusks, and of the frightful wounds which they can inflict.

We now found that we could get no farther up the "Bitumirim," as the channel beyond was completely blocked by numberless trees, which had from time to time fallen across it. Having therefore lifted the pig into the canoe, we started to return by the way we had come, well satisfied with our success.

The most characteristic feature of animal life which this wild and gloomy little river exhibited, was in its king-fishers, of which I remarked no less than three different species.

One little blue and red fellow, smaller than our home bird, was the least shy of all. He would sit on some dead branch over the water, motionless, with the exception of his head, which would move restlessly from side to side while the canoe was approaching, and only when the prow was almost touching him would he fly off, with the usual scream of his kind. Not so the other two species, which were both bigger than the English bird, and plainer in their colouring, appearing, from a distance, to be clothed in plain black and white, and blue and white. I could not get a shot at any individuals of these two species, for they invariably fled at the first sight or sound of our approach. While in the act of flight, they kept up a continuous harsh scream, which however ceased the moment they again perched. Though two birds were never seen sitting together, yet I fancy the male and female were always within hearing and generally within sight of each other, because the scream of the one in flight, invariably brought another individual of

the same species on to the scene. What a solitary life they must lead—sitting the whole day long on some dead branch in the dark recesses of these silent forest streams !

Parrots, which are generally numerous in these prairie woods, were in this instance entirely absent.

We had for some time noticed a peculiar haze coming over the atmosphere, and upon getting out once more on to the main river, we found that the air was full of smoke ; and two hours later we were witnessing a prairie fire by daylight.

The conflagration was on the opposite side of the river to that on which our camp stood, and was below the wood just spoken of; so that it could not approach within half a mile of our tents.

After having deposited our pig in camp, we walked down to look at the fire from closer quarters.

It was approaching the river, though at a slow rate, as the wind was very slight. The scene was not at all impressive as compared with the tremendous night conflagration I had witnessed from the top of the "Serinha," nevertheless it was an interesting sight. A dark roll of smoke was ascending from the flames, forming a wall behind them and a cloud above. In the midst of this dark cloud, high up in the air a multitude of birds of prey hovered, hawks and buzzards, of every variety.

As the fire advanced, quail after quail, turned out of its cover, came skimming along over the prairie, towards the river ; and every moment some keen eye

above spotted the prey, and down, like a flash of lightning, swooped a big hawk or falcon, in pursuit. Frequently, the quail would be crossing the river before it was seen by the enemy, and the rushing sound through the air, as the big bird swooped down from a height of perhaps 300 or 400 feet, would then be plainly audible to us, above the crackling of the flames. One could not help pitying the unfortunate quails, thus persecuted on all sides—but the wonderful exhibition of the marvellous powers of flight of these birds of prey, was most intensely interesting, and for the time was all-absorbing. The eye could scarcely follow the rapidity of their swoop, and their recovery when they happened to miss the mark was almost equally rapid—one powerful stroke of the long-pointed wing, and they had bounded up again to their former height, and were ready for the next unhappy bird which the flames might drive out.

The instinct of these hawks in thus following the fire is extraordinary, indeed it seems almost to deserve a higher name than this.

We were rather hoping that the fire, when it reached the wood, would drive some big game out of it; as, though the flames could not penetrate beyond its outskirts, yet the tremendous noise of the bursting of trees on these occasions, and the roar of the flames, would be quite sufficient to alarm game into taking to the water. None, however, appeared, though we watched, rifle and gun in hand, until the fire had

burnt itself out against the edge of the wood and the bank of the river. We did not, however, return to camp empty-handed. Whilst sitting on the top of the bank watching the wood opposite, several large fish came up to the surface in the river beneath, and Curling sent a bullet from his little pea-rifle through the back-bone of one, cutting it almost in half, and, of course, killing it instantly.

On this evening, therefore, we were able to have three courses at our dinner, namely, fish, entrées (such as duck and quail), and a *pièce de résistance* in the shape of ribs of wild pig. Thus we continued living on the fat of the land, simply by the expenditure of a little powder and shot, while our *tropeiros* and the natives generally were content to live on a concoction of greasy beans and *farinha* from year's end to year's end. We marvelled greatly at the indifference they one and all exhibited to the minor riches around them, which were so free to all alike.

On the following day we decided to continue the march, although S—— had not yet appeared.

Crossing the river Tibagy was the first thing to be accomplished. A stout rope, made of the bark of a certain kind of *cipo* or *llana*, was always kept stretched across the river, the ends being secured to two strong posts embedded in the opposite banks. To this rope was attached, by means of a loose noose, a raft made of three canoes fastened together lengthways up and down stream, and boarded over on the top. Upon this raft all our animals were taken across, three at a

time, with their packsaddles upon their backs, but without their loads.

The mode of inducing locomotion in this raft was simple enough. Two men went on board each time, and by merely pulling on the stretched line, and without exercising more force than was necessary to slacken the connecting noose, the required motion was given to the raft: the force of the current against the sides of the canoes—whose bows were given a slight twist across current by the men pulling—being itself the principal motive-power.

At first sight, it appears as though the canoes forming the raft ought to point across stream in the direction they have to travel, instead of having to cross broadside on. This, however, is of course a fallacy, as a more careful examination of the raft at once shows. In fact, the *balsa*, which is the name by which this contrivance is known, is, without being itself aware of it, a very scientific affair, giving a perfect practical illustration of a great statical law. Indeed, its action recalled forcibly to my mind the "Parallelogram of Forces," a physical theorem which had been the wonder and admiration of my youthful days.

By means of this *balsa* all our troop, with baggage and stores, was safely transported to the other side of the Tibagy with great facility, and our last day's march on the great prairie commenced. In two hours more we should reach its western boundary, and another stage of our journey would have been then completed.

CHAPTER X.

The "Neutral zone" of forest and prairie.—Camp at Ipiranga.—Forged trade-marks.—The pea-rifle.—Amusing habits of a Brazilian Jay.—The "Monjêlo."—A Brazilian race-course.—The surroundings of Ipiranga.—"Patiencia."—Two forests.—Monkey shooting.—A Brazilian bridge.—Hospitality of the people.—On the formation of prairies.—The "Oitenta Oito" butterfly.—The pea-rifle again.—A forest "road."—"A Mula cançou!"

By referring to the map at the end of the book, it will be observed that the demarcation line between forest and prairie is placed at some distance on the seaward side of Curitiba; whereas, in the text, I have spoken of the "Serrinha" as being the commencement or border of the prairies.

As this apparent disagreement may perchance perplex the reader, I should no longer delay its explanation.

It is simply this. There is in this province no hard, well-defined division separating the forest from the prairie. They are not divided by any single narrow line. On the contrary, I have always found that there exists a zone or belt, varying in width from about ten to thirty miles, of neutral ground, so to speak; that is to say, of country that is neither all forest nor all prairie,

but which is divided between them both—the former more generally being in excess of the latter.

Thus then, on the map, the division is shown any where within the limits of this neutral belt, and in the particular instance referred to, the line shown happens to coincide more nearly with the forest than with the prairie border; the whole of the Curitiba plateau being included in the neutral belt. Any apparent disagreement between the text and map is thus accounted for.

It will be found as we proceed, that this neutral territory plays a very important part in the prosperity of the province. It has, in fact, been the birthplace of all real progress which has been made since very early days. In every case where attempts have been made to establish agricultural settlements beyond or without its limits the result has proved more or less a failure; whereas those settlements which have been founded within its borders have invariably prospered to a greater or less degree.

It will be shown that the rationale of the comparative prosperity of this zone lies partly in its own superior natural resources, and partly in its necessary position between the two great economic divisions into which the province is divided: namely, the prairie and the forest, the pastoral and the agricultural lands.

There is, however, one settlement which is not situated within the limits of this neutral zone, but which, nevertheless, has hitherto exhibited a considerable amount of progressive prosperity. This is the town of Ponta Grossa, which we had just left behind us.

This is quite an isolated case, however, and can be accounted for by the chance fact of the town being placed in the very centre of the circle of agricultural settlements which have sprung up in the "neutral zone," so that a great proportion of the local trade naturally passes through it. Ponta Grossa lives and thrives entirely by this local trade, and itself produces nothing.

Anxious as Ponta Grossa showed herself to be for the construction of the railway—it is pretty certain that the whistle of the locomotive will be the signal of her collapse. Her prosperity is entirely arbitrary, and will vanish like smoke when railway communication is once established between the valley of the Tibagy and the sea coast.

To return, however, from this digression. We were now once more to traverse this neutral territory—this time on the western side of the great prairie. Our first glimpse of the new order of things to which we were approaching, was obtained from some high ground which the mule track crossed about six miles beyond the Tibagy river. From this spot we once more beheld huge forests of pines clothing the sides of hills and mountains before us, and covering an area of hundreds of square miles. A bird's-eye view, could we have obtained it, would have shown that large patches of open *campo* or prairie were interspersed amongst these seemingly compact forests, and that in other places there existed many leagues of park-like country, with trees dotted here and there about it, singly and in clumps more or less widely separated.

From our view-point, however, all ahead of us appeared to be one vast forest, extending right up to the summit of the watershed between the two rivers, the Tibagy and the IvaHy, a distance from us of perhaps twenty miles or more in a straight line.

Since the day when we had mounted to the top of the "Serrinha" and first beheld the vast expanse of golden *campo* stretching away southward and westward to the limits of vision itself, we had traversed nearly eighty miles of continuous open country, without a break appearing in it.

Notwithstanding its monotony, I had, during those long daily marches, conceived quite an affection for the grand rolling plains and boundless horizons, and almost grieved to think that this part of our long journey was now come to an end.

At two o'clock the pine trees began to appear in straggling array on our right and on our left. Half-an-hour later we were winding our slow march beneath the cool shade of their lofty outstretched crowns, and the prairie was left behind and forgotten.

All the old bird-life which had been so familiar in the forests of the Serra do Mar reappeared once more, and I especially recognised the woodpecker with the scarlet top-knot, who moreover seemed to be as shy and solitary in its habits as ever.

At three o'clock we passed a *rancho* or *châlet*, where the manufacture of "*herva-mate*" was being carried on. "*Herva-mate*" trees abounded, especially in the more open spots.

In appearance they are not unlike our English holly. They grow without cultivation, and, notwithstanding the value of the manufactured product, are looked upon altogether as a "no man's" property. Dearth of labour is, however, quite sufficient to account for this neglect.

After travelling for about two hours altogether, now through forest, and now through open grass patches, over a road which had deteriorated not a little since leaving the *campos*, we arrived at our camping place for the night,—the little *povoação* of Ipiranga.

Tents were pitched by the side of a small streamlet—a tributary of the Bitumirim—which bounded one side of a large open square—the playground of the settlement. On the upper side of this big clearing were several small houses, one of which proved to be a *venda* of superior quality, kept by a one-eyed Portuguese, by name Terxeira, and his spouse; the latter a lady whom few people would fall in love with at first sight.

At this house we were enabled to replenish our stock of beer, at the marvellously cheap rate, considering the remoteness of the village, of three shillings a bottle. This cheapness was, however, to be accounted for by the fact that Sr. Terxeira obtained his beer from Curitiba, where it was manufactured and put into English bottles with English labels upon them, and transmitted to the interior to be palmed off as genuine *Cerveja Inglesa*. Among the many bottles of false Bass and Tennant, we discovered

one or two of the real article, which, for the benefit of future travellers, I may remark can best be distinguished from the false by their tinfoil capsules, which, in the case of the latter, are formed of very thin material twisted on by hand, whereas a genuine English-imported bottle always possesses a stiff capsule artistically put on.

We missed our usual dinner of quail and prairie hen, but Terxeira was equal to supplying all wants, and said he would have his pigs brought in from the other end of the clearing where they were busily engaged eating grass, and have one killed for us.

Curling begged him not to trouble himself about it, but if he would point out which we might have, we would manage the rest ourselves. On leaving the prairie Curling had discarded his gun and now carried his light pea-rifle. Terxeira pointed out a fat porker feeding by himself about 120 yards off. Curling rested his rifle on the gate by which we were standing, and taking careful aim, fired, and the pig, much to the astonishment of Sr. Terxeira, dropped down mortally wounded. From this moment the fame of Curling's pea-rifle, a fame which was to last uninterruptedly for nearly two years, commenced. Terxeira spread the report of its wonderful doings, with a bullet not much bigger than a single large shot; and many of the inhabitants from the surrounding huts and *châlets* came in the course of the next twenty-four hours to inspect the tiny though powerful weapon.*

* The pea-rifle above mentioned was one of *Lang's*, .380 bore, and

S—— did not yet make his appearance, so we decided to wait for him here another day. I took advantage of the opportunity thus afforded to add to my collection of birds. I shot three or four kinds of woodpecker and a beautiful bird of the jay tribe that I had not before seen. Like all its race, this last-mentioned bird was very lively and restless, and first attracted my attention by its peculiar cry, which consisted of a double note, startlingly loud, but not harsh like that of its English cousin. Several of them were wandering about amongst the pine trees, and occasionally pursuing each other with loud cries.

After I had shot one, others came round to look on, and I succeeded in getting a second and a more cleanly-killed specimen.

The head was surmounted with a covering of short stiff black feathers, which stood up on end like the bristles of a scrubbing-brush. A pert knowing expression was given to the eye by a fringe of light-blue feathers, which entirely surrounded it, continuing backwards down both sides of the neck. The breast and tip of the tail were of a light straw colour; the back was very dark blue, almost black, and the wings with the upper part of the tail were of a deep bluish purple. Altogether, it was a very remarkable bird in its outward appearance.

About a year later, I had the opportunity of observ-

sighted up to 150 yards. It was, perhaps, on the whole, the most generally useful weapon of any on the Staff, though their name was legion.

ing some of the habits of this same bird, in a tame, or rather in a captive state, a specimen having been caught alive and presented to Mr. Lloyd.* This individual was kept in a cage hanging up in the dining-room of our house at Colonia Thereza, where it proved a constant source of amusement to all. It was fed chiefly on the hard grains of Indian corn, and the way it would eat them was this :—Picking up a grain from the bottom of the cage, it would fly up and carefully place it on the perch between its two claws, and keep it in this position by grasping it and the perch together with one toe of each foot, leaving a small space in the middle of the grain exposed, on which to operate.

Having satisfactorily accomplished this preliminary feat, it would then draw itself up perfectly erect, and pause for a moment to look round at the company, as though to say, "Gentlemen! now I am going to begin." Then throwing its head far back and making its whole body and neck perfectly rigid, it would start off on a succession of rapid and vigorous blows, dealt with its stout-pointed beak, on to the imprisoned grain. So rapidly did the blows descend, that the eye could scarcely follow the motion of the bird's body. The space left for its beak to operate upon was scarcely more than an eighth of an inch; but, nevertheless, every blow fell accurately on the mark, otherwise, the

* One of the Concessionaires of the Paraná and Matto Grosso Railway Survey, and for some time (from October, 1873 to October, 1874) Directing Engineer of the same.

powerful hammer-like beak would soon have broken the slender toes all to pieces. Generally, half a dozen of these rapid strokes would suffice to split the grain, and one portion of it would fall to the bottom of the cage. This always seemed to puzzle the bird, and it would pause and whimsically turn its head aside, as though considering what was to be done in consequence. Presently its mind would seem to be made up, and it would take the remaining half of the grain, which was still too big to be swallowed comfortably, and carefully place it out of the way on the end of the perch. This accomplished, it would fly down and pick up the fallen piece, and recommence upon this the hammer-and-anvil performance. Generally, this would disturb the first piece from its nicely balanced equilibrium on the end of the perch, and it would fall.

Now we enter upon the ludicrous stage of the proceedings. The bird's perplexity and distress would be manifested by its frequent pauses for consideration, and vain and oft-repeated attempts to keep both pieces on the perch at the same time; though, sure enough, at the first blow it gave to the one, off would tumble the other half, which the operator's quick eye perceiving, down he would jump to pick it up again. The roars of laughter which greeted each fresh discomfiture, were often taken to heart by the poor puzzled bird; and it would look angrily round at us for a moment, as though to say, "What are you laughing at, pray? Can't you mind your own business?" which action would of course produce fresh bursts of laughter;

and then once more it would return to its hopeless task.

It was always a satisfaction at last to see it leave one piece to its fate,—though evidently doing so with a heavy heart,—and operate upon the other till all was devoured.

Within twenty yards of our tents; was one of the most curious and primitive labour-saving machines that can ever have been invented. It was worked by water-power from the little stream before mentioned, and I should imagine that the genius of him who first invented this machine could only have been more remarkable than that of the persons who still continue to make use of it.

It was called a *Monjôlo*, and its sole use was to bruise Indian corn preparatory to the corn being made into *farinha*.

Notwithstanding that the machine has probably been described by not a few travellers in Brazil, I will give a short description of it here for the benefit of those who may not happen to have read about it. This particular specimen of the *Monjôlo* was formed out of a log of wood, perhaps ten feet long and fifteen inches in diameter, roughly hewn out at one end into a trough, while the other extremity was thinned off to about half the thickness. A piece of hard wood about eighteen inches in length and tapering to a blunt point was let into this end of the log with its point downwards. This formed the hammer or “bruiser.” The whole was suspended on two trun-

nions left for the purpose in the substance of the beam. When the trough was empty, the hammer of the machine rested in another trough or basin scooped out of a trunk of a tree, in which the corn also was placed. This was its normal position when at rest, the beam then being nearly horizontal. Now to set it to work, and, more important still, to keep it at work. It was in the successful accomplishment of this latter object, that the true genius of the inventor had been so brilliantly displayed. A dam having been made in a convenient stream, the water from it was conducted by means of one or more hollowed-out trunks of trees to the machine; where, falling in the trough before mentioned, it filled it and caused the hammer-end of the beam to rise and at the same time the trough to descend, and thereby tip out the water again, which in its turn would immediately cause the hammer once more to drop down into its former resting-place.

Thus, as long as the water flowed into it, the machine would rise and fall at regular intervals. This particular machine made one blow about every half minute, and I calculated would bruise about half a bushel of corn in a week. I examined it in the evening and again in the morning after it had been working all night, and there was no perceptible difference to be observed in the small handful of corn that it had been operating upon during those twelve hours.

There is certainly something very comical in these machines to the unaccustomed eye. I think the element of absurdity must lie in the enormous expen-

diture of power required for the performance of a microscopic amount of work.

Beside a *Monjolo* and a *venda*, Ipiranga boasted of a race-course, on which, if Sr. Terxeira's word was good, heavy stakes were occasionally lost and won. The race-course consisted of two parallel paths or tracks, each being about 300 yards in length, deeply worn into the ground by many a galloping hoof.

In the afternoon we amused ourselves by racing the various animals belonging to the troop, not, of course, including the pack-mules.* The Brazilians themselves, when racing, ride without a saddle, which is not surprising to any one who knows what a cumbrous awkward affair a native saddle is; we, however, preferred racing *na moda Ingleza*, as the natives called it, that is to say, booted and spurred, and with horse fully equipped.

The population of Ipiranga is by no means confined to the inhabitants of the few houses which are situated in the central clearing. Many paths (mule roads) led from this large square in different directions, showing that there were other habitations around. And the fact is that the whole of that portion of the "neutral zone" lying between Ipiranga and the town of Tibagy is more or less inhabited and cultivated; much of the richest pastoral as well as agricultural land of the

* I once got on the back of a pack-mule, but never repeated the experiment. The brute first began to bite and kick savagely, and then, finding I did not tumble off quickly enough to please it, it dropped quickly down on its stomach, with the fiendish intention of rolling. I barely escaped a broken leg or something worse.

province being included in this strip of territory. As I could never discover what formed the exact, or even the approximate, limits of Ipiranga, I cannot give its population. Mr. Lloyd, in his Report to the Brazilian Government puts it down as 400. This, however, is probably too low an estimate. One thing, however, is certain, which is, that nowhere can one ride for more than an hour along any of the numerous mule-tracks, which form a network stretching right away to the town of Tibagy, a distance of thirty miles in a straight line, without coming across a habitation of some kind—generally a *châlet* inhabited by a *Caboclo** (a farmer on a small scale), or not unfrequently a *chacara* with large stock-yards and numerous out-houses attached, belonging to some richer *fazendeiro*. It was from this strip of country also that, at one period in the history of the expedition, the greater part of the supplies of both the first and the second Staffs were drawn.

But to return. Just as our racing had come to an end, and Curling's horse—an animal that he had purchased at Ponta Grossa for the rather high figure of 12*l.*—had carried off all the prizes, the tinkling of a troop-bell was heard, and S—— appeared with the long-expected mules and cargoes. He said that he had been able to do nothing on the first two days after we had left, on account of the exorbitant price asked by the

* *Caboclo* has been defined to mean the progeny of the Indian with the Negro. In these pages I have used the word, with a much wider and more varied signification, as do the Brazilians themselves.

mule-owners, amounting to the full value of the animals themselves; and this simply for the hire of them for a six-days' march. At last, when almost in despair of being able to obtain more reasonable terms, and being on the point of giving in, a man came forward with an offer to undertake the journey for 3*l.* 10*s.* per mule. This offer, though at more than double the rate that we were paying for the rest of the troop, and equal to almost two-thirds of the actual value of the mules themselves, he was obliged to accept. The old story, that the roads were so bad, and that the animals would be utterly ruined in travelling over them, was again given as an excuse for this exorbitant demand. We had, however, already accomplished two out of the six-days' march from Ponta Grossa, and nothing to come up to the unfinished bit of the Curitiba road had yet been encountered.

Had it not been for the constant reiteration by our *tropeiros* of the stock phrase, "*Paciencia, senhores, logo mais v'm'cés hão de ver,*" which may be freely rendered, "Don't excite yourselves, gentlemen, you will open your eyes presently," we should now have put down as a humbugging myth this well-worn excuse.

There being no longer any need of stopping the march, on the following morning we once more started all together, crossing the Bitumirim itself, immediately after leaving the clearing, by a newly-built timber bridge, and at once entering upon some of the grandest forest scenery that we had yet encountered. Pine-trees were still the great monarchs of all, and were



THE BRAZILIAN PINE (*ARAUCARIA BRAZILIENSIS*).

Camp of 1st Staff on Borders of Pine Forest.

[Vol. I, p. 181.]

here of larger dimensions even than those on the Serra do Mar, and must have been about 160 feet in height in many cases, with a girth in proportion.

Beneath this forest of pines grew another forest, entirely distinct from the former in character.

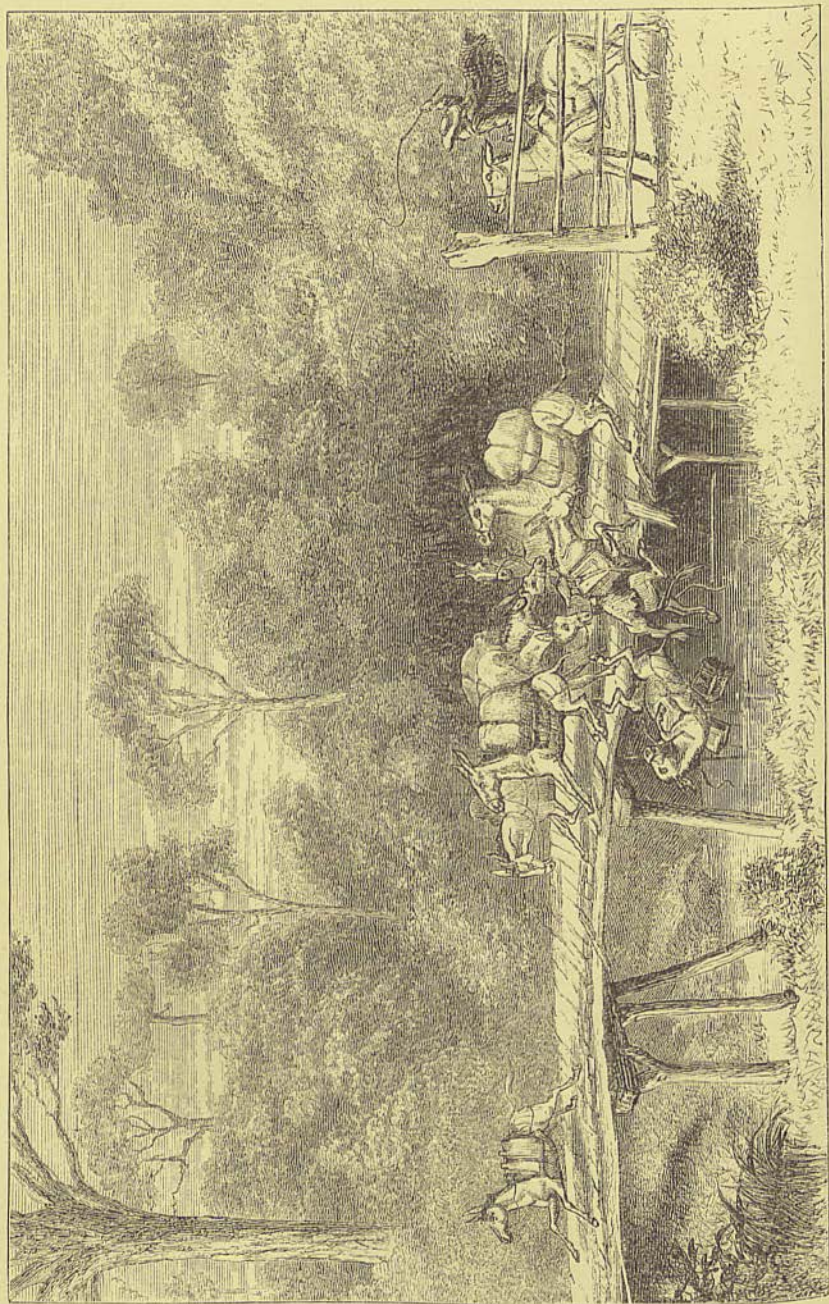
This second or lower forest was composed of trees of more tropical growth, together with many kinds of shrubs of the myrtle tribe, tall slender palms, gigantic ferns, twenty and thirty feet high, and brakes of bamboo or *taquára*. Running riot in all directions amongst the tall trunks and long branches were *Uanas*, great and small. Some, like huge snakes, were hanging down from aloft, life-like as the anaconda. Others, of a different kind, taking the form of gigantic cables, and stretching themselves, taut as an anchor line, from one tree to another. Others again, of less imposing dimensions, were idly swaying about in mid-air, either singly, or coiled in thick ropes about each other. The greater part of the forest seemed given up to them, to sport and pursue their vagaries whither fancy led. Not a tree but what was embraced by at least a score of them, of various sorts and sizes. Such a wealth of fantastic combination I had never before beheld. For nearly two leagues we luxuriated in this our *beau idéal* of a Brazilian subtropical forest.

I was riding behind, bringing up the rear of the party, when I heard the report of a gun some distance in advance, followed by another and another. I put spurs to my horse to try and get to the front, but I found that some of the leading mules had been

frightened by the fusilade that was still going on in front, and had turned tail and thrown the rest of the troop into confusion. The nervous animals were all huddled together in a compact mass across the track, effectually barring progress from the rear. I dismounted, and, giving my horse in charge of one of the men, managed to get past the block on foot, and reached the scene of firing. There I found Curling, Robertson the storekeeper, and another man who was carrying Curling's spare gun, all in a state of tremendous excitement. They had fallen in with a large troop of monkeys, which chanced to be crossing above the road at the moment of their passing. Two had already been killed, and I arrived just in time to see the pea-rifle bring down another from the very top of an immense pine. Two fell at the shot; one was killed, and the other dropped some fifty feet, on to a tree below, but recovering himself immediately, cantered off from branch to branch on the trail of his companions.

One of the monkeys slain was an old and hoary patriarch, having a long grey beard, which gave him an intensely human appearance; the other two were young ones, destitute of such ornament.

After this little episode, which afforded some excitement, I continued marching on foot in advance of the troop, and was soon glad enough that I had done so, as, in the first place, the track now began to go into "corduroy," the soil being a stiff clay, which, under these deep shades, can never dry, and, in the



A PANIC UPON A BRIDGE.

second place, by being in front, I was able to get shots at many birds and monkeys, which I might otherwise not have obtained. We crossed the Bitumirim once more by the most rickety bridge that could be imagined. It was built on some very weak-looking piles which were suspiciously inclining down stream. The footway, which was barely six feet wide, was composed of sleepers loosely laid down, and not secured at all, except by light baulks of timber laid across their ends, and loosely tied at intervals with *Uanas* or *cipos*. Parapet or railing there was none, and large gaps yawned in the footway where sleepers had fallen through into the river beneath. The height of this bridge above the present level of the water was about sixteen feet.

How the heavily-laden mules got over, without accident, I could not conceive. The *tropeiros* dismounted and led their own beasts across, wisely avoiding the risk of a tumble through. I once saw a mule-troop take fright when crossing one of these rickety bridges. The result was alarming, and many animals were thrown over into the river beneath by their frantic companions rushing against them.

Soon after passing this bridge the ground began to rise, and the forest once more to return to its old temperate character; the soil, too, again changed from clay to gravel and loam, intermixed with boulders of trap-rock, such as had characterised it when first the change from prairie to forest had commenced.

We now passed a collection of small *châlets*, situated

in a park-like piece of ground, that seemed to extend for many miles in different directions. Cattle were browsing about this open place, and not a few horses and mules were taking life easy under the shade of the scattered clumps of pines.

We stopped at one of these *châteaux* to get some milk. A robust English-looking matron served us, two spirited-looking boys, of about ten and twelve years respectively, flanking her, one on each side, forming a body-guard. Our troop did not stop, so we declined the offer to enter and sit down to *descansar um pouco*. As usual, the proffered payment was refused. It was becoming evident, that the farther we receded from civilization, the greater was the hospitality that we were to meet with. We camped about a league farther on, under the lee of a very large *chacara* or farm-house, whose owner would not allow us to eat in our own tents, but insisted upon entertaining us under his own roof.

It was with some difficulty that we persuaded him to allow us to sleep in our tents, and it was not until he had seen with his own eyes how comfortable we made ourselves in them, that he at last gave way. We did not breakfast in the house, but milk and eggs were freely supplied us for nothing, and fat capons at the rate of half a milreis each. In return for this hospitality, we presented the *fazendeiro* with three bottles of beer, for which he loaded us with thanks, given with all sincerity, beer being everywhere in these out-of-the-way parts regarded as the greatest possible

luxury, and a present of a few bottles of it as a proof of the highest esteem.

Our entertainer gave us some interesting information with reference to the formation of these park-like prairies such as his estate chiefly consisted of, from which it appeared that they were continually undergoing augmentation. As most people know, it is a disputed point, as to how the South American prairies were originally formed. Some say that they in many cases were once covered with a timber growth. Others, that they have remained in their present state, bare and bleak, since the day when they first rose up above the waters of the "Denudation." Without attempting here to give an opinion on the great general question, I may nevertheless record the interesting fact, already perhaps tolerably well known, that the operation of turning forest-land (of a certain kind) into prairie-land, is continually going on by the simple agency of fire; and moreover,—and this is a point perhaps less known,—such land, when once changed into prairie, has no tendency to return to its former condition. This is a strong point in favour of the opinion of those who hold that the prairies were once covered with forest. I have said, though, that the forest must be of a certain kind. One of the characteristics of the forest *proper* is, that when any portion of it is cleared, either by axe or by fire, or by both, it will always tend to return to forest, and will, in fact, so return, if neglected for a sufficient number of years, Such is the forest-land of the Ivahy valley, where towns

and villages founded by the Spaniards and Jesuits in the sixteenth century, and abandoned after fifty years or more of habitation, have their sites once more overgrown by forest.

The "neutral" zone, however, of mixed forest and prairie is not generally of this character. For the most part its forests consisted of pine trees, with an undergrowth of bamboo or *taquára*. Now it may be laid down as a fairly accurate rule, that, wherever a particular species of *taquára*, such as that most generally found in the higher lands of this province, occurs in any abundance in conjunction with a pine-forest, the ground on which it thus flourishes, may, in the course of a few years, be converted into *campo* or prairie-land, simply by the agency of fire, applied twice or at most three times in that period; and, moreover, that the ground thus once cleared will have *no tendency* to relapse again into forest.

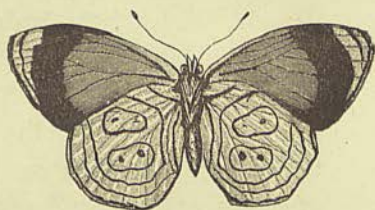
The following day's march was continued through a country, over which forest chiefly predominated, and which became more and more broken and mountainous every league we advanced.

The track we were following was much encumbered with fallen trees, so that the progress of the heavily laden troop was but slow. Curling and I, with one of our Brazilian *camaradas*, named Pedro, went on in advance of the baggage-train, in order the better to enjoy the many new and interesting objects of both animate and inanimate nature, which now cropped up at every turn of the forest path.

We were mounting upwards from the valley of the Tibagy towards the watershed dividing this river from the Ivahy. Every quarter-of-an-hour we crossed some little valley, each with its tiny stream of running water hurrying on to swell the volume of the "River of Many Waters."* Each of these little streams was the resort of swarms of butterflies; of which countless numbers of every variety of size and colour literally



UPPER SIDE.



UNDER SIDE.

THE OITENTA OITO BUTTERFLY (MALE).

covered the ground, and at our approach darkened the air with their flight. Many varieties were swallow-tailed, others again were tufted-tailed, like birds-of-paradise. There was also one pretty little butterfly, which we afterwards christened the *oitenta oito*, the "eighty-eight," on account of its having that number very distinctly marked in figures on the under side of both the lower wings. The upper sides of the wings were altogether different from the lower, being of that peculiar, burnished blue and purple,

* *Tupi* = "Tibagy."

which changes its tints, like the plumage of many of the humming-birds, with every movement of the light upon them; whereas the under sides were marked with the three plain colours of red, brown, and satin white. I describe this particular butterfly, not because of its rarity, but, on the contrary, because of its being the most universally distributed of all the butterflies belonging to the province of the Paraná. I found it in three out of four of the chief valleys of the province, namely, those of the Ivaí, Tibagy and Ribeira. No doubt it is also to be met with in the wooded portion of the Iguassú valley. A great many species seem to be strictly localised; the boundaries of their several tribes being marked out sometimes by the character of the growth of the forest; such for instance was the case with a very large bright blue butterfly, which we also noticed on this day, flitting along the path before us amongst the bamboos, amongst which only it is to be found. At other times, however, their limits, though often strictly enough defined, are yet to all outward appearance arbitrary, depending on nothing that is visible to the ordinary observer.

After a long march — considering the nature of the country — of fifteen miles, Pedro announced that we had arrived at the spot where the troop was to halt.

A small *ranch* occupied one corner of the ground, which was a park-like clearing, similar to many we had already passed. A number of semi-wild cattle were feeding about it, or standing at gaze, pawing the ground

in indignant wonderment at our intrusion upon their domain.

They were not long left in doubt as to our character, for we had decided, the moment we first saw them, that one of their number should be slain, and we wasted no time in putting this design into execution.

Curling, with the pea-rifle, took up his station in a convenient spot, while Pedro and I rode round to drive the animals past where he stood.

With yells and shouts we rode at them, and soon put the whole herd in motion; bulls and cows, heifers and calves, all thundering along together, shaking the earth with their enormous combined weight.

Suddenly a tiny puff of smoke was seen to proceed from where Curling had taken up his station, and at the same moment a young heifer bounded out from the line of madly rushing animals, almost at right angles, and, after running a few paces, staggered and fell down dead. We drew rein at once and allowed the remainder of the herd to gallop on unpursued, for our dinner was now provided; the pea-rifle had again done its work with effect.

It must not be supposed, from this description, that every traveller in these regions is at liberty to obtain his dinner in a like unceremonious manner. These cattle that one meets with on the march are all private property, notwithstanding their semi-wild state of living. In this case the owner was a friend of our man Pedro, who assured us that he would not be offended at our thus making free with his stock, and would be

satisfied with a 20\$000 note transmitted to him at the first opportunity.

When the troop came up, an hour or so later, the heifer was already skinned and cut up, ready for the cooks. In Brazil, as well as in other countries, the way to keep your men in a good temper is to look after their stomachs. Our Europeans, at the best of times, had proved themselves a sad lot of grumblers since the march up-country had been commenced; liberal feeding was, therefore, the more essential in order to preserve even tolerable content among their ranks.

On resuming the march on the following morning I took my turn in remaining with the troop. The men who had by turns, for the last few days, ridden my horse, had managed to give it a sore back, consequently I was obliged on this day to put up with a spare mule, which had not yet been used on the march. This mule had a stern objection to leading the way, but went faultlessly when permitted to follow behind the pack-mules. For a few miles we jogged along comfortably enough, occasionally ploughing through a bit of "corduroy," and on the other hand now and then getting into open ground and consequently on to a more decent road. Shortly after leaving the last camp, which had been situated on the banks of a small river called the Capivari, a tributary of the Tibagy, the ground had begun to rise, and by the aneroid which I carried, I found that we were nearly 500 feet above that river, when the road entered

a bit of the densest forest that had yet been encountered.

The track through this was very narrow, and, as usual in all these forest bits, was much encumbered with fallen trees and drooping bamboo-stems. Dense gloom, almost the gloom of night, shrouded the road, which wound beneath a canopy of thick, matted foliage, that was impervious to the direct light of day. The soil once more had returned to a stiff red clay, and once more the poor wretched mules had to flounder, laboriously and toilsomely, through a slough of despond, in comparison with which even the memorable example on the Curitiba road sank into utter insignificance, and might have been termed a very fair highway.

For the first part of the time my whole attention was taken up with my own mule, and with guarding myself, either from being dragged out of the saddle by an overhanging bamboo, or from being spiked by some one or other of the various stumps which the knives of the mule-drivers who had preceded us, had left sticking out in all directions. My animal steadily laboured along, utterly ignoring the bit and refusing to stop for a second, even when its rider was in imminent peril of being dragged down to the mire by a bamboo, as was again and again the case. Never once did he attempt to tread on the slippery ridges, which rose almost up to the belly girths, but wisely kept to the holes, though each step into them threw up a shower of pea-soup mud, smothering both mule

and rider. After a time, however, even his mulish patience began to get exhausted at the tremendous and unceasing labour, and, now and then, notwithstanding vigorous opposition on my part, he would dash up on to the slippery bank, utterly regardless of the fact that one leg and one side of my body were being crushed and torn by the jungle the while, and to it he would cling with all his pointed hoofs, like a cat, to the last gasp, that is to say, until a last despairing tug at the bridle on my part, to save myself from being utterly crushed against some trunk, or decapitated by some overhanging branch, brought him down with a jarring bump once again into the quagmire beneath. After enduring this painful ride for perhaps an hour, and being, by that time, blinded with mud, and having both face and hands torn and bleeding, I dismounted, and walked on foot, leaving the animal to flounder his way along alone.

I was now able to observe the effect of this fearful road upon the baggage-mules, many of which were carrying loads of nearly 250 pounds each. It was cruel work to see them struggling along under this great load, and frequently knocking themselves off their legs by running the big, square packing-cases against some tree or branch. I saw one poor animal stop exhausted in the middle of the troop, its heaving flanks pouring down sweat in streams. Its legs were tottering and were embedded knee-deep in the mud, through which it had so long been labouring. Its long, limp ears with all the stiffness gone out of them,

its big, distressed eye, nearly starting out of its head, and the wide, distended nostril—all told the tale of how fearful the struggle had been.

In these cases no further work can be got out of the poor animal for the day. The only thing to be done is to unload it then and there, and transfer its burden to a spare mule, or, if there is not a spare mule, to one of the riding mules.

The *tropeiros* saw the state of the case at once, and, with the simple observation of "*a mula cançou*," proceeded to unload it. The one word "*cançou*" speaks volumes. Though literally meaning nothing more than "has become tired," it has come to signify, on these occasions, utter exhaustion. A mule is never supposed to be "tired" till it has arrived at this stage of complete exhaustion, in which it cannot be got to move another step either by whip or spur.

Before we got out of this terrible road another of the mules gave out, and this time one of the *tropeiros* had to resign his own quadruped to the pack.

We came to the end at last, emerging out upon a large open tract of country, known as the "Campinas Bellas."

The name of the mountain or ridge whose atrocities I have just described was "Serra do Macaco," or "Monkey Mountain." Where the mule-track crosses it, it rises to about 4,000 feet above the sea-level, or about 1,600 feet above the river Tibagy at the point at which we had crossed. The "Monkey Mountain" is, in fact, a portion of the dividing ridge separating the

two rivers, the Ivahy, and the Tibagy. It is entirely unnecessary that the mule-track should cross this ridge at so great an elevation. By making a short détour, several hundred feet in height might be saved, and the poor mules relieved from a vast amount of cruel labour and suffering.

At 4 P.M. we camped just outside the stock-yard of Sr. Andrade, the owner of a great portion of the Campinas Bellas, and also, if I am not mistaken, of at least a part of the "Monkey Mountain."

The house appeared, outside, to be little better than a timber hut, such as we had before seen used for storing Indian corn. In the next chapter we shall, however, make the acquaintance of its interior, and also of its inmates, who will serve as a type in many points of the *fazendeiro* class of this province. Both will be found to afford not uninteresting subjects for study, especially to those whose tastes lie in the direction of backwoods simplicity.

CHAPTER XI.

A "fazendeiro's" house.—Education of the women.—Slaughtering an ox.—Cruel spectacle.—"Danger" and the pig.—A cattle-breeding estate.—A Brazilian breakfast.—Hospitality.

HOSPITALITY to all comers is the great creed of men who, like the Brazilian settler in these outskirts of civilization, are themselves dependent upon the same virtue in others, whenever they have to perform a journey from one locality to another. Sr. Andrade had no sooner made out that we were a party of strangers, than he came down to insist that the chiefs of the party would establish themselves in his house for the night. As before, however, we declined to inconvenience the household to so grave an extent, but allowed him to carry us off to supply us with some refreshments after the long toilsome march. Pedro, who was evidently an old acquaintance of the *fazendeiro*, came in with us as interpreter, not that he understood English, but that he was now so accustomed to our broken Portuguese that he could readily apprehend our meaning in anything, and transmit it to others for whom it might be intended.

We followed Sr. Andrade into the house, and found

ourselves in a little timber-built room, of about 14 feet by 12 feet, with doors in each of the walls, opening into other apartments, whose mysteries will presently be explained. Benches were ranged all round the walls, with the exception of the spaces left for the doorways. The floor was the bare earth, beaten hard, and on it stood, in the middle of the room, one solitary table. There were no windows, and when the door was shut, the light could only come in through the chinks in the walls and roof, which, however, seemed large enough to render further provision for light and air unnecessary. Round these walls, which were all built of timbers similar in shape to an ordinary railway sleeper, the convex side being outwards, were hung all the paraphernalia which pertained to the every-day occupations of the inmates. Lasso, whips, spurs, saddles and bridles, weak-looking guns and tawdry pistols, took up most of the available space, and indicated accurately enough what was the life led by our host and the male portion of his family.

The door, opposite the entrance by which we had come in, was open, disclosing a lean-to shed, in which an atrociously ugly negress was engaged in crushing coffee with a wooden pestle and mortar. The door on the right opened into a second lean-to shed, in which, through the interstices of the wall, appeared a fire on the ground, with various pots and pans around it, over which a young and good-looking girl was presiding. This information we obtained inadvertently, and evidently not altogether with the consent of Sr.

Andrade, by our happening to advance farther into the room than was intended, and thus obtaining a full view of this domestic apartment and of its occupant through the open door.

The third door was of better make than the ones already referred to, and was furnished with a lock and key.

Our host's first act, after offering us seats, one on either side of the entrance, was to present a cigarette, made of tobacco rolled up in an Indian corn leaf, to each, to light which a young, half-naked slave-boy appeared on the scene, and handed round a brand out of the fire. The Senhora, a cheerful, motherly-looking old lady, now came into the room, and added her welcomes to those already given by her husband. Pedro, who seemed to be more or less a privileged person in the house, had a short conversation with her, and she went out and presently returned, accompanied by the negress, bearing a large wooden bowl full of delicious-looking new milk, a beverage which Pedro had no doubt told her would be an acceptable offering to us. After the milk, coffee in tiny cups was brought in, and handed round to us by the Senhora herself. When we had in this manner taken off the edge of our fatigues, conversation began, Pedro acting as interpreter. The first piece of news we heard was that Captain Palm had already preceded us some days, and was now therefore at Colonia Thereza. From him our hosts had learnt enough of the objects of the expedition to make them anxious to hear more.

They spoke in enthusiastic terms of Captain Palm, of how he had slept in their house, and eaten and drunk with them like one of themselves. In fact, it was evident that our popular chief had quite won the hearts of these good people in the few hours that he had spent with them, and that our own hearty reception was due in a great measure to him.

Andrade himself was an old man of about sixty years, and allowed his wife to do most of the talking for him when she was in the room. One of her first questions was to know whether we were married; and on hearing that we were still, *graças á Deos*, in the full enjoyment of our freedom, she proceeded to enlarge upon the delights of a married life, informing us at the same time that she had five unmarried daughters. After this pretty broad hint of what was expected of us, we of course expressed a wish to then and there make the acquaintance of these fair members of the family.

Her face became suddenly grave when this request was translated to her by Pedro, and for a moment her flow of words was stopped, and I feared that a "faux pas" had been inadvertently made. She looked hesitatingly at her husband, who had remained silently puffing at his cigarette during this conversation, and he said something which we did not understand, but which had the effect of at once dispelling her momentary gravity. The old man got up, and, going to the locked door and turning the key, opened it and disappeared into a dark chamber within. Almost immediately, however, he returned, saying,

“*Ellas não querem;*” and then, turning to us, added by way of apology, “The *meninas* are not accustomed to see strangers, and are afraid.” Meanwhile the *Senhora*, who was now evidently determined that her daughters should show themselves, had in her turn disappeared into the secret chamber, from which various sounds of whispering and suppressed giggling were now proceeding. Presently the *Senhora* reappeared, leading out one very modest-looking damsel of about eighteen or nineteen years of age, and closely followed by three others, apparently somewhat younger. All appeared to be overwhelmed with intense shyness, and an almost hysterical desire to laugh. After a formal and separate introduction of each one—be it noted that the lady was here introduced to the gentleman—they all retired back again into the secret chamber, and their *papa* once more turned the key upon them. At this time we were ignorant of the custom, which I afterwards found to be so general in these out-of-the-way parts, of keeping the women, or rather the daughters, of the family locked up like wild beasts; consequently we did not hesitate to express our wonder, and to ask why it was done in this case. *Sr. Andrade*, in reply, said it was the custom of the country, and that he had never thought of bringing his daughters up in any other way. I asked, “Did they never go out?” “No, never,” he replied: they had all learnt riding when they were *creanças*, and since then they had, according to custom, been shut up in the house, where they would remain until husbands had been obtained for them. None

cared to press a conversation on a custom which was so plainly a matter of creed on the part of our hosts, and the subject was allowed to drop. Later on I had many opportunities of comparing this jealous system of bringing up the "mothers of the nation" with the more liberal policy now beginning to be adopted by the more enlightened *fazendeiros*.

Soon after this little episode one of the sons came in from hunting. He said he had been trying to find a jaguar, which he knew was in the neighbourhood, from having constantly come across its tracks on his rides about the place: besides which, one of his dogs had most mysteriously disappeared, only the day before. The Senhora introduced the new-comer, with evident pride, as her son Jaca; and he afterwards became one of my most faithful *camaradas*, serving me in the various capacities of backwoodsman, canoeeman, and *tropeiro*, with equal good-will and fidelity.

Three big tiger-dogs accompanied him, and proceeded to take up their quarters on the floor of the room in which we were sitting. "Danger," who up to the present time had been quietly lying down beneath his master's seat, gave signs of preparing for action, and so, to prevent a row, one of the men was called in to take him away to the tents. Sr. Andrade misunderstood the movement and said, "Let the little dog remain, the others will not hurt him." When Pedro explained to him that our fear was for *his* dogs and not for ours, he was sufficiently amazed, evidently not being familiar with the fighting qualities of an English "bull."

Jaca informed us that he was about to kill a bullock, and invited us to come and see the operation.

The animal was already secured by the horns with a strong lasso to a big post, which stood up in the middle of the stock-yard, and, to judge from his tremendous struggles and bellowings, was more than half wild. Jaca appeared with shirt-sleeves tucked up and with a long pointed knife in his hand, and gradually approached the animal, which seemed to divine his intent and struggled with increased fury to get free, and to charge the enemy. With both hand and foot ready to act together at a moment's notice, Jaca drew still nearer; the distended nostril and lowering eye of the savage beast, which had now for a moment ceased struggling, plainly warning him to keep on his guard. Just as he had reached almost within striking distance, the animal charged furiously, and the stout lasso, of raw, plaited hide, creaked ominously. It, however, successfully withstood the strain, and, after a few seconds of futile rage, the beast once more subsided into watchful quietude. Seizing his opportunity, Jaca dashed forward for a second and back again quick as thought, but in that second his long knife had penetrated up to the haft into the animal's chest. With a mad bellow of rage, terror, and pain, the poor victim recommenced his tremendous struggles, with the blood pouring in a stream from his front. These however but hastened his end; gradually they grew more feeble and presently ceased altogether, and he stood there for some five

minutes, with body swaying to and fro and with the life-blood ebbing away, a ghastly and sickening sight. Jaca had meantime calmly lit a cigarette, and now quietly stood waiting for the end. At last, with a dull thud, the victim fell, and still for another long five minutes his flanks could be seen spasmodically heaving as he slowly sobbed out the poor remains of life.

This was the first occasion on which I had seen an ox slaughtered in this country. It seems a very cruel mode of killing; but it is no doubt necessary, in order to get rid of the blood from the meat, which in hot climates is always more or less imperative for health's sake.

Some of us promising to breakfast with the Andrades the following morning, we retired to our tents for the night, wondering much that a man, who prided himself upon being the owner of an estate of more than thirty square miles in extent, and who also possessed some hundreds of head of cattle, mules, and horses, could be content to pass his life in so wretched a habitation as was his, living in a style not better than the poorest "caboclo."

Our slumbers were disturbed at a very early hour by the crowing of cocks, the lowing of cattle, and the grunting of pigs, and for the moment I had to puzzle my brain to make out where I was, so unusual were the noises around. Suddenly a tremendous uproar arose almost within the tent. "Danger" had spotted a pig's snout inquisitively poking itself under the walls of the tent, which he had at once seized—the pig only

escaping by leaving a portion of his nose behind him.

On going out of our tent, we found Andrade already standing outside his door, waiting for our appearance to summon us in to partake of coffee, and smoke a cigarette, in which manner a Brazilian *fazendeiro* invariably begins his day, breakfast being usually deferred till ten or eleven o'clock.

It had been agreed that Curling and S., with Pedro as a guide, should start off early for Colonia Thereza, so as to accomplish the distance (five leagues) in one day, while I remained behind with the troop, which, heavily laden as it was, would not be able to do the journey under two days.

At seven o'clock they accordingly started, Andrade embracing them, and even the imprisoned damsels being permitted—as the greatest mark of honour—to come out for a moment and speed them on their way, by a shyly given *Que Deos t'accompagna*.*

To pass the time for the next three hours, I accepted the invitation of Sr. Andrade to take a ride with him round part of his estate.

Campinas Bellas well deserves its name. Situated high up upon the watershed between the two rivers Tibagy and Ivahy, and having a soil fertilised by the volcanic products of a former age, it is at once the most delightful, and one of the richest of all the cattle breeding estates in the country round.

* Lit. *God go with thee*, a very common form of parting salutation in Brazil.

A countless number of rich pasture grounds, varying in size from an acre to half a square mile, are naturally divided off from each other by belts of magnificent pines and bamboo undergrowths. Running streams intersect the pastures and pine groves in numerous directions; no less than four main tributaries of the two rivers, Ivahy and Tibagy, having their sources grouped together on this one estate. Year by year the area of pasture land was being augmented, as the annual fires encroached more and more upon the surrounding pine forest; and thus, year by year, the money value of the Campinas increases.

The sleekness of the cattle and mules, which we came across during our ride, struck my attention. Andrade told me that they were fed upon nothing but pasture and a monthly dole of salt. The various naturally formed paddocks were burnt off in rotation, so that a constant supply of young fresh grass was always obtained. On account of the position of the Campinas, almost upon the summit of a great watershed, having lofty mountain peaks close around it, it receives more rain in the dry season than the great majority of other cattle-breeding estates in the province; hence the stock kept themselves in good condition all the year round.

Six several times, in the course of the next three years, I paid a visit to this estate, till, in fact, I knew a great portion of it by heart. Each time it grieved and vexed my spirit more than the last, to see how absolutely wasted were the greater part of its advan-

tages. This vast estate only produced a net income of rather less than two contos (say £200) a year, when, by small judicious outlays, the veriest tyro in farming knowledge and business capacity could have increased this income fivefold.

For example, horses and mules are allowed to eat their heads off on the estate for eleven months of the year waiting for some chance purchaser, when, all that time, they might have been profitably employed in carrying produce to market, which produce is never grown, because of the insignificant outlay which would be required in the planting and gathering it in.

Cattle are driven to market year by year over the same atrocious roads, such as that over the "Serra do Macaco," while the *fazendeiro* and his family sit down in idleness half the year, waiting for their beasts to fatten, which fat is again wasted on the road, and all for want of a few weeks' vigorous work with the axe. Even in their own especial trade of stock-breeding, the apathy shown is remarkable. Breeding, both in the cases of horses and cattle, goes on promiscuously on the estate. No care is taken to improve the strain of either, by judicious selection of sires and breeders. No fresh blood is ever introduced into the troop or herd, consequently deterioration must and does take place, more especially in the horses, the troops of which are usually very small, and therefore more liable to suffer from the effects of constant interbreeding.

As in the case of the education of their women,

so in the management of their extensive *fazenda*, the Andrades—and with them many other *fazendeiros* settled in the more remote districts of Paraná—are a full generation behind the inhabitants of the more civilised parts of their own province.

Without wishing to disparage the hospitality of our well-intentioned hosts, I yet cannot refrain from recording my opinion that they have still also something to learn in the way of providing a repast suitable to the palate and digestive arrangements of an ordinary, civilised being, *not* endowed with the stomach of an ostrich. On returning from our ride at about ten o'clock, I went in to breakfast with the Andrades, according to promise. The first dish offered consisted of cubes of hard meat, out of which all flavour and goodness had been extracted by a process of cooking unknown to me, and withal so tough that no teeth could meet through them, the whole floating about in some thin greasy-looking fluid which our hosts called *caldo*, but which seemed to be nothing more than greasy hot water. A second dish consisted of black beans, likewise swimming in greasy *caldo*. Cabbage, cut up into fine shreds, formed a third dish; while *farinha* was handed round to be put into each individual's plate, to absorb the greasy liquor, and thus facilitate the conveyance of it to the mouth.

Notwithstanding a sharp appetite, engendered by a three-hours' ride in the fresh mountain air, my stomach revolted from the nauseous mess in my plate,

and vain were my attempts to get any of it down. After this came a dish of curded milk, which, when eaten with sugar and *farinha*, is really not objectionable. Water and *cachaça* were then handed round to drink, and thus the meal came to an end. Before rising from the table, however, Andrade and Jaca each filled his mouth with water, which, after going through various suggestive contortions of cheeks and lips for about half a minute, they presently squirted out, broadcast, over the hard-beaten mud floor. Immediately after this, coffee and cigarettes were handed round by the Senhora herself, she having all through the meal remained standing, in attendance upon us and upon her husband and son.

The meal above described may be taken to a great extent as typical of the entertainment offered to the traveller at the houses of all the ruder *fazendeiros* of the remoter districts of the province. What they are accustomed to eat themselves, that they give you,—nothing more and nothing less. They might live like princes with such a wealth of nature around them, but, in the great majority of instances, they certainly seem to prefer to live like—pigs. Their hospitality, however, must be taken to cover a multitude of sins. When once a traveller can get accustomed to the food of the country, there is no trait that he more appreciates in the character of the people than their open and ungrudging hospitality to all comers.

CHAPTER XII.

From the "Campinas" to Colonia Thereza.—Grand view of the Ivahy Valley.—The descent.—Arrival.

THE general elevation of the Campinas Bellas is about 3,300 feet above sea-level, whereas Colonia Thereza is but a little over 1,600 feet. The mule-track, after leaving Andrade's house, still ascends for some distance, to gain the summit of a ridge or mountain-spur, which runs out from the watershed, near the Campinas, down to the valley of the Ivahy.

From the point where the mule-track strikes the ridge of this mountain-spur, down to Colonia Thereza, on the Ivahy, the difference of level is about 2,000 feet, and the distance about fifteen miles.

For the entire distance, from the summit of the ridge to Colonia Thereza, dense forest covers the ground, becoming more and more tropical in character as it descends. The figures denoting the difference of level of the highest and lowest points on this road but feebly represent the amount of work to be overcome in reaching from one to the other.

After a five-hours' march, from eleven a.m. to

four p.m., our troop, tired out by the tremendous labour of locomotion over a corduroyed mountain-track, came to a halt for the day, having accomplished a distance of but nine miles.

We had left behind us, for good and all, the "neutral zone" of mixed forest and prairie, with its rich pastures and rude, though hospitable, inhabitants, and had entered the domain of the wild primæval forests, out of which I, at least, was not to emerge again for one long year and more.

Shortly before camping we had passed the remains of an old road, whose banks and cuttings were distinctly visible, and which is said to be a monument of bygone, pre-historic civilisation, that existed before the European discovery of South America, in 1500. Trees are said to have been felled upon this road whose ages exceeded 400 years, thus proving that the road had not only been in existence, but had even been deserted at least a quarter of a century before our discovery of the continent.

Many buried and forest-grown towns and settlements are known to exist in the valleys of the Ivahy and Paranapanana; but these, two of which I have myself seen, are of comparatively modern date, having been built by the Spaniards and Jesuits about the commencement of the 17th century; they therefore can have no connection with the road in question.

Shortly after entering the forest we passed two tiny huts, made simply of two or three bent sticks, stuck into the ground, with a cross-piece, on to which were

hung by the stalks long palm-leaves, now withered and dried.

Near both these *ranchinhos* were heaps of split-up fragments of worm-eaten trunks of palm-trees.

When we arrived at the camping ground, I asked the *tropeiros* about these *ranchos*, and I then learnt that they were the work of the semi-wild Coroados Indians, who inhabited different parts of the Ivahy valley—a small colony of them, in a comparatively civilised state, being actually settled close to Colonia Thereza.

When on the march these Indians usually carry nothing but their bows and arrows and an axe. The forest to them is a granary of food, and one of their favourite dishes is secured from rotten timber, in the shape of a large white maggot, with a body about one-and-a-half inches long, and thick in proportion, which they eat *alive*.

At last, then, we were in the domains of the Indians, long talked of among ourselves. On this night I confess to taking a more careful survey of my revolver than usual, before closing my eyes in sleep under the bell tent. The stillness of the night was, however, undisturbed by any sound but the tinkling of the bell round the neck of the *égua*—the patient leader of our much-enduring troop.

The last day of our long march—for it was now nearly a month since we had left Curitiba—had come, and in a few more hours we should arrive at our long-looked-for destination—the Ivahy river.

Our start was made earlier than usual—at nine a.m.—the *tropeiros* seeming no less excited at the near prospect of reaching the journey's end than we were ourselves.

Notwithstanding that we had already accomplished nearly half the distance between the Campinas and Colonia Thereza, we had, as yet, scarcely begun to descend, but were still travelling along at a height of 1500 feet or more above the level of the Ivahy.

Up to the present time, also, owing to the dense nature of the forest through which we were passing, we had been able to see nothing whatever of the country around. A great surprise, however, was even now at hand. I was walking quietly along, with my gun over my shoulder, about a quarter of a mile in advance of the troop, in the vain hope of seeing some moving life in these silent forests, when one of the *tropeiros* overtook me, and, drawing me a little aside from the main track, along a narrow path that was evidently kept open for the purpose, suddenly placed before my eyes a magnificent panorama of virgin forest, covering an extent of country of not less than 1500 square miles; comprising, in fact, the whole of the Ivahy valley from Colonia Thereza up to the great enclosing amphitheatre of wooded mountains which bound the sources of that river. It then appeared that our mule track was winding along the edge of a great precipice, which fell sheer for some 200 feet, and then sloped steeply down for another 1000 feet or so to the forest-clad plain of the Ivahy valley.

It was a marvellous sight, chiefly because it came so utterly unexpectedly.

I stood for a time lost in amazed admiration; the scene was so entirely different from any we had yet seen or had expected to see.

This was the country in which, for the next two years, probably, our labours were to lie.

In all the vast extent of forest mapped out beneath us, there was but one tiny village, with but some 400 inhabitants, all told; the remainder was still in a state of nature, as it had been for thousands of years, inhabited only by wild beasts and wild Indians.

The course of the Ivaly itself was not visible, except where here and there lines of white mist seemed to mark the presence of water beneath. A few feathery white clouds were dotted about the great plain, dreamily floating upon a motionless air. A certain quivering in the atmosphere above the plain seemed to tell of a temperature there existing, very different from that to which we had so long been accustomed.

The mule troop passed as we were still gazing at the lovely picture, and I was forced, unwillingly, to tear myself away from it. I have seen it many times since from the same point, and always with fresh pleasure. Soon afterwards, the track we were following began to descend. The trees began to change in character—old, familiar friends disappearing, while new and more luxurious kinds usurped their place. The air began to grow denser and hotter, and to lose that

invigorating effect which, on the upper plateau, had enabled us to sustain without fatigue long marches under a burning sun.

Perspiration began to pour from both man and beast, and the poor laden pack-mules literally watered the ground, as they passed, with their sweat. Not a breath of air could reach us through the dense sub-tropical foliage which shut us in above and all around. Every quarter of an hour or so the troop was made to halt for a minute or two to take rest, again to resume its weary ploughing through the vile, corduroyed road. Sometimes the track was so encumbered with fallen trees that new paths had to be cut, before the mules could get by.

At length we came to a clearing made in the forest by the side of the mule-track, showing that we were again approaching the haunts of civilized man. From this point onwards we passed many clearings, or *roças*, disclosing here and there peeps of the valley, still some hundreds of feet below.

"*Alli a Colonia!*" all at once said the leading *tropeiro*, close in front of whose mule I was walking.

Looking in the direction in which he pointed, I saw, about 200 feet below, three or four red-tiled huts, nestling amid a wealth of dark green foliage of orange-trees, bananas, and *capoeira*, or second-growth forest. This, indeed, was Colonia Thereza, destined to be for the next two years the head-quarters of our expedition.

Presently we crossed a small river—the Ivaahyzinho

—whose acquaintance we had first made on the Campinas above, whence it has its source.

Two of the poor tired mules no sooner felt the cool water about their legs than they laid themselves down in it, packs and all, and refused to stir till the *tropeiros* came up and thrashed them on to their legs again.

Travel-stained and sorely fatigued, we filed up the opposite bank, and almost immediately found ourselves in the heart of the little colony, with the noble river, the Ivahy itself, flowing beneath our feet.

Curling and S. saw our arrival, and at once came out to meet us. An hour later, ourselves and baggage were safely stowed away in the biggest house that the colony could boast of, and the weary mules were peacefully browsing in the grassy clearing around, with the dark Serra they had so laboriously descended frowning harmlessly in the background.

PART II.



CHAPTER I.

Second "act" commences.—Colonia Thereza, its present appearance and past history.—The Casa Grande.—The Indian village.—Description of the inhabitants.—A fish-trap.—The "Director" and his abode.—An exploration and its results.—"L'homme propose et Dieu dispose."

OUR destination was reached, and the long daily journeyings over the great prairies, and through the grand, silent forests, were already things of the past, and a new act was now soon to commence.

Meanwhile, however, we were able to enjoy a short breathing space after the many varied and rapidly succeeding changes, which, for the last few weeks, had crowded upon us to such a degree as almost to bewilder the yet unaccustomed mind, while at the same time delighting, beyond all power of description, the outward senses.

We had, as it were, leapt from one scene to another with a series of gigantic bounds, passing from each to other before the mind had had time fully to take in and digest that just left behind. Cities and ships, seas and plains, forests and prairies, rivers and

mountains, wintry frosts and tropical heat, were all jumbled up together there in a confused medley; and I confess that I, for my part, was glad to be once more at rest, if only for the purpose of clearing the cobwebs from my almost addled brain, and putting the chaos of impressions there collected, into something like proper order.

Colonia Thereza seemed at first glance to be the very spot in which to indulge undisturbed in one's own ruminations. Still and silent as the grave itself it appeared to me on the first morning after our arrival, during the earlier hours.

I had been turned out of my sleeping-place before sunrise by the vicious attacks of certain *pulgas* or fleas, and had gone out to take a quiet survey of the colony. I soon espied a chapel, in rather a dilapidated condition, perched on the top of a hill about 100 feet high, near the centre of the village. To this point I wended my way, passing one or two mud-built houses, whose inmates were, I supposed, still in the arms of sleep, no signs of life appearing from any of them. Reaching the summit of this little hill just as the sun rose, I faced round in the direction from which I had come, and there was the colony beneath me, bounded on the opposite side by the high red banks of the IvaHy, beyond which, enveloped in a golden and purple mist, rose up the distant Serra d'Esperança, the great mountain and forest-covered range which divides the head waters of the IvaHy from the valley of the Iguassú. On the left flowed the little river IvaHyzinho

debouching into the main river at a point just above the village.

The various descriptions which had been given us, at different times, of the poverty and wretchedness of Colonia Thereza had apparently not been overdrawn. From where I stood, a few mud and timber-built houses, not exceeding a dozen in number, could be seen, dropped seemingly at random here and there about the large, irregularly shaped clearing, which occupied the angle included between the two rivers, the Ivahy and the Ivahyzinho. An unpleasant-looking swamp stood between the river and the village. A few lean and gaunt pigs were wandering aimlessly about, two or three of which had followed me up to my present station, regardless of stones and clods of earth hurled against their bony sides.

Presently a flock of ducks came waddling out from behind one of the houses, and, taking up their stations round and about the doorstep of the same house, began to quack vigorously. A quarter of an hour later and the inhabitants began to come forth, not, however, to go to their daily toil, but to loll and chat upon their doorsteps, noble imitators of the ducks. I was interested in watching the gradual emerging from slumber of this little village, notwithstanding the slowness of the process. When I returned to our abode, after about an hour's silent musing and observation under the wing of the tumble-down chapel, the inhabitants had not yet got beyond their doorsteps, where, in fact, they seemed fixed for the day.

The history of Colonia Thereza had been a melancholy one, and is typical of that of many other back-wood settlements in this part of Brazil. Founded in the year 1847 by a French enthusiast, a certain Dr. Jean Maurice Faivre, under royal auspices, it was named Thereza in honour of the Empress of Brazil. It was originally designed by the founder to be a colony peopled exclusively by his fellow countrymen. After importing many French families, and expending large sums of both public and private money upon its establishment, Dr. Faivre died, it is said, of a broken heart, from the failure of his efforts to render his colony successful, and was buried on the scene of his ruined hopes. Thus ended the brief career of this colony as a French settlement. The exodus of its original inhabitants, which had already begun during the founder's own lifetime, now culminated in the desertion of the whole of the remainder, with the exception of two or three individuals, who had married Brazilian women, and had taken altogether to Brazilian life.

The deserted colony was taken possession of by Brazilians, who from that time to the present have just kept the place alive—aided by occasional efforts of the Government.

Small, however, as the colony appeared to be, I was surprised to learn that it numbered nearly 400 inhabitants, besides about 40 tame Indians, who lived in their own village on the opposite bank of the river. The apparent insufficiency of accommodation in the

village itself for so many souls was accounted for by the fact that many families live all the year round on their "sitios" or farms, at some distance, both up and down the river, from the colony itself. There they live almost the lives of wild Indians, in wretched palm-built houses, cultivating just enough beans and Indian corn to supply their own wants year by year.

Our first day was spent chiefly in getting our stores and baggage properly stowed away, and in unpacking and examining our many valuable instruments, which were now to be brought into daily use.

The director of the colony, Sr. Joscelyn M. Borba, came to pay us a visit, and to invite us to dine with him that evening, an invitation which we gladly accepted, as affording a convenient opportunity of gaining knowledge on many points of importance to us.

Besides the director we had a visitation of Indians, who, having heard of our arrival, came across the river in a body to look at us. They coolly walked straight into our house, and quietly sat themselves down upon the various boxes and packing-cases strewn about the rooms, without salutation of any kind. At first we were amused, as we had never seen this species of man before, but we soon found them a nuisance, and therefore turned them out, promising to come and visit them in their own village in the afternoon.

Our abode, the "Casa Grande" or "big house," so called in a comparative sense, had been built by Dr. Faivre, and had been successively inhabited by him and each director of the colony after him.

Compared to the other houses of the colony it was a perfect mansion, boasting of an upper floor and glazed windows. Notwithstanding the recent date of its construction it was already falling into ruin, the woodwork in many places being rotten, and daylight showing through numerous large gaps in the tiled roof.

In one of the upper rooms were collected, or rather, strewn about in disorder, a great variety of objects, chiefly of a scientific nature, which one least expected to meet with in this wild place. They showed what had been the occupations and aspirations of the former inhabitants. The most prominent object was a picture of the founder himself, with an outstretched map before him, pointing with his finger down the Ivaíy valley to the Paraná, telling plainly enough the tale of what had once been his hopes and his expectations. Other prints and engravings from French engineering instruction papers, harmonized well with a collection of models of steam engines and parts of machinery.

There were besides, a large microscope, a distilling apparatus, various retorts, glasses, bottles containing chemical ingredients of many kinds, a large magnetic compass, pieces of a levelling instrument, and a small and apparently perfect theodolite, all covered over with the accumulated dust of many years. This room, with its long neglected contents, formed only too faithful a type of the condition of the colony itself, in which houses were falling to decay before completion, and old buildings were deserted before their time. We religiously left the room untouched, and it remained

in exactly the same state till twelve months later, when, on the arrival of the new chief of the expedition, the house was put into order from top to bottom.

At about 3 P.M. S. and I crossed the river in a little dug-out canoe, to pay the Indians a visit. On arriving at their village we were at once surrounded by the natives, men, women, and children, who crowded up to look at and touch us, repeating the word *Inglez* several times. Though many of them were the same individuals who had come over in the morning to the *casa grande*, and had been rather unceremoniously told to clear out, we did not at first recognise them, as then they had been clothed in coloured print dresses and red baize wrappers, whereas now, in their own village, all garments were discarded, with the exception of a short apron, worn by both men and women alike. The children were entirely naked.

I now observed them carefully. The men were of middle height, and very thick-set; the women were short and stumpy, and universally fat. Both sexes wore the hair cut short all round the head, and the men in addition were tonsured. Their hair was straight and black, and, when cut short in the manner described, hung round the head like a thatch. The tonsure was most remarkable. Could it have been the custom of the tribe from time immemorial thus to shave the head, or was it a remnant of the old Jesuit regime of 250 years ago?

The features at first sight appeared remarkably ugly. The eyes were set somewhat obliquely, as in the

Chinese type. The forehead was low and retreating, being also scored horizontally with very deep lines or furrows. The nose was broad and flat, and the mouth large and unshapely. The expression of the face in the adults was vacant, and seemed to betoken very feeble intelligence. The colour of their skin was a sort of chocolate brown; their hands and feet were remarkably small and well shaped, more especially those of the women.

The children, unlike their parents, were bright and intelligent looking, and were evidently capable of being made something of. They responded with glee to any playful advances from us, and we afforded great amusement to old and young by making the latter scramble for *vintens*, which we threw amongst them. A metal whistle which I had with me, and sounded for their benefit, amused them greatly, and when I ended by presenting it to the woman whom I judged to be the wife of the chief, their happiness was at its height. Under the guidance of the chief himself, we visited all the huts in turn, of which there were four. These huts were rectangular in plan, and though of different lengths, were all of one uniform width and height, the width being about fifteen feet. Their mode of construction was peculiar, and not easy to describe. The framework consisted of young saplings, each being from sixteen to eighteen feet in length, which were stuck into the ground about two feet apart, in two parallel lines, distant from each other the width of the hut, namely, about fifteen feet. These saplings, in

the finished ranchos, were bent over towards each other till their upper ends crossed. In this position they were secured by being lashed to a ridge pole, which was placed on the top, and ran the whole length of the rancho. Other cross poles were lashed at intervals horizontally across the bent saplings, and the whole was then covered with palm-leaves, which were continued from the ridge down to the ground. The two ends of the rancho were stopped with a similar construction, consisting of a slight framework of bamboo stems, covered as before with palm-leaves; the difference being that, while the sides were curved and formed the roof as well as the main structure of the rancho, the ends were merely straight walls, not at all necessary for the support of the remainder of the erection. There was a narrow opening for entrance and exit left at each end, which was loosely covered with palm-leaves that had to be pushed aside in passing in or out.

This is the common rancho of all the Indians of the Coroado tribe, whether wild or tame. We found ranchos of exactly similar construction inhabited by the wild Coroados living at the *Corra de Ferro*; and when, two years later, I visited some other Indian settlements on the Tibagy river, I found that the ranchos were in no wise different from these at *Colonia Thereza*. The *Botocudos* Indians, of whom I shall have a good deal to say before long, build ranchos altogether different, as also do the *Caióá* Indians.

But to return to the ranchos of the Coroados.

Their interior arrangement was very simple. Down both sides were laid out rows of dried palm leaves. These formed the couches of the Indians, who lie ten or twelve together in one rancho, with their heads towards the sides, and their feet towards the middle of the hut. Down the centre was left a passage, about two feet six inches wide, and, along this passage, one, two, or more fires were burning. We found in each hut a woman squatting, whose business it seemed to be to keep up these little fires during the daytime. Ears of Indian corn were roasting at many of them, and this was all the cooking that was going on while we were there. Each hut had several tame parrots and parroquets walking about the floor, and helping themselves to whatever took their fancy. I observed a great number and variety of bows and arrows—some of the latter being very artistically ornamented with coloured pigments—tucked away in the palm-leaf thatch, besides one or two more civilized weapons, such as axes and *fouces* (Brazilian billhooks), showing that the Indians, though they had certainly learnt to cut *roças*, and sow corn and beans every year, had not yet wholly given up the ways and weapons of their forefathers. Indeed, there is an obvious distinction between the words *tame* and *civilised*, and these Indians had evidently not made much progress towards the latter, more advanced state.

We subsequently employed several of these Indians on our staff of *picada* cutters, and I shall have to refer to them again, with reference to their value as work-

men. Though they understand something of the value of money as a medium of exchange, their intelligence is not sufficient to tell them that one note of a hundred *milreis*, is worth a hundred times as much as one note of one *milreis*. Consequently, when they go to sell their produce of corn and beans, or their fish or game, in the colony, they count only the number of notes given to them in exchange, and not their value. After receiving the money they go to the "merchant," who, by the way, generally gets wind of these transactions and waylays these simple beings in order to entice them into his shop. There they are shown a lot of worthless rubbish, such as odd bits of gaudy red cloth, or gay-coloured calico; gunpowder well doctored with sand, or other refuse stores. For things such as these they are easily induced to part with their hard-earned *milreis*, and the sole limit to the degree in which they are cheated, lies in the conscience of the "merchant," who helps himself out of the bundle of *milreis* notes, which the poor simple Indian proffers with open hand for payment.

The Indians feel that they are cheated by the Brazilians, but are prevented by their ignorance from finding a remedy.

One of our own men, a tame Indian engaged from this colony, was in this manner cheated out of four months' wages, amounting to 180\$000, or say £18, coming out of the merchant's shop with nothing to show for his four months' labour but a straw hat, a brass pistol, and a piece of red baize. He

however seemed well enough contented, though the same man a month before, had been ready to mutiny because his wages were not raised from £4 10s. to £5 a month.

To return however to the present. After stopping some time in the little Indian village, we went down to the river, to look at a certain fish-trap belonging to the Indians, of which we had already heard. They had selected for the position of their trap, a place on the river where there was a small rapid, which, in the present low state of the water, took the form of a succession of tiny cascades, having a total fall of about two feet six inches. Across the top of this rapid they had constructed a dam of loose boulders and stones, leaving however two or three openings at suitable points for the flow of the water, and the passage of the fish. In the channels thus left free were placed the small ends of fan-shaped sieves, made of split bamboo, and extending with a slight dip downwards to such a distance from the channel, that while their small end was several inches below the surface of the water, their broad end was left high and dry, two or three inches above the water.

The fish, seeking a passage down stream, being stopped by the dam, would have to pass through these channels. The rush of water through these latter being, on account of the dam, of course very strong, the fish, descending by them, would be carried forward with such force as to be left high and dry at the other end of the sieve, out of reach of the strong current that

had brought them down, and therefore powerless to regain their native element, which, however, they would have the satisfaction of seeing running pleasantly along close beneath them.

The trap is thus seen to be very simple and efficacious, though it requires, of course, pretty constant readjustment, to suit the altering levels of the water in the river. Moreover, it can only be used in the dry season. When the floods come, the dam is usually carried bodily away, and thus has to be patiently and laboriously renewed each year.

We saw several fish caught while we were examining this primitive trap. They were chiefly of the kind known by the name of *casudo*, from the fact of their being encased in a hard shell, instead of being clothed with the more common scales. Their fins were each furnished with a long, sharp, bony spike, which doubtless is intended to serve as a protection against their foes. This spike is more formidable than it looks, and the fish has an awkward habit of pretending to be dead, and then, when it is taken up, suddenly giving a jump backwards, by which manœuvre it frequently succeeds in inflicting severe punishment upon the unwary hand. Otters, which are the great enemies of this fish, have a way of seizing it by the belly, and so avoiding the touch of these unpleasant weapons. To judge from the number of empty shells which we used to see on the rocks in the river, the otters must be especially fond of the *casudo*.

During our stay at the colony, the Indians supplied

us liberally with this fish; and when baked in ashes it was very good eating.

Another kind of fish, of very opposite character, called the *surubim*, occasionally appeared on our breakfast-table. This fish has neither shell nor scales, nor weapon of any kind to defend it; it trusts entirely for its safety to its habits, which are nocturnal, and to its dark mottled colour, which is scarcely distinguishable from the mud of the holes in which it loves to dream away its life. Those which the Indians generally caught weighed from two to three pounds each; but lower down the river we used to catch them, chiefly by means of night-lines and nets, up to twelve and fifteen pounds weight.

After visiting the fish-trap, we made one of the Indians give us a specimen of his skill in the use of the bow. He took us with him into the forest behind the village where a small clearing had been made. Here a number of parrots were wheeling about and screaming high up in the air, disturbed by our appearance from their home amongst the tree-tops.

Motioning to us to remain perfectly still and quiet, the Indian went forward alone, and knelt down in the middle of the little clearing, with bow in hand and arrow already in the string, in full view of the shrieking and excited parrots. For the space of three or four full minutes the Coroado knelt thus, like a statue, waiting for the parrots to settle again upon the trees. Presently the screaming grew less, and in its stead the peculiar, chattering noise, that parrots make when

feeding together in large flocks was heard. Very gradually the Indian now raised the end of his bow a few inches from the ground, and, without perceptibly



WAITING FOR A SHOT.

moving from his kneeling, statuesque position, suddenly let fly his arrow up into the tree-tops.

A tremendous uproar greeted the shot: the parrots rose in a body with the wildest of discordant shrieks. We rushed forward in time to see the bird, which the

Indian had hit, fall, stunned by the blow of the blunt-pointed arrow, through the branches to the ground.

It appeared that this was one of the modes which these Indians had of capturing parrots alive. Being very hardy birds they soon recover from the stunning blow dealt by the arrow, and awake to life once more—as prisoners.

Taking leave of our redskin friends, we re-crossed the river, and found that Captain Palm had just arrived back in the colony from a three days' excursion by canoe down the IvaHy.

The report he brought back of the nature of the country below was sufficiently enticing to our sporting instincts. He had shot wild turkeys, seen many tracks of deer and tapir, and caught fish enough to feed himself and his three men every day of their absence.

The river had many rapids, and the forest on each bank was so dense that not a step could a man move in it except by cutting his way. Moreover, the surface of the ground itself was broken up into a network of steep hills and deep ravines.

These were the principal physical obstacles that we should have to contend against and overcome, by our own unaided efforts; the whole 300 miles of country before us, through which we had to conduct a careful, scientific survey, being utterly wild and uninhabited. To Curling and myself the prospect of the wild forest life thus placed before us was altogether one of pleasure; to the remaining two, not being "country born and bred," the same prospect had no such charms.

On this evening we all went to dine at the house of the director of the colony, according to previous invitation. Our host, notwithstanding that he was the chief man of the place, did not live in a very grand mansion. His abode was a mud-and-lath-built hut, having but three rooms and a lean-to kitchen. When we first entered, the only occupants of the reception room, which was also the dining-room, were Sr. Joscelyn Borba himself and a big pig, which was trying to upset the table, on which the dinner was already laid. To do our host justice though, he seemed much too good for his house; and when he explained to us, in course of conversation, that he had turned out of the Casa Grande especially for our benefit, it being the largest and best house in the colony, we felt the folly of judging from mere appearances.

The Senhora, contrary to backwoods custom in this country, sat down to the table with us on the right hand of her husband, and we were waited upon by an intensely ugly negress, who divided her time between us and the pig, which latter, though kicked by the director and beaten by the slave, refused to retire from the apartment.

While we were at dinner, the same curious custom, with which we were first made acquainted at Ponta Grossa, of the people of the place paying us complimentary visits, was observed; at one time during the meal there being as many as twenty individuals standing or squatting round the walls of the room, staring silently

with might and main. They neither offered to say a word, nor, as far as one could tell from their manner, did they expect to be addressed themselves. I really began to feel quite uncomfortable under their prolonged and silent stare. At length, however, somewhat to my relief (I don't know what the others felt), they began to depart one by one, till by the time dinner was concluded they had all disappeared. We talked to the director about them afterwards, and he told us that they were all "Caboclos" of the place, and that they merely wished to compliment us. Sr. Borba was not struck with the ludicrousness of the visit as we were; being, no doubt, long accustomed to the ways of the backwoods, notwithstanding that the chief part of his early youth had been spent in the civilised atmosphere of Curitiba.

We obtained a large amount of useful information from our host on this evening. He had lived in the province all his life, and for some time had been director of an Indian "Aldeamento," on the Parana-penema, which river I visited myself eighteen months later. Judging from what he told us of his present and past life, he seemed to have outlived most of the energy and enterprise of his younger days, though he did not appear to have long passed forty years of age.

On the following morning, after breakfast, Captain Palm, Curling and I started to make a thorough exploration of the colony, for the purpose of ascertaining what were its capabilities in the way of men,

food, and canoes, the three chief requisites for the complete organization of our staff.

We found that the colony was a little larger than what I had judged it to be on the first morning after our arrival. Many small houses to the right of the colony proper had then escaped my notice, having been concealed by trees and rising ground. We visited every house in turn, and picked up information here and there, thus returning the visits that had been paid us the evening before, in a manner most profitable to ourselves. The people were pleased at our coming to see them, and treated us with every mark of good will. The amount of coffee, maté, and cachaça that we drank—for at each house we entered, one or the other of these refreshments was pressed upon us—and the number of cigarettes we smoked I will not attempt to calculate. The inhabitants proved to be far more lively and talkative in their own homes than their first ludicrous visit to us would have led one to suppose. Many of the men had already been right down the Ivañy to the Paraná itself, and could give us many items of useful information. This house-to-house visitation was, however, tedious work, the conversation having to be carried on through interpreters; and moreover, its main results were of a nature not altogether satisfactory. It was very evident that the colony alone could not supply all our requirements, either in the way of men or of provisions. As regards the former it seemed probable that a sufficient number could be obtained to satisfy our wants for

the first two or three months—that is, while we were yet within reasonable distance of our base. Afterwards, however, when a larger staff of men would be required to keep up our communications, it would be necessary to make further extensive arrangements for drawing men from time to time, from other towns and settlements in the province.

Next, as regarded provisions: the Brazilians would not work with us without being amply supplied with their customary food, which consisted of beans, *farinha*, and pork fat. Meat also they would require occasionally; but this latter item all reports agreed in saying could be made up by hunting; as tapir, deer, and wild pig would be found in abundance lower down the river. The director had already told us that the three first mentioned articles would be absolutely essential, as no Brazilian would work for a day without them.

Now the colonists were in the habit of only growing enough of these things to supply their own wants year by year, without leaving any surplus. If, therefore, we took away the greater part of the able-bodied men from their Roças or plantations to work with us, it was evident that, practically, we should have to feed, not only ourselves, but the whole colony besides, from external sources.

Whence then were these supplies to come? Ponta Grossa and the Villa de Tibagy (*vide* map) were the nearest towns on the one side, and on the other side was only the small town of Guarapuava; none of the

three being nearer than two or three days' journey from Colonia Thereza. Moreover, we learnt that the mule-roads leading out of Colonia Thereza were often so bad during the summer rains as to be almost impassable for months together. It was ultimately decided to begin at once to form a big depôt of stores at the colony, and to appoint an agent at Ponta Grossa, whose duty it would be to send up to Colonia Thereza a certain regular supply of "mantimentos" or provisions every week, while the "roads" remained still passable. By this means we hoped to secure ourselves against any shortness of food supplies, at all events for the next three months, till Captain Palm again returned, when, if then found to be necessary, he might appoint additional agents for us at Tibagy and Guarapuava.

Lastly, came the question of canoes; for, as it was intended that the exploration should be carried more or less along the banks of the river, this latter would of course be used as our road.

The colony was not rich in canoes; it appeared that there were only two wretched little "dug-outs" obtainable, besides the one Captain Palm had already purchased for us. There were, however, two professional canoe-builders in the colony, and to these an immediate order was given for five large-sized dug-outs to be commenced at once.

The consideration and final determination of these plans occupied us up to the 7th, and on the 8th Captain Palm started back again for Antonina, on his way to

Miranda, to pay a visit to the 3rd and 4th Staffs at their end of the work, promising to come again to us in about three months' time, but—*l'homme propose et Dieu dispose*—this was the last time we ever saw Captain Palm.

CHAPTER II.

Want of enterprise of the colonists—I become a doctor.—A “Fandango.”—The beginning of the summer.—First camp in the forest.—The “Polvora.”—Early morning in the forest.—Clothing.—The “Fouce.”—The fall of a monarch.—“Vamos come—r.”

BEFORE taking the reader with us into the great primæval forests in which we were now to find our home, I must say yet a word more about the people of this little backwoods colony of Thereza, which forms, as it were, one of the vanguards of civilization westward, towards the still untamed interior of South Brazil.

Facile princeps, in respect both of age and worth, must come the *Mãe da Colonia*—the Mother of the Colony—a title given by ourselves to an old lady of more than fourscore years, familiarly known in the village as “Maruca Velha,” from the double fact of her actually being related or connected by marriage to every family in the colony, and of the boundless hospitality which she never failed to exhibit, not only towards her own people, but to every one of ourselves and of our European staff, to whomsoever she thought it would be acceptable.

This old lady possessed natural *noblesse* of character

in a high degree, and she was respected and beloved by all. In her time she had contributed greatly to the population of the colony, as almost every other child in the place was the grandchild of "Old Maruca," and those that were not grandchildren were great grandchildren.

She had five stalwart unmarried sons still living with her. Of these, two were engaged by us for a short time, but they were such lazy fellows, and, withal, possessed of such an intensity of Brazilian pride of the most objectionable sort, namely, that which looks upon all real work as derogatory to free birth, that we were glad enough to get rid of them. As labourers with us they were no good at all, but as hosts in their mother's house, they were altogether delightful.

Laziness and want of enterprise seemed indeed to be the great fault of the people of the colony, and was exemplified on every side.

Though the soil was very fertile, and the climate such as would suit the growth of both tropical and temperate fruits and vegetables, yet scarcely any attempt was made to cultivate anything but the bare necessaries of life, such as beans, rice, and corn. Though the people had absolutely nothing to occupy them for nine months out of the twelve, yet such a thing as a "kitchen garden" was not to be seen in the place, and as for expending even half an hour's thought or labour upon a pleasure or flower garden, such a thing the wildest imagination never dreamt of. It is

a fact worth recording, that I never, to my knowledge, heard the word *jardim* (garden) used by anyone in this settlement. I think no one would have understood what it meant if the word had been used to them.

Though milk was abundant, butter was unknown in the colony.

I noticed the tobacco plant growing wild at the edge of the forest; yet all the tobacco smoked in the colony came from a distance of 100 miles or more!

Cachaça, or native rum, distilled from the sugar cane, was the only real industry carried on, and this was in the hands of a German, and not of a Brazilian.

Speaking broadly, Colonia Thereza might be said to be but very little more advanced in civilization than was the Indian settlement on the opposite side of the river, which I described in the last chapter. Its inhabitants existed, but did not live. If they had all been wiped off the face of the earth by a sudden earthquake or flood, it may safely be asserted that their destruction would have been a matter of absolute indifference to the community of the province at large—ourselves alone excepted. To the state, the colony had been worse than profitless, as, since its first establishment, it had cost altogether large sums of money, the only return for which had been the production of half a dozen men, who had served their country, more or less against their will, in the Paraguayan War.

The blame, however, does not all rest with the people themselves. No fair chance is given to a young colony unless decent communication with the outer

world is provided for it; and the atrocious mule roads which, in this case, have to serve as the sole means of communication with other markets, are useless for the purposes of commerce, as any gain that might otherwise be made by trading is sunk in the difficulties of transport; nevertheless, one or two men with a little capital and more enterprise might still, I think, do something to render Colonia Thereza a profitable member of the state.

Morning and evening, before going out to the day's work, and after our return, I was besieged by numberless patients of all ages and both sexes, for medical advice and remedies of the most diverse kind.

My knowledge of the noble science of medicine had been, on our first arrival at the colony, of the slightest possible description, but for some reason or other, which I never could clearly make out, I was from the very first exalted by the colonists to the rank and dignity of doctor of medicine, in addition to that of doctor of engineering—and from this time forth for the next two years, I retained the dignity thus forced upon me without question from any one. The staff was well supplied with medicines and surgical instruments, of which I had from the beginning taken charge, and therewith endeavoured on all possible occasions to uphold my reputation.

The number of toothache cases which came before me was astonishing. There seemed to be scarcely a man or woman above the age of sixteen years that could boast of a sound set of teeth, and scarcely ever a

day passed without my being called upon to use the forceps upon some one or other. At the time I was puzzled to account for this universal evil, but afterwards I came to the conclusion that it was chiefly caused by the people constantly eating *rapadura*,* and sucking boiling hot *mate*. It is not unlikely, too, that the evil was partly the result of a widely spread taint of a certain disease from which this hapless little colony greatly suffered. The usual doctors were the old women, who practised solely with the time-honoured remedies of root and herb, of which the forest afforded them an abundant choice.

One evening we were invited to a kind of ball, called a *fandango*, given by a *caboclo* of the village. Curling and I went to it together, in response to an elaborately worded, written invitation.

On entering the house at which the entertainment was to be held, we immediately found ourselves in a large mud-floor room, ranged round the walls of which were all the youth and beauty of the village, smartly dressed in clean cotton prints, all, evidently, carefully "got up" for the occasion.

In the centre of this room, which was bare of furniture, the young men of the village, to the number of about two dozen, were grouped together, chatting and smoking cigarettes with their hats on their heads, to all appearance utterly oblivious of the presence of the ladies.

* A mixture of sugar, treacle, and verdigris, cast into the form of a solid brick—much indulged in by the average *caboclo*.

Our entry seemed to be the signal for the commencement of the entertainment. Two banjos (violas) struck up, and now, for the first time, the men began to turn their attention to the demure but conscious-looking maidens, who had up to the present moment been silently awaiting their pleasure. One by one each man chose a partner, till ten couples were made up. These ten couples now formed a circle in the middle of the room, and the dance commenced.

With slow and rhythmic beat the men first began to keep time to the violas, alternately advancing towards and retiring from the centre of the ring, the women also stamping with their feet, but not advancing. At the end of each dozen bars or so of the music, all with one accord, both men and women, gave three loud claps of the hands, which was the signal for the moment of a greater display of energy in the movements of the body, and a more vigorous stamping of feet upon the hard mud floor. All at once one of the men dancers, in a rich full voice, struck up an "impromptu" stanza, in beautiful time and harmony with the music, the last words of which were taken up and repeated in chorus by all. Once more vocal silence, while the monotonous tum, tum, tum, of the "*violas*," and the noise of the stamping of feet went on as before. Then again, a second, wild, "impromptu" stanza burst forth from another of the dancers, again to be taken up in chorus by all.

We observed on each of these occasions that the dancers all turned their eyes upon us, as though we

were the persons they were addressing. We presently found this to be the case, one of our interpreters, who was present, coming up and informing us that we were being invited to "join the dance."

Nothing loth, we each chose a willing damsel from the still unexhausted row of wall-flowers, and joined the untiring ring in the middle of the room.

During what seemed interminable minutes, we too had now to beat our feet upon the hard floor, swing our arms and bodies, and clap our hands. As the dance went on the excitement waxed stronger, the "impromptu" shouts became yells, and the once graceful swaying of the bodies of the performers was changed into violent contortions, and all the characteristics of a North American Indian war-dance came into play. Curling and I now quietly slipped out of the ranks of the dancers, and retired unnoticed to the background.

The atmosphere of the room was full of the smoke of cigarettes, through which the dim bees-wax tapers, here and there stuck upon the face of the walls around, cast a lurid glare. Suddenly the music ceased; the tired fingers of the minstrels had given way at last, and the dance abruptly came to a conclusion. The partnership between each couple was immediately dissolved, without ceremony of any kind. The man turned on his heel without look, word, or salutation; and the forlorn damsel, her service or presence being no longer necessary, once more retired to her place against the wall, there to bloom unheeded till another dance should be commenced.

Refreshments of *cachaça*, water and cigarettes were now handed round by the host to us and to the men generally, who had again grouped themselves in threes and fours about the middle of the room. During the dance no conversation had been carried on between the partners, and now no sign of courtesy or deference was bestowed upon the poor forsaken damsels by their late partners.

It appeared to me, that this neglect proceeded not so much from any indifference or want of gallantry on the part of the men, as from an enforced custom, which seemed to forbid even the slightest appearance of intimacy between the sexes. A longer acquaintance with this little backwoods colony, was not convincing of the perfect efficacy of these strict rules of its society. Nevertheless, in default of a higher standard of education being given to the women, they are no doubt necessary.

On the 13th of September, the dry weather which had lasted at the colony for many months broke up. For two entire days, a tremendous cannonade dinned over our heads and amongst the wooded hills around, accompanied by torrents of rain. The river began to rise rapidly, and the swamp in front of the village brought into active life a vast chorus of frogs, which night after night serenaded the village with their plaintive and melancholy cries. It seems to be usual in most parts of the province of Paraná, for rains to fall from about the middle of September till about the end of October; such rains being like our April showers

at home, marking the opening of the summer season. The young grass now begins to grow on the burnt prairies, and the Brazilian agriculturist to "plant" his roças with corn, beans and rice.

On the 16th, the rains ceased for a time, and more settled weather returned. The climate, however, seemed to have become in these few days more distinctly tropical than before. The heat was felt much more by us, though the thermometer readings did not show any great increase of average temperature. The atmosphere in the forest became "steaming," and now began our first real taste of tropical insect life; which, from this time for the next six months, was to be a never ceasing torment, the greatest, because the most persistent, of all our troubles.

On the 24th of September, we left the colony for our first camp onwards towards the Paraná, a convenient spot having been previously selected for it, about six miles down the river. None of the canoes, which were being made for us, being yet completed, we hired every canoe that could be got, not only from the colony but also from the "sitios," to take us and our baggage and stores down to the camp.

The spot selected was on the bank of the main river, close to the mouth of a little tributary called the "Barra do Doutor,"* by which little river we hoped to obtain the advantage of water communication between the camp and the line of exploration, which

* "Barra," lit. *mouth* of a river. Familiarly used as equivalent to *river* itself.

was calculated to cut across the Barra at a point about a mile from its mouth.

Another advantage of this spot was that it happened to be a *sitio*; our tents, in fact, being pitched close beside a small timber-built *rancho* inhabited by one of old Maruca's sons, who, by the way, had married his own niece, and who, with his wife and children, lived here for three parts of the year. The usual farm stock, consisting of pigs, chickens, and eggs, were thus to be had at our very door.

Our forest life* had now regularly commenced. At the first dawn of day, each morning, the whole camp was astir. There was no lazy napping in bed or hammock after the sun had risen. At the peep of dawn sleep was ruthlessly banished from every couch. A tiny fly, which the *camaradas* called *polvora* (dust—powder), either from its being as small as dust, or from the fact of its possessing immense power of annoyance in proportion to its size, then commenced its operations.

No mosquito net was of the slightest use against its attacks; it could penetrate the finest meshes.

The moment the first streak of red light appeared in the east, myriads of these little pests rose from their roosting place on the bare ground, in a black cloud, and, penetrating into the hair and into the beard, as well as to all other exposed parts of the human body, inserted their microscopic, but most venomous probosces into

* *Vide* Appendix, Note B, "Mode of work in the forest."

the skin, producing fiery irritation, such as no mortal man could sleep through, for even one minute. Thus the camp was effectually aroused, *em muito boas horas*, and our day commenced.

We ourselves and most of the Europeans would go direct from the tents down to the canoes, which were moored just inside the Barra, where the water was deep and still, there to indulge in a most delectable morning "tub." With our Brazilian *camaradas*, a squat round the camp fire, with a cigarette to smoke and a bomba of boiling-hot *mate* to suck, stood instead of the more godly wash. Breakfast would be ready at about six o'clock, and by half-past the various parties A, B, &c. (*vide* Appendix, Note B,) would be crowding into the canoes, with cries of *s'embora*, *s'embora*, (away, away,) shouted out at the top of their voices by our semi-wild *camaradas*, awakening the echoes amongst the forest-clad hills around, and putting life and spirit into the start.

By seven o'clock, or sometimes a little later, the forest would be resounding with the strokes of the axes, and soon would commence the daily cannonade of falling trees, as yard by yard the broad *picada* was cut through the dense-grown timber and underwood.

There was something very delightful in these early mornings in the forest; the exhilarating freshness of the air, and the wild beauty of the luxuriant vegetation of trees and flowers, and ferns sparkling with crystal dewdrops, giving a charm to the surroundings such as must be seen and felt to be fully understood.

The temperature, which, after 11 o'clock, it being now the month of September, rose above 80° Fahr., at this early hour seldom reached higher than 60°. The insect life was, for the most part, still torpid, for it was not till two or three hours later in the day that it got to be really troublesome. One thing only was needed to render one's enjoyment at these times complete and perfect, namely, a proper and suitable costume.

The Brazilians wear nothing but cotton and linen, and thus it is that they are constant sufferers from an ailment which goes by the name of *constipação*, which ailment is merely the result of too rapid a cooling of the body after exertion. At this time I had not yet myself learnt what was the best kind of costume for every-day wear in these forests. In England we had been told that nothing less strong than the coarsest sail-cloth would stand the wear and tear of a Brazilian forest, and that therefore some garments of this kind would be very necessary. As a matter of fact, nearly every engineer of the expedition was thus induced to furnish his wardrobe with a suit of clothing which, to the strength and weight of the stoutest sail-cloth, added the obstinate rigidity and absolute uselessness for the purposes of warmth of the stiffest oxhide that ever *tropeiro* slept in, on the icy prairies of the far South. Such was the material with which, at this time, in my early days of inexperience, I habitually clothed my body from top to toe.

Certainly I was now thorn-proof, snake-proof, and perhaps almost jaguar-proof; but all freedom of loco-

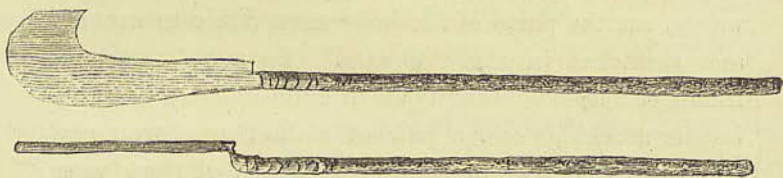
motion was gone, and each step taken over the rough broken ground of the *picada* was productive of profuse perspiration, which, when the heat of the day was passed, turned into a chill, icy bath, in which every joint and every limb pained and stiffened. For a few weeks I endured the self-inflicted torture, and then, after a sudden attack of inflammation, which brought me, in but a few hours, nearer to death's door than I have been, either before or since, I discarded this coating of mail, once for all, in favour of a light flannel costume, which I ever after wore in preference to any other kind of clothing. The legs, from the knee downwards, are the parts of the body most liable to wounds and scratches in these forests. To counteract this liability, I used to wear a pair of hand-knitted, knickerbocker stockings *over* a pair of white flannel trowsers, and when in course of time my supplies of these were exhausted, I substituted short gaiters of fawn skin, which had been tanned and dressed by ourselves. A pair of short shooting-boots, a flannel shirt with a pocket or two in it, and a thick felt and cork hat completed my forest costume, and I can recommend it as being at once the most generally useful, and by far the most comfortable, and, I may say, *safe*, "get up" that can be devised for the services required.

The undergrowth of this part of the forest through which we were now cutting our way was of the most impenetrable character. The summits and slopes of the short chopping hills, which were here the characteristic formation of the country, were densely covered

with bamboo (*taquára*), the ravines and bottoms being even more densely overgrown with tangled cane-brakes and thorn thickets, so that the work of cutting the picada was necessarily slow and laborious.

We had brought out with us a store of English billhooks. These were found to be altogether unfit for the work required of them, and accordingly the native Brazilian billhook, called a *fouce*, was employed for this picada work.

The *fouce* is universally used by the natives in cutting their roças, and it is an instrument which, I think,



THE BRAZILIAN FOUCE (BILLHOOK).

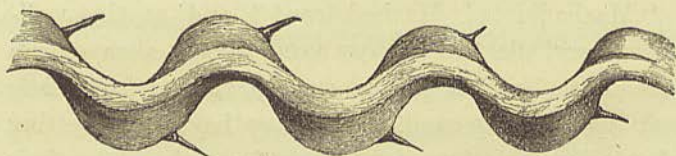
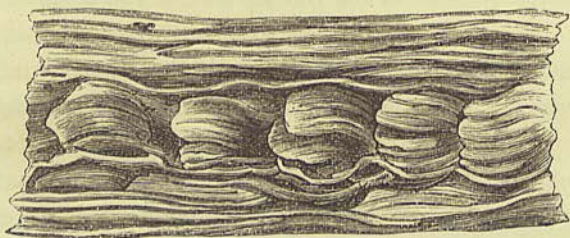
is scarcely capable of being improved upon, for the especial work for which it is designed.

It will be observed by the accompanying sketch that it is something like a common long-handled billhook, with the exception that the extremity of the hook is not pointed, but flat and blunt; also that the instrument itself is not put on in a straight line with the axis of the handle, as in an ordinary English billhook, but is connected with it by a short shoulder. The advantage of the blunt edge, instead of the point, is sufficiently obvious to anyone who has ever seen the ordinary usage

to which the *fouce* is subjected. The shoulder is also a very important part of its design. It relieves the handle from the full effect of the sudden jar communicated to the implement when a blow is given upon the iron-like woods upon which it has so frequently to operate, acting, as it were, the part of a spring or buffer, and thus conducing considerably to the longevity both of the handle and of the instrument itself. Weary work it was to see the men hacking the path with their *fouces* through the dense, matted undergrowth of cane and creeper, and it was a relief to all parties when the axemen were called to take their place. A Brazilian backwoodsman is perhaps the most skilful axeman in the world, certainly he is surpassed by none.

“Machadeiros! Machadeiros!” and at the well-known cry, the two brawny axemen, who always form part of the gang of picada cutters, rise up from their seat upon the ground, where they have been resting after a former labour, and come forward to take their places once more, one on each side of the condemned tree. At one glance they have decided in which direction it is to fall, and now commences a display of strength, endurance, and skill, such as is rarely witnessed in a Brazilian, except on these occasions. With rhythmic strokes the blows fall upon the devoted trunk, at first slowly and steadily, each blow falling with exact precision, so that not one grain of power is wasted. Soon two clean, wedge-shaped cuts appear from under the keen axes which now begin to whirl round more

rapidly, and to rain down their blows in quicker succession. The wedge-like cuts sink deeper and deeper into the trunk, as a quarter of an hour, perhaps twenty minutes pass. The sweat is pouring down the bare backs of the men in little streams, and still the shower of iron blows descends with undiminished vigour. Suddenly a sharp crack is heard, and those who are



RIBBON CIPÓS.

standing in the proper position, see the trunk give a perceptible jerk forward, and the leaves shiver as though with the knowledge of their impending fate. Encouraged by the sound, each man now vies with the other in the force and rapidity of his blows, and "quick" time is increased to the "double." The tree is still slowly moving, so slowly that the motion can only be observed by the gradual tightening and

straining of the twisted and ribboned *cipós* on the one side, whilst on the other side they droop and slacken. Like the sharp report of a pistol comes the second and final, warning crack. The axemen flee for their lives, for the fall of one tree brings the fall of many. Their work is done. Simultaneously with this second report, the tree gives another and a heavier lurch forward, and, amidst a dire disturbance of multitudes of vines and *cipós* and lesser growths of every kind, which form the normal upper canopy of a Brazilian forest, slowly bows its lofty head, and, gathering increased motion every instant, bids a final farewell to the skies above, and, dragging down in its ruin an acre of parasites, the accumulated growth of a hundred years, and crushing beneath its ponderous bulk a score of youthful aspirants, disappears with a mighty crash and roar into the hidden depths of the ravine below. Long after the tree has thus disappeared from mortal ken, the sound of snapping and cracking of overstrained branches and parasites comes up from beneath; but, besides this, the bare stump and a wide rent in the green canopy above, is all that remains to show that one of the monarchs of the forest has been laid low. The picada is always running along the side of some steep slope, with a mountain perhaps on the one side, and a deep gully or ravine on the other. Thus, when once a tree is cut down, it clears itself completely away and troubles us no more. The tired axemen wipe the sweat off their brows, chests and arms, and once more don their shirts

and recline at rest on the ground, while the *fouces*-men resume their wearisome task of cutting through the meaner undergrowth. Thus the work of the *picada* goes on hour by hour till the sun reaches the meridian, when the signal is given to the nearest man to stop work. His shout of "*Vamos comer, comer, come—r!*" is taken up by the other men, and echoes from one end of the *picada* to the other, causing all to throw down axes and *fouces*, and assemble round the luncheon bag now laid open on the ground in the middle of the *picada*.

In virtue of my rank as *patrão*, I am supplied with a plate, which consists of a piece of the inner bark cut off the top of the edible palm or *palmito*, and a spoon made out of a piece of split bamboo stem. The contents of the bag is the usual Brazilian mixture of black beans and *farinha*, well-seasoned with *toucinho*, or pork fat and salt. A sufficient portion of this mixture, which does not sound enticing, but which really is not at all bad stuff when one gets accustomed to it, is scooped out of the bag and put into my plate, after which the *camaradas* dive their own spoons into the bag and commence to eat from it all together, two spoons generally serving for the whole party.

There is always one man of a weaker mind than the rest who is put upon to go back to the last stream crossed by the *picada* for water. Cups or mugs there are none. In a Brazilian forest these things, like plates and spoons, grow ready made to hand. Presently the messenger returns, laden with a dozen or

more short stems of bamboo tied together in a bundle with a piece of cipó, each one holding about half a pint of water. By this time the solid part of the meal is already despatched, and the Brazilian, true to his training, first rinses out his mouth with some of the water and then proceeds to satisfy his thirst by drinking the remainder. This habit of rinsing out the mouth after every meal is highly to be commended, although it does not seem to bring its own reward in giving the natives sound sets of teeth. I got so much into this habit of the Brazilian *camaradas* that it was with some difficulty that I broke myself into the simple use of the *palito* when I was again domiciled in Rio de Janeiro.

It is strange how, in this one particular point of cleanliness, progress goes in an inverse direction to the onward march of civilization. The Red Indian and the Brazilian backwoodsman both wash the mouth out with water after eating. The people of Rio de Janeiro, as well as those of most continental towns, make a free use of the *palito*, which is one step *backwards* from the Indian mode, and we in England, the most civilized nation of all, entirely ignore both these godly methods of preserving health, satisfying ourselves with the operation performed at the morning toilette.

After this simple, but wholesome and sustaining repast, follows one of the most delightful few minutes of the whole day. Pipes and cigarettes are produced, and, lazily reclining at full stretch and lulled to a state

of dreamy repose by the combined influence of the heat, the hum of countless insects, which now dare not approach, and the fragrance of the strong Brazilian tobacco, one thinks for these few moments that there is nothing like a life in the Wilds.

Such is a sketch of the principal features of an ordinarily uneventful day on the *picada*. The afternoon is but a counterpart of the morning, and thus day by day we plod on through the month of September. After this, events began to thicken upon us, and life became infinitely more varied and infinitely more trying.

CHAPTER III.

Difficulties commence.—First encounter with a snake.—João Miguel's story.—Marvellous anecdote.—“Cobra preta.”—Insect life in the forest.—The “Mirim” bee.—Its wonderful instinct.—Absence of honey-eaters.—The “Carapatto.”—Green beetles, and how to capture them.—A brilliant display.—The great fire-beetle.—New plan of work.—Forest camps.

ON the 8th of October, exactly one month after the commencement of the exploration, Staff No. II. suffered the loss of one of its members. S., who had long shown signs that neither the climate nor the mode of life that we were leading suited him, now found himself forced to resign on account of the deplorable state into which his health had fallen. Sores, the combined effect of climate and insect bites, had broken out all over his body, and his strength and energies had utterly collapsed. Seeing no prospect in the future of an easier life, which might afford him some small chance of recovery (for we were now scarcely entering upon what was expected to be the most trying season of all—the summer), he despaired of ever becoming sufficiently restored to health to again be of any real use. It was very remarkable

that on the same day that S. left us, Lundholm also found himself forced to give up work. His symptoms and sufferings were of an exactly similar kind to those of S. For nearly eight weeks Lundholm remained incapacitated for work, and thus on one and the same day we entirely lost the services of one half of our staff; and the work that now devolved upon Curling and myself was doubled.

A few days after this, I made my first near acquaintance with a snake out in the forest. We were all sitting on the ground in the *picada*, at the conclusion of one of our mid-day lunches, smoking and talking, when one of the men who was sitting facing me, suddenly shouted out, "*Doutor! doutor! cobra! cobra!*" at the same moment jumping up and unsheathing his long *fação*, or knife. The word *cobra* had an electric effect upon the whole party. Each man was on his feet in an instant. Not at once realising what the danger was, I did not stir. A second later, and my eye fell upon a *Jararaca*, which, with head erect, and tongue darting before it, and eye flashing and scintillating, was gliding softly and noiselessly by, within a foot of my side. I was so struck with the beauty of the reptile and with the ease and grace of its motions, that I forgot to be afraid, and it was not till the long *fação* of the man who had first seen it had descended upon it, cutting the long, supple body in twain, that I realised how unpleasantly close the animal had been to me. The man's name who thus put an end to the venomous brute's existence was João

Miguel; he was one of the axemen, and I knew that he had once himself been bitten by a *Jararaca*. The vehemence of his ejaculations as, not satisfied with having once decapitated his enemy, he slashed the wriggling body again and again, hissing out between his teeth the words, "*Oh, bicho do inferno! take that, and that, and that!*" as each fresh blow descended, sufficiently testified to the intensity of his hatred.

His story is a very common one in this part of the country. He was out one day cutting his *roça*, when he trod on a small *Jararaca*, which immediately turned upon him, and made its fangs meet through his instep. Waiting only to slay the reptile by a blow from his *fouce*, he ran as fast as the pain of the wound would allow him to the nearest *rancho*, which happened to be only a few hundred yards distant. Arriving there, he at once, regardless of the pain, slit the wound open with his *fação* and poured *cachaça* into it, while, at the same time, he swallowed large draughts of the same spirit. Continuing this treatment for some time, the pain at length began to subside, and other symptoms, which he described as intense drowsiness and sensations of sickness and suffocation, also gradually decreased. In a few hours all the dangerous symptoms had vanished, and he knew that his life was saved. The *cachaça* had cured him. The strange part of the story, however, is still to come. He declares that at the corresponding season of every year he goes through all the same sensations, just as he experienced them in the very hour the event happened, and that at

such times he is practically a cripple, unable to walk or even move for two or three days. I believe this is not an uncommon phenomenon in the case of snake bites, though I have never yet heard it satisfactorily accounted for. The Brazilians have great faith in the efficacy of *cachaça* as a remedy for snake bites.

There is, however, another remedy of a very different character, in which a large section of the people implicitly believe, namely, the corrosive sublimate of mercury, which the *caboclos* know by the name of *sublimão*. I first heard of this remedy from one of our *camaradas*, who had come from the village of Jatahy, on the river Tibagy. I afterwards paid a long visit to this very village, and found that the people there were very firm believers in the value of this remedy for snake bites. The story of the discovery of this valuable quality of *sublimão* was thus related to me by two independent people, one of whom was Sr. Telemaco Borba, the brother of the director of Colonia Thereza.

A certain man in the province of Matto Grossa had been bitten by a snake, and feeling that he was dying he sent for a priest to shrive him. The padre came, and approaching close to the dying man, began the performance of the offices for which he had been summoned. On concluding he inquired how the sufferer felt in his body. The man replied that since the padre had been with him he had lost all pain, and was now feeling quite comfortable. The padre then departed. No sooner, however, had he gone out of the house than the pain returned worse than before, and the poor

man shrieked aloud that the padre should again be sent for, to come and comfort him. The padre returned, and the moment that he touched the patient the pain ceased. The padre was an honest man, and instead of claiming the credit for his own holy person, candidly owned that he was altogether mystified. He went away again, and once more the pain came back to the poor man. The padre returned, and the pain ceased. Racking his brains to find out the cause of this seeming miracle, the padre suddenly recollected that he had got with him a small packet of corrosive sublimate. Having taken it from his pocket, he placed it on the wounded part of his patient, and again went out of the house. On returning, he found that this time the man had suffered from no relapse, but was evidently recovering. In short, the cure became complete; simply from the touch (or, as it seems, merely from the proximity) of this packet of *sublimão*. This story savours somewhat of the fabulous, but whether there is any truth in it or not, certain it is that the corrosive sublimate of mercury is held high in esteem by a great number of the people of this province, as an antidote for snake bites.

On the afternoon of the same day on which I first saw a live *Jararaca*, I very nearly increased my knowledge of snakes, by treading on a *Cobra preta*. I had had occasion to walk back a short way over the *picada*, to correct an error made by the chainman. The sun was beating powerfully down through the gaps which had been made in the forest above by the cutting

down of some great trees. Across one of these open spots I was toiling wearily, for the work on this day had been more than usually fatiguing, when I caught sight of a bright eye, fixed and motionless on the ground, a little in advance of my uplifted foot. In a moment, I saw that it was a snake, coiled up in readiness to strike. I gave such a start backwards, as to almost come into collision with the man who was following immediately behind me. He was carrying a *fouce*, and as I pointed the reptile out to him, he went forward a step and brought the cold steel down on the centre of the coiled-up snake, cutting the animal into several pieces at one blow. For the next few days I was nervously inclined to see a snake in every stick on the *picada*, but, though it was seldom that a day now passed without one or more being killed either in the forest or in the camps, I did not myself come into contact with another for some time.

As the days went on, and summer came nearer and nearer, the heat in the forest increased in proportion, and, *pari passu*, the insect life grew and multiplied. There was a certain blue and purple bee, that made itself most especially objectionable, by always selecting the eye pieces and object glasses of the instruments for its chief attentions. I was once or twice stung in the face by this inquisitive insect, when endeavouring to take an observation. I noticed, however, that this bee objected to the colour red, and never settled upon the red *baetas* or baizes worn by some of the men. I took a hint from this, and ever afterwards, the moment

an observation was completed, covered the instrument I was using with a light, red silk handkerchief, leaving it thus protected till the next observation came to be taken. Most of the insect tribe objected more or less to the colour red; a most noteworthy exception to this rule, however, being a small, black, stingless bee called the *Mirim*. This little creature is at once the greatest nuisance and the greatest boon to the dweller in the forest. It is about the size of a house-fly, though more clumsily made. Like all the bee tribe, it is not an early riser, and seldom becomes troublesome before ten o'clock in the morning. From that hour, however, till nearly four o'clock in the afternoon its activity is unceasing. It settles in countless numbers upon the back of the neck and back of the hands, occupying in those parts every available space. It accompanies every step you take in a small cloud round your head. Individual members explore each feature in your face with the most painstaking minuteness. It is impossible to eat one's luncheon without devouring half a dozen or more. If you open your mouth wider than usual, to give a shout, a bee seizes the occasion to explore the cavity within, and your shout terminates in an ignominious splutter. Besides being the most bold and fearless of all the winged insect world—for one may touch them, and take them up to look at them, and they will exhibit no fear—they are also the most widely spread. I have found them almost equally abundant in all the sub-tropical forests of the province of the

Paraná. It is no exaggeration to say that a person might kill fifty a minute on the back of his hand, for five consecutive hours during the day. The very moment one batch is swept off the hand or back of the neck (these being two favourite points), another batch is ready to take their place. They neither sting nor bite, but there are some people who cannot stand the peculiar tickling sensation which they cause; and would go raving mad from them, if their neck were not covered up. I became accustomed to them after a time, and went about all day with perhaps five hundred congregated on the back of my neck, without troubling myself about their presence. In fact, in time I came to look upon them as a useful shield against mosquitoes; for on their favoured localities they were crowded so thickly together, that no mosquito had a chance to insert his proboscis. It was not, however, merely as a shield against other and more bloodthirsty insects, that the *Mirim* bee is so serviceable to the forest dweller, but it is on account of the vast stores of honey which it lays by in every tree, which honey, in fact, is one of the most useful natural products of these great forests. Numerous as the nests of this bee are, it is yet very rarely indeed that they can be discovered by any but the most practised eye. The reasons of this are, first, the very minute size of the insect itself, which renders its flight to and from its nest almost invisible in the gloomy shades of its forest home; and, secondly, the careful instinct which causes it generally to select a spot on the smooth trunk of an apparently solid tree

for the door of its abode. By some wonderful instinct the *Mirim* discovers a hollow in the heart of an apparently solid tree, where the most experienced forester would not dream of expecting the existence of a cavity. Through the outer covering the little animal then bores a tiny gallery, which runs perhaps for six or eight inches through solid wood before reaching the hollow within. In order still further to diminish the chance of the entrance of any enemy, from the mouth of this gallery it constructs a tiny tube or chamber of wax, which, when completed, protrudes out at right angles from the trunk of the tree, to a distance of from half an inch to an inch. Were it not for this little external construction, which is doubtless made to conceal the aperture from a certain species of red ant, which is very fond of running up and down the trunks and trees searching for grubs and larvæ, it would be almost impossible for human eye to discover the nest. I could never myself succeed in finding a *Mirim*'s nest, and there were but very few of our Brazilian *camaradas* themselves who were really adepts in the art. We had one or two men, however, who possessed the faculty (I might almost say instinct), which enabled them to find as many bees' nests in an hour, as would supply our whole camp with honey for a week. The honey itself is not contained in a comb, like that of our common hive-bee, but in bags, each of which may hold from a teaspoon- to a tablespoonful of the pure liquid. The flavour is most delicious, and is usually slightly acid. The honey always tastes cool

and fresh even in the most sultry weather, when the thermometer is perhaps standing at 98° Fahr. in the shade. The chief enemy of the Mirim bee, besides man, appears to be the red ant already mentioned. This ant we not unfrequently discovered inside their nests—notwithstanding the precaution taken by the Mirim against its intrusion—where it played havoc with the young grubs. I do not know whether this ant eats the honey also, but the Brazilians have told me that they occasionally cut out nests which are full of another species of small black ant, which eats both honey and grubs: this I never myself saw. It seems strange that there should be, as far as is known, no honey-eating bird or animal of any kind, with the exception of the ant, in these forests, to take advantage of the bounteous stores supplied by this little insect alone, to say nothing of the many other varieties of honey which exist. I cannot, however, help thinking that it will some day be discovered that the so-called antbear (*Tamandua bandeira*) is a honey eater, for which its whole construction seems admirably adapted. If this were proved to be the case, the object of the large bushy tail, which has for so long puzzled naturalists, would be fully explained. Its use would evidently be as a shield against the attacks of the enraged bees flying around, whilst the animal was making havoc of their nest.

Besides bees, of mosquitoes proper there were many kinds. Their attacks began at a comparatively early hour, when the air was damp and steamy and the

temperature not below 68° to 70°. As the sun rose higher, and the atmosphere became drier, they disappeared from the comparatively open *picada* and concealed themselves in the low-lying deeply shaded ravines, where we occasionally came upon them at these hours in enormous multitudes.

Wasps, hornets, bumble bees, and *Botucas* were also numerous and troublesome during certain hours of the day; but as I shall have occasion to refer to these *bichos*, individually, later on, I will here do no more than record the fact of their existence.

The most disgusting by far of all our forest foes was the loathsome *Carapatto*, or tick. During luncheon was the time to be most carefully on one's guard against their insidious attacks. The *fouce*-men when at work had naturally, in the course of the day, dislodged many hundreds of these vermin from their customary stations on the leaves and twigs of the small undergrowth, and consequently the *picada* itself, in the rear of the cutters, was generally alive with them. To obviate as much as possible the nuisance of their presence, we usually, before sitting down, felled a palm-tree, and, having stripped off the long feathery leaves, laid them on the ground as a carpet to recline upon. Many ticks would, however, find their way up through the palm leaves, and, eagerly fastening on any part of one's clothing that came within their reach, at once begin to swarm up, till they succeeded in discovering some vulnerable part of the body, to which they would then attach themselves so firmly

that, if not detected and pulled off immediately, it became a matter of great difficulty to remove them at all, without leaving most of the head still buried in the flesh. To most people the bite of the *Carapatto* is more poisonous than that of any kind of mosquito or fly. I myself, I believe, am a rare exception to this rule, for I never suffered the slightest pain or irritation from it.

It may be imagined that with all these drawbacks to comfort and enjoyment of nature in the forest, it was generally a relief when evening arrived, to find ourselves once more in the open clearing on which our camps stood. Here, there were neither mosquitoes nor *carapattos* to vex us, and even the little *polvora* always retired to rest with the sun.

Round the first camp was a considerable extent of *capoeira*, or second-growth forest, which was at this time less than a year old, and consequently not more than six feet high. One's progress through this undergrowth early in the morning was commonly attended by a noise like hail, caused by the falling off from the leaves on to the ground of multitudes of little blue and green beetles. These pretty little insects were at this early hour temporarily deprived of the use of their wings, though their senses and instincts of self-preservation evidently remained keenly awake. Every leaf had several individuals upon it, which, if you but looked at them, at once relaxed their hold, and, rolling down the leaf, tumbled straightway to the ground and were lost in the rubbish beneath. By

attaching a cup to a long stick and cautiously introducing it underneath the leaves, and then with the other hand pointing another stick at the 'cute little insects, they immediately tumbled off and were caught, as it were, in their own trap. When once the sun's rays touched them, they recovered their temporarily suspended powers of flight; thus it was that they could only be caught in this manner very early in the morning. I never came across these curious beetles again after leaving this camp.

While on the subject of insects, I must not forget to mention one of the most beautiful of all the sights afforded by these insect-teeming tropical forests, namely, the nightly display of fire-flies, which was now just commencing. The first occasion of my witnessing one of these brilliant spectacles was in this wise. One day I had been out in the forest till a rather later hour than usual, and, on arriving on the river bank at the spot where I had appointed canoes to meet me as usual, to take myself and the men with me down to camp, I found that by some mistake the canoes were not there. It was rapidly becoming dusk, and there was, therefore, no time to send a man through the forest to the camp, which was more than a mile below us. We, accordingly, remained where we were, firing minute guns to let those in camp know our whereabouts. This succeeded, and in about half-an-hour up came two canoes to take us down. It was then quite dark and raining gently. When we got out into the middle of the river, lo! we found ourselves

floating down between two brilliant walls of fire. Myriads of fire-flies had all at once come out of the forest, and were showing their enjoyment of the rain by flashing their million lights all along both banks of the river. The lower portion of these fire-walls was the most brilliantly lighted—the fire-flies congregating in the greatest numbers about a yard above the water-level. Now and then a brighter light, like a big planet, would shoot out from the dark forest, and thread its path in a bold, well defined orbit amongst the crowd of lesser stars, and then sail majestically away above the tree-tops towards the interior of the forest. This was the great fire-beetle, which, in addition to the usual phosphorescent light in its tail, carried two shining fixed lamps, one on each shoulder. So brilliant are their lamps that I have seen them light up both sides of one of our broad *picadas* as distinctly as a pair of carriage-lamps will illuminate a country lane on a dark night. Now and then on our course down, one of these great beetles would take its flight across the river, which was here more than a hundred yards wide, the deep bass note with which its flight was accompanied sounding not unlike the distant roar of a cataract. On this particular night the display of fire-flies and fire-beetles was probably more than usually brilliant, on account of the very favourable conditions of the atmosphere.

Like mosquitoes, fire-flies are most lively when the air is saturated with moisture, and when, at the same time, the temperature is not below 70° Fahr.

On the 14th of October we bid farewell to our first camp, the line of the exploration having now advanced to some distance beyond it, though, unfortunately, not following the bank of the river, but being forced by the nature of the country to penetrate nearly a mile inland, with the unpleasant prospect of having to be carried still farther away inland, before it would be possible to bring it back once more to the river bank.

This, in conjunction with the loss of the services of two members of the staff, necessitated the introduction of an entirely new feature into the conduct and working of the exploration.

The main camps would still have to be situated on the banks of the river, which would still perforce continue to be the main road for the transport of all heavy stores.

These camps, however, could no longer be used as such for the working parties of explorers. Too much time would be taken up in walking to and from them each day, to allow, in such a case, of the survey work proceeding with due rapidity and economy. Practically it was found that for every mile that had to be walked through the forest, even though a hand *picada* had already been made for the purpose, one hour was lost.

So difficult was the nature of the ground itself—so impossible was it to cut and clear a decent walking *picada* through the dense undergrowth that covered it, without an enormous expenditure of time and labour, that one mile of such walking was more exhausting to

the physical powers than ten miles would have been on an ordinary, country road.

These considerations forced us into the adoption of a system of small *working* camps, constructed upon the very line of the exploration itself.

On the 19th of October this new system was, for the first time, begun to be put into operation, and on that day I, with a small party of nine men, started for the forest laden with hammocks, instruments, and provisions calculated to last us a week. Only the bare necessities of life were taken with us; for the labour of forest transport was too great to allow of indulgence in any luxuries. We had no tents because they could not be carried. One large iron pot and a small tin cup was to satisfy all the requirements of our cooking. Beans, farinha, *toucinho* (pork fat), coffee and salt were our sole comestibles. Thus laden, we took four hours to accomplish a distancé of little more than two miles. At the end of the march the legs of most of the men with me, from the knee downwards, were caked with blood—drawn from them by many a cruel thorn and sharp stump on the way.

Our first business was to build a *ranch*o or hut for shelter at night or from rain.

As the building of huts is always an important part of the education of a backwoodsman, I will describe the type most commonly built by us for our working camps; the same type, though built with a good deal more solidity, being afterwards employed in our big camps and depôts.

The sole materials used are palm trees, bamboo stems, and cipós. Though there are many kinds of this latter parasitic plant, there was one especial species which we invariably employed. This species was perhaps the most common of all, and it could be readily obtained in any part of the forest in lengths of from twenty to thirty feet, and of the thickness of a little finger. It was enormously strong, the strength lying altogether in its bark. By slightly twisting it previous to use, it could be tied into knots like string or cord without fear of breaking—and even without being twisted it was so pliable that it might be wound round an axe handle without breaking.

Three pairs of uprights are cut from the long slender stems of palm trees (or if the *rancho* is to be very small, from young saplings). These uprights are pointed at the bottom and notched at the top. One pair, the longest of the three, is driven into the ground, at the distance apart corresponding to the proposed length of the *rancho*. This pair supports the ridge-pole (also part of the stem of a palm), which is lashed to its place with pieces of cipó. The other two pairs, which are shorter, are now fixed in the ground at equal distances on each side of the centre pair, to correspond with the proposed width of the *rancho*. To these latter, eaves-poles are similarly lashed with cipós. A horizontal crosspiece at each end binding the three uprights together, completes the more substantial part of the frame of the *rancho*. The rafters are of bamboo, bound on with cipós to the

ridge and eaves-poles. One or two other bamboos are lashed horizontally across the rafters to act as laths, and upon these, palm-leaves are suspended by their bent stalks. As each of these leaves may be from twelve to fourteen feet long, one row on each side of the ridge is sufficient covering, if the *rancho* is not very large, or is only to be occupied for a few days. When the leaves are fresh they form a perfect protection from sun and rain. When they are a few days old, however, they require to be renewed, as they shrivel up in drying. There are other kinds of palm-leaves—namely, those of the small edible palm, which are best laid on the rafters horizontally, instead of suspended vertically from the ridge like those of the bigger palm tree. A *rancho*, constructed in the manner described, of dimensions fourteen feet by ten feet, could be run up by four men in about half an hour. In the event of heavy and long-continued rain it was sometimes necessary to build a second *rancho*, in order to accommodate comfortably the whole working party.

It was in one of these little *ranchos*, then, built in the midst of the forest, half a day's journey from the big camp, that I swung my hammock, on the evening of the 19th of October. There was a subtle charm in the feeling that we were now cut off from all the world, and were dependent on the work of our own hands for the very roof that covered us.

CHAPTER IV.

A Suggestion.—The dancing birds.—Peculiarities of forest growth.—The Jacutinga.—The Suruquá.—“Roughing it.”—Illness.—Jacutinga blood.—Kindness of a colonist.—The dangers of some Brazilian climates.—Life in camp.—The “Cigarro.”—Fishing in the Ivahy.—The stinging caterpillar.

LET a man in search of a new sensation of life, for once in a way sleep outside the accustomed shelter of a roof and four walls. Let him choose for the season of his experiment some still, calm summer's night; and for a spot some quiet secluded wood or grove, even in prosaic, highly-civilised England. I venture to say that that man, in those few short hours, will have tasted a pleasure more real than any his past life can recall since the days of his boyhood.

Instead of the homely woods, substitute the magnificent growth of a Brazilian sub-tropical forest; and for the knowledge of having civilisation all around you, the certainty of a boundless expanse of unknown wilderness with strange and unknown inhabitants, and I leave it to the imagination of the reader to say to what extent his pleasurable sensations would not be added to and enhanced.

Thus surrounded, I passed my first night in the depths of a Brazilian forest—uneventfully, but yet supremely enjoyably, in spite of the busy attacks of many hungry mosquitoes during the earlier hours.

The next day was Sunday; I accordingly gave the party a rest, myself only with two men making a short expedition to fix a convenient site for our next small camp.

Of these two men one was Pedro Antunes, who had attached himself to me with great faithfulness since the commencement of the expedition, and the other was his uncle, by name Messeno Lopez—both being very superior to the general run of our Brazilian *camaradas*. Besides these two there was another man with my little party, who was a very faithful but at the same time an incorrigibly idle fellow. This was Jaca, a scion of the noble house of Andrade, whose acquaintance, as the reader may remember, we made on the march up from Ponta Grossa to Colonia Thereza. These three formed, so to speak, the *élite* of our Brazilian staff, and I felt that they were men I could more or less depend upon under all circumstances.

It is a very rare thing in a Brazilian forest to hear birds singing. Nature seems to have concentrated all her art energies in the production of beauty which shall delight the eye. The melodious songsters of more temperate climates are very generally wanting, their place being supplied by harsh-shrieking parrots and toucans: dry chatterers, such as the *Japú* and black and yellow hangnest; and melancholy wailers,

like the doves and goat-suckers, with all of which, and many more besides, during the next year we were to become familiar enough. Very soon after Pedro, Messeno and I had started from our little camp, our attention was attracted by the unwonted sound of a bird singing. My companions, immediately they caught the sound, told me to follow them towards it, and I should probably witness a very curious sight. We accordingly made our way cautiously through the forest, which happened to be in this particular spot rather more open than it usually was, and, after going about twenty yards, found ourselves in a tiny glade, in which tree-ferns, palmitos, and myrtle-shrubs formed the only undergrowth, while towering high above, two great cedars spread out their boughs and thick foliage in a broad protecting canopy. A small waterfall at one end of the glade had worn a little basin at its foot. Round this basin, some on the ground and some on the low myrtle-shrubs, a group of little birds, about the size of tomtits, with lovely blue plumage, red topknots, and black "points," were assembled together, apparently with one common object. One of them was perched, quite still, on a twig, whistling a merry tune, while the remainder were keeping time with the feet and wings, and twittering a chorus accompaniment. At first I could not imagine what they were doing, and thought they were making a demonstration against some enemy, possibly a snake. After watching them for a minute or two I found that this was not the case; they were evidently

not being excited by anger or fear, but merely by the song of their companion. They were, in fact, having a ball and concert, and, to all appearance, thoroughly enjoying themselves. At last something—probably ourselves—startled them, and the performance was abruptly terminated, each bird separating and going its own way. My companions now told me that these pretty little creatures were actually known as the dancing birds. Messeno also said that he had frequently seen them performing in the manner just described. He affirmed that the minstrel was the cock bird, and the dancers were his wives. I had no opportunity of testing the accuracy of his statement, but am inclined to doubt it. More likely individuals of both sexes were assembled, as is the custom with many birds, preparatory to pairing.

We fixed the site of the next working camp on a beautiful spot where three streams met, and where, by the perennial overflow of their waters, the surface soil of the ground had been almost altogether washed away, leaving only the rocky substratum untouched. Here, in consequence, the jungle was very open, the greater part being given over to tree-ferns and palmitos, which both appear to delight in rocky ground of this nature.

Open patches or glades of this kind form a very characteristic feature of these forests. They usually occur in situations where the ground is liable to frequent scourings from the overflow of streams, and therefore there is always a streamlet running through

them. They are the favourite resorts of all kinds of animal life, from the largest mammals, such as the tapir and the deer, to all the multitudinous varieties of sun-loving insects, such as butterflies, bees, wasps, and the larger kinds of flies. On the other hand, the scourings from these glades are carried down to some lower point, where the valley is wider and less steep, and are there re-deposited, giving rise to a luxuriant and matted undergrowth of cane and thorn brakes, which, as I have already remarked, are the favourite haunts of the various species of mosquitoes, and other shade and swamp-loving insects and vermin.

I here shot a bird which we were afterwards to meet in enormous numbers in the middle portion of the Ivahy Valley. This was the *Jacutinga*, a species of *Penelope*, in size and appearance something between a turkey and a pheasant. This bird, fifteen months later, was destined to save the existence of the 2nd Staff, when, for a period of some weeks, we were, through certain untoward circumstances, entirely cut off from our usual supplies. The same bird was also very soon to serve me, individually, a good turn, which I shall not be likely to forget while the power of memory remains. I also shot two specimens of a bird of very different character, called the *Suruquá*. This bird, which is about the size of a thrush, is, if we except perhaps some of the humming-birds, by far the most lovely of all the feathered denizens of these forests. The plumage of the male is a most resplendent purple and gold on the head, throat, and back, the

breast being of a lovely, bullfinch red. The wings are dark slate, delicately barred with white. The bill is very small, but the mouth is as wide as a goat-sucker's. The feet and legs seem disproportionately weak and delicate for the size of the bird. The female is much more soberly attired than the male, a simple drab and brown taking the place of the gorgeous red, purple and golden array of the latter. The wings of both male and female are precisely alike.

The habits of these birds are peculiar. Their principal food consists of butterflies, and other soft-bodied flying insects, and the only time when they exhibit any activity is when in pursuit of their prey. At all other times they sit motionless on some bough or branch of a tree, generally about thirty feet above the ground. The report of a gun will not cause them to do more than turn their head, and I have on more than one occasion shot the one bird, while its mate has remained sitting on the same tree not half a dozen yards off, quietly looking on.

The sound of our axes seemed to have an especial attraction for the *Suruquá*. Frequently while some tree has been trembling on its throne under the powerful blows of the axe, one of these birds has come flying hurriedly up, and settled itself comfortably on one of the branches of the tottering monarch, as though it had been fleeing from some pursuer, and had now reached a haven of safety. I think possibly the vibration of the leaves under the blows of the axe upon the trunk, deceives it into imagining that butter-

flies are flitting about round the tree, hence its haste to come and inspect it. Certainly the bird seems silly and stupid enough for anything.

My companions told me that the *Suruquá* was always to be found in the localities resorted to by Jacutingas, and that it was, in fact, the great enemy of this latter bird, and that the object for which it sat, so patiently watching, hour after hour, was that it might pounce upon any passing Jacutinga, and, having secured a position under the wing of its prey, cling there and tear its vitals out at leisure. This, many Brazilians who believe in the truth of the story say, is the use to which the *Suruquá* puts its sharp beak and abnormally big mouth.

My own experience of the bird is that it is utterly unfitted by nature for so bold a profession. So delicate is it that one shot in the body suffices to bring it to the ground dead. In skinning specimens of it, I always had to use the utmost care and skill, the slightest awkwardness in handling causing the feathers to come out in handfuls, the skin itself being almost as fine and delicate as gold-beater's.

We cooked the *Jacutinga* for lunch, and finished the meal with a luscious drink of *Mirim* honey. We then built the *ranchito* for our next camp, after the mode already described, and returned to camp for the night.

I pass over the details of our forest life during the next few days. It was a time of incessant toil, accompanied, as was but natural under the circumstances, with no inconsiderable amount of "roughing

it." We lived principally on beans and *farinha*, varied occasionally with birds that we shot, and other natural products of the forest, such as honey and the tops of the edible palm. My toilette and sleeping kit consisted only of a hammock, a couple of spare flannel shirts, and a light blanket. At this time I had not yet discarded the suit of rigid sail-cloth, already referred to, both working in it by day, and sleeping in it by night. No kind of clothing could be less suited to the work and the climate than this, and I was but waiting till I could get other garments from the big depôt camp to discard it for ever.

On the 25th of October, after I had been out in the forest for nearly a week, living in the manner described, an event occurred which nearly deprived the staff of yet another of its members.

About three o'clock that morning I awoke feeling very cold. I got out of my hammock, and went to the fire, when I immediately began shivering violently. Some of the men, seeing there was something the matter, got up and lent their own *ponchos* to put over me. After a short spell of painful vomiting, I endeavoured for a moment to stand on my feet, and found I had lost all strength. I began to think I was suffering from poison, and I gave directions that the moment it was daylight, men should be sent to the main camp for assistance. For a long time after this I was insensible, and when I again recovered consciousness I found that I was being carried by our old friend Jaca, on his back, through the forest. It

must have been two hours or more after this that I again came to myself after a second lapse into unconsciousness, and found that I was lying on the ground by the banks of the "Barra do Doutor."

I felt I was sinking from sheer exhaustion; and, though I knew I was asking for what could not be obtained, I prayed the men round me to give me some soup.

Lying on my back, I happened to notice several *Jacutingas* or wild turkeys in the trees above, and I told Jaca, who was bathing my face with water, to shoot one and give me its blood to drink. Two were shot, and their blood brought to me warm, which I eagerly swallowed. This blood, I fully believe, saved my life, for it gave me strength enough to last through the next two hours, which time it took for me to be taken down by canoe to the *sitio* of Maruca's son at the mouth of the Doutor.

One of those strange chances which, even to the most sceptical, must appear providential, had before this made me aware that I was suffering, not from any poison, but from an acute attack of inflammation of the kidneys,* the remedies for which I well knew to be

* The "chance" referred to in the text was this. While lying on the ground by the Barra, waiting the arrival of the canoe that had been sent for, such a deadly pain came on that I felt I was really dying. I said to Tynson, one of our Europeans who was with me, "Tynson, lift me up, I think I am dying." He did so, and supported me in a sitting position with his knees resting in the hollow of my back. In a few minutes an indescribable sense of relief came upon me—and then it was that it flashed across my mind that the relief was due to the warmth of the man's knees communicated to my back. I at once guessed the true state of the case, and gave directions for treatment accordingly.

a hot bath and cupping. Thanks to this timely discovery of what I was suffering from, I was able to give directions to my men what to have done for me when we should arrive at the *sitio*. Before we reached it I was again insensible, and remember no more till I found myself in bed with hot water running down my back. For two days I remained with the hospitable people of the *sitio*, by the end of which time I was sufficiently recovered to go down the river to our own big camp.

I have described this attack somewhat fully, because it affords the best illustration that I can possibly give of the greatest—perhaps the only—danger of the climate of this part of Brazil.

This danger lies in the sudden changes of temperature which occur in very short spaces of time.

On the night on which I was taken ill as described, the thermometer fell 38° Fahr. between six o'clock in the evening and three o'clock in the morning!

In the Appendix (Note E) I have given a table of temperatures, which will, no doubt, be interesting to many readers of this book. There it will be seen that even more sudden and startling variations of temperature than the one quoted are not uncommon to this climate.

The advice of the *tropeiro* on the prairies, "never travel without your poncho," is applicable to all parts of the highlands of Brazil, whether forest or *campo*.

After this attack I allowed myself four days' rest in the big camp, where I built myself a *ranch*o after the

fashion of those already described, with the addition, however, of four walls and a door.

In this hut, which, as compared with the tents, was deliciously fresh and cool, I used to draw and write during the day, wholly protected from the insect world by a large mosquito net, which, when suspended from the rafters, hung down to the ground, affording ample room for a camp stool and a table within its protecting folds.

Bees, wasps, hornets, flies of various kinds, and mosquitoes buzzed around it all day long, but none could find an entrance. Had there been any *polvora* in this camp, my self-satisfaction would, doubtless, have been much lessened, for they would have come through the meshes of the gauze, like water through a sieve.

All day long big *Cicadas*, or, as the camaradas call them, *cigarras*, were circling round and round the open space of the camp, uttering shrill cries like the whistle of a locomotive. The *Cicada* is something like an enormous fly, measuring from three to four inches across from wing to wing. Its colour is generally light green. It has great power of wing, and flies with almost electric rapidity; not, however, travelling far, but contenting itself with sweeping round and round any small open space or clearing in the forest, frequently sitting on a bough or twig to rest. I do not know whether it is that the *Cicada* is very local in its habitats, or whether its duration of life is limited to only a few weeks in the year, but certain it is, I do not recollect seeing it in

any other camp but this, nor do I remember ever having heard its shrill whistle except during the three months of September, October, and November.

What the swallow and the swift are to the great open spaces of the big river, the Cicada would seem to be to the smaller glades and clearings of the inner forest, dominating over all its lesser kind.*

It is one of the myriad species of insect life that is called into existence by the approach of summer, and which, having fulfilled its predestined mission of laying the seeds of a future generation, dies a natural death, either, I suppose, when the rains commence in the month of December, or a few months later when the colder weather sets in, and once more wipes off the scroll of creation nine-tenths of the forest insect world.

At about five o'clock every afternoon the air would usually become very sensibly cooler, and I used then to go out on to the river to fish.

One of our European *camaradas*, a Swede named Oberg, who, now that Lundholm was on the sick list, was constantly in camp attending on him, was a most enthusiastic fisherman, and it was always his delight to be my companion on these occasions.

The current immediately opposite the camp was very strong, it being, in fact, the tail end of a small rapid that played and sparkled a hundred yards above.

* Since writing the above, my attention has been drawn to a very beautiful account of this insect given by Louis Figuier, in his popular work, "The Insect World," where he says that its sole food is the "sap of large vegetables."

This was our favourite fishing ground, and here we would anchor the canoe in mid-stream, by means of a large stone attached to the bow rope and heaved overboard, and throw our lines into the swift current. Sometimes we used to attempt fishing with a fly, but this was never very successful on account of the number of small brown swallows which were always skimming along just above the surface of the water. These swallows were constantly darting at the fly, and so getting themselves caught on the hook. With ground bait we were usually very successful, and frequently eight or ten pounds' weight of fish of various kinds would be caught before dark.

About this time, too, we began to make regular use of a large net belonging to Curling. This net was sixty feet long and seven feet deep, with two-and-a-half-inch meshes, the whole being properly fitted with leads and cork floats. Until now no one had any idea of what value it would prove to us. At Colonia Thereza we had experimented with it on one, and only one occasion, which experiment had been so very unsuccessful that the net had never been used since. On that occasion we had attempted, by a combined action of dragging the net and beating the water towards it, to make a haul of fish: but the bottom of the river proved to be so much encumbered with waifs and strays of trees, rocks, and such like obstructions, that no better result was obtained than the tearing of several large holes in the net. By a happy inspiration, it now occurred to us to anchor the net across the

river, or rather as far across it as its length would permit—for the Ivaity was here full ninety yards wide—and see whether the fish would not be obliging enough to entangle themselves in the meshes of their own accord. One evening, therefore, Curling having just returned from a two days' exploration in the forest, we proceeded together to put the idea into execution. One extremity of the net we anchored by means of big stones close to the bank, while the other extremity was taken out towards the middle of the river, and there secured in a similar manner—the net therefore standing across current. The next morning, almost before daylight, anxious to see the result of the experiment, Curling and I got into our canoe, and paddled to the spot. It was soon evident that the experiment had succeeded beyond our greatest expectations. Even before commencing to haul in the net, we could see through the clear depths of the water various white and black patches attached to it. The hauling in afforded great excitement, as fish after fish was brought to the surface, each one seeming to be bigger than the last. When we came to count the spoil, we found fourteen fish of three different kinds, varying in weight from two to twelve pounds. The biggest was a fine Surubim, which could not have weighed less than twelve pounds. Besides this there were two more Surubims, four Dourados (Brazilian salmon), and no less than seven of our old friends, the Cascudos. Nearly all the fish were already dead, though why they should have been so I did not understand. I suppose, however,

that their struggles to escape from the meshes of the net must have caused them to die from sheer exhaustion.

From this date till the end of the expedition we continued to use nets, that we ourselves made from time to time, with great success—always putting them down in the evening and taking them up in the morning. In the day-time the fish see the meshes and avoid the snare. In time of floods, that is, throughout the rainy season generally, the nets could not be used, on account of the drift timber, which at those times was carried down the river in large quantities. It is, unfortunately, at this very season of the year, when most other supplies were liable to run short, that the services of these nets would have been most useful, could they only have been employed with anything like safety to themselves.

Before concluding this chapter, I should mention another class of insect, which was now beginning to force itself upon our notice, first, by its wondrous beauty, and, secondly, by the terrible punishment that it has the power of inflicting upon whomsoever it touches. This is the tribe of the hairy caterpillars. Every evening after sunset the borders of the camp clearing were lit up with many scores of these luminous caterpillars, most of which emitted light from every ring or band of their bodies.

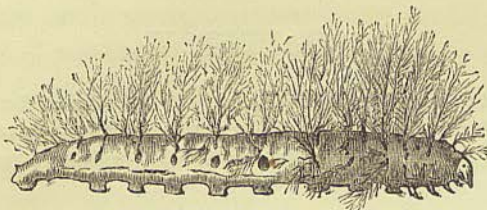
The phosphorescence was not confined to the under part of the animal, as in our common glow-worm, but shone out also from the back and sides. The optical

effect was that produced by a railway train when running at night with all its carriages lit up. The varieties of these caterpillars were legion. Their bodies were protected by triple coats of mail; that is to say, they were covered with a hairy substance which, in some species, took the form of moss, and in others of groups of stag-antlers. To attempt to touch these creatures with the naked hand was a scarcely less hazardous undertaking than plunging one's hand into a live hornets' nest. Each hair, or point, has the power of inflicting a sting as painful as that of a certain venomous species of red ant very common in parts of the forest, so that if by chance, as not unfrequently befell us when working on the *picada*, one of these caterpillars happens to drop off a tree on to the hand, or, worse still, on to the nape of the neck, the pain is almost unbearable, the spot on which the creature falls immediately becoming inflamed, and afterwards swelling up to a great size. The best cure for these most painful stings is the immediate application of some strong spirit, either *cachaça*, brandy, or ammonia. Birds will not touch these caterpillars, their chief enemies appearing to be certain species of black ants, which I shall have occasion to refer to later on, and also the large kinds of wasps and hornets.

Frequently, at night, as many as four or five individuals together would mount up the palm-tree walls of my hut, forming a most beautiful illumination. Notwithstanding that the phosphorescence in these caterpillars extends over almost the whole of their bodies,

the light they give is not brilliant, like, for instance, that of the great fire-beetles, but is of a most soft and subdued character.

They are especially numerous about the months of October and November. As a class, they are, I think,



PHOSPHORESCENT STINGING CATERPILLAR.

without exception, the most beautiful of all the lower animal organisation of these forests—whether seen by day in their wonderful moss-like garments and brilliant colours, or by night when shining in all the splendour of phosphorescent light.

CHAPTER V.

In the forest again.—Animal and insect life.—The “whip” butterfly.—
A plague of sores.—The “Aipa” cure.—First adventure with a
tapir.—Curling’s messenger—Starved out.—Relief expedition.—
A happy meeting.—Another tapir hunt.

ON the 1st of November I returned once more to the little working camp in the forest, whence a week before I had been carried on men’s backs.

I was quite recovered, except that I felt the labour of the forest march somewhat more fatiguing than it should have been.

The camp was the second that we had built in the forest, and has been partially described as the meeting place of three streams, and a favourite resort of many kinds of animal and insect life. It now became more than ever famous for the number and variety of its animal productions.

Of quadrupeds we killed two *pacas* (a kind of guinea-pig), and a small short-horned deer which one of our dogs hunted across the open glade in which our camp stood. Of birds, *Jacutingas* or *Jacus*, *Suruquás* and humming-birds of several species were especially numerous. At different times we killed fourteen snakes,

either inside or close to the *rancho*, one of which, a small and beautifully marked coral snake, had taken up its abode in one of my boots, out of which it dropped when I took the boot up to put it on.

After this little incident I never failed to shake my boots out every time before venturing to put my foot into them ; and, though I never again found a snake therein, I frequently turned out small fry, such as lizards, frogs, stinging caterpillars, and large poisonous spiders. The vast number of *Mirim* bees which visited and remained in the camp during the hotter hours of the day was inconceivable. The *xarqui* and the *toucinho* of the men were usually covered more than half an inch deep with these insects. I believe it is the salt contained in these two articles of food that is their especial attraction. Unlike our common hive-bee, the *Mirim* does not make its honey from flowers. In the first place the flowers of the forest are few and far between, and would be altogether insufficient for the sustenance of the vast armies of these bees ; and, in the second place, I never observed a *Mirim* bee to settle upon any flower. Their natural food seems to consist chiefly of decaying animal matter, and out of these refuse stores of Nature they form the delicious honey with which the forest abounds.

Amongst the many varieties of butterflies which thronged the glade in which our *rancho* stood, and which also fulfilled the part of Nature's scavengers, one especially deserves mention, as having peculiar habits, different from those common to most other

kinds. This was a butterfly of medium size, measuring about two and a quarter inches across the wings, when open. Its colour was white, barred and spotted with brown. It was remarkable, first, from its habit of snapping or cracking its wings when annoyed or disturbed, whence we christened it the "whip" butterfly; and, secondly, from the peculiarity of settling, not upon the small undergrowth like the generality of its kind, but upon the main trunks or limbs of trees, where it places itself with the head downwards and the wings outspread, closely embracing the smooth bark. In this position, which is more common to moths than to butterflies, it remains undetected by the casual observer, as it resembles merely a patch of lichen. If approached, however, it will give warning of its disapprobation by sharply shutting and opening its wings once or twice (more generally twice) in quick succession, producing by this sudden contact the whip-like snap from which we gave it its name. Frequently, too, it makes the same sound when on the wing. The *suruquá* is very partial to this butterfly, and is at once attracted by the whip-like crack, forsaking its branch, on which perhaps it has been perching for half an hour without having given the smallest sign of life, and darting after the "whip-cracker" with great eagerness.

Like the great majority of the butterfly world, it is a scavenger, and was not unfrequently to be seen, surrounded by wasps, bees, and hornets, sucking the juice of the *xarqui*.

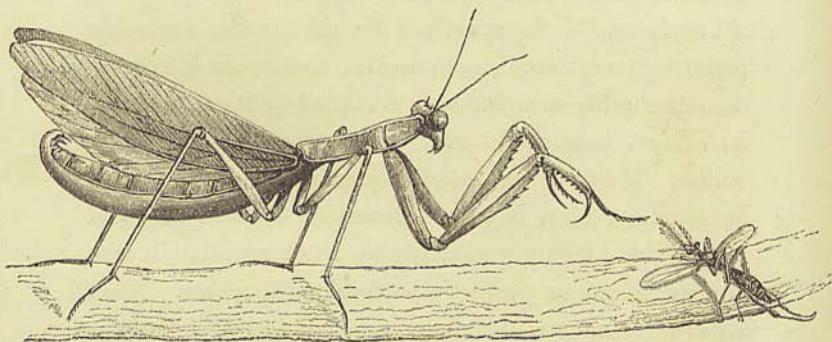
At night I frequently caught large brown and purple

moths, measuring eight, nine, and even ten inches across the wings, which like the butterflies and other day insects seemed to consider our *xarqui* their common property.

Of all the myriad representatives of insect life that thronged around and about us at this little camp, by far the most curious and most interesting to the ordinary observer, was the creature represented on the next page, usually called by the Brazilians the "Devil's riding-horse." So exactly does this insect resemble in its appearance a common leaf, that, were it not for its remarkable abundance in certain localities, it would be almost impossible ever to discover one of them. When, however, by careful search, one has been detected, nothing is more interesting than to watch it for awhile. Its normal attitude, when no other insect is near, is one of perfectly motionless devotion. This attitude is so marked, that it has obtained for it the common name of "Praying Mantis"—a name, however, not at all indicative of its real pursuits. It is, in fact, the most bloodthirsty of insects, preying upon mosquitos, flies, and small bees with inexhaustible appetite.

When for example, a mosquito—usually the most wary of insects—deceived by the resemblance of the *mantis* to a leaf, happens to alight to rest upon some leaf or twig within a short distance of it, the latter is seen to turn its head sharply in the direction of the new-comer, and then begin with a very slow and almost imperceptible motion, to creep towards it.

At the same time, its forearms which had before been tightly folded back upon themselves, begin to open, disclosing to view a pair of formidable-looking, serrated pincers or jaws. The mosquito meanwhile, calmly pursues its innocent occupation of washing its hands and face, preparatory perhaps to another onslaught upon its human victims, and all ignorant of the doom so close upon it. The *mantis* still continues its



PRAYING MANTIS AND MOSQUITO.

almost imperceptible approach, its great green eyes staring upon its prey. Now it has arrived within striking distance. With the rapidity of lightning, both its arms are shot out at once, the unhappy mosquito is caught between the sharp serrated edges, crushed as in a vice, and, in but little more than a minute, the whole body is torn to pieces and devoured. Again the *mantis* resumes its motionless prayerful attitude, and is once more ready for a victim.

Thus amidst the countless hosts of foes to man,

which yearly are brought to life by the heat and moisture of these great forcing-houses—the tropical forests, there is at least one that is silently but unremittingly fighting on his side, slaying its thousands and tens of thousands of his most troublesome insect enemies. Thus it was that I, at all events, always looked upon the *mantis* with a friendly eye, notwithstanding the unkindly suggestiveness of its Brazilian name.

About this time, namely the beginning of November, Curling and I were both attacked by the plague of climate sores, similar to those under which S. and Lundholm had succumbed a month earlier. These sores attacked chiefly the back of the hands, the forearms, and the feet and legs below the knee. They invariably commenced on mosquito bites which had perhaps been slightly scratched or rubbed. At first the sores thus caused would be merely superficial. After a few days, however, they would begin to eat into the flesh, becoming excessively painful, and causing swelling of the thigh glands. When this latter stage was arrived at it was necessary to keep quiet for a day to allow the swellings to go down. We had to discard boots and trousers, and go about on the rough *picadas* in slippers and *pyjamahs*. I never found that these sores affected my general health, though forest locomotion during the time they lasted was terribly painful. All the Europeans of the Staff, without exception, were now attacked in a similar manner, and many began to leave us in consequence. Those with weak or unhealthy constitutions were invariably the men who suffered most.

Their lives became a burden to them, and their presence more or less a burden to us. It seemed to be a fatal thing to "give in" altogether under this affliction. Those who did so doubtless hoped to cure themselves all the sooner, but the contrary result was obtained. Lundholm remained ill and unable to work for nearly eight weeks from this cause, and the torments that he underwent from the plague of insects in camp the whole day were truly pitiable. Those Europeans whose special duties obliged them to remain generally in the camps became discontented, ill and miserable. The least evil was clearly proved to be to endure the pain and discomfort as best we might and *not* give in, except perhaps for a day at a time, when rest had become absolutely imperative.

About five weeks after these distressing sores first attacked us so generally, a newly arrived Brazilian *camarada* informed us that he knew of a plant which he called *Aipa*, that was a sure remedy. After some difficulty he succeeded in finding this plant, which proved to be a kind of wild celery. With it he made a strong decoction like tea, by boiling the leaves and stalks in water. With this decoction the sores were bathed morning and evening, the bruised leaves themselves being applied as a poultice at night. After three days of this treatment, Curling and I entirely got rid of our troubles in this respect. Lundholm was cured in less than a week, and the five Europeans, who were at that time still with us, were all cured in equally short periods. This *Aipa* remedy, I found afterwards, is

known to, and practised by the wild Coroados Indians, who inhabit the lower portion of the Ivahy valley, they also occasionally suffering from similar sores.

For three weeks I remained out in the forest with my little party of workers, Curling, with another party, keeping always from one to three miles in advance of me, communication between us, and also with the main camp, being constantly kept up by messengers sent from one to the other.

Once I paid him a visit in his advanced camp, though the journey was pain and grief to me on account of the climate sores just mentioned. I found him, however, in a far more wretched state than myself, his legs especially presenting a shocking sight. Nevertheless he still managed to crawl about, exploring. Fortunately he had with him a very good foreman, an American named Nettles, who, from having been in the country many years, did not suffer from this affliction so greatly as did the rest of us. This man, who was almost the only trustworthy and capable non-Brazilian that we possessed, was of immense help in relieving Curling of much of the most trying part of his work, which, in his present condition, he could not possibly have performed himself.

On one occasion he had been sent by Curling with two other picked men, on what proved to be a four days' expedition, for the purpose of exploring the course of a little river called the Barra Baptista, down to its junction with the Ivahy. On this expedition, during which they suffered great hardships from not

taking sufficient provisions, they met with an adventure which seemed almost providential, resulting in the killing of an animal which hereafter was destined to become, like the *Jacutinga*, one of the mainstays of the Staff. This was the South American tapir, known amongst ourselves by its Brazilian name, *Anta*.

The adventure came about in the following manner. The small party of three men, including Nettles, had been working their way through the forest, along the banks of the Baptista for a day and a half, and had not yet emerged out on to the big river, as had been expected. Their provisions were already consumed, and they had nothing to eat but honey and *palmito* tops. On the second night they camped, tired, and almost supperless, on a spot about twenty yards from the bank of the Barra. The moon, which was nearly full, had risen about an hour, when one of the party went to the Barra to get water, and suddenly found himself face to face with a tapir. For one second the two stood looking at each other, and then the latter turned sharply round and plunged into the water, just as the man discharged the contents of his pistol about his ears. Hearing the report, Nettles and the other man with him came rushing up. Taking in the state of affairs at a glance, the Brazilian plunged into the river, which was here only ten or twelve yards wide, and keeping his pistol and powder-belt high and dry with one hand, with the other swam across, and in a few seconds landed on the opposite side. Nettles rushed a short distance down stream, in order to reach a little

rapid where the water was shallow, so as to cut off the tapir's escape on that side, while up stream a natural barrier was formed right across the river by a *salto* or waterfall, five feet in height. The tapir was now imprisoned within a pool of about twenty yards by twelve. After remaining beneath the water about one minute after his first dive, the men easily following all his motions by the ripples on the surface, the animal came up again to breathe and look about him. Two charges of buck-shot saluted his appearance, and immediately he plunged down again beneath the water. After a short interval he again rose, but receiving a similar salute, dived as before. Whichever way he turned he found someone ready to receive him; till at length, blinded by the repeated charges of shot, and exhausted by his repeated dives, he fell a victim to a thrust from a long *fação* which pierced his neck. The hunt lasted twenty minutes, and must have been especially exciting to the three men engaged in it, as they were literally hunting for their lives. The flesh of this tapir supported them for the next two days till they had once more safely arrived back in camp.

I do not think either Curling or I will ever forget the weeks that we spent in this manner out in the forest. I should but weary the reader were I to recount a tenth part of the miseries and hardships we suffered, chiefly caused by the painful sores which were eating into our limbs, and the never-ceasing insect plague. Day after day we were devoured alive

by insects, and pestered by vermin of all kinds, and even at night there was very little rest from their attacks. Were it not that the climate of these forests, notwithstanding that they are veritable forcing-houses of heat and moisture, is essentially healthy, no European could have withstood these sufferings for the many weeks during which we ourselves were obliged to undergo them. I originally went out on this protracted expedition with two Europeans amongst my party, neither of whom remained with me after the first week.

The Brazilians, on the contrary, came out nobly through the ordeal; for even to them it was an unusual trial, accustomed as they were to their large open *sitios* and *roças*. For my part I grew to have quite an affection for each individual of my small band of *camaradas*; and they on their side seldom complained when by chance provisions ran short, or some especially difficult service was required of them.

On the 18th of November this severe spell of forest life terminated for the time. We emerged on to the open river bank, bleached quite white or whitish-yellow; and this, notwithstanding that a powerful tropical sun was blazing above us for twelve hours a day. This heat, however, only reached us in the deep shades of the Brazilian forest in the form of a highly magnified Turkish bath. Hence the bleaching phenomenon.

Curling still remained in the forest, while I went down the Ivahy some four or five miles, to the point

of the junction of the Barra Baptista, to build a store camp and collect supplies at that spot.

It was down the course of this little river that Curling was slowly leading the van of the exploration, *sorely* hindered by his bodily sufferings and by the double work which had devolved upon him since the departure of S. and collapse of Lundholm.

He was at this time, by calculation, about four miles distant, in a straight line from the mouth of the Baptista, and about the same distance from the big depôt camp on the Ivaly.

His party was a large one, consisting of about twelve or thirteen men, and to supply these with provisions a constant communication had to be kept up between his little camps and the big river depôt. The distance was continually increasing as he advanced, and the strain upon the transport arrangements augmented in proportion.

By making a depôt at the mouth of the Baptista we hoped, as soon as ever the summer rains should have set in, to open up a water communication with him by that little river. On the day after I left my forest camp on this service these rains actually commenced.

In three days I had built the new depôt, and collected a large supply of provisions on the spot. On the morning of the fourth day, the rains now having caused the waters of the Barra to swell, I intended to make the attempt to open up the new line of communication.

An event, however, occurred in the afternoon of the third day, which induced me to hasten forward this operation with all speed.

A report of a gun was heard at some distance away in the forest. There was great surprise and wonder amongst us as to who it could be coming. We answered with pistol shots, and nothing more was heard for nearly half an hour. At the end of that time we heard a noise of hacking, as of a man cutting his way through the forest, and presently there emerged into the camp clearing, a human being covered with blood from head to foot.

At first no one recognised this miserable-looking object, so disfigured was he with blood and torn garments. It proved to be one of the men of Curling's party, a man named Miguel Lopez, perhaps without exception the most splendid fellow on the expedition, in whatever capacity he was tried. I knew him to be Curling's favourite man on this account. At first he could scarcely speak, but after we had given him some *cachaça* he revived, and was able to give his news.

He had brought a note from Curling to me, in which he said that he had for the last two or three days sent messenger after messenger to the big depôt camp up the river for provisions, and none had returned; that he and his party were reduced to living on honey and birds, and that by the time Miguel, the bearer of this note, reached me, he should, with the rest of his party, have started to cut his way down to

meet me at the new store camp, praying me at once to start by canoe and endeavour to meet him.

Something had evidently gone wrong on the old line of communication, though what it might be I could not guess. Miguel told me that he had been cutting his way down for twenty-four hours without stopping, and that he had been cut and torn by the thorns and stumps which at night he could not avoid. Occasionally he had taken to the water, half wading and half swimming for long distances, but that his feet had been cut to pieces by the rocks, and in the forest by the thorns.

He said that Curling's party, laden as they were with camp equipage, would take at least three days to accomplish this laborious march.

I at once ordered the two light canoes which I had in readiness, to be loaded with provisions; and, within an hour after Miguel's arrival, I had started, accompanied by six of the best and most powerful men, on a mission of succour. Miguel would not be left behind, but insisted upon coming, and, notwithstanding his late severe fatigues—which were scarcely yet an hour old—he set his companions such an example of how to work, that before night came we had accomplished what I calculated to be fully half the distance to Curling's forest camp. Our work thus far had been very laborious, as, notwithstanding the rains, the little Baptista was in parts very shallow, and rapids, cataracts, and *saltos* were numerous. The many fallen trees also greatly impeded our course.

When night came we did not trouble ourselves about making any elaborate camp, but merely cut a little clearing a few feet in diameter for the fire, and swung our hammocks in the trees around.

We had brought a dog with us, which, the moment we had landed, set off full cry into the forest, and continued hunting for two hours after dark. Miguel said that, if there were any jaguars about, he would be snapped up to a certainty. We shouted to him to leave off the chase, which, by its manner of running, the *camaradas* recognised as being a deer, but to no purpose. Once the animal passed close to our little camp, but it was pitch dark, and nothing could be seen. At length the dog grew tired of its fruitless hunt and returned to us, and the remainder of the tropical night passed undisturbed, but by the melancholy wail of some kind of goat-sucker in the distant forest, by shrill night insects around, and the never ceasing buzz of mosquitoes in our ears.

The moment daylight appeared we had started again, our first piece of work being to drag the canoes bodily up a *salto* of nearly six feet vertical drop. This was probably the scene of Nettles' tapir hunt already described. The little river was wonderfully rich in birds. Solitary king-fishers reigned over each little reach of water. Sturdy bitterns and long-necked cranes of various species kept guard over each rapid and waterfall. I shot one or two as specimens, but there was little time for delay of this kind. After five hours of incessant toil—during which Miguel had

enlivened us by pointing out many of his late tracks or *rastos*, where he had, from time to time, taken to the water, and, after the manner of his race, tacking on a tale to each—shortly before midday we heard shouts from the right bank, and the well-known sound of hacking a *picada* through the *mato*. We shouted in return, and presently several men appeared out on the bank, amongst whom I recognised Curling by the peculiar cut of his garments, which consisted of an enormous sun-hat (which, by the way, is very rarely required in the forest itself), a short duck-jacket and knickerbockers.

The delight with which they hailed our appearance did our hearts good, and amply repaid the toil we had undergone before meeting them.

They presented a very forlorn appearance indeed, having already done a good amount of forced marching on starvation allowance. Curling himself was but in a poor condition for marching, as, like myself, he was still covered with climate sores on his legs, hands, and arms. The Brazilians showed their delight at the succour that had arrived in their usual manner, by shouting and firing off pistols.

There was to be no more marching that day. The next two hours were spent in cooking and eating. A clearing was made, and a large palm and bamboo rancho built in a very short space of time.

Some tracks of tapirs had been observed by us on our way up the river, and it was proposed, as a fitting conclusion to the happy meeting, that a hunt should be

organized. Curling had got one dog, and I had brought up another, and both were said to be good tapir hunters.

The river was too shallow to allow us to use the canoes with any advantage, though the game was sure to ultimately take to the water. Two men started off wading up the river; occasionally, when the water became deep, getting out on the bank and cutting a way through the jungle. They took the dogs with them in a leash, ready to slip them when a good track had been found. Curling and I went with them, as long as they kept near the river, but not finding a suitable track at once, they soon steered away for the forest, advising us, however, to remain in or near the river.

We separated, Curling going down stream, and I going up. We had not long lost sight of each other, when a tremendous uproar of dogs and men, and crashing of underwood, burst forth from the direction in which the hunters had gone. My heart leapt up to my mouth with excitement, for I knew that such an uproar could be caused by nothing less than a tapir suddenly roused from its lair. At this moment I happened to be waist-deep in the water, with no welcome shallows anywhere near, on which I could move freely. The noise and crashing of underwood seemed, however, to be coming directly towards me. I cocked both barrels of my gun, which was loaded with heavy ball cartridge, and stood as motionless in the water as the excitement of the occasion

would allow. I could now distinctly hear the galloping of the great beast as he came nearer and nearer. My eyes grew misty with the intensity of my excitement, as I momentarily expected to see the animal come bursting out of the jungle, and plunge into the river. My gun was at my shoulder, and my finger on the trigger, when the tapir suddenly turned at right-angles to its former course, and without coming into view, went crashing its way through the jungle in a direction parallel to the river, followed by the dogs in mad cry.

In two minutes more all sounds were lost in the distance, except the faint voices of the dogs still in full cry. In my eagerness, I attempted for a few seconds to follow by swimming, booted and armed as I was, but this was a hopeless task. Half-an-hour later I heard a double shot in the distance. This proved to have been the death-knell of the tapir, which, after a rapid hunt, the dogs had brought to bay higher up the river, where the hunters had come up with it and despatched it with their pistols at close quarters. This night we had tapir steak for dinner for the first time. To me it tasted very like beef; but the Brazilians said that they would have preferred *xarqui*, or dried beef, to tapir meat, because the latter was liable to cause *dor do estomago*. Curling and I, however, enjoyed this unusual luxury of fresh meat greatly, voting it better than any *xarqui* that ever grew beneath an ox-hide.

The rancho which we had here built was named

“rancho da Anta,” or “tapir hut,” in memory of this our first tapir hunt. It was no sooner built than its services were put in requisition. Thunder, which had ceased for the last twenty-four hours, once more began to mutter around, and the big rain-drops to patter upon the leaves of the forest. The rancho, however, had been made large enough to contain us all, as well as the two canoe-loads of provisions that I had brought with me. Amidst the thunder, and lightning, and heavy tropical rains, we all passed a comfortable night, sheltered from the elements beneath the work of our own hands, and with meat and drink in abundance. This is what constitutes happiness in the backwoods of Brazil.

CHAPTER VI.

Return to the river.—Anarchy in the big camp.—The “merchants” of Colonia Thereza.—The Cachoeira.—A perilous mishap.—Habits of certain parrots.—Habits of the toucan.—The four-in-hand parrot.—A new plague.—The “berne.”—A wild-pig hunt.—Dagan and the tree bridges.—Indian runners.—After work in the forest.

THE bold and shrewd spirit of enterprise which in the Eastern hemisphere causes men to follow even armies into the field in the hope of making legitimate profit out of their necessities, in spite of the manifold risk to life and property, does not seem to have penetrated into the Western hemisphere, or at least into that part of it situated within the boundaries of South Brazil.

Let us say that in the province of Paraná alone, our expedition, in the course of its two years' or so existence, expended the respectable sum of £30,000 to £40,000, more than one half of which having been spent over the heads of the “merchants” of Colonia Thereza, to their loss, no less than to our inconvenience.

Would it be believed that, with such a sum of

money as this passing by them in a constant stream, as payment for stores and provisions, which their knowledge of the country could have brought to Colonia Thereza at a saving of at least one-third of the price actually paid by us, the highest flight of commercial enterprise called forth in them by the presence of our expedition in their country, was to send *surreptitiously* down to our camps five-shilling barrels of *cachaça* to be sold retail to our men on "tick!"

Imagine my disgust when, two days after the events described in the last chapter, I returned to our big camp up the river, and found that it had been transformed in our absence into a low *venda* for selling and drinking *cachaça*.

It appeared that the chief "merchant" of the colony—a man of some capital and considerable connection in the large towns of the province, had been doing exactly what I have just described, and sending one of his friends down to sell *cachaça* to our men on credit, for which hereafter he had the cool effrontery to send in the bills to *us*, begging us to act as his collectors and stop the money owing to him out of the men's wages!

No wonder poor Curling had never heard more of his messengers whom he sent for supplies. As fast as they arrived at the camp they joined the orgie there going on, while the spirits lasted, and now, having been drunk for three days, were but just waking to a sense of their neglected duty.

I made a clean sweep of all the worst offenders, who, before an hour had elapsed from the time of my arrival, were on their way up to the colony, dismissed.*

Remaining but three hours in this camp, to put things straight once more and despatch a "special" to the colony, I first sent on a big canoe, loaded with men and stores, to the Baptista Camp; and half-an-hour later started thither myself, in a tiny cedar canoe, with only Messeno to work it. The old camp was now therefore to be deserted, and only Lundholm (who at length was beginning to move about a little), with four men, was to be left behind in it, as being a more convenient point for him to recommence his forest work from.

A little more than a mile below the camp there was a *cachoeira*, or cataract, which I had already passed once before when the river had been quite low. On that occasion we had had to get out of the canoe into the water and lead her down some narrow channels to the bottom, the fall being about five feet in eighty yards; ugly-looking ledges of rocks standing all across it. Now, however, that the river was in flood, I asked Messeno what he was going to do when we came to it. He replied that the men in camp had told him that the *cachoeira* was *lisa*—in fact, that it was now temporarily obliterated by the flood, and that we

* What we most suffered from at this time, when the work was scattered, was not only the want of more engineers, but of a few thoroughly good, trustworthy *foremen*.

should "slip" over it without knowing it was there beneath us.

I reclined at full length at the bottom of the canoe enjoying to the full the rapid motion as we were swept along on the flooded river. Parrots of many colours swooped out from the edge of the forest as we passed by, saluting us with the harshest and most discordant of screams, and then again swiftly returning to their cool coverts in the thick-foliaged trees and relapsing into silence. *Biguás*, or big divers, moved uneasily on their *tocos*, or tree-stumps, as we approached, finally spreading their wings and skimming off up or down stream, and never failing to dip their tails into the river at the commencement of their flight.

All at once the dull roar of falling water disturbed my dreamy cogitations, and at the same moment we rounded a sharp bend in the river and came in full sight of the cataract, which, so far from being anything like *lisa*, was raging and foaming like sea-breakers on a rock-bound shore. We were in mid-stream, and had already entered, beyond the power of staying our course, into the full current leading to the cataract. It was difficult to see the full extent of the danger to which we were being hurried, for the setting sun was straight before us, dazzling our eyes. "*Que diabo! 'stamos perdidos!*" "The devil! we are lost!" were the only words Messeno could utter when he first caught a glimpse of the great waves stretching across the whole width of the river. There was no time, in fact, for more words. Messeno, who had till now been

standing in the stern of the canoe, sat down—still, however, continuing to steer with his paddle. With a rush we raced down the first piece of slippery water, that marked the beginning of the cataract, dashing our bows into the raised wall of foam at the bottom. A huge volume of water came on board, over the low straight sides of our tiny craft, but in a second we had passed through the wave, and still floated. I could now make out another and another wall of water ahead, each one marking a line or ledge of sunken rocks. It was evident that with the canoe already half-full of water, the next wave must swamp her utterly. With one hand I clutched my valuable gun, and with the other my still more important bag of survey-books, and in a moment we had dashed into the second wave. The water came right over us, and I immediately felt the canoe sinking from under me, and heard the angry hiss of the breakers in my ears, as we were swept over the sunken rocks beneath. Almost immediately the canoe reappeared close by my side, floating bottom upwards. I threw one of my arms round her, but she turned over at once, causing me to disappear under the water. Twice again I tried to support myself by her, with a similar result each time. I was blinded and choked by the water, and already almost exhausted by my efforts to keep my head above the surface. I expected momentarily to be dashed against some hidden rock, when the question of “to be or not to be” would have been definitively settled in the negative. The mighty roaring of the waters all around

us, and the still more horrid hiss which told of a rock barely covered, over which we were passing at the rate of twelve miles an hour, would have shaken my nerves had I had time to think. But in less time than it has taken to read this description all was over. The cataract was thundering impotently in our rear, and we were drifting swiftly along in smooth water. I say *we*, for, on looking behind, I was relieved to behold Messeno sitting astride upon the stern of the upturned canoe, on which, having both hands disengaged, he had easily succeeded in seating himself the moment we had emerged into smooth water. He also had the advantage of me in being clad only in a pair of drawers, whilst I was fully accoutred in my forest costume. I now got one arm securely round the canoe's keel, and in this manner we drifted some distance, too utterly exhausted by the beating about in the cataract, to make any efforts to right the canoe, or steer her towards the bank.

At last Messeno gave a shout and said, "*Alli vem a canoa grande*"—"Here comes the big canoe,"—and at the same moment, I also caught sight of a canoe struggling up stream, under the bank. It was the same which I had sent on half-an-hour before I started. I could see the men in her all standing up, and working their paddles like madmen. All they could do, however, was to hold their own against the stream till we had drifted down abreast of them, when they immediately turned their canoe's head a few degrees off the bank, and putting their backs into their paddles more vigorously than ever, cut us off in mid-stream,

and in another minute we were safely on board. We had drifted fully a mile before we were rescued, and had not our rescue come when it did, I should have had to have dropped my gun and books, and even then have had a hard enough struggle to reach the shore, encumbered as I was with boots and clothing, and exhausted by the cataract.

From this day forth, I entertained a wholesome respect for the power of water in motion. I had practically proved how utterly helpless a man must be, under such conditions as those Messeno and I had just encountered. The knowledge of swimming in such circumstances is chiefly useful as giving nerve to a man; but to attempt with his puny strength to combat the waters of a cataract, or even in the slightest degree to guide his course down it, is a sheer impossibility. I considered that my experience in this respect had been cheaply bought, at the price of a good ducking and the loss of various small articles of private property.

After a refreshing time of four or five days, spent either upon or close to the big river, during which I built yet another main camp, four miles below the Barra Baptista, and made one or two short but interesting exploring expeditions into the forest, duty compelled me once again to give up my body to be tortured and devoured day and night by bees and mosquitoes, carapattos, and stinging caterpillars.

Between the animal life of the inner forest and of the river banks, there is a wide and marked difference

—more especially with respect to bird life. One noteworthy instance of this is in the case of the parrot tribe. These birds were extremely rarely seen by us at any distance away from the river banks. The solemn stillness of the depths of the forest was seldom disturbed by their harsh cries, whereas on the river banks they formed the chief, and certainly the most prominent feature of animal life. Here their shrieks were often deafening, and their flights frequently quite darkened the air.

I have already incidentally mentioned their habit of shrieking when on the wing, and relapsing into silence when they have again returned to their covert. This seems to be a very general instinct with all the smaller and weaker varieties of parrots, if not also of the larger kinds. This latter is the instinct of self-preservation, induced by the vague knowledge of enemies existing within hearing of their cries, and whose approach they can neither see because of the dense forest surrounding them, nor hear, without themselves preserving silence. Besides this instinct of silence under certain circumstances, parrots have another great protection against their enemies given them in the colours of their plumage. Although green of various shades is the characteristic hue, like that of the forests they inhabit, many species are gaudily marked with yellow, purple, and red, one particular bird which I have often seen having a head the exact colour of a certain bright yellow and pink fruit called the *guariroba*, upon which it ex-

clusively feeds during the months of November and December. In this case its gaudy topknot is a real protection against its enemies, the hawks and kites. It will generally be observed, however, that all the more striking colours and markings are altogether absent from the most exposed parts of the bird, and are confined chiefly to the breast, neck, and the wings and tail, when these latter are spread open for flight. The brilliant blue and scarlet macaws, with which we were to meet in great numbers in other parts of the forests, are an exception to this rule; but, on the other hand, these birds are powerful enough to cope with any hawk or eagle of the country on equal terms, and therefore have less need of concealment.

It is remarkable that with the toucan tribe—another harsh-screaming bird—the rule observed in the case of the parrots is reversed in one noteworthy particular. This bird screams when it is sitting, and performs its short and clumsy flight in perfect silence. It screams only in the early mornings and evenings, when seated on the extreme tops of the highest trees, enjoying the first or last rays of the sun, and while it has a full and unimpeded view above and all around it. When a bird of prey appears, attracted perhaps by the screaming, the toucan sees it at once from afar, and quietly drops down into the thick covert beneath, till the coast is again clear. Parrots therefore scream only when in flight, because at that time no enemy dares to attack them, in face of their compact numbers and rapid

powers of wing; while the toucan, which is a bird of feeble flight, and of a less gregarious nature, carefully avoids attracting attention by screaming, except on the occasions noticed.

A knowledge of peculiarities such as these, in the habits of birds, is sometimes very useful to the human inhabitant of the forest, who has to read such signs to lead him to his dinner, or perhaps even to save him from some danger.

There is a certain species of large parrot, a specimen of which I never succeeded in obtaining, which may be seen at all hours of the day, high above the river and forest, flying either in pairs, trios, or quartettes, steering always one straight, unswerving course, ignoring alike friend or foe, except the partner by its side.

I never observed less than two or more than four of them together. Very frequently they fly in threes, two in front and one close behind. When four are together, they keep religiously in pairs, one behind the other, like a four-in-hand harnessed to an invisible car. They exhibit none of the exuberance of spirits so characteristic of the smaller parrots of the river banks. Even their cries are cut and dried by rule, and are heard proceeding from them only at perfectly regular intervals. The midday sky is seldom without two or three such pairs or quartettes in view, each following its own distinct, separate course.

In the deep shades of the silent forest, the only sounds that used to reach us from the outer world

were the screams of these great parrots flying overhead. Whence they came and whither they went on their long, steady flights was one of the many insoluble problems of this wild land. Nobody could answer the question, not even the Brazilians themselves.

The time which had now come was to be the last occasion on which we were to be called upon to endure the torments of a prolonged spell in the forest; for the line of exploration was never again forced to follow a course so far removed from the banks of the main river, the Ivahy. On arriving at the little camp from which my work was to start again, after the usual laborious march from the river, which on this occasion took seven hours to accomplish, the men being laden with provisions, hammocks, &c., we found that another plague, which had, however, already appeared on the Ivahy, was awaiting us.

Hitherto our troubles, though painful enough, had been little more than skin-deep. This new plague was, however, of a more penetrating character—it was to make its abode deeply seated in the flesh itself.

The origin of this new pest was a big, spotted fly, not unlike our common horse-fly at home, though larger and more stoutly built.

I first made the acquaintance of the fly itself as I was one day paddling in the bow of my canoe; the prick it gave almost causing me to jump overboard.

The Brazilians call the fly *botuca*, a name which they also give to a large brown fly having an enor-

mously long and sharp proboscis, which we met with a month later.

The fly in question is a silent fly, that is, it makes no buzzing with its wings when flying, like the brown *botuca*. It is thus enabled to make its attacks without warning. Neither does it insert its proboscis into the human body for a bloodthirsty purpose like the latter insect, but merely in order to deposit its egg therein. It is a curious example of the minute care which Nature bestows even in the smallest points relating to the economy of life in her especial protégés, the insects, that this fly, which is, as far as I know, the only winged insect of these forests which deposits its eggs in the living bodies of the larger animals, is also the only one whose bite or rather prick is absolutely free from venom, and which therefore leaves not the slightest irritation behind it.

When we know that the egg is a very delicate molecule, and that any rubbing or scratching upon the spot in which it is deposited would suffice to destroy the germ of life within it, while it is yet in its first stage, we begin to see the reason for this exceptional exemption from irritation following the touch of this particular fly. The prick is sharp and sudden, but the moment the proboscis is withdrawn (the egg having been deposited at the very moment of the prick) the pain ceases, and no inclination is felt to scratch or rub the wound. The egg, thus left to itself, speedily germinates and becomes a maggot, which gradually, and, at first, painlessly, works itself deeper into the

flesh. In about a week's time, when the maggot has grown to a length of perhaps half-an-inch, it begins to fill out laterally, and at the same time to make known its presence to the unfortunate individual, be he man or beast, in whose body it is working. At regular intervals during the twenty-four hours, the animal changes its position by revolving slightly on its own axis, the sensation to the hapless sufferer being as though a sharp spiked wheel was being screwed round in his flesh. At first the pain is felt about once in every six hours, lasting perhaps for three seconds each time it occurs. Every day, however, shortens the interval of repose; and, by the end of another week, the pain recurs every hour. By this time the pain has become so great as to attract especial attention to itself above all the more common daily annoyances of mosquitoes, flies, wasps, and stinging caterpillars.

It was when the animal was in this advanced stage that, on the first occasion of my suffering the indignity of having one of them in my own body, I discovered what it was. I complained of the constantly recurring pain to a Brazilian, and he at once suggested that it was a "berne" that was causing it—"berne" being the name of this interesting *bicho* which I have just been describing. Having ascertained that he was in fact correct in his surmise, I gave myself up to be operated upon, and, after a good deal of pinching and application of tobacco juice, the beast was extracted.

The full-grown "berne" is about an inch and a

quarter in length, and half-an-inch in diameter, being cigar-shaped—that is, pointed at both ends. Its general colour is white, but round its body are five dark rings, which, if closely examined, are seen to be composed of numerous tiny black spikes or bristles. These are the feeders of the animal, with which also it cuts and tears the flesh in which it is buried, by its periodical revolutions. Such was the new plague with which we now began to be inflicted.

Fortunately for us, the fly which produces the “berne” is, like so many other species of insects, extremely particular in its choice of locality; and though one part of the river or forest may be swarming with it, another part, a mile or two distant, may be entirely free from it. It may, in fact, be looked upon as the representative in the New World of the African *tsetse*, though not of course by any means so formidable as this latter. It is, however, sufficiently a scourge to cattle, as to render the breeding of them, in the localities where it is existing, a very unprofitable proceeding.

Its bite is not poisonous, like that of the *tsetse*, but the wounds caused by the “bernes” which it deposits, if not constantly attended to, breed other vermin, and the cattle die a miserable death—being, in fact, devoured alive.

We frequently killed deer having “bernes” in their bodies, and our dogs at one time suffered terribly from the same pest. I have seen with my own eyes as many as 200 “bernes” of large size extracted from one dog in the course of an hour’s operation.

Old dogs are grateful to the hand that relieves them from these torments. Young ones have to be muzzled and securely tied to a tree under the operation, or they will bite savagely from the pain of the process. A few days' experience, however, and they too will lick the hand that is operating upon them.

One morning early during this my third residence in the back-forest, I was walking along one of our broad *picadas*, attended by Jaca alone, the other men of my party being about a quarter of an hour in advance of us, when we were startled by hearing a sudden rush in the jungle by the side of the path, accompanied by a noise like the clapping of "nigger-bones."

"*Porcos do mato*," said Jaca in an excited whisper. "Wild pigs!" and down went the *fouce* that he was carrying, on to the ground, and, drawing his pistol from his belt with one hand and his long *fação* with the other, and followed by me, he glided noiselessly but rapidly in pursuit. Fortunately the jungle was, in this part, more open than usual, and with an occasional "snip" of the knife, we had no difficulty in following at a run in the direction that the pigs had taken.

Presently "clack, clack," close in front of us, and then a sound, like the rushing wind amongst dry autumn leaves, receding before us. "*Vamos, Doutor*," and encouraged by the near proximity of the game, we increased our speed, winding in and out amongst the great trees and clustering masses of tangled *cipós*, and jumping over fallen trunks in eager pursuit. Nothing

stopped us, and Jaca's deftly-handled *fação* went through the various impeding *cipós* easily and noiselessly, as though they had been butter. Another "clack," this time behind us, caused us to stop short in our tracks and listen, peering into the gloom around us to sight the animals. The same signal was repeated now on every side of us. We were in the midst of a drove. At a sign from Jaca, I moved noiselessly to the right, while he crept away to the left, and we speedily lost sight of each other. I loosened my knife in its sheath, and, cocking both barrels of my gun, slowly and cautiously crept on.

Suddenly another double "clack," almost beneath my feet, and two dark forms rushed away before me. I let drive one barrel and then the other in quick succession at the same pig, and then, drawing my knife, rushed to the spot. The pig was there, hard hit in the back, but was dragging himself away on his fore legs, the hind legs trailing.

When I came up he snapped his jaws viciously, and rolling his bloodshot eyes made a great effort to charge, but failing in so doing, fell down on his side, and before he could rise I had driven my knife through his neck again and again in the excitement of the moment. I had bagged my first pig, and an ugly brute he was, with his two slanting tusks sticking out, white and sharp, from each side of his lower jaw, giving him a savage look even in death. His chest was very deep and strong, but his flanks and hinder part were lean and wiry, like those of a greyhound. He was covered

with long bristles of the colour of porcupine quills, and his scent was of the strongest possible description.* I now shouted to Jaca, but just then I heard the report of his pistol at some distance away in the forest, showing that he too had come up to the game. Presently he returned. He had, however, missed his pig, probably from having nothing better than a Brazilian pistol as a weapon. Cutting a long *cipó*, we secured my *porco* on Jaca's shoulders and retraced our steps to the *picada*, where we dropped our game, covering it over with fresh palm leaves, to keep the flies from touching it. This was the first drove of pigs that had yet been met with. It was a sign that the forest was becoming less densely jungled, and also that we were now entering the land of Jaguars and Pumas, for these beasts were always to be found where *porcos do mato* existed, these latter forming their principal food.

After this day's work was over, we returned by the same *picada*, the pig being given to a man named Dagan to carry. This man was a German, and was chiefly famed among us for his enormous appetite. This peculiarity, added to certain eccentricities of manner and behaviour, had made him the general butt of the Brazilian *camaradas*. On this occasion the *picada* happened to cross the river Baptista twice—in both instances, a "tree-bridge" having been felled across it for the convenience of crossing. These tree-bridges, of which there were many on different parts of

* See Appendix, Note C, "Brazilian wild pig."

the picada, were the plague of Dagan's life, as he was afraid of losing his balance or slipping upon them, and tumbling perhaps twenty feet or more into the water beneath. Usually he preferred the safer, though more laborious method of descending one steep bank, wading or swimming the river and ascending the opposite bank. To-day, however, the Brazilians had chaffed him into a determination to exhibit unusual pluck, and he swore a mighty oath that he would, with the pig on his back, cross the next tree-bridge with the best of them. We presently arrived at the river, and on seeing his old dread, the narrow and slippery tree-bridge, Dagan's heart began to fail him, and for a moment he hesitated. The Brazilians began to chaff again unmercifully. Dagan's back got up, and boldly stepping upon the tree, he commenced walking across it, with the pig still strapped to his shoulders. The river was about twenty yards wide from bank to bank. When he got half-way across, we saw that his courage was giving way. He hesitated and almost stopped; then, suddenly seeming to summon up all his remaining courage, fixed his eyes on the opposite bank, and began to run. At the first step his body inclined ominously to one side, at the next step his centre of gravity hung still more away from the tree; and at the third, man, pig and all had toppled over into the river beneath, making a terrific splash, with the impetus gained by a drop of nearly twenty feet. The Brazilians, who had till now delighted in chaffing the poor fellow, at once showed their good nature by

rushing down the thorny bank and plunging in to his rescue. Fortunately, he had fallen into a good depth of water, and was therefore not at all hurt, but when he was pulled out his face wore a scared look, which told plainly enough what a shock his nerves had sustained. Shortly after this occurrence Dagan requested permission to leave the expedition, which was granted. I fear the daily torture of the tree-bridges, added to the insect plague, had been altogether too much for him. To us, it was inconvenient losing all our Europeans, as, however unfitted they were for the life we were leading, yet they were valuable because they could all write and understand figures, which scarcely one of the Brazilians was capable of doing with even the most ordinary facility. As chainmen and storekeepers, therefore, they were always of some value to us.

On the day following this incident, we were met on the *picada* by two naked Coroados Indians, whom I recognised as belonging to the Indian village at Colonia Thereza. Each was carrying a light bamboo basket on his back, supported by a band of bark passing over the head.

Without greeting of any kind, nor taking the slightest notice of the questions of the Brazilians, they walked straight up to me, and one of them produced a note carefully wrapped up, first, in a bit of cloth, and next, in a roll of leaves, and gave it to me with the words "*Capitão—Doutor.*" The note was from Curling, announcing, amongst other things, his own

successful emergence from the forest on to the river bank.

The baskets which the Indians carried contained, besides a supply of beans and farinha for our common consumption, a budget of letters from England, with dates three months back, three bottles of beer from the Curitiba brewery, and some fresh fish caught that morning by the net in the IvaHy.

The introduction of Indians into our staff was a bold idea, now for the first time attempted to be put into execution by us. Our object was to obtain a set of men accustomed to forest life, who would be independent of Brazilian pride and prejudice, and would do the work that a Brazilian would not do. Language proved the stumbling-block in the way, and our Indian *camaradas* were never more than a partial success.*

How I enjoyed this particular night, when after the day's toil on the *picadas* was over, we returned to our little forest camp—which happened to be the very one that had been the scene of Curling's rescue, and our first exciting tapir hunt in honour thereof—and, after a delicious bathe in the cool waters of the Baptista, and the unwonted luxury of a dinner of fresh fish, wild pig meat and *beer*, I swung in my hammock smoking a soothing pipe, and reading the news of the old country from my budget of travel-worn letters.

I remember on this night, the great fire-beetles were constantly mistaking my humble light of a bees-wax

* See Appendix, Note G, "The reclaiming of the Indian."

dip, stuck in a *vara* beside me, for one of themselves, and coming blundering up against it, extinguishing it again and again; and how tired Jaca was of my oft-repeated shout, "*Jaca, quero luz,*" necessitating his tumbling out of his hammock each time to relight the ill-used dip.

On looking back on these times as I write, through a long vista of months and years, crowded with many other scenes and adventures, I forget all the manifold discomforts and petty troubles with which they had, indeed, bristled at all points, and remember only the pleasures of my then wild life.

CHAPTER VII.

An Indian panic.—A night alarm.—Jealousy between Indian and Brazilian.—News from the first staff.—Their life and ours.—Morant's adventure with [a snake.—The coral-snake.—Other snake encounters.

IT was the last night of the Old Year. We were camped on the river bank, a full day's journey by canoe from Colonia Thereza. For the last two nights a panic had reigned in the camp. The tame Indians whom we had been employing for the last few weeks had all at once disappeared, and none knew whither they had gone. The Brazilians, whose consciences in everything relating to Indians make cowards of them, knowing as they do what just cause the Indians have for hating them, declared that the men who had disappeared had been acting the part of spies during the time they had been with us, and had now, having learnt all our habits and ways, gone into the forest to collect their fellows for the purpose of making an attack upon the camp, and murdering us all. Precautions had been taken to prevent, at all events, the chance of a surprise ; and now, for the first time, night watches had been established.

The first excitement had somewhat calmed down, and it had begun to be thought possible that the Indians in question had merely returned to the colony, having got tired of their work with us. The precautions were, however, still kept up, and I never retired to my hut for the night, without laying my revolver and Snider rifle close to my hand.

On this particular night (New Year's Eve), the hour being about nine, I was lying in my hammock in my *rancho*, dreamily watching the dark outlines of the men keeping *ronda*, whose forms stood out against the deep red glow of the watch fires like sombre giants. The low sound of their voices as they talked together just reached me where I was lying, in an indistinct murmur. Every now and then one would lean forward and take a brand out of the glowing heap, knock a shower of bright sparks off the end, lighting up the swarthy faces of those opposite and the dark mass of forest in the background, vividly for a second, only to leave everything in deepest gloom the moment after; then, carrying the now dull brand to his cigarette, would puff silently for a minute; then the low murmur of their voices would begin again.

I do not know how long I had been lying in this state of wakeful dreaminess, perhaps one hour, perhaps more. My thoughts had been wandering on wide travels into the far-away past, and uncertain future, when a slight noise recalled them abruptly to the present. I did not move, but held my breath, and listened. Again the same slight sound, quite distinct

from the low hum which I had been hearing for the last hour, seemingly quite close, on the other side of the *ranch*o to where I was lying. The fire on the floor was nearly out; a faint almost imperceptible glow was thrown by the expiring embers on to the white split palm-trees which formed the walls of the hut, showing out the dark spaces between, with greater distinctness. Slowly and silently I turned my head round towards the sound, at the same time noiselessly putting out my left arm to feel for the rifle which I knew was lying beside me.

My first thought was—Indians, and I concentrated my whole mental energy into the task of rapidly planning exactly what to do, when the moment for action should arrive. At the same time, while thinking thus intently, I kept both ears and eyes strained to catch each sound or movement. Before long I became convinced it could not be Indians—the noise was too continuous for that to be possible. Indians make no sign nor sound by which their presence can be discovered, before the simultaneous yell with which they are accustomed to spring upon their unwary victims.

The noise still continued, and now I could see a distinct movement of two of the white palms. They were separating, and the black space between was growing wider and wider; my eyes rapidly scanned it from top to bottom, but as yet nothing could be seen.

All at once a shadow seemed to pass in front of the white upright, at its lower end—something was coming

in, though what it was, the dim reflection from the small remnant of fire effectually concealed. The shadow grew bigger and bigger, and advanced farther and farther into the hut. Still I could not make out what it could be. I longed for the fire to light up, just for one moment, to show whether it was man, beast, or reptile. All this time my rifle was ready cocked, and pointing towards the place. It was too dark to see the sights, so I followed with my eye the bright line of reflection made by the red ashes on the polished barrel, and covered the dark moving object, determined to fire the moment it came sufficiently near to enable me to make out enough of the outline to distinguish the head from the tail. It now advanced as though to cross the *rancho*, and as it passed between me and the glowing embers, for one moment its outline was clearly defined. This was enough. Quick as thought my finger pressed the trigger. The recoil of the big Snider almost knocked me out of my hammock, and the report broke the deep silence like a thunder-clap, and went rolling away far into the depths of the night, startling, no doubt, many a wandering beast. I sprang down on to the ground and rushed to the spot, regardless of the uproar of dogs and men which the report of the rifle had aroused in the camp; only eager to see whether the bullet had taken effect, and what the animal was, that had so stealthily crept into my *rancho*. There, on the ground, lay the form of a big animal perfectly still. I seized a leg and held it up, and lo! it was an enormous *Jacuterica* or *Ocelot*, almost as large as one

of our hunting dogs. I rushed out into the middle of the camp, in triumph, bearing my trophy. "*Não è nada rapaziada,*" I called out to the startled men, who, pistols in hand, had come rushing out of their *ranchos*, thinking, no doubt, that we were in for a midnight attack. "Nothing at all, my lads, only a *Jacuterica,*" and I held the animal up to view by the camp fire. On examination, we found that the bullet had passed into his neck and out at the shoulder, making a hole big enough to have let the breath out of an *Anta* itself.

This was only the second animal of this kind that had yet been killed on the expedition, and I was almost as much pleased at having killed it as if it had been a Jaguar. No more thoughts of sleep just at present. I took the animal back to my *ranch*o, and, having first carefully suspended him by his fore-legs to one of the cross timbers, proceeded to skin him by the light of one of our patent oil lamps, held by Miles. The operation was not a very pleasant one, as may be imagined. All the wild cat tribe have a very strong scent, and this individual was no exception to his kind.

From the tip of the nose to the point of the tail, he measured three feet nine inches; the fore-legs exhibited great thickness of muscle, and the paws were armed with a formidable array of talons; but, by far the most terrible weapons to look at were the teeth, which were big enough to render him no mean customer for any animal to have to deal with, except the royal Jaguar himself. Even in death, the broad flat head, with its big, fierce-looking eyes, and shining

white fangs, looked ugly enough ; and none of the dogs dared to touch it, when laid upon the ground, but stood at a respectful distance and barked. No doubt many of them had already had too much acquaintance with other individuals of his kind, to care about renewing the same.

The boldness of the *Jacuterica* which I had just killed was only surpassed by that of another which I shot, under somewhat similar circumstances, a few months later. I could not help thinking that if the Jaguars, which report said we should meet with in great numbers another hundred miles lower down the river, only proved half as bold as their smaller brethren the *Jacutericas*, we should enjoy some more than ordinarily exciting scenes, before we were again safely domiciled in civilized lands.

In this case the attraction had evidently been a piece of roast tapir hump, part of an animal that Curling had killed a day or two before, lower down the river, and sent up to the camp, *pro bono publico*. This hump I had carefully kept hung up in my own *ranch*o, because, being considered a tit-bit by the Brazilians, I should otherwise never have seen it again.

It was a long time before I could get to sleep this night, and even when I did, dreams of *Jacutericas* and Indians disturbed my rest at frequent intervals.

The next canoe that came down from the colony brought us the news that the much maligned Indians had reappeared there, the very day after we had missed them. They had merely taken it into their heads to

go away, and had done so, not thinking it necessary to take any formal leave of us. It afterwards appeared, that, as we had not actually paid them at the end of their month, they had taken it for granted that we did not mean to pay them at all, but that we intended to deceive them after the mode to which they were so well accustomed at the hands of the Brazilians.

When they afterwards discovered their mistake, they were so delighted that half their village went directly to our agent, the director, and offered their services for as long as we might want them.

We engaged several, but, as already said, the difficulty of language—for we could obtain no trustworthy interpreter of the Coroado tongue—combined with the pride and jealousy of the Brazilians shown towards the Indians, made the experiment unsuccessful. It is worthy of note that in the case of Coroados Indians, or, indeed, any other Indians speaking the Brazilian language fluently, no prejudice whatever is shown against them by the dominant race. They work together freely, and such Indians even marry Brazilian wives, and are admitted freely into the society of Brazilians as one of themselves.*

Since the four staffs forming the expedition had first separated at Antonina, we had received no news of Nos. 3 and 4, and had but rarely heard of No. 1, notwithstanding that this latter was working within 200 miles of us.

About this time, however, we received a budget of

* See note on page 342.

letters from our friends on No. 1. They wrote in high spirits, having already, after but five months' work, completed more than a third of their allotted section. Up to the date of their letters (January the 7th), their life had been of a very prosaic character, and they had enjoyed the inestimable advantage of having supplies of every kind all around them. Fat oxen were brought to their camp door and there slaughtered whenever their necessities required it. Bread, that greatest of all luxuries, of which we on the 2nd staff had almost forgotten the taste, had never yet failed them. Beans and farinha, our staff of life, to them had served merely as condiments to their other food of fresh beef, pork, chickens, milk and eggs. Of climate sores they had had none, probably because of the higher mode of living that had been possible to them. Of the insect plague as we knew it, they had had no experience. They, moreover, tantalised us by talking of *riding* to and from their daily work, and counting their daily progress oftentimes by miles, whereas we could only count ours by yards, each one of which had been watered by the sweat of a score of human beings—axemen, foucemen, and carriers, who had laboured many times over the same ground, laden like beasts of burden with the food that was to keep the working parties alive, and, lastly, of the engineers themselves, who had literally left their flesh and blood behind on every stump and every thorn they passed, during those terrible weeks in the forest, when we were eaten up by painful sores and by insects. It

was scarcely possible to believe, when reading their descriptions of their life and country, that it was in the very same land, in the very same province, in which we ourselves were working; and, in fact, that all they described was not 200 miles distant from ourselves. Nothing, I think, could more strikingly and practically illustrate the difference that exists between the forests and the prairies of Brazil, than this comparison of two bodies of men, each engaged in work that had one common object, but whose several modes of life were so totally dissimilar. Many people in speaking and writing of Brazil as a country, speak and write of it as though it had but one climate, and offered but one kind of life to the emigrant or settler. In the province of Paraná alone there are three well-defined divisions of climate and life. First there is the hot and unhealthy lowland bordering the sea, on which, for example, the towns of Paranaguá and Antonina are situated, both being subject to occasional visitations of yellow fever. Secondly, there is the elevated prairie region, situated on the average 3000 feet above the sea level, and including an area of about 20,000 square miles, which possesses a temperate and most salubrious climate, well adapted to the constitutions of the races of northern and central Europe. Thirdly, there is the great forest-clad country of the two river basins—the valleys of the Ivaý and the Tibagy, with an extent of fully 40,000 square miles, or more than two-thirds of the whole area of England. This forest land possesses a climate entirely distinct

from that of either of the other two divisions. Nine-tenths of it is distinctly tropical, though not more than one-fourth of the total extent is actually situated within the tropics. Though very salubrious it cannot be said to be equally suitable to the European constitution with the more temperate prairie region which adjoins it, and through which the 1st staff was now so successfully working its way. For the intending colonist in Brazil, it is very important to realise the fact that, even in one province of Brazil, as many different climates and different physical characters of country may be found, as might exist in two kingdoms put together of the old world. He may literally "pay his money and take his choice" of an abode in any one of the three natural divisions which are found in the province of Paraná, since there is a European colony founded in each one of them.

Notwithstanding the more suitable climate and the comparative luxury in which our friends of the 1st staff were living, there were many disadvantages to their mode of life, as compared with ours; the greatest being no doubt its wearying monotony, which was enlivened by no excitement greater than might have been readily obtained on the tame moors of Yorkshire. If such an arrangement had been possible, I think the maximum of enjoyment of our life in Brazil would have been obtained by a periodical and judicious exchange of the members of the one staff with those of the other. *We* should certainly have appreciated to the full an occasional breath of the

cool prairie breezes, good living, and freedom from the insect plague; and, without doubt, the charm and variety of a month or so of forest life, such as we had been leading, would have been an agreeable change to more than one of the members of the 1st staff.

When next we received news from them, about a month later, Morant had in the meantime become the hero of a snake adventure which doubtless went some way towards relieving the monotonous tone of his life for the time being.

It appeared that one night, after he and his tent companion Von Sydow had retired to bed, the latter was aroused by feeling, as he thought, some animal sucking his finger. He drew his hand away and then struck a light to find out what it might be that had taken such a fancy to him, but could see nothing. Meanwhile Morant was lying asleep on his low camp-bed at the other end of the tent, about ten feet distant. The night being very warm and there being no mosquitoes to guard against, he was lying with one arm and shoulder nude above the blanket. The constant movements of Von Sydow, who was doctoring his sucked finger, at length caused him to arouse himself slightly, but just sufficiently to make him conscious that there was something wrong about him. "I felt," he said, "something heavy on my chest, and cold round my arm; I opened my eyes, and by the light that Sydow was using, to my intense horror and dismay beheld a long head and neck waving backwards and forwards, a few inches above my face. It

was a *snake*. I dared not stir, for I felt that its body was twined round my arm, and that the slightest motion on my part might cause the reptile to drive its fangs into me. I called out gently to Sydow, and said, 'Sydow, there is a snake on my arm, what is to be done?' Sydow answered, 'Yes! yes! ya! ya! very good,' as though he thought it an excellent joke, and I knew that he did not understand me, but probably imagined that I was talking about his finger. (Von Sydow was a Swede, and only knew a few words of English.) I spoke to him again and said, 'Sydow, *snake, snake,*' but he did not understand me and only laughed and answered, 'Ya! ya!' I did not dare to shout out loud for fear of exciting the snake, which was still gently waving its head before my face. Something had to be done, and that very soon, for no mortal could long bear this agony of suspense.

"The moment came when I could restrain myself no longer. I jumped up in bed, and simultaneously, with all the force of long-restrained fear and horror, threw out my arm, with the cold deadly folds of the snake still twined round it,—hurling the reptile violently on to the ground by the suddenness and energy of the movement, before it had time to strike.

"While I was looking for a weapon of some sort with which to kill it, it had glided out beneath the wall of the tent and disappeared."

This was Morant's first close acquaintance with a snake, as described by himself. Whether it was a venomous snake or not could not be proved, but the

horror of his situation, when he first discovered the reptile twined round him, was in any case the same. In all probability it was either a *Jararaca* or a *Cascavel* (rattle-snake), both these venomous species being very common on the prairies and in the little *capões*, or patches of wood, upon them.

Von Sydow to this hour believes that Morant's snake was the very animal that sucked his finger.

It is just possible that this was so, and that, finding the finger not so dainty a morsel as it had expected, the reptile had glided off to try its luck upon a younger and more delicate piece of humanity.

The number of snakes found on the prairies, when compared with the multitudes which exist in the forests, during the summer months especially, was disproportionately small. Scarcely a day passed without what may be termed a snake adventure happening to some one of our *camaradas*, and we ourselves frequently had unpleasant reminders of how near danger lurked at all hours, when we were least thinking of it.

On one occasion Lundholm, on going to turn into his hammock, which was suspended in one of the "working" *ranchos*, found a big black and yellow boa, about eight feet long, coiled up in it. It is needless to say that the intruder was quickly dispatched. It became a recognised part of the day's work to turn boots upside down before putting them on in the morning, and turn hammocks or camp-beds inside out before venturing to recline in them at night.

I possessed at this time a tame toucan, about which

I must say a few words presently. One day this bird, which spent a great deal of its time paying friendly visits to different parts of the camp, came hopping in at the doorway of my *rancho*, and all at once stopped short and became violently agitated, fluttering its wings and screaming loudly. I got up from the little camp table at which I was writing, and made a step towards the bird to take it up and see what was the matter with it. At the moment of putting my foot down, I felt a blow like the stroke of a whip round the calf of my leg. I jumped almost out of my boots with fright, for I saw that I had stepped upon a snake, which had at once whipped its head and half its body round my leg. My vigorous leap had speedily shaken it off, but I was nevertheless relieved to see that it was an individual of the non-poisonous, black and yellow boa tribe, of the same species as the one that had before been found in Lundholm's hammock. I confess, however, to the weakness of objecting strongly to all the snake race, whether venomous or not, and on the spur of the moment I snatched up my gun and shot this one dead on the spot.

In its stomach, which was somewhat distended, I found two large frogs, which were sufficient evidence of the humble nature of its pursuits.

Next to the poisonous and much dreaded *Jararaca*, the most common snake of these forests is a certain beautiful and non-venomous coral-snake, which is banded and spotted with black, yellow, and red colours.

The Brazilians have an intense fear and hatred of this lovely snake, which they declare to be more deadly than the Jararaca, affirming that it can both bite and sting. There are, I believe, some varieties of coral-snakes that are poisonous, and therefore it is always prudent not to put one's self in the way of being bitten by them; but I can safely assert that the variety of which I am speaking, and of which the Brazilians have such a dread, neither has a sting in its tail nor any poisonous fangs in its jaws, for I have skinned many of them, and examined both the head and tail most carefully without discovering anything to justify the fear of the Brazilians.

The food of this coral-snake consists of worms, centipedes, and such-like ground vermin, its slim delicate body being admirably adapted for their pursuit. The natives say that it has the power of burrowing into the ground like a worm, but this I altogether doubt. Most likely they are led to believe this, by the, certainly, very remarkable and sudden manner in which the snake in question can disappear from view. In the forest there is always a certain amount of rotten vegetation and loose *débris* on the ground, even in the most open spots. The coral-snake when surprised by an enemy, at once burrows under this loose rubbish, and not content with thus hiding itself, glides away with all speed from the spot, carefully keeping its body concealed all the time. Thus when one looks for it beneath the surface, at the spot where it disappeared, it is not

to be found; hence the natives have come erroneously to believe that it burrows into the ground itself.

Notwithstanding the bright colouring of this snake, it is by no means a striking object to the eye, when lying upon the *débris* of the forest; and, in fact, I have on more than one occasion almost stepped upon them without seeing them, notwithstanding that, in walking along a forest *picada*, one rarely takes one's eyes from off the ground, or puts one's foot down without looking where it is to tread. This habit, which comes of necessity, of looking at each step one takes in a forest *picada*, is no doubt the chief reason why accidents from snake bites are always so rare. Still even the practised eye of a Brazilian sometimes fails to detect the presence of a snake till after he has stepped upon it. An instance of this occurred one day when I was walking out to the work along our broad *picada*. There were eight men with me, all barefooted as usual. We were walking Indian fashion, one close behind the other, and each treading exactly in the other's footsteps to avoid thorns and stumps, six men being close in front of me, and the other two following about three paces behind. All at once we were startled by a cry from one of the two men following, and, on looking round, I saw him in the act of striking a vigorous blow with his *fouce* at some object on the ground before him. "*Ê Jararaca,*" and he pulled out on the end of his weapon a big snake of this venomous species, which he had that moment killed. The man said that he

saw its head moving exactly in one of our footsteps, just as he was about to put his own foot down in the same spot. We seven in front must all have trodden upon it without seeing it, the brute not having had time, between our close following footsteps, to wriggle itself free from the *débris* which was partially concealing it and keeping it down, till the eighth man, who was farther behind, came up, saw it moving, and killed it.

I must defer to the next chapter some account of other snake adventures which were met with by us during the remaining few weeks of the summer season.

CHAPTER VIII.

A Sunday in the wilds.—Dirt-eating animals.—The tame toucan.—Its habits.—A snake guard.—“Cobra ! cobra !”—A plague of fleas.—My solitary “rancho.”—An alarming adventure.—Tapir and jaguar.

VERY early in the morning of the 16th of February, Curling and I, who were once more together in the latest built of our big Depôt Camps, situated fifty miles below Colonia Thereza, were up and ready to start to hunt the Brazilian tapir.

The day was Sunday, our day of relaxation. The great rains which had continued all through January and the first ten days of the present month, had given way to an interval of sunshine, destined to last for about a fortnight.

Up to the present time I had not even seen a tapir alive, though Curling had shot many. There were two canoes ready for us, and four of the best canoe-men to work them, namely Miguel Lopez, of Baptista renown, Hypolito his brother, a hunter of the first water, and two other powerful fellows. Five dogs were to accompany us, and operations were to be commenced at a famous Saltlick or *Barreiro*, which

existed on the bank of the river, about a mile and a half below camp.

I took my double-barrelled smooth bore and a Snider rifle. Curling also took a gun and a rifle, and at 6.30 A.M., before the sun had yet appeared above the wooded hills that surrounded the camp, we started, Curling with two men going in one canoe, and I with two men in the other, the dogs being divided between us. The morning was fresh and lovely, the thermometer standing only at 70° Fahr., with a gentle cool breeze wafting the scent of flowers and fresh green foliage up the broad river. Immediately below the camp there was a rapid, which afterwards became famous to me on account of the number of times I was upset or swamped in it, but which on this occasion we ran down in grand style, just shipping enough water to stir up the currents of our blood. This was the last of a long series of rapids which extended for a distance of about ten miles up the river from our camp. Simultaneously with passing this rapid, the mountains, which had hitherto pressed against the river banks on both sides, receded, and to right and left the valley opened, showing a wide expanse of comparatively flat forest, bounded a few miles distant by mountains ranged in the form of gigantic crescents or amphitheatres, one on each side of the river. The crescent on the right enclosed our proposed hunting ground, which covered an area of perhaps eight or nine square miles. One horn of the crescent rested on the rapid that we had just

descended, while the other touched the river about three miles lower down its course, the Saltlick or *Barreiro* lying midway between the two. Suddenly we turned out of the main river, at a point halfway down a tiny rapid or *ligeiro*, into a small *barra* or side stream, whose entrance was almost concealed by the mass of luxuriant growth that hung down from the trees on either side almost to the water's edge. Silently we glided up the dark and gloomy avenue through which the little stream flowed, for about a hundred yards, and then disembarked on a soft mud-bank, redolent of alligators and other loathsome reptiles, and, crossing this, came at once to a narrow, deeply sunken path ascending steeply up to the true bank of the *barra*. This I recognised as being a tapir's "run" or path, by which that animal is nightly accustomed to come down from the forest into the river. We followed this "run" up to the top of the bank, where we emerged straightway into a large open space free from growth of any kind, but surrounded on every side by little beaten paths leading into it as one common centre. Every inch of the ground covering this space, which was about twenty yards square, was worked up like a farm-yard by the huge feet of tapirs and other wild animals!

I had never beheld anything like it before. The tapirs must have been there by scores. Many of the tracks were quite fresh, and the water in them still muddy,—a sure sign that they were not more

than an hour old. Miguel pointed out to us besides tracks of deer and wild pig, especially drawing our attention to a solitary, broad, round pad, which here and there showed up amongst the chaos of other tracks. "*È rasto de Tigre*," said he, rolling out the word "*Tigre*" in a tone of awe. "If the dogs cross that track on the trail of their game, they will give up at once and come back to us." We heard and began to entertain feelings of respect for the Jaguar, that could make even the man Miguel speak of him in such a tone of dread. The Jaguar track which Miguel had pointed out to us was, however, at least a day old, and the scent therefore was entirely gone from it.

The dogs all this time were yelping with excitement, and straining at the leash that held them back. At a signal from Miguel, they were now slipped, and with a short, eager yelp of delight, they dashed off into the forest on the tapir's tracks. We silently withdrew by the way we had come, and paddled out into the big river to wait and watch.

Curling in his canoe crossed over to the opposite bank, and took up a position about 300 yards from the mouth of the *Barra*, while my canoe stationed itself about twenty yards above the same *Barra*, with the bow resting on a big rock in the river.

Between us, we were thus able to command a full view of a long stretch of river, both up and down stream; and the game, which would be certain ultimately to take to the water, would, in the opinion of

the hunters, most probably take to it somewhere in the reaches which we were thus commanding.

After the first eager "yap" of the dogs at starting, they had subsided into silence, which was always their habit while working up to their game on a comparatively stale morning scent. If the day-lair of the tapir, whose track they were hunting, should not be very far inland from the *Barreiro*, we should know by the sudden breaking out of the dogs into full cry, the exact moment of its being aroused.

The minutes wore on and on, and no sound came to us but the gentle rippling of the *Ligeiro* flowing past us, and now and then the harsh shrieking of parrots, as whole flocks would suddenly dart out from the bank, wheel noisily round our heads, and again suddenly retreat. I was beginning to get impatient, when at last Miguel, who was in my canoe, held up his hand and said, "*Hist! os cachorros!*" "Hark! the dogs!" then after a moment, "*Elles vem correndo,*" "They are running this way." True enough, I could now hear the distant sounds of the dogs in full cry far away in the forest, but, though I listened intently, I could hear them come no nearer; on the contrary, they gradually seemed to get farther and farther off, till at last they again became inaudible. The tapir had evidently changed its course away from the river. For another half hour we sat, and then Miguel gave vent to the disappointing words, "*Anta foi s'embora,*" "The tapir has gone right away," and pointing to the mountain range which formed the lower horn of the crescent already

mentioned, he said that the tapir had crossed the range, and, in all probability, dropped into the river on the other side.

We signalled across to Curling's canoe, to say that we were going down the river to see if anything could be seen, and, without waiting for him to move, put our bows down stream, and started away for the next bend. Suddenly the men again pricked up their ears. "*Estão correndo,*" "They are running." We had just reached the bend of the river, when we again heard the sound of a dog or dogs running. They were below us still, and seeing that my two men began to paddle with might and main, I also took up a spare paddle, and the canoe now literally raced through the water. As we rounded the bend, and came into full view of another long reach of river, Miguel paused for a moment, to scan with rapid eye the surface of the water; "*La está! la longe!*" "There he is, right away;" and once more we began to spin along. Miguel's practised eye had discerned a head in the water more than half a mile distant. Presently, I also discovered a little black speck upon the water, moving leisurely across stream. We now passed two of the dogs which were squatting upon the bank howling, and a little farther on two more, also howling; these dogs had forsaken the chase, and were howling to be taken into the canoes. One dog alone was therefore now running, and to my surprise I found that it had crossed the river, and was on the other side. In the meantime, we had approached near enough to the swimming

animal, to make out, much to my disappointment, that it was a deer and not a tapir. It paid no attention to us whatever, till we were within sixty yards of it, when an exciting chase began, the deer heading towards the bank and swimming for its life. I laid down my paddle and took up the gun, and when within thirty yards let drive with one barrel at the small head. My hands were unsteady after the severe exertion of paddling, and I missed the mark, the bullet striking short and ricocheting off into the bank. The deer was now but ten yards from the bank, and, once landed, good-bye to venison chops for dinner! Steadying myself as well as I could in the rocking canoe,* I let drive with the other barrel. The big bullet crashed through the animal's head, killing it instantly, and it at once disappeared beneath the surface. Before we could reach the spot, it had sunk right to the bottom. The current was very strong, and unless we could recover it instantly, it would be swept away along the bottom, and we should see it no more. In the excitement of the moment I plunged in, clothes and all, after it, and was lucky enough to come right upon it at the bottom of the river, which was not more than between six and seven feet deep at this spot. Clutching the first part I could lay hold of, I rose to the

* When once one has overcome the first difficulty of *standing up* in a canoe whilst it is in motion, it is far less difficult to take accurate aim in that position than when sitting down. The greater the "rocking" of the canoe, the more advantageous is it to shoot *standing up* than sitting down.

surface in triumph, with the deer in tow, and we were both hauled into the canoe together.

The dog, which alone had hunted this deer, now appeared upon the scene, having swum across the river to us. This dog was named *Cachorronha*, which was a pet modification of the word signifying "pup." During the year or so of her life spent in our service, she gained the well-earned reputation of never failing to bring us game, when once she started on a track. In this case she, in common with the other four dogs, had doubtless brought a tapir down to the water, she alone having crossed the river in pursuit, but not finding the tapir, which no doubt had gone a long way down stream before again landing, she had set herself to find something else, with the result already known. Poor animal! she was destined hereafter to meet with a sad and violent death in our service.

Curling joined us after the hunt was over, and together we returned to the camp; arriving at about 10.30 A.M., having had, notwithstanding the disappointment of the tapir, a most delightful four hours. On our return we landed again at the great *barreiro*, and shot a brace of *Jacus*, which, in company with many parrots, doves and other birds, were there feeding. It is surprising what a liking so many birds and animals have for dirt-eating: for those that I have mentioned as frequenting the *barreiro*, do not merely lick the soil, but actually bite it off and eat it in large quantities. A *Jacu's* crop is often found full of it; and the marks of the front teeth of

tapirs, pigs and deer, cover the side banks of a *barreiro*. It does not appear that beasts of prey or even birds that feed on worms or insects, have any taste for dirt eating. As far as my observations go, it is only vegetarian animals that do so. The popular idea is that a *barreiro* contains common salt. I dare say this is correct, but on the one occasion when I had the curiosity to lixivate a small quantity of *barreiro* soil, I could only discern a sweetish taste in the water of lixiviation. *Barreiros* are very numerous all along the banks of the Ivahy river, and I always intended to experiment more fully upon the earth they contained, before I departed; but this was one of many good intentions which, from being too long deferred, was never fulfilled. I think Humboldt somewhere gives an account of men who eat dirt; it would be curious to know if these men were, like the dirt-eating animals of the Ivahy, vegetarians in their ordinary diet.

At the *barreiro* which we visited on this day, we found the remains of three old pitfalls, probably the work of Indians who had now deserted this part of the forest.

On the 17th, Curling went on down the river, while I was detained for ten days in camp, doing some necessary drudgery of drawing and writing. The toucan, which I have already mentioned, now became a great pet of mine, and I found in it a very amusing and intelligent companion. It came to know exactly the hours of my meals, and would come into my hut

as regularly as clockwork to them, taking up its place on a box on the corner of the rancho, and occasionally screaming to attract attention. It became an expert catcher, never missing the food thrown to it, if it came within reach of even the tip of its great bill. Its powers of digestion were abnormally rapid, and it was consequently always hungry. Though it quickly became friendly and even intimate with any person that took notice of it, and was kind to it, yet it was very easily offended, and the offence used to rankle in its little bosom for many hours after its committal. Once I threw a bit of charred wood at it at breakfast-time, which it caught as usual, but when it tasted the gritty flavour of the charcoal it screamed angrily, hopped quickly out of the rancho, and did not reappear till roosting-time, when it went sulkily up to its perch on one of the cross timbers of the hut, without uttering its customary salutations.

The manner in which it prepared itself to go to sleep was worth observing. Having first arranged itself comfortably on its perch, with feathers well puffed out, its next operation was to throw up its tail with a sudden jerk into a perpendicular position. This feat being accomplished, it would pause for a few moments to take a last look round the rancho, and then, if all was quiet, with a dexterous turn and dive, both beak and head would disappear entirely under the wing and puffed-out feathers of the back, the bird now presenting the appearance of a perfectly round ball of feathers. In this position he would pass the

night, sleepy but not generally asleep; for if I called him by his name, he would always answer by a little noise like a grunt. If I touched him in the night without first calling to him, he would start up broad awake. If, however, I spoke to him first, and then touched him, he would not move, but only give vent to a kind of purring grunt, which probably meant "Can't you leave a fellow alone?"

Toucans are far more intelligent and amusing birds than parrots, as far as my experience goes. I do not, however, suppose that they would stand the cold climate of England, as they are more delicate in themselves, and less stoutly plumaged than the latter.

As an additional example of this bird's usefulness as a snake-guard, I may relate the following little incident, which took place in this camp, two or three days after Curling had left it.

One evening a *camarada* came to me to have a tooth extracted; but, as it was then dusk, I told him that he must wait till the following day, when, if he would come to me directly it was light, I would do what he wanted. I was kept awake most of the night by being pestered by fleas, with which the camp had at this time begun to swarm. When morning came, being then almost worn out by many nights of sleeplessness from the same cause, I was in a state of torpor, and had not aroused myself as usual immediately it became light. The man with the toothache came three times, at intervals of about ten minutes, and found me asleep each time. A minute after coming the third time, he

heard the toucan screaming in my rancho, and, thinking I was the cause, and that he should now find me awake and up, at once returned, only too anxious to have his toothache cured without more delay. I was not awake when he returned, but his vigorous shout of "*Doutor, doutor, cobra!*" twice repeated, roused me to a certain state of consciousness—when, on opening my eyes, the first thing I saw were two young frogs jumping in a great hurry along the floor of the rancho, closely followed by a *cobra preta*. The spectacle, for the two seconds during which it lasted, was superb. The snake was evidently absorbed in the chase, oblivious to the sudden shout of the man, or the screaming of the toucan. Its eye was flashing like a diamond, and its long forked tongue was shooting in and out with lightning rapidity, as, with head erect and held perfectly steady, it glided with a swift rocking motion of its supple body in pursuit, seeming as though moved by some invisible, magic force. For these two seconds the picture was absolutely perfect. I had never beheld so fascinating an object, when lo! just as I expected to see it strike one of the frogs, a big, rude paddle descended upon its back, and only a hideous writhing object remained, biting the dust in agony. I was quite angry with the man for the moment for so summarily spoiling the chase; but when I knew that the reptile, to whose existence he had thus put an end, was only less deadly than the *cascavel*, and, withal, far more active in its movements, I lost my momentary sympathy for it. In this case, if

it had not been for the toucan in the first instance, the snake might have remained lurking about my rancho beneath the boxes with which it was filled for days, until, perhaps, its presence had been made known after the disagreeable manner of Morant's snake.

The Brazilians say that there is a certain snake which they call the *cobra casada*, or married snake, which it is dangerous to kill near any habitation, or, having killed it, to trail it along the ground to any house, because its mate is certain to follow it by scent, and, on finding it dead, will savagely attack any person it can find in the neighbourhood. I do not know what foundation there is for this story. I should think that I have seen and myself killed at least a hundred snakes of various kinds in Brazil, but I never knew one that showed any disposition to wilfully attack. The utmost any have done has been to remain still, in readiness to strike when touched or threatened. In the majority of instances they have tried to flee.

Soon after this I had a very disagreeable rencontre with a *Jararaca*, which dropped into my canoe from an overhanging branch as I was paddling gently up stream under the bank. As the snake dropped in, I tumbled out into the river. Fortunately it happened close to the camp, and, in answer to my shouts, somebody came down to the landing-place and captured the canoe as it was drifting past, and killed the snake.

My reminiscences of this camp, were they confined to such incidents as those I have related, would by no means have been disagreeable; but unfortu-

nately there was, beneath all, an undercurrent of great misery, which, to be fully appreciated, must have been felt. Fleas in countless myriads swarmed throughout the camp. The dogs, which no doubt had originally brought upon their bodies the progenitors of this vast colony, became, as was but just, the chief sufferers from them. All day and all night these latter wandered about like unquiet spirits through the camp, vainly endeavouring to escape from their torments by creeping into corners, rolling in the scarcely cold ashes of the fires, and barking, whining, and biting their sides with rage and pain.

All means were tried to lessen the plague. We washed the dogs with carbolic acid, killing thousands of their tormentors. We scrubbed them, and combed them in the river, and got rid of thousands more.

Using the dogs as collectors for the vermin, we repeated these operations many times, but still the plague seemed to increase upon us.

Night after night I sat up working, unable to sleep by reason of this terrible plague. When utterly tired out I would many times go down to the river and lie in the water for an hour or more at a time, dozing, till, my blood getting chilled, I was forced once more to return to the scenes of torment.

The curious thing was that, though all in camp complained more or less of the annoyance, none but myself really suffered from it. Our servant Miles, who slept in a rancho close to mine, would snore away comfortably in his hammock all night long.

Frequently I used to wake him up and make him change hammocks with me, and in this manner, my body having been previously well rubbed over with *cachaça*, I would sometimes manage to get half an hour's rest before the *pulgas* found out the imposition that had been practised upon them, and, recommencing their operations, drove me forth once more to wander about the camp, like the wretched dogs themselves, in hopeless misery.

At length Nature could endure it no longer. My brain began to get so weak from long-continued want of sleep, that I could no longer work.

I fled the camp and had a solitary rancho built for me about 800 yards up the river, on the opposite side of the water; and thither, after it was built, I retreated every evening to sleep, allowing no man or dog ever to go near it either night or day. The first night on which I made use of this rancho I slept for fourteen hours right off, and should probably have slept still longer had not the *camaradas* in the big camp, thinking from my non-appearance that I had been devoured by a wild beast or slain by Indians, come up to look for me.

During the daytime I still remained in the big camp, never entering my little domicile up the river except in the evening to sleep, on which occasions I would "paddle my own canoe" up to the spot, and before landing strip off all my camp attire, leaving it in the canoe, and then wash off any remaining *pulgas* by a plunge into the river, walking up nude from the

water to the hut, where, having put on fresh garments, I was free from trouble for the night.

Several tracks of jaguars had been seen about, and therefore, as I had no particular ambition to be caught napping by one of them and devoured, the rancho, though small, had been built with unusual strength, with stout palm-tree walls and narrow doorway, which latter I carefully and securely closed each night with pieces of palm-trees cut for the purpose. With a loaded double-barrelled gun and a Daw's six-shooter in the rancho with me, I did not trouble my head about any danger.

One night, however, a rather startling incident occurred to disturb my repose.

I had been asleep, I suppose, about three hours, when I was suddenly startled into full wakefulness by a wild, unearthly scream, proceeding from the interior of the forest. It was pitch dark, with the exception of the feeble light of one or two fire-flies that were flitting about outside. A second or two longer elapsed before I could recollect where I was, when the roaring of a *corredeira*, about two hundred yards above, recalled me to my surroundings. I got up, and, feeling for my gun, took it up and waited to see what was coming. In a shorter time than it has taken to read this, a noise of breaking of trees and crashing of underwood followed the scream. Some big animal was crashing its way through the forest, down to the river, in a tremendous hurry. I knew it must be a tapir, and I guessed what had been the cause of the sudden uproar. The beast came

thundering along straight for the rancho, which I now recollected was built almost, if not actually upon a "run." I did not know which side it would pass, so I kept in the middle of the hut, intending to fire through the walls as it passed, on the chance of the bullets going clear of the uprights and hitting the mark. The event, however, turned out rather differently from my anticipations, for the animal, in its blind hurry, and doubtless also from its ignorance of the existence of the newly-erected obstacle, turned neither to the right nor to the left, but struck with great force against the stout corner-post of the rancho, and, not pausing in its career, in another half-second had reached the water's edge and plunged in with a loud splash, being gone before I quite knew whether the hut had been knocked down about my ears or not.

In the morning I examined the corner-post which had been thus so rudely shaken, and found a large patch of coarse yellow hair sticking to it, which had evidently been torn off some animal, though not off the tapir itself, for the hair of that animal is brown or grey, but off the hide of the beast that was attacking it, which could have been none other than a *jaguar*. On going down to the river bank I found the huge tracks of the tapir deeply scored into the soft mud, as though the animal had slid down into the water on all fours. The canoe was half full of water, and the clothes that I had taken off, the evening before, were floating about in it.

Some time after this occurrence, when I had left

this camp and gone down the river, I heard that a tapir had been killed by the *camaradas*, having its hide cut in several places, which the Brazilians said had been done by the sharp claws of a jaguar. I have no doubt that this tapir was the very individual that had so rudely disturbed my night's repose on the occasion which has just been related. Thus we see, that, from the highest mammal down to the lowliest insect, war—ruthless, incessant war—is the normal condition of Nature in these great primæval forests. Let moralists draw their lesson therefrom.

END OF VOL. I.

