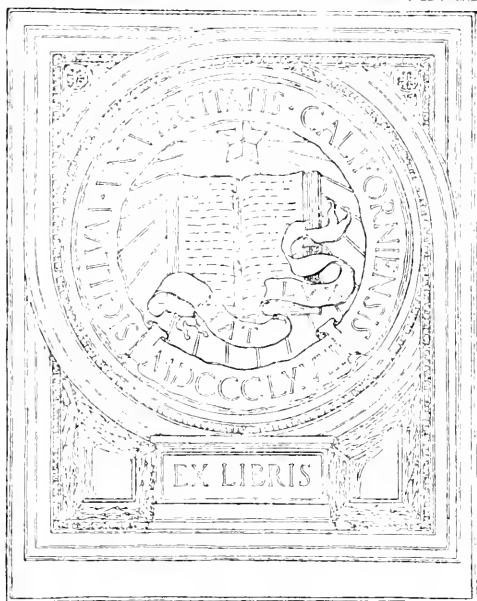


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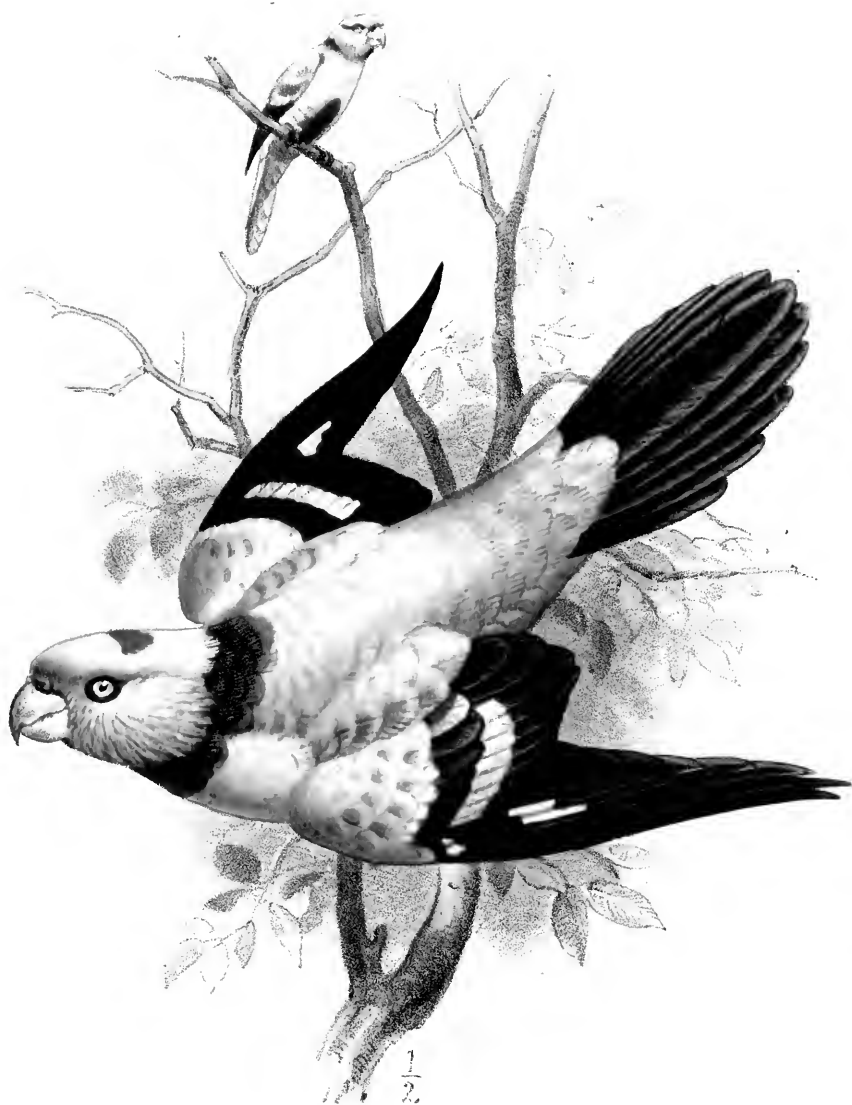
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THE
CRUISE OF THE MARCHESA
TO
KAMSCHATKA & NEW GUINEA

WITH NOTICES OF FORMOSA, LIU-KIU, AND VARIOUS
ISLANDS OF THE MALAY ARCHIPELAGO

By F. H. H. GUILLEMARD

M.A., M.D. (CANTAB.)

FELLOW OF THE LINNEAN SOCIETY; FELLOW OF THE ROYAL GEOGRAPHICAL SOCIETY
FELLOW OF THE ZOOLOGICAL SOCIETY, ETC. ETC.

With Maps and numerous Woodcuts

DRAWN BY J. KEULEMANS, C. WHYMPER, AND OTHERS
AND ENGRAVED BY EDWARD WHYMPER

'Ignotis errare locis, ignota videre
Flumina gaudebat, studio minuente laborem'
Ovid. Metam. iv. 294

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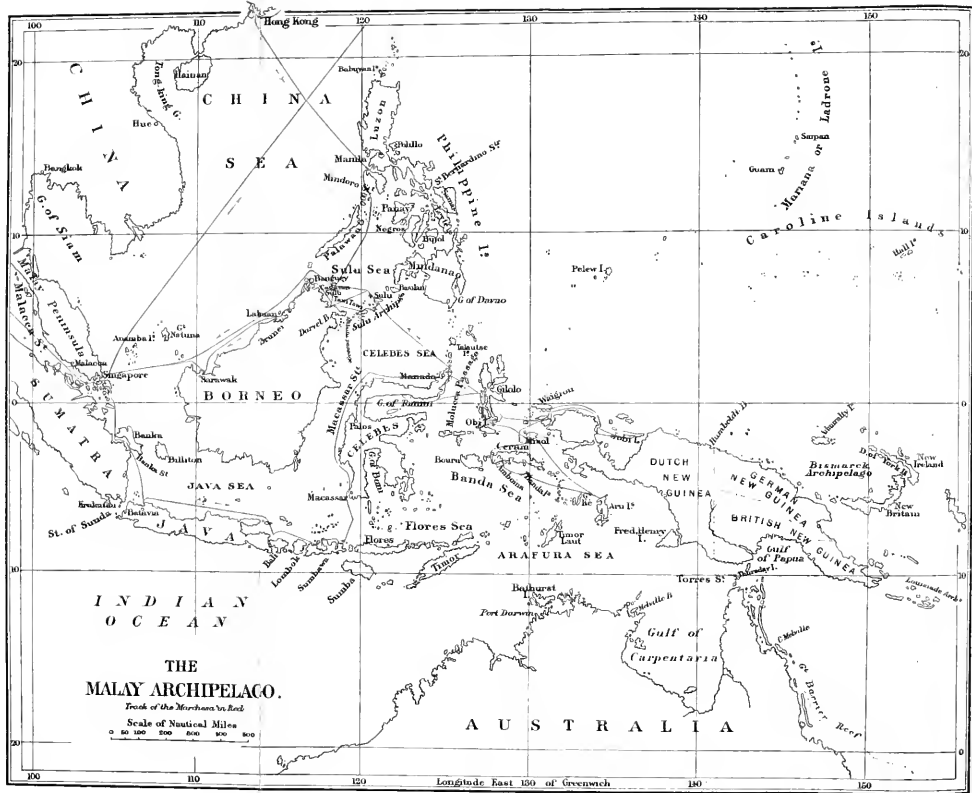
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INDIAN OCEAN

THE MALAY ARCHIPELAGO.

Track of the Merchant in Red

Scale of Nautical Miles
 0 50 100 200 300 400

A U S T R A L I A

Longitude East 150 of Greenwich

Shelford, Geog. Publ. London

CRUISE OF THE YACHT MARCHESA.



CHAPTER I.

CAGAYAN SULU.

Anchor off Lamery, Island of Luzon—Taal volcano—Bancoran—Cagayan Sulu—Malay dress—Proceedings of the Spaniards with regard to the island—Birds—The crater-lakes—Extraordinary natural phenomenon—The Pangerang's house—A Sulu cradle—Discover a third crater-lake—Particulars of the island—Curious habits of the Whimbrel—Yacht Bay—Zoological characteristics of Cagayan Sulu.

ON the 21st of March, 1883, the *Marchesa* left Hongkong for the Malay Islands and New Guinea, having spent a few weeks at Foochow and other treaty ports of China—well-trodden paths into which I will not ask my reader to accompany me. Our original intention was to visit the new English colony in North Borneo, and thence to proceed *viâ* the Sulu Archipelago and Celebes to the Moluccas. At a later period the plan of the voyage was slightly altered, and after leaving Sulu we returned to Singapore to refit and take in stores before finally sailing on our Papuan cruise.

Within two hours of leaving our anchorage in Victoria Harbour we were meeting half a gale of wind from the east, accompanied by an unpleasantly rough sea. On the following day the wind had backed to the N.E., the sea had run down, and things were more comfortable, and on Easter Sunday, March 25th, we came to anchor off Lamery in the island of Luzon, some forty or fifty miles to the south of Manila.

Lamery is as fertile-looking a spot as one could hope to meet with even amid these isles of perpetual summer. Sloping gradually upwards from the sea, it is backed by a conical volcano of no great size, which appears to be extinct. The ground is highly cultivated, and the sugar-cane—the principal crop—looked wonderfully well at the time of our visit, covering the country with a mantle of the richest green. From here Taal, with its extraordinary lake volcano, is barely an hour distant. From the middle of a mountain-lake fifteen miles long, surrounded by very high hills, and probably itself an extinct crater, this volcano rises to the height of two thousand feet. Reaching the summit of the island thus curiously formed, the bottom of its crater is seen to be covered by a sheet of water nearly a mile across. The country in the neighbourhood of Lamery seemed thickly inhabited, and we learnt from a half-caste that the combined population of the Taal and Lamery districts was as much as 46,000. The latter village is of somewhat peculiar aspect, for though the houses are almost all of the type usually met with in the Philippine Islands—that is to say, of palm-leaf mats with high-pointed roofs—they surround a most solid-looking and incongruous cathedral, built of stone, and nearly 100 feet in height, which is visible at sea from a distance of ten miles or more.

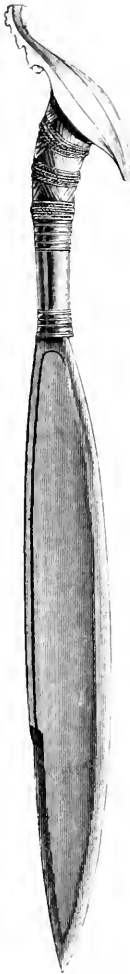
Our stay in this beautiful district, whose only drawback seemed to be the existence of cholera, was limited to a few hours only, and on the following day we weighed anchor, and rounding Cape Calavite, ran down the western side of Mindoro into the Sulu Sea. These waters are studded with numerous shoals and small islands, the position of which, owing to the imperfect survey, is in many cases doubtful, and for the first time we had a man at the mast-head on the look-out. From this elevation shoal water is readily detected by the difference in colour, and for many months subsequently this precaution was as regularly observed as the manning of the “crow’s nest” in an Arctic vessel. On the 28th March we passed close to Bancoran—a lonely lagoon islet of the San Miguel group—whose lofty trees appeared literally covered with thousands

of snow-white birds, which from their colour and flight could have been none other than the Bornean Nutmeg Pigeon (*Myristicivora bicolor*). The calm lagoon and the refreshing green of the trees, as well as the promise of abundant sport, tempted us sorely to try our fortune ashore, but time presses even in the Sulu Sea, and we decided on continuing our course. Shortly after midnight we dropped anchor on the south-west side of the island of Cagayan Sulu.

If the reader consult a map of this part of the world he will notice that the north-eastern part of Borneo presents a more or less straight coast-line, from the eastern end of which the Sulu Archipelago runs like a chain connecting it with the Philippines, while the long island of Palawan and others of lesser note form a similar link at the western extremity. The space thus enclosed is known as the Sulu or Mindoro Sea, within which, in a nearly central position, lies Cagayan Sulu. The island is practically independent, although nominally under the authority of the Sultan of Sulu. We had been led to visit it for several reasons. To the naturalist its isolated position between two countries possessed of such a different fauna as the Philippines and Borneo, offered an interesting problem, while of the great beauty of its scenery we had read in Admiral Keppel's "Cruise of the *Mæander*." At the time of his visit, in company with Rajah Brooke, two curious crater-lakes had been discovered on the south coast, but since then, with the exception of a visit of H.M.S. *Nassau* for surveying purposes in 1871, few vessels seem to have anchored off its shores.

Shortly after daybreak on the morning after our arrival the Pangerang or chief came on board—a quiet, domestic-looking old man without followers of any kind, with the exception of half a dozen men who had paddled him to the ship. He was dressed in ordinary Malay costume, which is simple and comfortable enough in climates such as these. Round the waist is worn the *sarong*, a silk or cotton garment about the size and shape of a small tablecloth, which is simply wound twice round the body and the end tucked in. It falls like a petticoat nearly to the feet. A short

jacket, the *baju*, is usually the only upper garment, and is often left open down the front. The head-dress differs according to the locality, but the *sarong* and *baju* are invariable, and are worn alike by rich and poor throughout Malaysia. The latter garment is often of unornamented black silk, or some equally plain material, even among the most wealthy, but the *sarongs* of those of high rank are generally of most beautiful workmanship, ablaze with gold thread, and of great weight and value. Our visitor, however, wore nothing of this description, and was evidently a man of more intelligence than wealth, but he carried a beautiful *parang*—a most murderous-looking weapon of a shape peculiar to this island and those of the Sulu Archipelago. It has the appearance of a sharp-pointed meat-chopper striving by a process of evolution to become a sword, and with its great weight and razor-like edge, is capable of cutting a man's body completely through at a stroke. Fortunately these weapons are more frequently used for other purposes, and are admirably adapted for clearing a path in the thick jungle or for opening coconuts. Some that we saw afterwards in Sulu had well-carved ivory handles, and the hilts were in many instances of silver. They appear to be all made by the native workmen in Sulu Island, and are worn by every male almost from the time when he is strong enough to carry one.



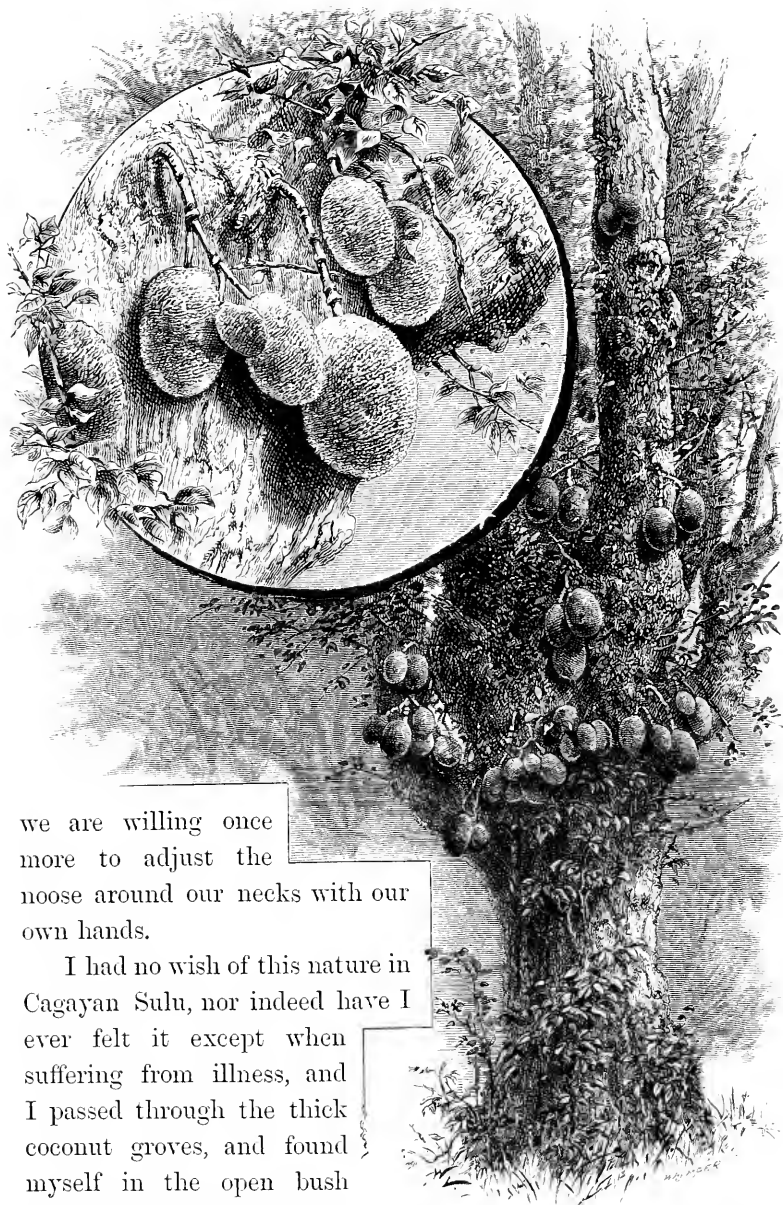
SULU PARANG.

The Pangerang smoked small cigarettes of Chinese tobacco rolled in the thin dried leaf of the Nipa palm, and chatted in Malay to one of us who was conversant with that language. He told us that the Spanish gun-boat *Sirenia* had visited the island in April, 1882, and had given him two documents, of the contents of which he was ignorant. He brought them for our inspection,

and we found one of them to be a certificate addressed to Spanish ships, and stating that the Pangerang was to be trusted; while the other was a sort of passport to enable the latter to visit any of the Spanish possessions. On learning our nationality the old fellow became communicative, and confided to us his dislike of the "Castillans." It appeared that the captain of the *Sirenia* had given him a Spanish flag with instructions to hoist it on the arrival of a vessel, telling him at the same time that the island was a Spanish possession, and that the flag had been sent by the Sultan of Sulu himself.¹ He said that for his own part he acknowledged no sovereignty but the Sultan's, but added that he would be afraid not to hoist the flag in the event of a visit of a Spanish man-of-war.

Beautiful as are almost all tropical islands, I do not think I have ever seen one more captivating than Cagayan Sulu. Mr. St. John calls it a "true gem of the ocean"; and as the boat glided over the coral-gardens, bright with vividly-coloured fish, and landed me, gun and collecting-box in hand, on the snowy sand, I felt as if I could cast off civilisation and European clothes alike, and cultivate my mealie patch and grove of coconuts with the natives for the remainder of my natural life. It is the feeling that every lover of Nature doubtless has on revisiting scenes like these, but in ninety-nine cases out of a hundred we should soon find ourselves sighing for our morning papers, and calling the place a "wretched hole," were we to try the experiment. The sauce of life is variety, and just as the restraints and conventionalities of civilisation become after a time unbearable to those of us who have once tasted of the sweets of rough travel, so there are occasionally moments when, even in Palm-grove and Coral Land, the thought of a high hat and a white shirt is actually not unpleasing. Habit is, after all, too strong for us, and however often we may succeed in breaking its bonds, there must sooner or later come a time when

¹ We learnt afterwards from the Sultan that this was a pure invention on the part of the Spaniards.



we are willing once more to adjust the noose around our necks with our own hands.

I had no wish of this nature in Cagayan Sulu, nor indeed have I ever felt it except when suffering from illness, and I passed through the thick coconut groves, and found myself in the open bush country beyond, with all the

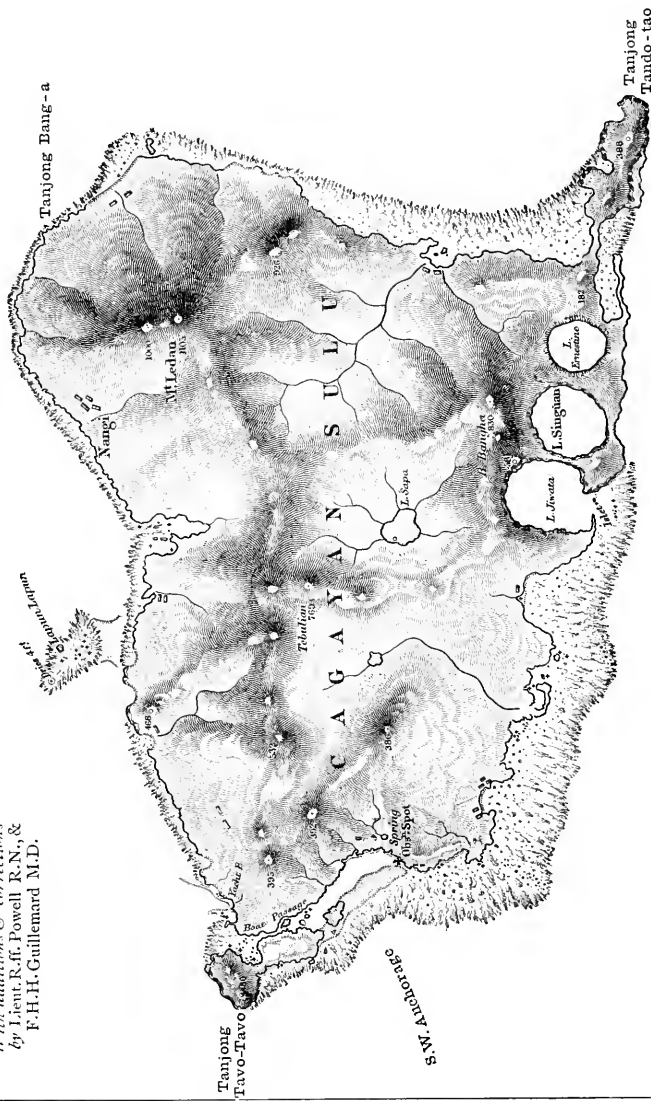
JACK-TREE. (*Artocarpus integrifolia*).

pleasurable feelings of a naturalist when he knows that he is on untrodden ground. The island, which is about five miles in length by four in breadth, is purely volcanic, and the soil, to all appearances, very rich. It is for the most part low and undulating, the highest elevation being only 1100 feet, but several extinct volcanoes of small size exist, whose sides, strewn with lumps of slag and scoriæ, permit only of the growth of coarse lalang grass. In the little valleys, or along the seashore, the mat-shed houses, elevated on piles, are shaded in pleasant groves of banana, coconut, jack-fruit, and durian trees. Cultivation appears to be but little undertaken, and though yam, sweet-potato, and tapioca are grown, it is not to any great extent, and the islanders seem to live chiefly upon fruit and fish. The latter are caught in great numbers, for, the island being surrounded by a fringing reef, the natives can coast its shores in all weathers in tolerably smooth water.

I found both birds and insects scarce during my ramble, so far at least as regards the number of species. A beautiful Glossy Starling (*Calornis panayensis*, Scop.), with a blood-red iris and the plumage metallic green shot with violet, haunted the coconut groves in some numbers. Its occurrence was interesting from the fact that it is a Philippine bird, which is not found in Borneo. On the beach the Blue-and-white Kingfisher (*Haleyon chloris*, Bodd.) was equally abundant, sitting motionless on the branches of the trees overhanging the sea, and from time to time uttering its loud, laughing note. One of the most generally distributed of all birds in this part of the world, it is found from the Red Sea to the farther side of New Guinea, and the little patch of turquoise blue that reveals its presence is one of the most familiar objects to the naturalist as he skirts the mangrove-girt creeks of the islands of the Malay Archipelago. Other birds were few and shy, and as it shortly afterwards came on to rain heavily, I returned to the ship. At this time,—the changing of the monsoons,—there is a good deal of wet weather on the island, and the temperature is comparatively low during cloudy days. In the cabins on board the thermometer registered from 78-80° Fahr.

CAGAYAN SULU

*With additions & corrections
by Lieut. R. H. Powell R.N., &
F. H. H. Guillemaud M.D.*



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SCALE OF MILES

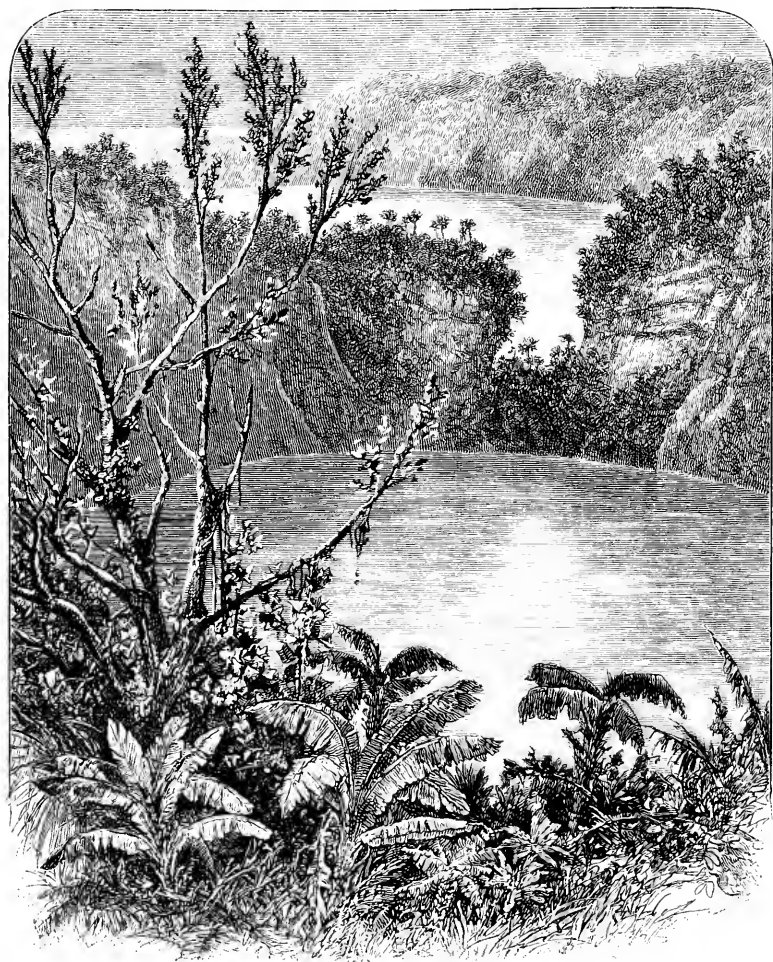
Our first expedition to the crater-lakes, one of the most interesting natural phenomena we met with in these Eastern seas, was unsuccessful owing to bad weather, but the next day being fine, we started early in the steam launch to visit them again. They are situated on the south side of the island, about four miles distant from the south-west point off which we had anchored, and running along shore inside the coral-reef, it was not long before we found ourselves at the entrance. It was barely a couple of hundred yards across, and as we glided slowly in, the pale milky-blue of the water on the reef suddenly gave place to the deepest sapphire. We had altered our depth from three feet to between fifty and sixty fathoms, and it hardly needed a glance at the high surrounding walls and circular shape of the basin to tell us that we were in the crater of an extinct volcano into which the sea had at some later period irrupted. A little island at the entrance marks its original boundary on the side towards the sea, and from this and the almost unbroken regularity of the basin's circle it is evident that, if the land were at the same level then as now, the sea had to encroach but little to burst into the deep hollow which it fills at the present time.

The little lake and its surroundings were fairy-like in their beauty, but so peculiar in character, and so rich in the tropical luxuriance of foliage as to give an almost theatrical effect. Around us the dense jungle overhung the water, completely precluding any attempt to land, and clothed the steep walls of the crater to a height of two hundred feet or more. Giant creepers had sprung from tree to tree, and, choking the struggling vegetable life beneath them with an impenetrable mass of foliage, hung in long trailers towards the margin of the water below,—a wealth of green of every imaginable shade. It has been said over and over again by travellers that the great masses of colour so often seen in the landscapes of the temperate zone are in the tropics rare in the extreme. In the dense forests of the latter the glorious orchids and other flowers which are the pride of our hothouses at home are not in reality uncommon. But they are for the most part hidden by the thick

vegetation, or perched far out of sight in the forks of some gigantic tree overhead. The explorer who penetrates the true primeval forest in a country such as Borneo finds himself at the bottom of a subarborescent world, if I may be allowed the expression, with whose surface all communication is absolutely cut off. Yet it is just there that all life, whether animal or vegetable, centres. The tiny lorikeets are feeding on the figs or other fruit, and the *Arachnotheras* searching the corollas of some heavily-blossomed tree for their insect prey. But they are almost out of sight, and far beyond the range of the gun of the naturalist. Beneath, the forest seems gloomy, dank, and devoid of life. Everything is fighting for the sun and air, in which alone most flowers will come to perfection, and could we only transform ourselves into monkeys, and swing from branch to branch a couple of hundred feet from the ground, we should doubtless get a much more favourable idea of the richness of the flora of the tropics than our limited powers of locomotion permit us to obtain at the foot of the trees. The fact remains, however, that but few flowers present themselves to the eye, and those who expect to find the blaze of colour that a field of buttercups exhibits in England, or an anemone-clothed hill in Greece, will, as Mr. Wallace and other naturalists have already told us, be much disappointed. But every one who sees tropical vegetation for the first time must be struck by the great variety of tint in the foliage. At home our trees have but little range in the gamut of green. Here they run from a falsetto of vivid greenish-yellow to an *ut de poitrine* of a colour that is only just not black.

We steamed across to the eastern side of the crater, and made the launch fast to a huge fallen tree which jutted far out over the water. It was half buried in the rich soil at one end, and was covered with a wealth of ferns and epiphytes. Above us a large creeper with inconspicuous whitish flowers had attracted an enormous quantity of yellow butterflies, which were apparently limited to that one spot. They were far beyond our reach, and, from a collector's point of view, might just as well have been in the other

hemisphere. We had brought with us a trained fishing cormorant we had got some months before in Japan. Life on board ship was



LAKES SINGUAN AND JIWATA FROM THE EAST.

evidently a burden to him, and it was resolved to release him here, so while we enjoyed our tiffin he was put overboard to seek his

own. Immediately above us a gap in the cliff revealed the probable position of the second lake, and scrambling up by an ascent so steep that, but for the jungle, it would have been impracticable, we found ourselves on a knife edge of rock dividing the two craters. The scene was a very curious one, and we could realise at once the delight of Admiral Keppel on his discovery of such an extraordinary natural curiosity. The second lake, though of somewhat smaller size, is more perfectly circular than the western one, and though its southern wall is only a few yards distant from the beach, the sea has, as yet, left it unbroken. The level of the water, which is perfectly fresh, must be fully forty feet above the sea, and but for the lessened height of the surrounding walls the second lake is almost an exact reproduction of the first. Our only disappointment was that owing to the denseness of the vegetation we could obtain no photograph giving any idea of the extraordinary scene that lay before us.

We scrambled down again in considerably less time than we had taken over the ascent, and rowed round to the sea side with the intention of hauling our "Berthon" boat through the jungle and launching it on the second lake. But after a hard struggle we had to relinquish the idea; the heat and dense tangle of creepers proving too much for us. The view from the southern side was even more striking than that we had first obtained, though limited by the masses of foliage which, combined with the steepness of the cliffs, prevented our descent to the water's edge. Opposite to where we stood the almost perpendicular crater wall was hidden by enormous creepers, but to our left the deep gap by which we had ascended from the western lake stood out bare and rocky, the cliffs rising a hundred feet or more above the little pass. The water below us lacked the deep sapphire blue of the other basin. We watched its unruffled surface in vain for any trace of the crocodiles which are said by the natives to haunt it in abundance.

Our search for shells and beetles was rather unproductive. Of the former only some common species and a single valve of a huge

Tridacna were found. I had never met with this except on the floor of a museum, and the first sight of the monstrous shell on a lonely sea-beach is one not easily forgotten. We were more fortunate with the birds, and though a good many were lost in the jungle, we shot a large fruit-eating pigeon which I had hoped might prove to be a new species (*Carpophaga pickeringi*, Cass.) It had, however, I afterwards found, been once before obtained upon a small island off the Bornean coast by the United States Exploring Expedition. On the shore of the outer lake, close to the sea, we found some curious masses of coarse conglomerate, and several blocks of scoriaceous rock of large size.

The land in the neighbourhood of the crater-lakes seemed to be but little inhabited, and the only hut we saw was a miserable tumble-down affair, open on two sides. Near our anchorage, however, the groves of fruit-trees and coconuts hid a good number of scattered dwellings which, like almost every hut throughout Malaysia from the Nicobars to New Guinea, were built upon piles. The house of the Pangerang would have been pleasant enough even for a European to live in, for in a climate where it is "always afternoon" domestic wants are few. On our return visit to him he welcomed us with evident pleasure, and we sat down to tobacco and a long *bichara*.¹ Although not dressed in any way to distinguish him from the other natives, with the exception of his turban, he was intellectually of a very different stamp. In his pilgrimage to Mecca,—for he was a Hadji,—he had seen men and things, and evidently felt his superiority to the rest of the islanders. He offered us guides for our excursions, and talked long about the Spaniards, whose reputation for cruelty still seems to linger here, adding that he wished the English would take the island instead.

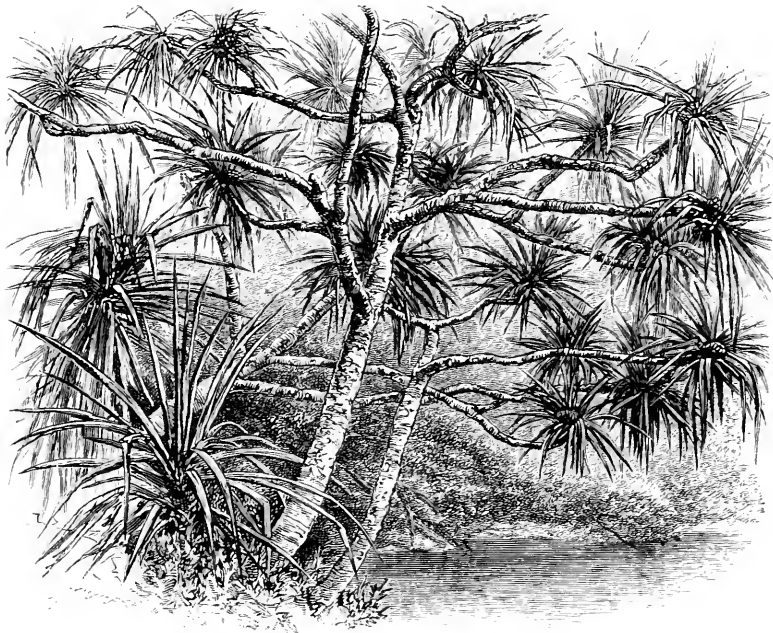
¹ The meaning of this word the traveller in the Malay Islands is not long in learning. It corresponds to the African palaver, and, whether for business or pleasure, is met with under different names in most countries in the world. Its great art lies in saying as little as possible in the most protracted time. The information usually obtained in a *bichara* of ordinary length would "boil down," to use the language of the Fourth Estate, into half a dozen lines of letterpress.

Two or three of his wives sat with us in the hut and spoke occasionally, for though the people of Cagayan Sulu are Mohammedans, as is the case throughout the islands of the Indian Archipelago wherever semi-civilisation and the Malay element prevail, the position of woman is very different to that which she occupies in Turkey. Here, unveiled, and free to go about wherever she pleases, she is a distinct personage in the household.

We noticed at one end of the room an ingenious contrivance to produce the same effect as a rocking-cradle does upon a European baby. The little basket-woven cot was suspended in the middle of a long bamboo, which rested horizontally two or three feet from the floor, supported at the two ends only. A slight downward pull produced a vertical motion, which, owing to the great elasticity of the bamboo pole, lasted for a considerable time. We afterwards saw a similar method adopted in the Sulu Archipelago.

On the 31st of March we paid a third visit to the craters in company with the Pangerang. We had heard rumours of the existence of a third lake resembling the other two, and were anxious to investigate the truth of them. But as it was said to be in close proximity to the others, we hardly thought that it could be anything of importance. Not only had Admiral Keppel visited the lakes on two occasions, but Captain Chimmo, during the visit of H.M.S. *Nassau* in 1871, had completed an apparently accurate survey of the island, so there was but little chance of any further discoveries. Skirting the mangrove and pandanus-lined shores, we reached the lakes in heavy rain, and forced our way through the dripping jungle to the eastward, when, to our astonishment, at a distance of a few yards only from the second lake, we came upon yet another of an almost exactly similar nature. It was of rather smaller size than the others, being two-fifths instead of three-fifths of a mile in diameter, but the basin was perfectly circular, and filled with water to about the level of the second lake. Thick jungle clothed the precipitous sides, but the latter, instead of running sheer down into the water, left room for a small beach, on which some wild bananas

were growing. We had no means of trying the depth of the water, but in the other two Admiral Keppel found bottom at fifty-five and thirty-nine fathoms respectively. The torrents of rain that descended prevented our attempting photography, but we returned to the ship much pleased at our unexpected discovery.



PANDANUS.

From our friend the Pangerang and other sources we obtained some general information on the island. Colonised originally from Sulu, though at what date appears uncertain, there is still a certain amount of communication with that group of islands as well as with Sandakan at the north-east end of Borneo. The language is purely Sulu, but many of the people speak Malay, the *lingua franca* of the Indian Archipelago. Some years ago they suffered much from the raids of Sulu pirates, the last of which occurred in

1863, but these pests, who established their stronghold among the labyrinth of shoals on the south of Tawi-tawi Island, have of late been held in check by the Spanish, and before long will, no doubt, have entirely disappeared. The only trade is in coconut oil, but the yam, banana, sweet-potato, cotton-tree, and tobacco are cultivated. Liberian coffee, cacao, and sugar ought all to do well, and the soil appears to be particularly adapted for growing the two former, but we saw none upon the island. The greater part of the agricultural work is done by the women, while the men employ themselves in fishing, managing their crank dug-out canoes with great dexterity. They also make use of rafts made of large bamboos lashed together—a species of craft that I do not remember to have seen anywhere else in this part of the world.

There are apparently no horses, in spite of their being so abundant in Sulu, but cattle of a small breed are much used for riding purposes. They are never milked, but the Pangerang informed us that this was merely because no one knew how to perform the operation. The island is said to be very healthy, but in 1873 smallpox appeared, and almost exterminated the people. During this terrible scourge, in many villages of thirty or forty souls but one or two were left alive, and as many as 1000 are said to have perished. At the present time the population is probably under 3000.

Rare as the visit of a ship of any kind must be, our appearance seemed to excite but little curiosity among the natives, and we wandered about the island almost unnoticed. Our men were allowed a run ashore, and were full of yarns on their return. One, a new hand in the tropics, to whom the *lex non scripta* which declares coconuts to be invariably private property was unknown, ascended a palm and proceeded to possess himself of the spoil. The result we afterwards overheard in a fo'e'sle conversation, "Well, mates, ye see I was just a reachin' out of my hand for to grab 'em, when, Lord save me, if there wer'n't a fox came and poked his nose out just agen mine! I reckon I fetched down again pretty quick. Blessed if ever I see such a rummy country afore, where

the foxes runs up trees!" The dragon guarding Jack's golden apples was, I need hardly say, a *Pteropus* or Flying Fox,—one of the large frugivorous bats so abundant throughout the Malay Islands.

One of our excursions was to the summit of a small volcano on the west side of the island. Our path led through the coconut plantation, where, if we chose to stand and watch steadily the crowns of the palms some forty feet or more above our heads, the restless movements of numbers of brilliant little sun-birds could be noticed, their dark forms changing momentarily into a flash of metallic violet as they passed from beneath the shadow of the fronds. They were all of one species, *Anthothreptes malaccensis*, a common bird which, with slight variations in plumage, is found throughout the greater part of Malaysia. The hill—for being only 400 feet in height, the volcano cannot be dignified by any more imposing title—rises gently in the form of an abruptly-truncated cone, and bears evidence of tolerably recent formation, for its slopes were covered by the bright green lalang grass only, and the jungle had not as yet succeeded in obtaining a footing. In countries farther removed from the equator the traces of volcanic eruptions may remain almost unaltered for centuries, but in these lands of perpetual summer the combined action of a powerful sun and heavy rain rapidly disintegrates the lavas, and prepares a surface soil for the reception of seeds. Ere long the sea of tropical vegetation has closed over the spot, and the smaller size of the jungle trees alone reveals it to the traveller's eye. Some months later, while in the island of Sumbawa, we came across a well-marked instance of this kind on the slopes of the huge Tambora volcano, whose terrific eruption in April, 1815, caused the death of 12,000 people. The wavy course of a lava-stream, though doubtless unrecognisable on the spot itself, could be traced with the greatest ease from the ship. Nature's wound had no doubt skinned over rapidly enough, but the scar still remained.

Arriving at the summit we found an evenly-shaped crater nearly 100 feet in depth, its sides clothed with trees of no great

size. To the south, and quite close to us, lay two other hills, also evidently volcanic. Our elevation, though little enough, was sufficient to afford us a good view of the island, which in every direction appeared to be comparatively free from jungle, though scattered belts of palms and fruit-trees were abundant. Ledan, a curiously-shaped mountain, rising like a bold hump of rock abruptly from the level country around it, was a very striking object to the east, and farther to the right a sharper peak, hollowed on its southern face, indicated the position of the three crater-lakes. On our return we gathered large bunches of a Jessamine almost exactly resembling our own, but with slightly larger and more fragrant flowers. The *Mussaenda*, with its striking white bracts contrasting with the green foliage and orange flowers, was also very abundant.

In the course of one of our conversations with the Pangerang he had mentioned the fact that during the months of April, May, and June there are often strong winds from the S.W., and on our inquiring for the best anchorage at this season, he told us that there was an excellent harbour on the north coast. We were provided with Captain Chimmo's chart, but beyond a mere unprotected anchorage on this side of the island, nothing of the sort was indicated in it, and we told our friend that we thought he was probably mistaken. He stuck to his point, however, and accordingly one afternoon we set off in the steam launch with him to explore. The western point of the island is apparently formed by an abrupt headland known to the natives as Tanjong Tavo-tavo, but in reality an intervening creek forms it into an islet. Entering this channel we found that it expanded into a small lagoon with a little island in the centre—if indeed a clump of trees growing straight from the water can be termed an island. It was crowded with Whimbrels (*Numenius uropygialis*, Gould.), who were balancing themselves uneasily upon the branches,—a common habit in this part of the world. Nothing is more curious than the adoption by certain birds of habits which, from anatomical reasons, we know must be

extremely inconvenient to them. Without power of grasping in its foot, and with its great length of leg, few birds would seem less adapted for an arboreal life than the whimbrel. But in these regions, as in others, necessity has no laws. The dense growth of mangrove has here overrun the sandy beaches and oozy flats which are the favourite haunts of this genus in temperate countries, and hence, in company with our Common Sandpiper and the equally wide-ranging Turnstone, both of which were also abundant in this locality, no other choice of a resting-place is offered them.¹

Beyond the lagoon the channel became so narrow as hardly to admit of the passage of the launch, and finally opened out on the north side of the island into what would have been, but for the presence of a coral-reef completely across the entrance, a most admirable harbour. We were quite prepared to have this pointed out to us as the object of our search, but the Pangerang made no sign, and turning eastwards, we pursued our course for about half a mile, until we suddenly came upon it. It was as good a harbour as could be desired during the south-west monsoon, well protected to the east and west by reefs, and having an average depth of fifteen fathoms, with a sandy bottom. That it had previously escaped observation was no doubt due to the fact of its being formed principally by the coral-reefs.

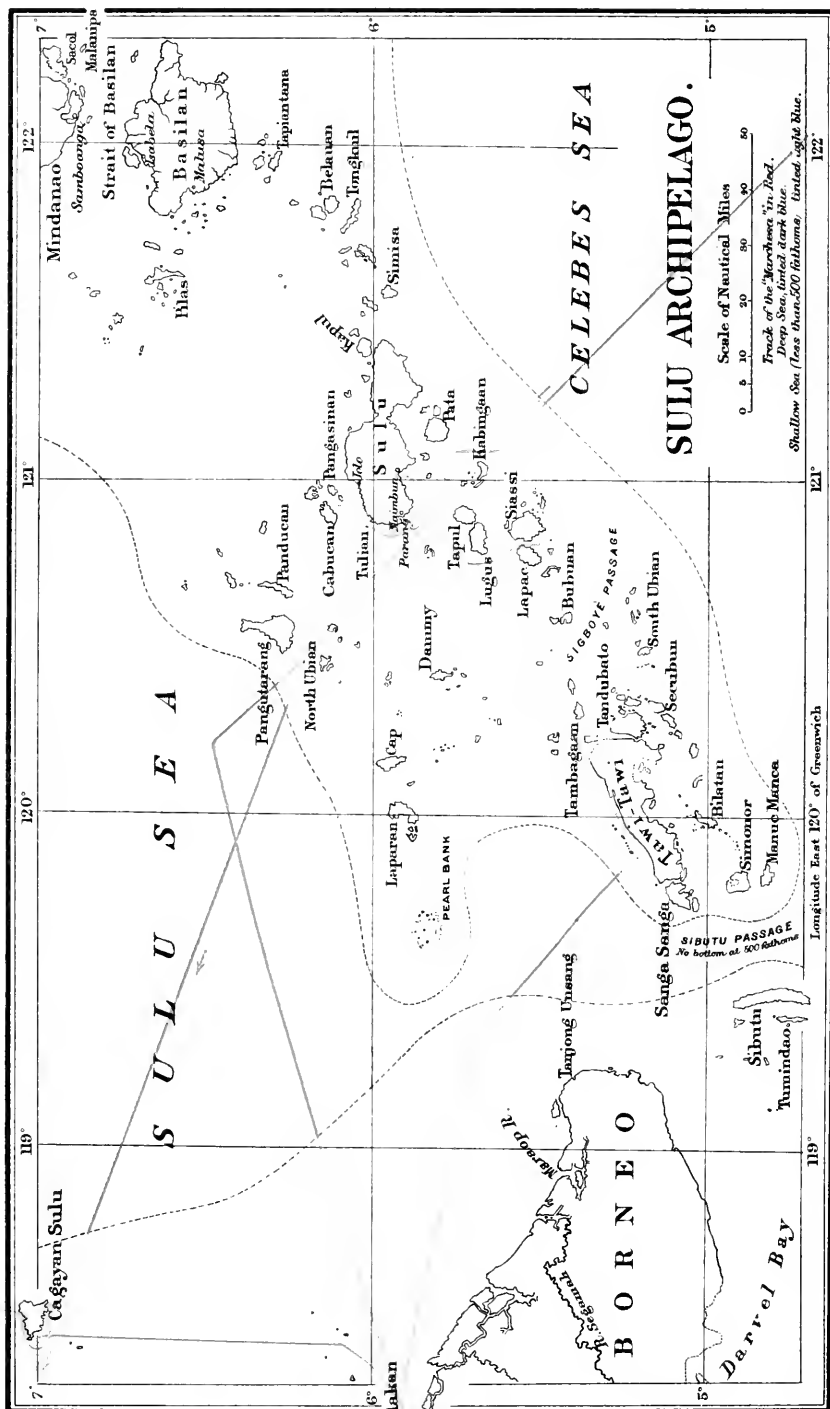
Our discovery, although perhaps not so interesting as that of the third crater-lake, was a useful one, and we devoted the remainder of that and the whole of the following day to making a sketch survey. The shore of Yacht Bay, as we named it, was sandy—somewhat of a rarity on the coral and mangrove-girt coasts of the island—and formed an ideal place for a picnic. Behind us the tall jungle threw a pleasant shade over the little beach, whose margin was lapped by a waveless sea, its only sign of life the almost inaudible swish with which it advanced or retired over the cool white sand. We ate our tiffin beneath a large *Barringtonia*, whose

¹ The whimbrel has been said ("Ibis," 1879, p. 142) to build its nest in trees in some parts of Celebes. The statement, however, is one which requires confirmation.

branches, thickly clothed with broad fleshy leaves, stretched far out over the water. The tree was in fruit and flower, and its bright-stamened, tassel-like blossoms and large quadrangular nuts carpeted the ground below. The latter is a "common object of the seashore" in the Malay Islands, and is much used by natives to catch fish. The fruit is pounded and thrown into the water, and the fish, rising to the surface in a stupefied condition, are easily secured.

We were too much occupied to spend our time in searching for objects of natural history, but the forest by the beach seemed silent and deserted. Animal life indeed, so far as we could judge from our short visit, appeared singularly meagre in Cagayan Sulu, a fact that is perhaps accounted for by the island being, geologically speaking, of comparatively recent formation. Crocodiles and *Hydrosauri* of course exist, and, according to the natives, the rat and the Kraw (*Macacus cynomolgus*), a common Bornean monkey. We did not, however, obtain either of the two latter. With regard to the birds, the few species we collected or identified were interesting, as showing the island to have been peopled with immigrants both from the Philippines and Borneo, though, as might be expected from its proximity, chiefly from the latter country.¹ We were fortunate enough, in spite of the comparative paucity of birds, to find one new species—a pretty thrush-breasted *Mixornis*—closely allied to a Bornean bird of that genus; and on the whole, taking into consideration our two other discoveries, we felt that our visit to this little-known "gem of the ocean" had not been entirely unsuccessful.

¹ Cf. Paper by the author on Cagayan Sulu: "Proceedings Zoolog. Soc.," 1885, p. 417.



CHAPTER II.

THE SULU ISLANDS.

We embark a Rajah — A perfect calm — Arrive at Meimbun — Scenes on the Meimbun River — The Sultan's Istana — The Sultan of Sulu — Unsettled state of the island — Visit of the Sultan to the *Marchesa-Parangs* and spears — Natural history rambles on the island — Beauty of the scenery — Sun-birds and other birds — *Cinnyris julia* — The Rajah's village — A Sulu cemetery — Second visit of the Sultan with his wives — Domestic broils — The ladies of the harem — Cockatoo shooting.

WE bade adieu to our friend Hadji Usman, the Pangerang, and left Cagayan Sulu on the 3rd of April. Our destination was Sandakan Bay, about fifty or sixty miles due south, where there is a settlement of the North Borneo Company. Here and in the neighbourhood we spent about a fortnight, but as we afterwards returned for a more lengthened visit, I will leave my account of the new territory and the doings of the somewhat anomalous form of government which administers it for the present, and proceed to the more attractive islands of the Sulu Archipelago.

Our ship's company had increased in numbers since our northern cruise. Before leaving Hongkong we had been fortunate enough to obtain the services of Mr. Griffith, the well-known photographer in that city, and it is chiefly from the beautiful negatives obtained by him on our cruise in these waters that my illustrations of tropical types and scenery are engraved. At Sandakan we made friends with a little so-called Rajah, to whom, with his suite of three Sulu attendants, we gave a passage to

Meimbun in Sulu Island. He was a lively little youngster of about fourteen, who had been a great favourite of the last Sultan of Sulu, and had apparently acquired a good many of his sovereign's despotic habits, for the way in which he ordered about his followers was most amusing. He smoked native *rokos* or cigarettes incessantly when he could not get ours, and his chief amusement seemed to be the rapt contemplation of the two or three tinsel and gold embroidered *bajus* that constituted his wardrobe. Our own native servants were two in number; Ismail, a Singapore Malay, and a Sulu boy named Usman, both of whom we had taught to collect and skin birds.

We left the shores of Borneo behind us on the afternoon of April 19th, and set our course westward for Sulu. The northern part of this extensive archipelago is but little known, and the currents are strong and uncertain, and hence it is necessary to be careful not to approach the network of shoals and islands before daylight. The following morning we found that we had been set considerably to the northward by the current, instead of to the south, as we had been informed by the Sandakan people would be the case. The mountains of the island of Sulu, among which Buat Timantangis was especially conspicuous, were visible far away to the E.S.E., and altering course so as to pass through the Pangutarang Channel, we rapidly approached them. I have never, in the whole course of my wanderings, seen a calmer sea than that which lay before us. Not only was its burnished surface unbroken by a single breath of air, but no trace of a swell was visible to mar the glassy plane. Everything was aglow with the heat. The little puffs of white cloud were reflected in the oily mirror with marvellous distinctness, and sea and sky blended in a shade of silvery grey towards the invisible horizon. A mile or more away the flying-fish were visible, little dark specks that regained the sea only to leave a larger, darker speck behind them—the ripples that marked their disappearance; and far astern of us we could see our track widening almost to infinity—a series of parallel black

streaks on the one side, and on the other merely a trace of grey. It was a relief to turn and watch the land we were approaching; a second and almost more beautiful edition of Cagayan Sulu. A dark mass of jungle-covered mountain, half hidden in mist and rain-cloud, dimly overtopped the lower slopes, where the bright green lalang grass was dotted here and there with trees, or varied by patches of a deep brownish-red, which marked the plots of cultivated ground. Farther to the south the cone-shaped peak of Mount Tulipan proclaimed itself a volcano, and as the *Marchesa* rounded the western point and made for the harbour of Meimbun on the south side, the thick plantations of coconuts and fruit-trees that lined the shore spoke of the fertility of the soil. The praus that lay becalmed around us had their sails of the most glowing colours, in stripes of red and blue and orange, and seen under the light of an afternoon sun with their details softened by the haze, the effect was quite as Venetian as Venice, where, alas! these beauty-spots of the landscape are now no longer common except upon an artist's canvas.

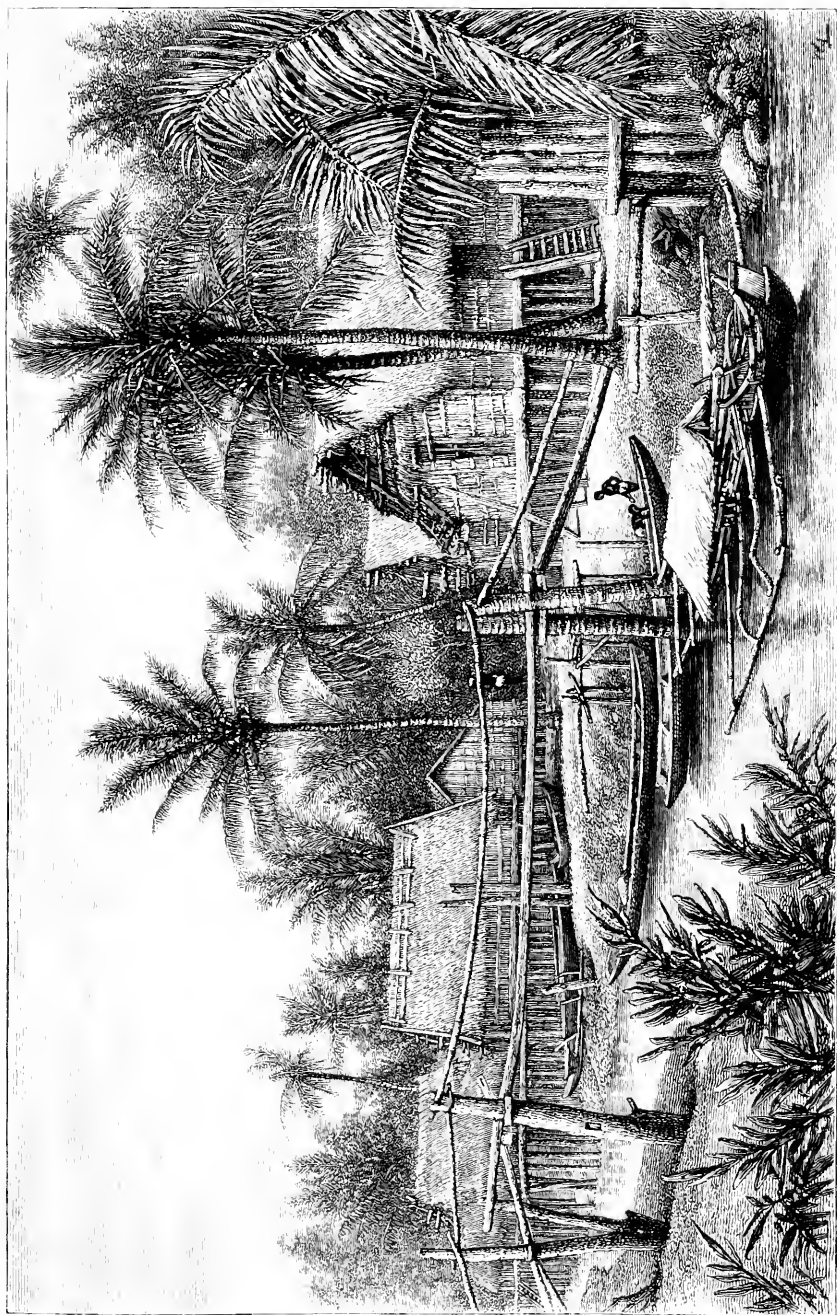
We anchored off the mouth of the little river on which the village of Meimbun is built, and a few canoes with bamboo outriggers on both sides came round us somewhat mistrustfully. The Spaniards are hated by the Sulus, and there has been war *à outrance* between them for a couple of centuries or more, with but few intervals of peace. The sight of their fellow-countrymen on board our vessel soon allayed the suspicions of the natives, and having established our nationality, we put our little Rajah and his followers into one of our boats, and rowed ashore to explore the village.

Had I to introduce my reader to the most un-European scene I know of, I think I should ask him to take a seat with me in a native canoe, and paddle up the graceful windings of the Meimbun River. At its mouth the huts, built on sea-weed-covered piles, form each a separate island. Their floors are raised a bare three feet above the level of the water, and one needs no better evidence of

the fact that here, at least, we are in stormless seas. On the palm-stem platforms in front of the entrance the natives squat, while around are playing half a dozen naked little cupids, now plunging into the water, now paddling races in miniature canoes. A little farther and we enter the river, whose water is so clear and pure and bright that one longs to tumble in, clothes and all, and squatter about in it with the brown-skinned little urchins around us. Close to the banks lies the market-place, a picturesque jumble of ponies, ripe bananas, red *sarongs*, palm-leaf stalls, and flashing spears. Beyond, the sea-going praus are hauled up on shore, their unwieldy sterns a mass of quaint carving. Then through a tiny reach bordered by the Nipa palm, whose graceful fronds, thirty or forty feet in length, spring directly from the stream, and we find ourselves in a sort of upper town, where the houses are built with seeming indifference either in or out of the water. The place is the absolute perfection of beauty and untidiness. Overhead the eye rests on a wealth of verdure—bamboo, banana, durian, jack-fruit, and the arrowy betel-palm with its golden egg-like nuts. In these happy climes man's needs grow at his very door. Cold and hunger, misery and want, are words without a meaning. Civilisation is far off indeed, and, for the moment at least, we have no desire for it.

Before us lie the houses. They are rickety enough certainly, and their walls of yellow *attap* gape sufficiently to show us a slumbering Sulu within, his murderous-looking kris at his hip. But there are no north-easters here, and he is doubtless quite happy. That man should live by the sweat of his brow is true here in its most literal sense. But it is not so metaphorically, and our sleeping friend will not even have to get up and feed the pigs and chickens that are routing around the piles of his hut. Bountiful Nature supplies food for them also, and, in domestic language, they have to "find themselves."

A little bridge spans the river at this point. It is constructed of a single plank of the Nibong palm, with a light bamboo handrail,



and is in keeping with the quaint novelty of the scene around. Were I to land my reader here, with the not unnecessary precaution of informing the natives that he is an *orang Ingris*, and not an *orang Castellan*, he might wander unharmed about the village. But the river beyond is too tempting to leave unexplored. Once past the huts the vegetation closes in on either side, forming a picture-frame of tropical foliage around the cone-shaped summit of Buat Timantangis. A brilliant flash of blue shoots arrow-like across the stream. It is a kingfisher, whose close resemblance to our own well-known species is the only link in our surroundings connecting us with home. The little white cockatoos, diminutive brethren of the familiar Australian bird, fly in small parties over our heads, and here and there a golden oriole sits like some brilliant yellow blossom amid the mass of foliage. Ere my reader disembarks with me at the Istana, and walks up to pay a visit to the Sultan, he will—or ought to—allow that as far as regards beauty of scenery, there are few places more favoured than the island of Sulu.

On the occasion of our first landing we did not go far. Leaving the river we struck off to the right into an open country, where a number of young teak-trees were growing. The ground was covered with small lumps of lava and scoriae, the relics of some former eruption, and but for the thick growth of grass above it, walking would have been far from pleasant. The views of the country inland were lovely, but the ardour of our chase after the many new objects of natural history around us was a little damped by our Sulu boy, Usman, who, after wandering about in a state of perturbation from one to the other of us, finally begged that we would keep together and not go far from him. The Sulus, we learnt, were apt to be unnecessarily hasty in their actions, and might not perhaps allow us sufficient time for explanations were they to meet us. We had every desire to keep our heads upon our shoulders, and it was therefore thought better to pay our respects to the Sultan, and make ourselves generally known in our

ordinary unmangled condition. In Sulu every prospect pleases with the single exception of being mistaken for a Spaniard.

It was not long before we found ourselves at the Istana,—the Sultan's residence,—an uninteresting building enough from the outside. It is placed close to the river, and opposite, across a short stretch of turf, is a long, low building with latticed windows devoted to the ladies of his harem. The door of the Istana was guarded by two Sikhs, bushy-whiskered and moustached. In the Malay Archipelago one gets accustomed to rubbing against men of almost every race and language under the sun, always excepting Europeans, who are rarities. Chinese, Goa Portuguese—the curious nondescripts that are classed under the name of burghers in Ceylon, the *orang sirani* or Nazarenes of the Malays—Sikhs, Bombay *tambis*, nay, even Swahilis, all these I have met with. One would not be astonished at the appearance of a Hottentot or a North American Indian, but if the Sultan had any in his suite he did not show them. Two curiosities, however, there were at the palace doors which seemed more incongruous still,—a couple of carriages which had been presented to the late sultan. There are no roads in the island, and they were rotting slowly away under the action of the weather, just as the Sulu power is rotting before that of Spain.

We were told that the Sultan would see us, and entered to find ourselves in a large room. It was floored in the rudest manner, but the walls and ceiling were hung with coloured cloth. In the centre was a large Turkish lamp, such as one sees in the bazaars at Constantinople, but it was almost the only ornamental article visible. An old "four-poster" bedstead occupied one corner, evidently a production of the country, and with the footboard rather well carved; but the greater part of the room was taken up by a gigantic divan about fourteen feet square, covered with carpet, and with seats round the three sides.

We waited a good half hour in company with about thirty natives, who probably belonged in some way to the Sultan's

retinue. They were armed, as indeed is almost every Sulu, with spear and *parang*, and looked as if they might be unpleasant enough if called upon to use them. One or two who spoke Malay came forward and chatted, and we were amused by the intense astonishment that they expressed at our walking-stick guns, which we had brought instead of our usual 12-bores for fear of creating an alarm. Presently a stir was heard and the Sultan entered. He was dressed in a purple velvet jacket trimmed with gold lace, a gold-embroidered flat Malay fez with a turban round it, a coloured silk *sarong*, and European trousers. His age appeared to be not more than nineteen or twenty, and his expression, though somewhat nervous, was not displeasing. Behind him came an unprepossessing individual with a revolver in his hand, loaded and cocked, the muzzle of which he happily kept directed towards the ceiling, and a numerous retinue of hangers-on, among whom was an attendant bearing a silver betel-box, and a small case which contained Chinese tobacco and the thin Nipa leaves which, in these countries, are the substitutes for cigarette papers.

The Sultan's title is Paduka Baginda yang di per Tuan Maulana Sultan Mohammed Budderooddin, but he advanced and shook hands. Doubtless he is a Lord of Elephants, Emperor of Pearls, and the like, but the above is the correct designation of His Royal Highness, according to his visiting-card,—a packet of these not very necessary articles having been sent to him by the Spaniards as a present. He was a little suspicious of us at first, but gradually became more at ease. We asked him to pay a visit to the yacht, but he said that he was afraid he could not do so unless she were brought alongside the small *jambatan* or pier at the mouth of the river. With our large draught of water this was impossible, and we told him so. We afterwards found out that he was mistrustful of us, fearing that we were in league with the Spaniards, and that our design was to carry him off to Manila. It was ultimately settled that two Turks who formed his bodyguard should return with us to the ship to inspect,—he having, apparently, much confidence

in them. In the meantime refreshments had been brought for us in the shape of European biscuits and some really excellent chocolate—the latter the produce of the island. Nipa-leaf cigarettes were also handed, which, in spite of their being most beautifully rolled, would hardly commend themselves to the gilded youth of St. James's Street. There is such a marked bonfire flavour about



MOHAMMED BUDDEROODDIN, SULTAN OF SULU.

the palm-leaves that it completely masks that of the tobacco, and the presence of the latter appears entirely unnecessary.

Regaining our boat we found that our men had got on very well with the natives. Fruit and fowls had been brought for sale and barter. The price of the latter was one dollar for eight, but at a later period of our visit we got them cheaper. The young Sultan has hit upon a most simple plan of increasing his revenue. The currency consists of dollars, cents, and "cash" of the Straits Settlements, or Hongkong. He buys 120 cents, or its equivalent in

“cash,” with his dollar in these countries, and has fixed the rate of exchange at 80 cents in his own dominions, thus making a clear gain of 40 per cent. We noticed a few days later that a guard was placed over a small trading vessel from the North Borneo Company’s territory to prevent any smuggling of cents.

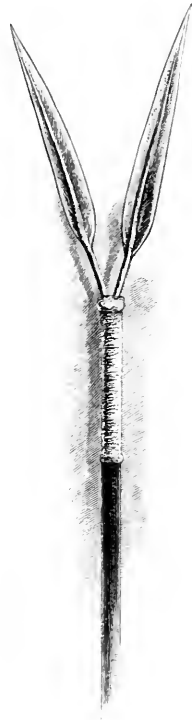
The authority of the Sultan of Sulu is practically limited by the four walls of his harem. Indeed, as we discovered at a later period, it does not seem absolutely undisputed even there. Formerly he ruled over all the islands of the archipelago excepting Basilan, together with Cagayan Sulu and a large extent of country at the north of Borneo, in the neighbourhood of Sandakan and Darvel Bay. Of this latter portion the North Borneo Company have become the possessors, in consideration of an annual payment to the Sultan and his heirs *in perpetuo* of five thousand dollars. His influence over the chiefs in the other islands is of the slightest. In Sulu itself even it is doubtful, for the people are split up into innumerable factions. The island is only thirty-three miles long by twelve in its extreme breadth,—smaller than the Isle of Wight in fact,—yet it appears always to be, and to have been, in the condition of Europe in feudal times, when every man’s hand was against his neighbour. The eastern peninsula is governed—if indeed such a term can in any sense be used in connection with the Sulus—by the Maharajah of Loc, while at the extreme west lives the Panglima Dammang, a bloodthirsty old ruffian, who is constantly fighting with the Maharajah Tahil. The latter warrior has his headquarters at the foot of Buat Timantangis, barely a couple of miles from his enemy. All are more or less at war with one another, but all join in a common hatred of the *Castillan*. The lovely island, with its glorious wealth of fruit and flower, with a soil as fertile as any in the world, with its shores lapped by a stormless sea, ought, one would imagine, to drive all thoughts of murder from man’s breast. But the land streams with Sulu blood, shed for the most part by Sulu hands, and poison appears to be used with as much indifference as the *parang*. The people are,

apparently, hopelessly turbulent and regardless of life, yet in our five weeks' intercourse with them, walking or riding alone in almost all parts of the island, we met with the greatest civility everywhere, except in one instance to which I shall presently refer.

The inspection of the *Marchesa* by the two Turks must have been satisfactory, for on paying another visit to the Sultan on the following day we learnt from him that he would come on board in state that afternoon. We accordingly returned to make arrangements, as it had been delicately hinted that His Royal Highness would expect a salute of twenty-one guns, and we were rather uncertain as to the efficiency of our armament. At 3 P.M. our boats were seen making for the ship, literally crammed with people, whose brilliantly-coloured *sarongs* and jackets gave our lifeboat, gig, and cutter the appearance of three Crystal Palace flower-beds. Before long our decks were crowded. The Sultan was in a different dress from that in which we had first seen him. He wore a flat fez of black silk heavily embroidered with gold lace, a short cloth coat also much embroidered, and a white silk *sarong*. His dress was decidedly effective and in good taste, and although we knew him to be a man of the weakest character, with no thoughts beyond his harem and his opium pipe, he comported himself with a quiet dignity and perfect good-breeding which made us all like him. It is no doubt a common enough characteristic among those of Malay race, but for all that it is none the less pleasing, especially when accompanied, as it was in his case, by a smiling unreserve which is not so often met with, and an evident sense of pleasure at the novel objects by which he found himself surrounded.

The crowd of Sulu warriors that thronged our decks were all armed, but the Sultan carried no weapons of any kind. He was, however, closely followed by an attendant who bore his *parang*—a beautiful weapon of razor-like sharpness, gold-hilted, and with its ivory handle inlaid with eight pearls. There were other personal attendants whose Sulu titles I am not acquainted with. Anglicised

they would be the "Betel Box in Waiting," and the "Bearer in Ordinary of the Tobacco Case." The "Gentleman Usher of the Revolver" was happily absent, for the way in which his forefinger had trifled with the trigger on the previous day had filled us with alarm. But the most important of all these people were two men who bore the spears of the Sultan and Sultana. These weapons, like the *parangs*, are of Sulu manufacture, and even those carried by the common people are wonderfully well made. The Sultan's were, of course, of still better quality. Of wavy steel, rough and without any trace of polish, as are all the best blades of Malay make, they were very sharp, and were fitted with a hilt of embossed silver about a foot in length. The Sultana's spear was of curious shape; double-bladed, with the two blades meeting at the hilt. The shafts of these weapons appear to be usually made of the wood of the *Areca* palm, the toughness and density of which renders it a favourite material for this purpose throughout Malaysia and the Pacific Islands.



THE SULTANA'S SPEAR.

There were perhaps forty or fifty other Sulus on board, besides the two Turks and a Sikh of gigantic stature. The former were mostly of inferior rank, but almost all were dressed in embroidered jackets of different colours, with Chinese gold buttons. They wore turbans of silk or cotton, worked with gold thread. All these are made on the island, and are good, but too gaudy, one of the favourite colours being a bright green. A tight-fitting cotton garment, much like a pair of riding breeches, seemed to usurp the place of the *sarong* in a great number of cases, reaching to the ankle, and leaving the feet bare. The inevitable *parang* is stuck in a twisted cotton belt.

Our guest was much pleased with the mechanism of a Nordenfelt gun we carried, and his astonishment when we showed him its rapid action with ball practice was considerable. He inquired the price, and asked if we could get him one, adding that it would be a capital thing in the case of any further row with the Spaniards! He wandered over the ship, exhibiting considerable interest in what he saw, but his chief source of pleasure seemed to be the piano, to the music of which he insisted on dancing. I must clear the imperial character by adding that he had partaken of nothing stronger than lemonade.

We sped the parting guest with a salute of twenty-one guns, and were not sorry to get our decks clear of his numerous adherents. As a matter of fact, four hours of a sultan is quite sufficient. We had on many subsequent occasions to entertain these small potentates,—“Rajah days” they used to be called by the sailors,—and very fatiguing and monotonous work we found it. Not only were our meals disorganised and the routine of the ship interfered with, but the decks were generally found liberally bespattered with the ineradicable stains of betel juice, greatly to the disgust both of officers and men. It speaks well for the character of our guests that we never had any article stolen.

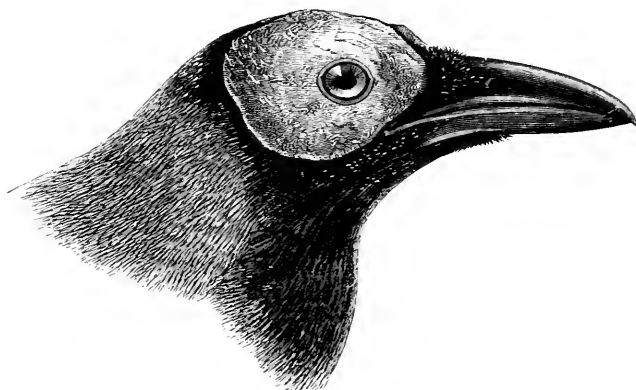
During our stay at Meimbun, and again on subsequent visits, the time passed pleasantly enough. Subjects for the camera were abundant, and collecting and preserving birds and other specimens took up a large portion of the day. Every morning, shortly after sunrise, we disembarked from our boat at the little bridge by the upper village, and were welcomed by a small crowd of stark-naked little Sulus of both sexes, who fought for the honour of carrying our game-bags and cartridge-belts. None spoke Malay, and so our conversation had to be carried on by signs, but it never flagged, at least on their part, and we had some difficulty in keeping it within bounds when, as often happened, a party of ten or a dozen accompanied each gun. The young ladies showed as much keenness in the sport as their companions. The Roman fair ones

pollice verso, were, we know, always willing for the death of the combatant; and a bright-eyed little maiden who, clad in the simple garb of a cartridge-bag, used generally to accompany me in my rambles, was invariably much disgusted when I refused to shoot some bird of which I already had a sufficient number of specimens. If the truth were known I daresay some of these merry little urchins had seen bigger game bite the dust. I recollect seeing one whose only garment was one of the razor-edged *parangs*, attached to his waist by a belt of twisted cotton.

One of our favourite excursions was towards the foot of *Buat Tulipan*, to the west of *Meimbun*. It is a cone of rather over 2000 feet, and is cultivated in patches almost to the summit, for it has long been extinct, and neither it nor its fellows trouble the island even with an earthquake. Such diversity of scenery as *Sulu* affords is seldom seen in a tropical island. The old jungle has been for the most part cleared away, but long, dark patches of it still exist in the small gullies, or cover the sides of the mountains. Nearly everywhere the eye is greeted by what an auctioneer would describe as "an extensive and park-like view." If we stand on one of the many hills which tend to make the island look far larger than it really is, we see before us a stretch of hill and dale covered with bright green grass, and dotted with little spinneys or solitary, well-grown trees,—just such a view, indeed, as one might get from a country-house in *England*, were it not for the suspiciously sharp cone of some volcano cropping up on the horizon. Here and there, where the soil has been freshly turned by the rude wooden ploughs employed by the natives, it seems as if some huge ruddy-coloured blanket had been spread out in the sun to dry. Few huts are to be seen. Most of them are buried in little groves of *cocos*, or amid the dark foliage of the *durian* or *Artocarpus*, and the "warm blue breathings of the hidden hearth" alone reveal their presence. In these open glades there is but little bird-life, but in the other localities we had for many days no difficulty in procuring specimens. Perhaps the commonest, or at least the

most conspicuous bird is the Scarlet-vented Cockatoo (*Cacatua hæmaturopygia*), which possesses a single rose-coloured feather for its crest. This species is occasionally tamed by the Sulus, and apparently can be taught to talk, although not readily. We ourselves did not succeed with our pets, but in one instance I found a much dissipated-looking specimen in a native hut, who seemed to have half forgotten some language which, we were assured, was Sulu.

Overhead, in the open clearings, the Wood-swallow (*Artamus*



Sarcops calvus.

leucorhynchus) hawks unceasingly. Square-tailed and with short, stumpy-looking wings, it has a somewhat clumsy appearance, but its beautiful silver-grey back and snowy under-surface atone for it. Its habits are curiously swallow-like, whether sitting huddled up in company with half a dozen others on a bare bough, or whirling round in wide circles with an incessant twittering cry; but in reality it is a species of Shrike, and has as little affinity with the Hirundinidæ as our so-called sea-swallow, the tern. The curious *Sarcops*—a bird the size of a thrush, with black and silver plumage, and a large fleshy wattle of a bright pink colour round the eye—is

also an abundant species, haunting the large fruit-trees in the neighbourhood of the native huts; and though not so conspicuous as the blue and green parrots, or the brilliantly-coloured Lorikeet (*Loriculus bonapartei*)—a little glowing ball of vivid crimson, yellow, and green—its peculiar appearance is even more striking to a naturalist's eye. But of all the ornithological spoil we obtained from the archipelago, the tiny little Sun-bird (*Cinnyris julia*) was perhaps the most brilliant and the most beautiful. The head and tail are metallic green, the back a deep red, and on the under-surface the brilliant magenta of the throat gives place to a rich orange on the breast and abdomen. These lovely little creatures were not common, but a particular clump of low, flowering shrubs close to the village of Meimbun was a favourite spot for them. They were fearless enough of our presence, and as they flitted from flower to flower with a short, jerky flight, or hung head downwards, rifling the blossoms of their insects or nectar, their throats shone like living rubies in the blaze of sunshine. The habits of this genus are very much alike, and as I used to watch them my thoughts often went back to a well-remembered spot on the Flats of the Cape Town peninsula, whither some years ago I used to stroll every morning to see the Nectarinias (*C. chalybeus*) feasting on a huge bush of *Erica* in full flower. In spite of their beauty of plumage, however, these birds are not the best of characters, constantly quarrelling and fighting, and driving away their weaker brethren, just as is the case among the humming-birds. Their many moral imperfections somewhat quieted my conscience whenever I transferred a fine specimen to the collecting-bag. They were, moreover, great rarities, having previously only been discovered in the island of Mindanao by the naturalists of the *Challenger*.

South of Buat Tulipan was a picturesque little village, where our friend the young Rajah lived. It was built half in, half out of what appeared to be a lake, but was in reality a creek running up from the sea, its entrance hidden by the mangroves. These

places always have the strongest fascination for me. It is pleasant to lie at full length on a palm-leaf, taking deep draughts from a coconut and watching the picture of savage life and its surroundings. Here a Sulu—*parang*-girded, and with his spear stuck handy in the sand—is drying fish in the sun. They have been already smoked, and now, tied in small bundles, are being stocked away on beautifully neat bamboo frames placed one above the other. A couple of old women are dipping water with long bamboos from the well, leaning over the blocks of white coral of which its parapet is built. In these climates man is amphibious up to the age of ten, and a dozen or more little warriors and their wives *in futuro* are splashing and spluttering about in front of the houses, or climbing into the carved praus drawn up on the grey sandy earth which forms the beach. Over the tops of the mangroves the sea is visible to the right, in vivid patches of bright green, white, or blue, according to its depth. Everything is simmering in the heat. Our coconut is finished, and we look longingly at a mass of the yellow fruit above our heads. The little Rajah who has come out to see us motions to a boy close by, and the young monkey, climbing like a cat by the aid of the notches cut in the tree, throws us down another to refresh us before we start once more upon our rambles.

Among the big durian and jack-fruit trees at the back of the village lay the little cemetery. The carved wooden headstones were closely packed together, some flat and in the shape of a conventional leaf; others straight and post-like, carved to represent a series of superimposed cubes. Overhead the *Michelia*—the dead man's flower, as the Sulus call it—dropped its deliciously-scented blossoms, and the graves were strewn with the flowers of the Areca palm. Buddhist and Mohammedan alike plant the Champac above their dead. So should we too, I think, did our climate permit it. Day after day throughout the year the tree blossoms. Day after day the delicately-creamy corollas fall entire upon the grave, retaining both their freshness and their fragrance, unlike any other

flower. For how long after they have closed over our loved ones are our graves decorated, I wonder? Here Nature, kindlier-hearted and unforgetful, year after year lays her daily offering of Champac blossoms upon the tomb.

A few days after our arrival the Sultan intimated that he would like to bring his wives on board with him when next he



A SULU GRAVE.

visited us. He was said to have six, but we could not ascertain the exact number, as it is of course contrary to the rules of etiquette to allude to them. The first wife, a Sulu woman much older than the Sultan, was, we soon found out, not the favourite. What little affection he had to give was bestowed upon a rather nice-looking girl with a good figure, who had been taken but a short time before from a Datu or chief at the east end of the island. War had broken out in consequence, and both parties were shortly

to take the field. His august Majesty is not supposed to engage in warfare, so he gets some one to do his fighting for him. There is usually not much difficulty about these matters in Sulu, and in this case a lean and unpleasing-looking warrior who came to visit us on board was about to act as generalissimo of the forces. The *causa belli* apparently led a miserable life among the other members of the harem, who were intensely jealous of her. She had been chosen by the Sultan to be the bearer of his present, which so enraged the second favourite, a Chinese girl, that she slapped His Majesty's face, and altogether declined to be present on the occasion. Some little time after, before our second visit to Meimbun, this favourite wife died suddenly of poison, "administered by some person or persons unknown," but there was very little doubt that the Chinese girl, if not the actual administrator of the drug, was at any rate the instigator of the crime.

It had been arranged that the Sultan's party should arrive at ten o'clock in the morning, and we had fondly hoped to get rid of them before tiffin. But potentates and punctuality have no connection in the far East, and it was not till four hours later that the beauties of the harem appeared. We were then novices at these ceremonies, and had put off our meal from time to time, expecting our guests every moment. We were, I regret to say, both hungry and short-tempered. But later, when we got to be aware that these imperial idiosyncrasies were always to be depended upon, we took action accordingly, and received our visitors a few hours after their appointed time with the easy smile begotten of the post-prandial cheroot.

In due course of time five large boats discharged their brilliantly-coloured cargo on board, and our decks were soon so crowded that it was almost impossible to move. The Chinese wife had thought better of her resolution, and had condescended to be present after all, but another of them was in a fit of the tantrums, and had refused to come. Whether in or out of the harem the Sultan appeared to be equally in a state of broil, and the fear of poison,

the intrusion of the Spaniards, and opium-smoking, no doubt all combined to shorten his life.¹ He was also considerably in debt at Singapore, but with an elastic conscience and plenty of his warriors at hand, he was less likely to suffer from anxiety on this account than his creditors. He would be a bold dun indeed who would venture to go to Sulu in search of his money.

To European eyes the Sultan's wives were not very attractive, in spite of the brilliancy of their attire. All wore gold-embroidered Turkish slippers, and silk stockings, which in some cases were covered with spangles. Their dress was a loose sacque reaching nearly to the feet, of silk or stuff of bright colour. Over this was a loose jacket buttoned *à la chinoise*, and the head and shoulders were enveloped by shawls of shiny gauze with a gold fringe. One—the Chinese girl—wore hers as a yashmak, but her reason became apparent when, on removing it to drink some lemonade, she disclosed a bruised lip, which may or may not have been the result of personal chastisement administered by her lord and master. Their hands were covered with rings, for the most part set with pearls, which are the chief product of the island. It was amusing to see them looking over a photograph book, where the jewellery to be seen in the portraits was the only thing that interested them. Their opinion of English ladies was evidently lowered when they discovered that they wore so little.

Although only three wives had come on board, they were

¹ He died in the beginning of 1884. The usual difficulty as to his successor arose, one party declaring for his brother,—the rightful heir,—another for an old uncle with whom he had been on anything but friendly terms. In May, 1886, the date of our last intelligence from the island, the late Sultan's brother appeared likely to gain the throne, but the matter was still unsettled. In spite of the disturbed condition of the country, Captain Schüick, the German planter, had been unmolested. Desultory fighting still continued. Any surplus in the population has no doubt been considerably lessened, and the Spaniards behind the loop-holed walls of Jolo on the north of the island are probably biding their time, and will step in when both parties are exhausted. Their project of getting the young Sultan to go to Manila, "in order to be invested with his title," has failed.

accompanied by numbers of female attendants. There was also a large gathering of Sulu warriors, but on this occasion they kept to one side of the ship, leaving the other to the ladies, who ranged themselves along the bulwarks like an ornamental border in a flower-garden. Most of them were plump little damsels with bright eyes, and though not so good-looking as the Dyak women—who are, I think, the most attractive of all those of Malay race that I have seen—they had more claims to beauty than their mistresses. We regaled them with lemonade and preserved fruits, and supplied them with cigarettes, which they appeared to enjoy thoroughly. Unfortunately they were themselves provided with betel, and before we could interfere, our spotless decks were covered with the juice. The Sultan left his wives to take care of themselves, and wandered about the ship inspecting our arms and machinery, returning now and again to the fascinations of a musical-box, with which he was greatly delighted. It was with the greatest difficulty that we induced him to come on deck to be photographed. We arranged a group of the three wives and the slave bearing their betel-box, the Sultan and his Tobacco Box in Waiting, the two Turks and other exalted personages, but although we explained the operation, nothing would induce them to remain quiet for a single instant, and the patience both of the operator and sitters was fairly exhausted before we obtained a successful negative.

After the departure of our guests some of our party proceeded in the cutter to Parang to stay with the Panglima Dammang, with whom we had already made acquaintance. The distance was barely ten miles, and aided by a light breeze off the land, it was not long before we arrived at our destination. Others of us remained behind at Meimbun, to indulge in our favourite flight-shooting among the parrots. Every evening small flocks of green parrots (*Tanygnathus*) and the little white cockatoo fly from west to east over the village about half an hour before sundown, affording capital sport. The former, of which there are two

species,¹ are only of value to the naturalist, but the latter are capital eating, and are free from the bitterness that is characteristic of many of the parrots. Cockatoo pie, I can assure my readers, is really excellent.

¹ One of these, *Tanygnathus burbidgei*, is, as far as is known, peculiar to the Sulu Archipelago.

CHAPTER III.

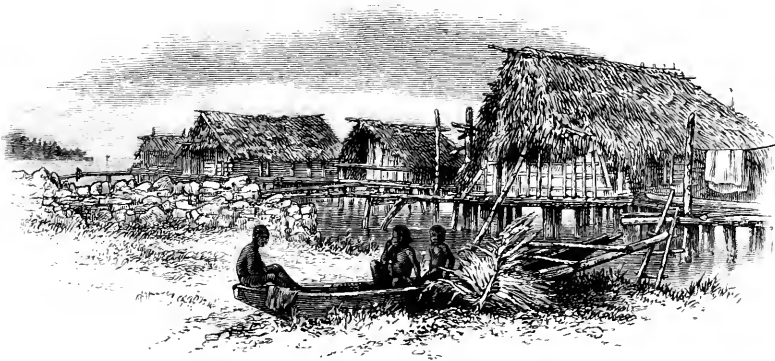
THE SULU ISLANDS (*continued*).

We leave for Parang—The Panglima Dammang—Parang and its surroundings—Tulian Island—Jolo, the Spanish settlement—Life in the town—Marine fireworks—The watering-place—A narrow escape—Pig-hunting—Our life in Sulu—Climate—Unhealthiness of Jolo—The Spaniards and the Sulus—*Juramentados*—Return to Meimbun—Sulu praus—Carving—Photographing the Sultan—Meimbun market—Ancient chain armour—New species of birds—Revisit Parang—Pearl divers—Lukut Lapas—Captain Schüick—Products of the estate—Jungle fowl—Tobacco cultivation.

ON the day following that of the visit of the Sultan and his wives the *Marchesa* anchored off Parang. The village, consisting of thirty or forty houses in line, is built on piles in the sea, each house being connected with the shore by a separate bridge of palm-stems. Although this method is in use among most Malay peoples in rivers or estuaries, it is seldom that the houses are entirely exposed to the sea as they are here and in New Guinea. Their shape and mode of construction in the latter country are, however, quite different. Here they are mere huts with rather high-pitched gables, the walls made of roughly-constructed *attaps* or mats of palm-leaves.

The *Marchesa* was probably the first European ship that had visited the village, for the Spaniards afterwards told us that they had never been there. The people do not bear a very good name even among the Sulus themselves, and the Panglima was a personage with whom few would have dared to trifle. He came on board with his chief men and attendants very soon after our arrival, as

had been previously arranged, and although Meimbun and Parang are only a few miles apart, the difference between his suite and that of the Sultan was considerable. They boarded the yacht in crowds, and though they behaved well, and we had no *contretemps* of any kind, it was evident that they were, on the whole, a very pretty set of ruffians. The Panglima Dammang had returned on the previous day from a battle with his old enemy, the Maharajah Tahlil, in which nine men had fallen; but though he had been



VILLAGE OF PARANG.

victorious, he did not seem by any means in a good temper. Although he could have seen nothing of the kind before, he paid not the smallest attention to the yacht or her fittings, and indeed took no interest in anything except some champagne, of which he drank two tumblers. He wore his favourite *parang*, with which, we were told, he had killed thirty men; and as he sat scowling in a corner of the saloon, the thought how easily he might enlarge the number and add the *Marchesa* to his navy if he chose passed through our minds. Possibly the same idea occurred to our guest also, but if it did he was far too wise to act upon it.

There was a little sea running when the first detachment of his people left for the shore, and the prau, being overloaded, filled and sank about a hundred yards from the ship. There was in reality

not the smallest danger, for the men all swam like ducks, and the boat, relieved of its load, floated awash on the surface of the water. The Panglima, hearing the shouting, rushed at once on deck, and seeing what had happened, jumped into our lifeboat with half a dozen of his men, and pushed off to the rescue. It was the only pleasing trait that we ever saw him exhibit.

The country round Parang, though perhaps not so pretty as the neighbourhood of Meimbun, was very pleasant under the rays of the early morning sun, when the grass was sparkling with the heavy dew. Not only is this time the most enjoyable of the whole day in the tropics, but it is by far the best for the collector. A few hours later, when the freshness of the morning has disappeared before the blazing heat of mid-day, animal life has also gone, and bird and beast hide themselves in the thicker jungle till evening. Parang, however, did not appear to be a good place for the naturalist, in spite of the considerable amount of cultivated ground and fruit groves. The soil was wonderfully good—a rich, dark loam of great depth—and the jack-fruit was of a larger size here than I have ever seen it elsewhere. The Papaw (*Carica papaya*), with its palm-like crown of large deeply-cut leaves and bright yellow melon-like fruit, was growing wild, or—more correctly—uncultivated, in the forest. It is curious how little this really excellent fruit is used. Not only is it of delicious flavour, but it is actually a digestive of considerable power. In the West Indies alone does it seem to be properly appreciated. In the Straits Settlements it appears but rarely at table, while in Java and the Malay Islands there is an idea among the Dutch that it is absolutely harmful.

We came upon a great number of graves in the forest, some of them collected in groups and surrounded by a ditch six feet or more in depth to keep off the wild pigs, others lonely and overgrown with vegetation. Even over the latter, though long neglected, the Champac flowered and strewed its blossoms. Many of the headposts were very tastefully carved, but there were no inscriptions of any kind. Nearer the village were the tombs of a former

Datu and his wives, built of stones piled into a dome, and mounted on a slightly-raised platform. A square of bamboos erected above the graves was decorated with strips of white cotton. On the whole, perhaps, these tombs were the most common objects observable in Parang. It would have been interesting to learn what proportion of the occupants had died in their boots, or rather would have done so were such articles in general use in Sulu.

The visit of the yacht on this occasion was a short one, but we returned again overland a few days later. Indeed our movements during the time of our residence among these interesting, but perhaps rather untrustworthy people were rather erratic. At one time we were the guests of the Sultan, at another engaging in a series of pig-hunts with the Panglima of Parang. Then, after a few days in Jolo among the Spaniards, we would ride out to the middle of the island, where a solitary German—a prominent figure in Sulu history—has established himself, and still continues to live, in spite of the ceaseless fighting that goes on around him. The eastern peninsula of the island was the only part into which we did not penetrate. The Maharajah of Loc and his adherents were too uncertain for us to care to trust ourselves in their hands.

From Parang to the Spanish settlement on the northern side of the island is not much more than fifteen miles by sea, and as we steamed along close to the shore we passed many canoes, whose occupants shouted at us, and held up some object in their hands that we could not make out. We stopped and found that they were pearl-divers, and the articles they wished to dispose of were the beautiful iridescent shells in which the pearls are found. The banks in and around the Sulu Archipelago are almost as well known as those of Torres Straits, and the Sulus are probably the best divers in the world. I have seen few men better proportioned or more athletic-looking—none certainly in this part of the world—and clad only in a sharp-peaked Bornean hat and a narrow waistcloth, their lithe figures showed to the best advantage. They had no pearls for sale, and the prices they asked for the shells were too high

for us to come to terms, so we resumed our course. About seven miles west of Jolo, and little more than a mile off shore, the small island of Tulian is passed on the port hand. A few years ago the Spaniards had a small detachment of soldiers here, a sort of outpost to keep a watch upon the movements of praus. It was a constant source of employment to the Sulus, who for a long time made frequent, and invariably successful attacks upon it by night, cutting down the sentries and slaughtering the cattle without the loss of a single man on their side. So silently were these raids carried out, and so demoralising was their effect, that the Spaniards eventually abandoned the post, and the island is now deserted.

Jolo, as it is spelt by the Spaniards, rejoices in many names. It appears as Sulu in the English charts, but the Bornean traders speak of it as Spanish Town. To the natives it is Tiangi,—“the market-place,” while Admiral Keppel and Sir Edward Belcher mention it as Soog, though this latter name, with its varied spellings of Sugh and Soung, has long disappeared. The town was in old days the capital of the island and the residence of the Sultan, and at the time of Belcher’s visit was built much in the same manner as Brunei, the “Venice of the East.” The buildings ran out in three lines into the sea, the piles of the outer houses being in twenty-four feet of water, and the intervals between the rows admitting of H.M.S. *Samarang* being secured at the mouth of the main street.¹ Hardly a trace of this native town now remains. The Spaniards, who permanently established themselves here in 1878, completely destroyed it, and set to work to build a fortified town, which should give them, once and for all, a secure footing on the island.

We arrived off the settlement at mid-day. It is a taking place at first sight, as indeed any place in the island must be. To the right rise the graceful slopes of Buat Timantangis, while the white houses and grassy glades give a homelike appearance to the little town, which is in itself attractive. We were a little uncertain as

¹ “Voyage of H.M.S. *Samarang*,” Belcher, vol. i.

to our reception by the Spaniards, for we knew that the relations between them and the natives, with whom we were on intimate terms, were anything but cordial. But we were destined to be most agreeably disappointed, and I may here say that it would be impossible to meet with greater kindness than was shown us during our visit by the Governor—Don Julian Parrado—and his officers. We anchored in ten fathoms not far from the shore. There is no harbour, but gales are of great rarity in the archipelago, and the anchorage is protected to the north by the Pangasinan group of islands. Our anchor was hardly down before a pleasant-looking young Spanish officer boarded us, with the compliments of the Governor and offers of service, and the information that the band would play at five o'clock. We replied with such suitable Spanish politenesses as our vocabulary mustered, and rowed ashore at the hour appointed.

I doubt whether any island in the world presents such curious anomalies as Sulu. At the south a semi-barbarous court, with a boy sultan of sensual habits, and an authority that is practically *nil*. The rest of the island in a feudal condition, parcelled out among half a dozen or more petty despots who are little better than savages, and eternally at war with one another. On the north a large prison, some acres in extent, outside of which no Spaniard dare show his nose. Here are cafés, two or three billiard-tables, a band that one would listen to in Vienna or London with pleasure, fever and dysentery, and complete and hopeless *ennui*. And in the middle of the island, somewhat mistrusted by the Spaniards, although a friend of the present Governor, but admired and respected by the Sulus in spite of sundry fights he has had with them, lives the German sea-captain, Schück, leading a planter's existence among groves of cacao, coffee, and Manila hemp.

We landed at an excellent wooden pier which runs out into the sea for three or four hundred yards or more, and has a lighthouse built at its extremity. The Governor, whom we found living in a house constructed entirely of corrugated zinc—an arrangement

which seemed admirably adapted for raising the temperature within to fever heat—received us very kindly, and showed us over the town. It is completely surrounded by a loop-holed wall about twenty feet in height, behind which sentries pace incessantly. The gates are shut at sundown, after which no one is permitted to enter. On the seaward side there is no wall, but a gun-boat is always stationed at the anchorage, and the pier and shores are



A STREET IN JOLO.

patrolled by soldiers. Thus closely imprisoned, the Spaniards have wisely kept their men employed to the utmost of their power. They have recovered a great deal of ground from the sea by building dykes and filling in the ground behind them. Hospitals and barracks have been constructed on piles over the sea, but no plantations have ever been attempted except by one man, who laid out a small sugar estate close to the walls, only to have it completely destroyed by the Sulus in the following year. In spite of the youth of the settlement, the three or four streets which it

possesses look not only extremely neat and clean, but even picturesque, planted as they are by rows of bananas and cotton-trees on either side. There is a market-place formed of palm-leaf sheds, beneath which the Manila men chatter and discuss the merits of their fighting cocks, which, slung up in handkerchiefs with their legs protruding, or tied to a post of the stall, are visible in all directions, for cock-fighting is as much a ruling passion here as it is in Cuba, and at any street-corner one may see a couple of natives putting their birds together for half a minute's friendly spar without spurs.

The Governor, who was a colonel in the army, chatted to us in excellent French, and gave us some information about the town. Life in it must indeed be monotonous and trying to a degree; a mere vegetative existence, with little or nothing novel to break the dull round save the advent of cholera or a Sulu running *amok*. Except in parties of ten or a dozen fully armed, no one leaves the town; and the evening promenade in the Plaza to listen to the band, the Sunday cock-fighting, and an occasional water-party appear to be the only amusements. The garrison is composed of six companies of the Manila native regiments, under a commandant and about twenty-five officers. These latter, with their wives and children and sixteen artillerymen, are the only Europeans. They number about 120. The rest of the inhabitants are made up of a very large number of convicts, sent from Manila and other parts of the Philippines. They seemed tolerably happy and contented, wore no chains, and were said to be very harmless.

Waiting for our boat to take us off to the ship, we witnessed a marine phenomenon as pretty as it was extraordinary. The calm water around the pier, itself not phosphorescent, was full of a *Pyrosoma*, or some such creature, that was most strongly so. These creatures progressed slowly in a very irregular serpentine fashion, leaving behind a vivid phosphorescent train which lasted for some little time. There were great numbers of them, and the effect was as if the water were full of fiery snakes. We did not

succeed in catching the author of these "sea fireworks," as our sailors called them, and during our six weeks' stay in these waters we never noticed the phenomenon again.

There are several wells within the town of Jolo, but the water is not particularly good, and the best is obtained from a spring on the beach about three-quarters of a mile to the eastward. Its situation is a curious one, the water bubbling up in a strong stream between high and low water mark¹ into a sort of rocky basin, overhung by the gnarled branches of a large *Ficus*, which must be of great age. The Governor had cautioned us as to the character of the natives in the neighbourhood, and told us that several of their men had been krissed or speared while watering, which operation was as a rule undertaken with a strong guard. Apparently, however, the relations between the contending parties are of the politest character, for he added that he would send a message to the chief, informing him that we were English, and asking him not to molest us. Either this or the northern fairness of our skins was sufficient, and we landed to shoot and get water for the ship on several occasions without any *contrectemps*. A little incident nevertheless took place on our first visit which showed us that the Governor's caution was not unnecessary. One of us, noticing a rare bird alight in a tree close by, jumped hastily out of the boat and went towards it. Several natives were standing round, and apparently knew who we were, but another suddenly appearing on the scene, and probably mistaking us for Spaniards, marked his man, and feeling for his *parang*, went on the track of the unsuspecting sportsman. Before he had gone two steps he was stopped by the others, but, had he only been a little nearer, the number of our ship's company would probably have been reduced by one.

Our stay at Jolo was varied by excursions into the interior of

¹ This, though a curious, is not a very unusual phenomenon. Such a spring exists at Walvisch Bay in South-West Africa, and I have also seen them in Sumbawa and other places in the Malay Archipelago.

the island and several pig-hunts with the Sultan and the Panglima of Parang. The latter was as keen a sportsman as he was a formidable warrior, and with good weather and plenty of pigs we had one or two capital days, although we did not on any occasion kill more than eight. Few sights could well be more picturesque than our "meets" on the park-like uplands of the beautiful island. The brilliant colours of the dresses; the scowling face of the old Panglima giving his orders; the advance of the line through the long grass; the spears glittering in the blaze of sunshine; the excitement and rush when piggy broke cover; the ride homeward by moonlight to Meimbun, or to the stockaded house of the Panglima; the strangeness of our surroundings as we dropped off to sleep on the cool hard mats,—all these are among our most vivid recollections of Sulu. The natives are most fearless riders, and mounted on their sure-footed little ponies, will go at full gallop over the roughest ground. Like almost every wild tribe I have seen, the people ride with the big toe only in the stirrup, which here is usually a simple loop of rope.

We were even better friends with the Spaniards than with the Sulus, and it was curious thus to alternate between two races who had been bitter enemies for nearly three centuries; on one day in almost complete savagery, the next drinking coffee and listening to selections from Wagner rendered by a band which only a few months previously, before the advent of cholera, had been nearly 100 strong. All the performers, with the exception of the conductor, were of native or mixed blood, from Manila, and their instruments had been sent out from Paris. Sitting in the little creeper-covered arbour in the public gardens, with our excellent friend the Governor pouring out a string of amusing absurdities between the pieces, we could shut our eyes and fancy ourselves in Nice, or some other like haunt of fashion in far-away Europe. If we opened them the illusion vanished quickly enough. At the end of the street the sentry paced up and down behind the loop-holed walls, and between selections from the "Nozze" and "Robert

le Diable" the sergeant of the guard placed the heavy key of the gates in the Governor's hand.

The northern side of the island is said to have a greater rainfall than the southern. The Spaniards had not taken any observations, but we gathered that it was considerable. The first three months of the year are on the whole fine and dry, but at the end of April or the beginning of May the rains come, and the monsoon changes. Part of July and September and the whole of August are again fine, but in the middle of September the second rains usually begin, and last until the end of the year. The easterly monsoon does not set in steadily before November. During our visit in April and May the thermometer on board ship stood pretty steadily at 80° or 81°. Inland the temperature was three or four degrees higher. Cholera had visited Jolo during the previous year, doubtless imported from Manila, for as far as we could learn only a few cases occurred on the island generally. In the town itself, however, a large number of people fell victims, and, sanitarily speaking, it was in very bad condition at the time of the *Marchesa's* visit, although the streets and houses were beautifully clean. The garrison were dying at the rate of one man a day, chiefly from dysentery and fever, the latter disease being especially rife, owing no doubt to the amount of digging always going on within the precincts of the town. This mortality is, however, no criterion whatever of the healthiness of Sulu itself, which appears to be equal to that of any tropical island in this part of the world, and far superior to that of Northern Borneo. The crowding, the disturbance of the soil, and the condition of hopeless *ennui* resulting from the prison-life of Jolo,—each of these is sufficient alone to make any tropical station unhealthy. When they are combined the only wonder is that the death-rate is not higher.

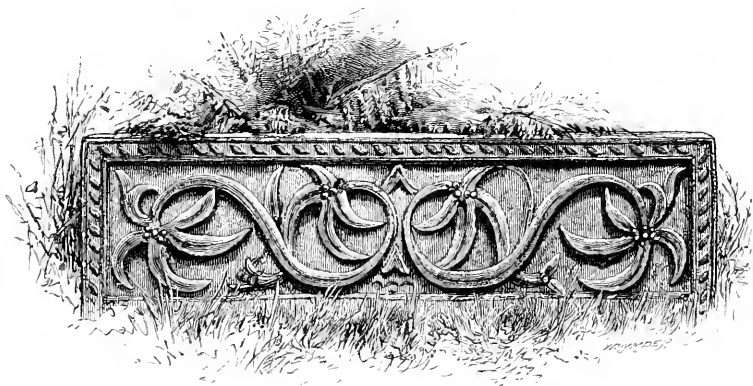
Our friend Don Julian, always bright and cheerful in spite of his ill-health, and with a mixed vein of keen humour and kindly cynicism in his manner which rendered him a charming companion, seemed alone to prevent Jolo from falling into a condition of utter

stagnation. He was doing his very utmost to conciliate the natives, but his efforts had apparently been almost fruitless, for though he might succeed for a time, fresh outrages and murders would soon place the two parties on their old hostile footing. It is curious to note how quickly the neighbouring Philippine islanders submitted to Spain's yoke, and how prosperous and contented they are at the present day in spite of earthquakes, typhoons, and tidal waves. But with the treacherous and fanatical Sulus,—possibly from their religion,—little or no progress has been made. During the war of succession in 1881—for in Sulu the death of the Sultan is always the occasion of a general outbreak—the natives came up to the very walls of Jolo, and tried to carry it by assault, with the result that a few Spaniards and a large number of their enemies were killed and wounded. Affairs were quiet for a time, but the people of Loc—with whom the Sultan, at the period of our visit, was himself at war—having been constantly successful in lying in wait for and spearing the Spanish just outside the walls of Jolo, an expedition was organised at the end of 1882, and in the engagement which took place about thirty Sulus fell. Just previous to this a Loc man, armed with his *parang*, had succeeded in getting into Jolo unperceived.¹ Walking to the Plaza he drew his weapon, and rushing upon the people began cutting down men, women, and children indiscriminately. Although almost every one goes armed in the town, he was with some difficulty overpowered, and he had killed no less than seventeen persons before he was finally despatched! Truly it can be said that even life in Jolo is not without its excitements.

On the 1st of May we found ourselves again at Meimbun, after another day's pig-sticking with the Panglima Dammang, in which six pigs had bit the dust. As we rowed up the little stream we noticed some of the natives busily engaged in repairing their large praus, which were hauled up on the mud close to the market-place. The Sulu boats are of two kinds only. The *dapang*, or smaller one

¹ The Sulus are allowed to enter the town, but are searched for arms at the gates.

is usually a "dug-out," with its freeboard heightened by planks. So far it is a common enough model in Malay waters, but its peculiarity consists in both bow and stern being cigar-shaped. Above the "ram" thus formed the two top planks are bent sharply outwards, making a deeply-flanged bow of very characteristic shape. These boats are provided with large bamboo outriggers on both sides, and will stand tolerably heavy weather. The larger praus, which are used for voyages to North Borneo, Samboanga, and other more distant parts, are from 12 to 20 tons' burden, and



CARVED STONE, MEIMBUN.

are strongly, though rather clumsily built. Their sterns are often highly ornamented with carving. We were much struck by Sulu taste and execution in this way, whether displayed on tombstones, praus, or house decoration. Over the door of the Sultan's harem was a very pretty bit of scroll lattice-work, but the best example of stone-carving that we saw on the island was a large slab which lay half buried in the mud and coarse vegetation of the river-bank just below the Sultan's house. The people were rather amused at my sketching it, but I could not get them to tell me what it was. Most probably it was originally intended for a gravestone, but when we were there the washerwomen of the household used

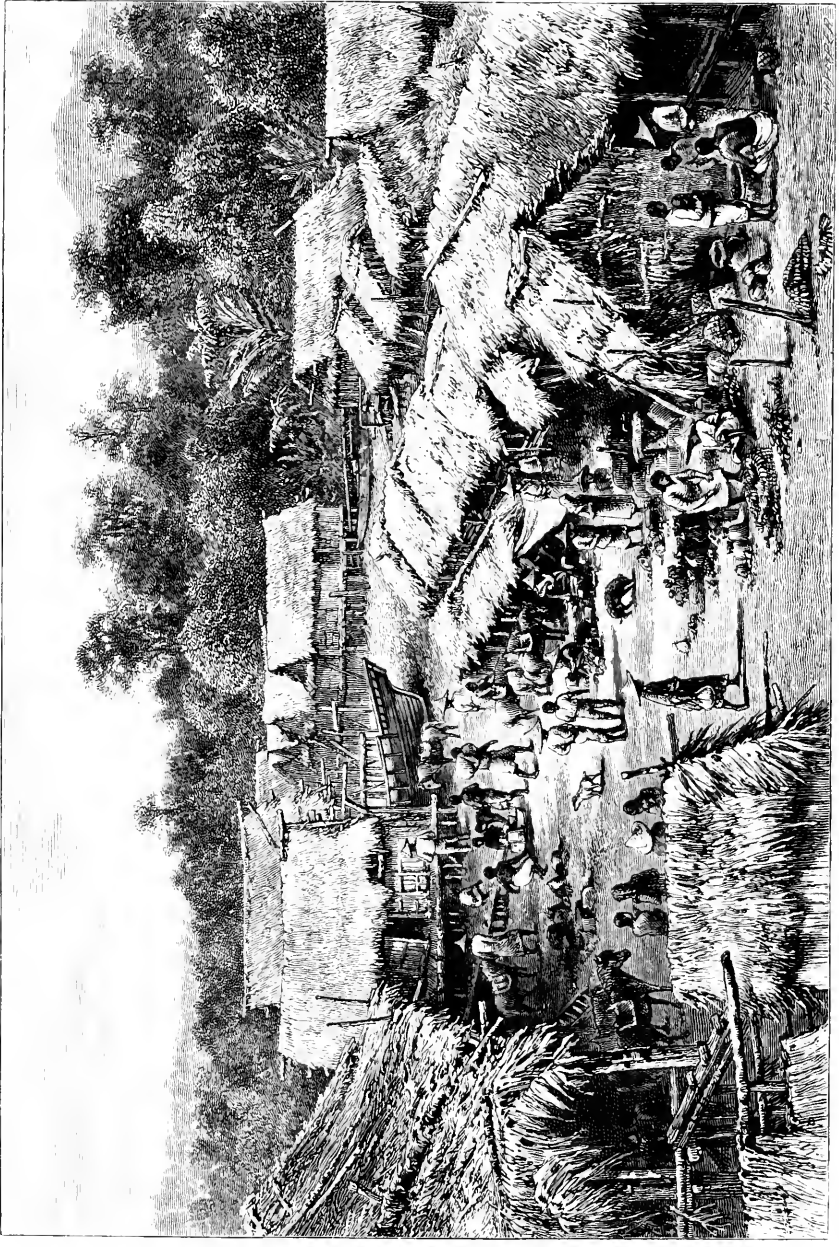
it as a slab on which to knock off the buttons of the imperial shirts.

The Sultan had on several occasions expressed his desire to be photographed, and accordingly one morning, having previously made an appointment at nine o'clock, we rowed ashore, and, after two or three hours' collecting, arrived at the Istana at half-past ten. We were a good half hour too early. The Sultan, dressed in an ordinary Oxford shirt, with a short silk *sarong* and European trousers, made his appearance with the charming nonchalance that characterises all well-bred people who are late. We sat and drank chocolate for some time, and at length, after a few delicate hints on our part that we were quite ready, he again retired for half an hour or so, reappearing in full Sulu costume of bright yellow trousers fitting close to the skin, a magenta velvet coat covered with small gold plaques set with pearls and emeralds, and a small turban. The latter was of a kind peculiar to Sulu—of brilliant crimson silk worked alike on both sides with flowers, and not much larger than a good-sized handkerchief. We congratulated ourselves on this unusual rapidity, and were preparing our plate when we discovered that His Royal Highness had not the smallest intention of being photographed in this costume, but was merely waiting until another was ready. This turned out to be a quasi-European dress, of dark blue cloth jacket and trousers embroidered with gold. But as the straight gold stripes upon the trousers did not seem sufficiently decorative, he set his wives to work to make an additional looped trefoil border of the same material, and retired into the other room. The hours passed on and still the members of the harem sat stitching away, so, tired of waiting, we went to talk to them. They were evidently as much disgusted as we were, and anxious to know if the job could be done quicker, they put the imperial unmentionables into our hands, and told us that they would be delighted if we would finish them. The design, we found, had not even reached the knee, and feeling that active measures were necessary, we again interviewed His Majesty, and

represented to him that he looked more than usually charming in his Sulu dress, that he would look even better in the photograph, and finally that, in European countries, curls and twiddles of gold lace were only worn down the leg by people of low rank, such as the Betel Boxes in Waiting and the like. Happily we succeeded in persuading him, and after he had again retired to make a few additions to his jewellery, we managed at length to form a group. Everything was going swimmingly; the hand was on the cap waiting for the Sultan's eye to fix itself upon the spot indicated, when suddenly jumping up, and clapping his hands, he declared that he would be taken on horseback! "*Baik sakali itu!*" A capital idea! The whole operation had to be gone through from the beginning again.

In spite of the irresolution of the Sultan, it appears that he can occasionally make up his mind. A short time before our arrival a burglarious Sulu entered the house of a Chinaman,—a few of that race being permitted to live and trade at Meimbun. It is not often that Johnny is caught napping, and this one was no exception to the rule. But instead of taking to flight, the Sulu cut down the unfortunate householder with his *parang*. On recovering, the Chinaman laid a complaint before the Sultan, who, on hearing the evidence, at once ordered the Sulu to be decapitated.

At Meimbun we once more resumed our old plan of collecting, and every morning, shortly after daybreak, the little crowd of children awaited our arrival at the bamboo bridge. Our way generally took us for a short distance over a well-trodden path leading to the market, and we used to meet and exchange salutations with small parties of Sulu warriors and their wives coming in laden with fruit and other produce. The greater number were mounted on the sturdy little ponies for which the island is famous, and at the ends of their spears dangled a couple of fowls or a bunch of bananas. The market itself would have rejoiced an artist's eye. The bright yellow of the areca and coconuts against the fresh green *sirih* leaf; the picturesque groups of natives bargaining round



the stalls; the little piles of spears leant up against the corners of the attap sheds; the Chinamen with their large Bornean hats sitting behind their shelves of "notions"; the swarms of butterflies hovering over the *débris* of jack-fruit husks and the like, together formed a scene which was always novel and amusing. No description that I could give would convey to my reader any idea of its busy life and brilliant colouring.

Mr. Burbidge, who paid a short visit to Sulu a few years ago, mentions the fact of some of the natives being provided with shirts of chain armour.¹ In spite of our being on the look-out for them we saw very few, but at a later period we succeeded in obtaining two. They were without the brass breastplate described by Mr. Burbidge. These articles are undoubtedly of European manufacture, and it is extremely probable that they were taken in bygone years by the Sulus from their old enemies the Spaniards. Where spear and kris are as yet unsupplanted by the rifle, as is the case among these islands, they must, I should think, be extremely useful.

Our ornithological rambles during this, our second visit to Meimbun were productive of several species which we had not previously obtained; among others of two or three rare pigeons. Of all parts of the world the New Guinea region is perhaps the richest in these birds, but we found them tolerably abundant here, and obtained no less than eleven different kinds. But our greatest prizes were two birds hitherto unknown to ornithologists. The first, a bush-shrike of brilliant colouring, with the head and shoulders shining bluish-black and the rest of the plumage bright orange-yellow, I afterwards named after the yacht (*Perierocotus marchesæ*, *vide* Frontispiece, vol. i.) The other bird (*Maeronus kettlewelli*), a babbler, with a curious tuft of white, hair-like feathers springing from the back, was an interesting species, of which we unfortunately obtained a single specimen only.²

¹ "The Gardens of the Sun," p. 206.

² *Vide* paper by the author, A Provisional List of the Birds inhabiting the Sulu Archipelago, "Proc. Zool. Soc." 1885, p. 247.

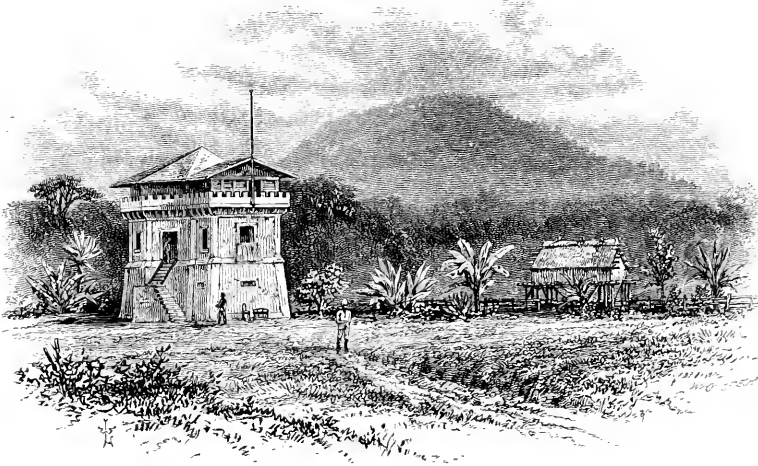
A day or two afterwards we returned to Parang on our way to Jolo, and the ship, as on the former occasion, was visited by crowds of natives, among them being a Datu or chief who was not upon the best of terms with the Panglima Dammang. We learnt, in fact, that hostilities were frequently apt to break out between them. The most amusing of our visitors was a very fat, good-natured-looking old Sulu, who was said to have been the most renowned pearl-diver in the archipelago. He had on one occasion reached a depth of twenty-seven fathoms. The Sulus are probably the best divers in the world, and think nothing of depths of less than seventeen or eighteen fathoms. We were anchored at the time in about fifty feet of water, and noticed that the natives went down to bring up the old tins and empty bottles we had thrown overboard. They do not use any weight, but swim straight downwards.

Returning from a shooting excursion next morning, we took refuge in the Datu's house to avoid a heavy shower of rain. He received our invasion with calm reserve, apparently not being too pleased to see us, but after a time he became more friendly. His house, like the others, was built on piles over the sea, with a rickety bridge about eighty yards in length connecting it with the shore. The floor was, as usual, constructed of split bamboos, which were so far apart that I nearly broke my leg by putting it through a more than ordinarily large gap. Among a little pile of spears in the corner of the room were three guns, one of which was a magazine rifle of American make! Our host was without cartridges for it, happily for the Panglima, and we had neither the wish nor the ability to assist him.

On the day following our arrival at Jolo we were astonished to see a large man-of-war approaching the anchorage. She proved to be the *Wolf*, a German corvette, the officers of which were very anxious to get information as to the doings of the Spanish authorities in the archipelago. This we left them to obtain first hand, and contented ourselves with lending them a couple of charts, of which they were in need. The Germans were at that time extremely

jealous of Spanish influence in these and other neighbouring islands, and—somewhat maliciously I fear—we asked them if they recognised the sovereignty of Spain in Sulu. They told us that they were unable to answer the question. By the treaty of March 7th, 1885, they have since admitted it.

We had returned to Jolo with the intention of staying a few days at Captain Schüek's plantation. The path thither leads straight



SPANISH BLOCK-HOUSE NEAR JOLO.

out from the back of the town towards the centre of the island, and about four hundred yards from the gates passes a small block house which the Spaniards have established as an advanced post. The country is but little cultivated in this part, owing to its disturbed condition, but after passing through a picturesque little valley, signs of agriculture become more frequent, and in less than a couple of miles the bungalow, Lukut Lapas, is reached—a large, rambling building surrounded by several outhouses and Sulu huts. The view is an extremely pretty one, with the thick plantations around the house, and a bright little rivulet dividing it from the

jungle-covered hills to the westward. Captain Schüeck had been settled there for four years, and after a short period of squabbles and fights with the natives, in which on more than one occasion he narrowly escaped with his life, he had at length succeeded in establishing a footing, and had made himself respected and looked up to by the people in no common degree. Two years later his wife and family—eight in number, and all under seventeen—had joined him. His history had been one of many vicissitudes. At one time a trader, he had visited most parts of the Malay Archipelago, and had been shipwrecked, captured by pirates—both Chinese and Sulu—and exposed to many other mischances. Coming to Sulu and espousing the cause of the natives against the Spaniards, he took to “gun-running,” had his vessel confiscated, and was himself taken as prisoner to Manila. The German Government took up his case; the Spaniards were compelled to release him, and he was ultimately fortunate enough to obtain £1000 as compensation. Such is the respect in which he is held by the Sulus that during his absence his family live unharmed among them, in spite of their lawless nature and the many factions into which they are split. In great measure this is no doubt owing to his upright and fearless conduct, and to his having taken his own line boldly. As an instance I may quote the following case. Two women working on his estate having been murdered by a couple of their fellow-countrymen, he called a meeting of the chiefs, and obtaining their consent, rode over to the house of one of the murderers, secured him, and shot him with his own hand. For the other he searched every prau on the coast, and having at length found him, brought him to the chiefs, by whom he was immediately kribbed.

Captain Schüeck's son, a merry boy of seventeen, we found not only a most useful, but an extremely agreeable companion. He accompanied us everywhere, and with his knowledge of the people and their habits, and his extraordinary command of languages, was of the greatest assistance to us. He spoke German, English,

Malay, and Sulu with perfect fluency, and was tolerably well acquainted with Bisaya and French. It was amusing to see his easy familiarity with the Sultan, and how he was called in to quiet the domestic jars among the beauties of the harem.

I have rarely seen better soil than that of Lukut Lapas. The lanook, or so-called Manila hemp (*Musa textilis*), was growing with wonderful luxuriance. It is a plant closely resembling the banana in appearance, but of a darker green, and its cultivation is almost exclusively confined to the southern islands of the Philippines. The fibre is of considerable value, being very strong and flexible, and but for the fact that the tree is said not to flourish out of the latitudes above named, it is extraordinary that it should not hitherto have been more cultivated. Like the banana, the lanook is trunkless, its spurious stem being formed by layers of the ensheathing petioles. As the older stems, which are the chief source of the fibre, are cut down, new suckers spring up with great rapidity from the parent root. The fibre is separated by scraping away the pulp with a blunt knife or piece of hoop-iron, and after a certain amount of preparation, is sorted according to its fineness, the coarser quality being made into cordage, the finer spun into a substance which, in the Philippines, is woven with silk or cotton to make dress fabrics. Exported, it is chiefly used in the manufacture of paper. The coffee plantation was by no means so flourishing as the lanook. The trees were affected by mould, and with a leaf disease very similar to, if not actually identical with that produced by the *Hemileia vastatrix* in Ceylon and other countries. It is doubtful whether Sulu is adapted for coffee-growing. It was only to be expected that the *Coffea arabica*—the sole kind that Captain Schüick had tried—would prove a failure, but it is possible that the Liberian variety, which has succeeded well at low elevations in Ceylon, might also do so here. Cacao and tapioca were the only other vegetable products grown. The former was doing extremely well. The tree, which was introduced into the Philippines by the Spaniards in the middle of the seventeenth century, appears

to have found a thoroughly congenial soil, and I have seldom tasted more delicious chocolate than that we drank in Sulu. Usually the trees do not begin to bear until they are four years old, but Captain Schüick informed us that at Lukut Lapas they had borne well on the third year. The young cacao always requiring shade, the plantations are generally made beneath the *Artocarpus* or other thick-foliaged trees, large clumps of which are so plentiful throughout the island that there should be no difficulty in getting suitable ground for planting.

Wandering about in the pleasant fruit-groves and open clearings, we were able to add considerably to our collections. In the long lalang grass the large ground Cuckoo (*Centrococcyx*) rose before one's feet with a flapping, laboured flight. The tiny Button-quail (*Eccalfactoria chinensis*) haunted the same ground in abundance, lying in twos and threes. The natives net them in great numbers, and used often to bring them to us for sale. They live well in captivity in spite of their pugnacity, but the top of the cage must be made of a piece of loosely-stretched linen or sacking, or the birds' constant habit of springing upwards soon causes their death. The common Jungle-fowl of the Indo-Malayan region (*Gallus bankiva*), identical in appearance with our "black-breasted red" game fowl, is very numerous throughout the island, but, owing to its haunting the thicker jungle and being very shy, it is rarely seen. The Sulus have a plan of catching it which seems to be very successful. They tie up a captive in the most frequented haunts of the species, and surround him with springes. The wild birds, attracted by his crowing, come down to fight, and are quickly caught. In this manner it is only the cock bird that is ever secured, and thus, although at one time we had as many as ten cocks tied up to the posts of the verandah, we never even saw the hen. After a few days' captivity they readily permit themselves to be caught and carried about, and become far tamer even than domestic fowls, with which they are freely crossed by the natives. The cock bird has sickle feathers of extraordinary length.

There is one crop deserving of special mention for which Sulu seems particularly suited. The tobacco used by the natives is almost entirely of Chinese manufacture, as they are apparently ignorant of the method of preparation of the leaf, but in the few places in which we found it growing, it appeared to be of remarkably good quality. It is a fact not generally known that the outside leaves—or “wrappers,” as they are technically termed—of the better qualities of Havana cigars are grown at Deli, in Sumatra, and that there are but few soils capable of producing them. In October, 1884, the managers of the German Borneo Company landed in Sulu, and, struck with the appearance of the island, determined on planting tobacco. The result of the first year's work was 200 *piculs*, valued at £10 per *picul*. This year (1886) 100 “fields” are under cultivation, which are expected to yield 800 *piculs*—in other words, about 100,000 lbs. The labourers are Chinese from Singapore, where they are engaged before the Government Agency, and receive their passage and an advance, together equivalent to \$60, the half of which only is charged to them. The method of cultivation is as follows. In December the felling of the forest and clearing of the land commences. In April the nurseries are prepared, and the seed, mixed with ashes, sown on the raised beds. The young plants grow rapidly, and in early May—the beginning of the rainy season—they are pricked out in “fields” of 300 by 20 yards, each of which is looked after by its own coolie. The soil is banked up around the stalk of the plant, and the leaves are carefully searched for insects. At the beginning of August the tobacco is fit for cutting. This is done an inch or two below the first leaf, and the plants are hung up head downwards in the drying-sheds until the stalks become dry, when the leaves are cut off, packed in bundles, and carried to the fermenting-shed. Here they are formed into “staples”—pyramidal heaps in which fermentation takes place—the heat being carefully noted by thermometers. When the desired temperature is reached the “staple” is rebuilt, the outer

bundles being now placed in the centre. When the leaves are considered fit, they are carried to another shed, where, after being sorted and pressed, they are made into bales ready for shipment. The stalks left after the first cutting grow again, and yield a second and a third crop, which, though inferior in weight, show no deterioration in quality.

The industry thus recently established in Sulu Island has, apparently, every prospect of success. By the manager of the Deli Maatschappij the soil was pronounced superior to the best Sumatran ground. The natives, though sworn enemies of the Spaniards, are tolerably friendly with the Germans and English, and it is to be hoped that, when foreign capital is employed and Spanish influence has become greater, the conversion of the *parang* into the ploughshare may be not far distant, and that Sulu, from a land of bloodshed and rapine, may in time become as peaceful and agricultural as the Philippines.

CHAPTER IV.

THE SULU ISLANDS (*continued*).

We visit the Panglima Dammanang—Battle between the Panglima and Maharajah Tabil—The Panglima shows his teeth—An unpleasant predicament—The convicts in Jolo—A serio-comic drama—Pangasinan Island—A bull-fight—Siassi Island—Cholera epidemic—Lapac—Leave for Tawi-tawi Island—The Spanish settlement at Tataan—An unpleasant companion—Tawi-tawi pirates—Fauna and flora of the Philippines and Borneo contrasted—Consideration of the Sulu fauna—The Sulu Archipelago zoographically purely Philippine—The Sibutu Passage forms the boundary line—The Sulu language—History of Sulu—Treaty of 1885.

WE rode out one afternoon from Lukut Lapas to the house of the Panglima Dammanang. There had been some talk about another day's pig-sticking, but we were uncertain about it, as the natives brought in the news that on the previous day he had summoned all his men to proceed against the Maharajah Tabil. We learnt that he had sent a challenge to this potentate, asking him to "come down and fight," and that the Maharajah, ever ready to oblige him, had replied that he would be delighted. "I will fight," he said, "but not with guns. Let us fight man against man; spear to spear, and kris to kris." The event, we believed, had come off that morning, but we could learn nothing certain, and when we pulled up our horses at nine o'clock at night outside the Panglima's stockades we were not at all sure if His Excellency had returned from the battlefield.

It was some little time before they removed the bamboo barricades and admitted us, and riding into the court, which was

full of Sulu warriors, we off-saddled the horses, and entered the house. It consisted—as do most of the houses in Sulu, even of those of high rank—of a single large room. In the centre was a raised platform surrounded with curtains. This was the bedroom of the Panglima and his two wives, the remainder of the apartment, which was carpeted with grass mats, forming his living and reception-room. Spears and guns were arranged on one side, and against the wall a few slightly-raised platforms served as sleeping-places for his head men or guests. We took possession of two or three of these berths, where we had often slept before, and, producing our supper, discussed the events of the day. The Panglima, we learnt, had gained a complete victory. Thirty houses had been burnt, many of the enemy killed, and a considerable quantity of loot obtained, and, concluding that our host would be in the best of tempers for a hunt on the following morning, we chatted away merrily over our chocolate and pipes.

Presently the curtains opened and the Panglima appeared, and squatted down without a word upon the dais. A glance at him told us that he was not in a condition to be trifled with, for he looked as black as thunder and took no notice whatever of us. It was in vain that we made our salutations, in vain that our clever little interpreter clad our congratulations on his victory in all the poetic imagery of the East. Conversation falls flat if carried on on one side with a series of grunts, and we soon saw that it would be wisest for us to retire for the night as quietly as we could.

The next day began with an amusing incident. An old woman entered the room with such a guilty look and melodramatic step that the only one of our party who was awake immediately “played ’possum.” Having satisfied herself by close inspection that we were all asleep, she made for our bag, abstracted a Turkish towel, and, tucking it under her *sarong*, disappeared with great rapidity. Soon after this little occurrence the rest of our party woke, and the Panglima also appeared. Neither sleep nor the slaughter of his enemies had exercised any softening effect upon him, and he looked

in an even worse temper than that of the night before. On our last visit the relations between us had become rather strained, but we hoped that the difficulties had passed over. We had lost several small articles while in his house, and some dollars had been stolen from our clothes during the night. But the chief bone of contention was with regard to some horses and silver-hilted spears that we had bought. The money had been counted twice by us before paying it, but almost immediately afterwards the Panglima had declared that it was eight dollars short. This we had at once denied, and the matter had been allowed to drop, but now our host returned again to the charge, and roughly demanded the money. We were half inclined to make a compromise by tendering four dollars, but feeling that it would show weakness, and that he might think that we gave it through fear, we decided not to do so, and told him of the morning's theft. The woman was sent for, and finding the evidence too strong for her, confessed, producing the towel amid the laughter of the Sulus standing round, who evidently regarded her with great contempt for having been found out. Among these people the Italian proverb, "*Peccato celato e mezzo perdonato,*" is true if we leave out the arithmetic, and it was quite within the bounds of probability that the delinquent had only been acting under orders. This incident, and our firm refusal to pay the money claimed, did not tend further to improve the Panglima's temper, and he growled out that "we English were liars, and that he would have nothing further to do with us." In polite society it is, I believe, the generally-accepted rule that the application of this term compels the insulted person to strike his opponent with violence in the eye. We were not, however, in a position to take this measure, but replied politely that we should be pleased if he would consider our intercourse at an end, inwardly hoping most sincerely that it might be. We then saddled our horses and rode slowly out of the stockade. It was crowded with people, and we should have had little chance had they attacked us. Fortunately, however, we were not intercepted. It was an unpleasant predica-

ment, from which we congratulated ourselves on having escaped with whole skins.

Our friend the Panglima we never saw again. In the war of succession in 1885 he was one of the first to fall. While leading his men he received a spear-wound in the left eye, and thus Sulu



A NATIVE OF SULU.

was rid of one of the most unmitigated scoundrels that ever trod its soil.

On rejoining the yacht at Jolo we found a Manila man on board who had escaped from the town. He spoke a few words only of Spanish, but complained of being cruelly treated by the Spaniards, and begged most piteously to be allowed to remain. It is a most difficult thing to judge of such cases. From our own observation, and from our constant intercourse with the Spanish officers,—whom we invariably found to be, as far as we could judge, gentlemen in the widest sense of the term,—we were inclined entirely to disbelieve his story. The fact, however, remains that the convicts, possibly weary of the monotony of the life or in dread of the fever and dysentery that carries off their comrades

day by day, constantly attempt to escape, although they well know that such attempts are almost invariably fatal. Unless he can manage to secure a prau, and put to sea on the hazardous chance of reaching some one of the Philippine Islands where he may be safe, the refugee is certain to be krissed by one of the Sulus who are for ever on the watch for such chances around the walls of Jolo. A reward is offered for the recovery of these men, but the Sulus apparently do not often claim it. We ourselves, while at Lukut Lapas, were witnesses of a little drama in which three actors played a part unconscious of our presence. It may perhaps be best described as a rapid procession in Indian file, with an escaped convict leading. Behind him came a Chinaman, anxious to secure his man and the reward, and behind him again a Sulu, *parang* in hand, and probably indifferent which of the two he brought to bag. It was a serio-comic drama in real life, but what was its last act we never discovered. The company vanished in the bushes and we pursued our way.

Don Julian Parrado was very anxious for us to visit the island of Pangasinan, four or five miles to the north of Jolo, where, he told us, there were three curious circular lakes connected by canals—a sort of second edition of the crater-lakes of Cagayan Sulu, as far as we could gather. A picnic was accordingly arranged, the Spaniards being delighted at the prospect of a day's outing without danger; and we started one morning shortly after sunrise with our guests and about five and thirty of the band, whose instruments were, I am afraid, somewhat stronger than our Spanish. The three lakes proved to be a complete disappointment. They were merely mangrove inlets, and though perhaps a novelty to some of our guests, were by no means so to us. Their size, however, was very unusual, and the complete concealment of the passages from one to the other showed us what a perfectly impregnable pirate haunt it would have made. We learnt that it had actually served this purpose until quite lately, but that the settlement of the Spanish at Jolo had proved too much for the occupants. After poling our

way through the tortuous channels, which, but for the aid of a native we had with us, we should never have found, we arrived at the farthest lake, where, in the very centre, half a dozen pile-built huts were picturesquely grouped. An incident occurred here which, trivial though it was, showed that the feeling of the Spaniards towards the natives was, in some instances at least, kindly enough. They found a "Moro" ill in one of the huts, and asked me to see him. He had fractured a rib by falling on the end of a pile, and while I was debating what substitute I should use for a bandage, one of the officers standing by took off his cholera-belt and handed it to me. I fear this little act of kindness was lost upon the patient. The Sulu character has no doubt many good points, but, as among most other native tribes with which I have been brought in contact, kindness and weakness are regarded as being very nearly synonymous terms.

It was a matter of great distress to our friends at Jolo that they could not show us any hospitality. I use the word in its restricted British sense, which implies that the only way of entertaining a guest is to feed him. "On ne dine jamais ici ; on mange," said Don Julian, deploring his inability to bid us to a feast of any kind. In default of meats for a dinner and partners for a ball, our indefatigable little friend had insisted on getting up a bull-fight in our honour, in spite of all we could do to prevent it. None of us had any love for these performances, and it was with considerable regret that we received our invitation, as we could not, of course, refuse to be present. The convicts had been at work for some days at the ring, and Jolo had been ransacked from end to end for suitable costumes, and when we arrived on the Plaza on the appointed afternoon, we were astonished to find how admirably the affair had been got up. Gaily-dressed caballeros pranced around the entrance as we made our way to the grand box. Opposite to us was the band in its full strength, and to our right the *elite* of Jolo were assembled in another box. Crowds of Sulus and Manila men, gay with coloured *sarong* and *baju*, occupied

every available point of observation; flags fluttered from the tops of a hundred bamboos, and the few ladies whose unlucky fate had condemned them to a residence in Jolo came out in the *dernières nouveautés* from Madrid. The boxes were beautifully decorated with flowers, the uprights being covered with palm-leaves, with a single blossom of the frangipane impaled upon each leaflet of the frond.

Bull-fighting is a form of amusement to which I have never as yet succeeded in accustoming myself, and of this particular performance the less said the better. It was, I think, the cruellest I ever saw. The pretty little Sulu bulls are such as can safely be approached and patted, and are without a particle of fight in their whole composition. Could we only have substituted the Panglima Damming and half a dozen of his chief warriors for them, we might, no doubt, have had some good sport and benefited the island at large. Maddened with the pain of the darts and impelled by the sole idea of escaping from its tormentors, the first bull rushed round and round the ring seeking for some place of exit, and from this arose the only amusing incident of the performance. At the corners were erected barriers to serve for the protection of the intrepid *banderilleros*,—*tablas*, I believe, in the phraseology of the bull-ring. It soon became evident that they were unnecessary, and crowds of natives accordingly took possession, some perched on the top and others peeping between the boards. Behind one of these the bull, in his frantic efforts to escape, succeeded in forcing his way. A scene of dire confusion followed. A heaving mass, from which legs and arms, horns and tail, protruded, was all that was to be seen by the spectators. At length some bold individual succeeded in obtaining possession of the animal's tail, and by bringing it up with a sharp turn against the corner of the barrier, his further progress was temporarily checked and the people extricated. Finally, however, he effected his escape, and his murder happily took place out of sight.

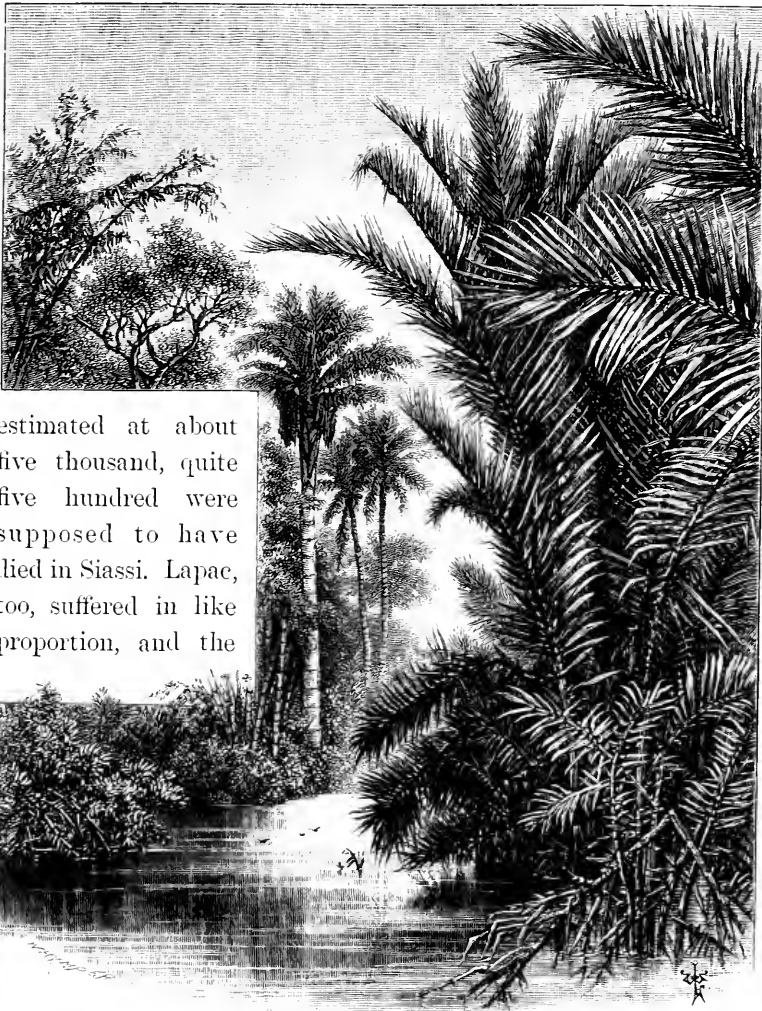
I need not describe the details of the rest of the entertainment.

Given tame bulls and a tyro *espada*, they are better left to the imagination. One thing, however, deserves to be recorded. The third and last bull was—hear it, O ye champions of the ring who lounge in the Puerta—a *cow!* I was pleased to find the Governor at the back of the box, whither I retired. “I do not like bull-fights,” he said. I confessed myself of the same opinion.

On the 16th of May we returned to Meimbun *en route* for Siassi and the islands to the south-west. All our Spanish friends had come off to bid us adieu, and we were most heartily sorry to part with them. The Governor especially, with his unvarying *bonhomie*, his keen sense of humour, and his quaint philosophy, had endeared himself to all of us, and we should have liked to take him away from the prison where he had still many more months to serve. Life in Jolo seemed to us to be little, if at all, better than penal servitude. It is certainly more unhealthy, and, as we dipped our ensign, and the farewell strains of the band gradually faded in the distance, we wondered how many of our friends would welcome us should chance lead us again to the shores of Sulu on our return voyage.

Siassi, which, with the neighbouring island of Lapac, forms an excellent harbour, lies about five and twenty miles to the south-south-west of Sulu. A Spanish settlement was formed upon it in October, 1882, and we found no less than three small vessels anchored off it, engaged in transporting stores and building materials. The settlement consisted of a block-house for troops, two or three houses for the officials, and a dozen or so of native huts, among which that of the inevitable Chinaman was of course to be found. It is situated on the west side of the island immediately opposite Lapac, and is under the command of a “Comandante Politico y Militar,” Don Jorge Gordojuela, who proved a very pleasant companion, and rendered us every assistance in his power during our two days’ visit. Up to that time they had had no fighting with the natives, but apparently did not put any very great confidence in them. A few months previously the cholera

had literally decimated the inhabitants. Out of a population



estimated at about five thousand, quite five hundred were supposed to have died in Siassi. Lapac, too, suffered in like proportion, and the

SCENE ON THE MEIMBUN RIVER.

(*Caryota* with inflorescence, and Nipa Palms.)

Comandante told us that in one village he had seen one hundred

and twenty-five corpses laid out side by side. It is the custom to keep the dead unburied for five or six days, and the consequences in a climate such as these islands possess is better imagined than described. The account was given us by our informant with a minuteness of detail that rendered it perfectly horrible. It would seem that here, as elsewhere in the Malay Archipelago, Europeans are but rarely attacked by the disease.

Both Lapac and Siassi are volcanic, and are much denuded of forest, so much so, indeed, as to be almost bare in some parts. The rainy season too had fairly set in, and heavy tropical showers fell at intervals during our stay, so that we were unable to add many specimens to our collections, and thinking that Tawi-tawi—an island thirty or forty miles to the south-west—would probably prove a more interesting locality, we weighed anchor and left on May 19th. We directed our course towards the northern shore, for one of our chief reasons for visiting the island was to see what progress had been made by a Spanish settlement that had been recently established on it. We kept a good look-out, for this part of the archipelago is entirely unsurveyed, and early in the afternoon arrived at our destination, which was revealed at some little distance by the presence of a small gun-boat anchored off the settlement. Seawards, Tataan is protected by a chain of reefs and banks which, as we steamed into the large harbour thus formed, were visible for an immense distance ahead, the yellow sand glaring in the hot afternoon sun. As we approached the ship, a boat put off and the captain came on board. He was in the confidential stage of intoxication, and mounting the bridge wanted to pilot us to our anchorage, intimating afterwards that he would be glad of a fee for his services! This we pretended not to understand, and congratulated ourselves shortly afterwards on having got rid of him.

Tataan had been founded five months before our visit. It was the first attempt of the Spaniards to gain a footing on Tawi-tawi, an island where the natives have a bad name even for Sulus. By no stretch of the imagination could it be called a taking place.

A broad, sandy path led from the shore to the large barrack-house, which was flanked on either side by two small buildings for the Commandant and his lieutenants. A force of eighty coloured soldiers were stationed here, but how they were employed or amused it would be difficult to say, for they could not go more than a hundred and fifty yards from the barracks in any direction, the dense jungle having only been cleared for that distance round the buildings. The Sulus were supposed to haunt the bush, and the garrison had already lost one or two men, of whom no trace had been discovered. Either they had been krissed or had lost their way in the jungle. Existence here seemed, if possible, several degrees worse than at Jolo. The only amusement was to bathe in a pretty, creeper-covered little bath-house, through which the streamlet of clear water that supplied the settlement had been led.

The Commandant was pleased enough to have the dull monotony of his life interrupted by our arrival. He spoke Portuguese fluently, and aided by our letter of introduction from Don Julian Parrado, we were becoming very good friends when the door opened and the captain of the gun-boat reeled in. He helped himself to the Vermouth unasked, and turning round on us, abused us in the most violent terms for not having called on him before the Commandant—he “would teach the English to be as insolent to him again,” and so on, the greater part of the harangue being, in the language of the police-courts, unfit for publication. He finally concluded by spitting in the Commandant’s face. We were on the eve of a row, for the brute was not sufficiently drunk to be harmless, but it happily passed over, and we left the house at once without further incident. The sight was scarcely an edifying one to the native soldiers by whom we were surrounded.¹

Tawi-tawi is, and has been from time immemorial, the haunt of pirates. In these days of steam few large vessels fall into their

¹ We wrote to our friend the Governor of Jolo about this individual, and on our return from New Guinea learnt that he had been dismissed his ship. From what we saw of the Spanish officers, I am bound to say that such an instance as the above must be regarded as absolutely exceptional.

hands, but for praus and small sailing ships insufficiently armed the locality is a dangerous one. The chief strongholds of these people are in the mangrove-lined shores of the southern part of the island, where, guarded by a network of reefs and shoals, they can bid defiance to any gun-boat sent against them. The Spanish settlement at Tataan is but a small beginning, but now that the supremacy of Spain in these seas is recognised by the European Powers, and the establishment of the North Borneo Company close at hand has caused a considerable development of trade, the islands have ceased to be the no-man's-land that they have hitherto remained, and the days of piracy are practically numbered. Tawitawi is about forty miles in length, is possessed of several good harbours and an excellent soil, but as yet it has been little cultivated. The northern coast appeared everywhere covered with dense jungle, but the south side is said to abound in natural clearings and to resemble Sulu Island. In the neighbourhood pearl-fishing is carried on to a considerable extent, but the pearls are stated to be of no great size.

In spite of the comparative proximity of the two countries the fauna and flora of Borneo are remarkably distinct from those of the Philippine Islands. Borneo, as we know, is almost typically Indo-Malayan in its zoological characteristics, much more so indeed than Java, in spite of the far greater extent of sea which separates it from the Malay peninsula. Its flora shows an equally great similarity to that of the latter country, and, if we pass to its physical aspect, we find that not only is the island devoid of recent volcanoes, but its geology is entirely continental. Were we to look at a chart we should see that, like Java and Sumatra, it is connected with the mainland by a submarine bank of vast extent, on which the soundings are everywhere extremely shallow. In short, it can be affirmed with the most absolute certainty that at one period of the world's history—geologically speaking, a comparatively recent one—Borneo was united with, and formed the south-eastern limit of the great Asiatic continent.

The Philippine Islands, on the other hand, are in every way of a different character. Taking the mammalia first, we find that only one monkey inhabits the archipelago as against the numerous species of this order found in Borneo and the other Indo-Malayan Islands. There are no elephants, rhinoceros, tapirs, sun-bears or tigers, and but very few small rodents. Among the birds a large number of characteristic Malayan genera are absent. On the other hand cockatoos and Brush-turkeys (*Megapodius*), both of which are peculiar to the Austro-Malayan sub-region, inhabit the islands, together with numerous species of pigeons, whose abundance is a characteristic feature of the same zoographic subdivision. The flora, so far as is known, shows similar peculiarities, for, in addition to the absence of many typical Malayan genera, a large Australian and Austro-Malayan element is present in the archipelago.¹ Geologically also the Philippines present very distinct features. Although the occurrence of gold in quartz veins, together with lead and copper, indicate the presence in some places of rocks of an ancient epoch, the islands are to a great extent purely volcanic and tolerably recent.² Their geographical history is a difficult one to decipher. That they were at some period more or less connected with the Indo-Malayan continent is most probable, for in no other way is it easy to explain the presence of many well-marked Indian forms. Such a connection, supposing it to have existed, may possibly have been through Formosa with the northern limit of the Indo-Malayan sub-region, which would in a measure account for the absence of many of the larger mammals. This supposition is somewhat borne out by the existence of a shallow submarine bank between Luzon and Formosa by way of the Bashee Islands, and by the presence of a very marked northern element both in the fauna and flora. A similar submarine connection, however, also exists with Borneo through Palawan, and from the little we know of the latter island it would seem as if the Bornean

¹ On the Flora of the Philippine Islands and its probable Derivation, R. A. Rolfe. "Journal Linn. Soc." vol. xxi. p. 295.

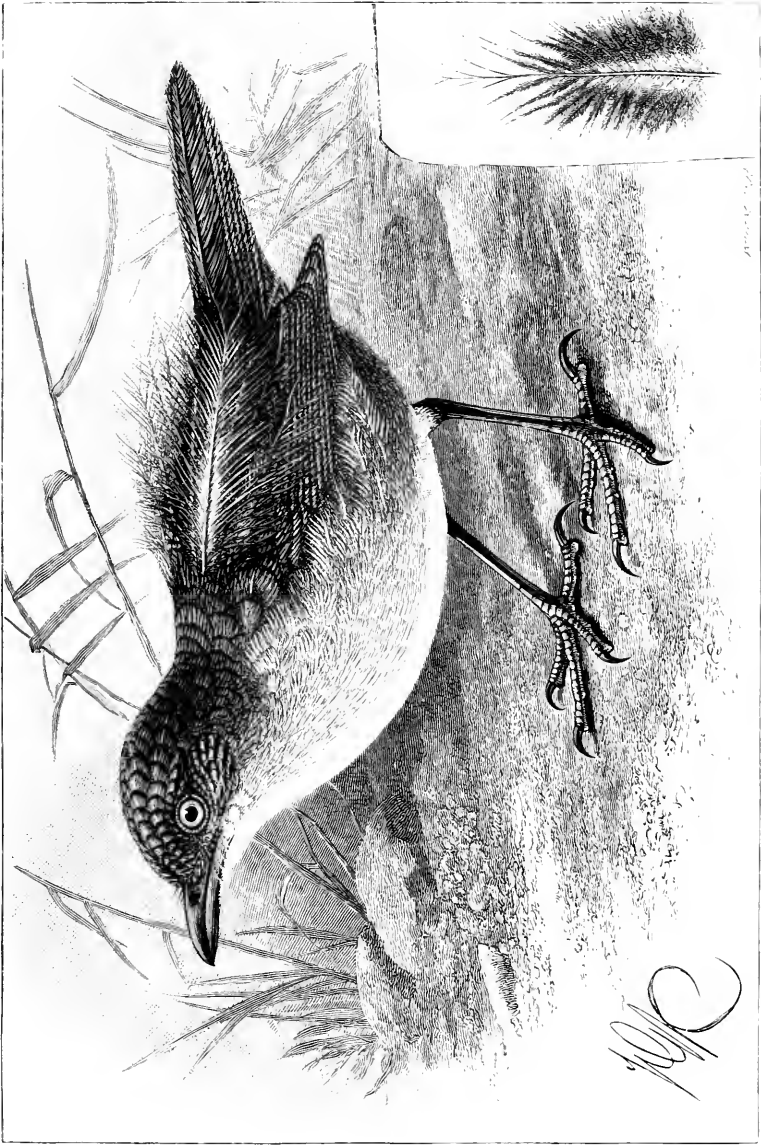
² Stanford's Compendium, "Australasia," Fourth Edition, p. 265.

and Philippine faunas here commingled. But at whatever point to the south and west this junction with the mainland may have occurred, it is most probable that it was of a more or less temporary nature,—insufficient at least to permit the immigration of any but a few species. There is a final hypothesis—perhaps more tenable than either of the preceding—that the absence of Malayan forms is due to subsidence of the islands at a period subsequent to their separation from the continent. Be this as it may, however, the fact remains that the Philippines are markedly insular in their fauna and flora, and have been peopled to a considerable extent from the Austro-Malayan region.¹

Connecting then, as they do, two countries between which such considerable differences exist, the Sulu Islands offered us most interesting problems for solution. Previous to the visit of the *Marchesa* little or nothing was known of the zoology of the archipelago, although a few birds had been brought home by Mr. Burbidge, the well-known botanist. Our own ornithological collection numbered considerably over two hundred specimens and comprised sixty-four species. This list is of course by no means an exhaustive one, but, as will be seen, it is more than sufficient to show the main source from which the bird-life of the archipelago is derived.

If from these sixty-four species we deduct those—for the most part of wide distribution—which are common alike to Borneo and the Philippines, we have thirty-eight species left. Of these two were entirely new, and one (*Carpophaga pickeringi*) appears to be confined to Sulu and a few small islands to the north of Borneo. Three others (*Dicrurus pectoralis*, *Ptilopus formosus*, and *Artamides pollens*) are Celebean and Moluccan birds. Of the thirty-two species remaining two only are Bornean and no less than thirty Philippine.

¹ *Anoa depressicornis*—a most peculiar form of wild ox supposed to be confined to Celebes—(see p. 211) is reported to be found also in Mindoro, but this fact has not as yet been proved.





The same evidences of absence of a former connection with, or at least of a long separation from, Borneo are apparent if we turn to the mammals. The pig is, in all probability, an introduced species. A monkey is said to be found on Sulu which is probably *Macacus cynomolgus*, but we did not shoot it, and the only species of deer existent on the island we were unfortunate enough to fail in obtaining. No other animals, except the rat and various Pteropi, came under our notice during the whole of our visit. In Borneo the naturalist might obtain twice as many species in a single day. Mr. Burbidge's researches in the botany of the archipelago tell the same tale. "In Sulu," he says, "the flora showed a marked resemblance to that of the Philippine and Celebes groups."¹

Zoographically, then, Sulu is purely Philippine, just as it is politically by the treaty of 1885. If we consult the charts of the islands we shall see the explanation of it. The Strait of Basilan shows soundings of from thirty to forty fathoms only, and from that island south-westwards to Tawi-tawi the depths are such that a ship could easily anchor at almost any point on the submarine bank connecting the group. West of Tawi-tawi, however, the level of the sea-bottom completely changes, depths of 100 fathoms or more being obtained close in-shore, while in the fairway of the Strait, which is known as the Sibutu Passage, Captain Chimmo was unable to get bottom at 500 fathoms. The distance across the Strait is about eighteen miles, and the surveys hitherto made seem to show an equally precipitous slope of the eastern shores of Sibutu Island. There is at present no exact information with regard to the soundings between Sibutu and Borneo, one point of which, Tanjong Labian, is distant only twenty miles, but since many islets, reefs, and sand-cays are known to intervene, it is almost certain that they are not of any great depth. The Sibutu Passage thus seems to be the natural delimitation of the Philippine Archipelago, and the traveller crossing it eastwards from Borneo experiences a change in the nature of his surroundings, which,

¹ "The Gardens of the Sun," by F. W. Burbidge, p. 343.

although perhaps not actually regional, is quite as striking as that which Mr. Wallace has shown to exist at the Lombok Strait.

Mr. Burbidge, in the work already quoted, states that the Sulu language "approaches that spoken by the inland tribes of North Borneo,"¹ a statement in which I venture to think that he was mistaken. It appears to be closely allied to the Tagalog, and the so-called Bisayan of the Philippine Islands, but to abound with



A SULU GIRL.

Malay and Javanese words, which have doubtless been introduced with Mohammedanism. The Arabic character is, I believe, the only one in use in the archipelago, but there are probably not many of the natives who are acquainted with the art of writing. Malay is very generally spoken by the coast dwellers, especially on the western side of the island, but in the interior it is little known except by the chiefs.²

The history of the archipelago, were it written, would consist of

¹ There are of course many settlements of the Sulus in North Borneo, especially in the neighbourhood of the Kinabatangan. Perhaps it is to these that Mr. Burbidge refers.

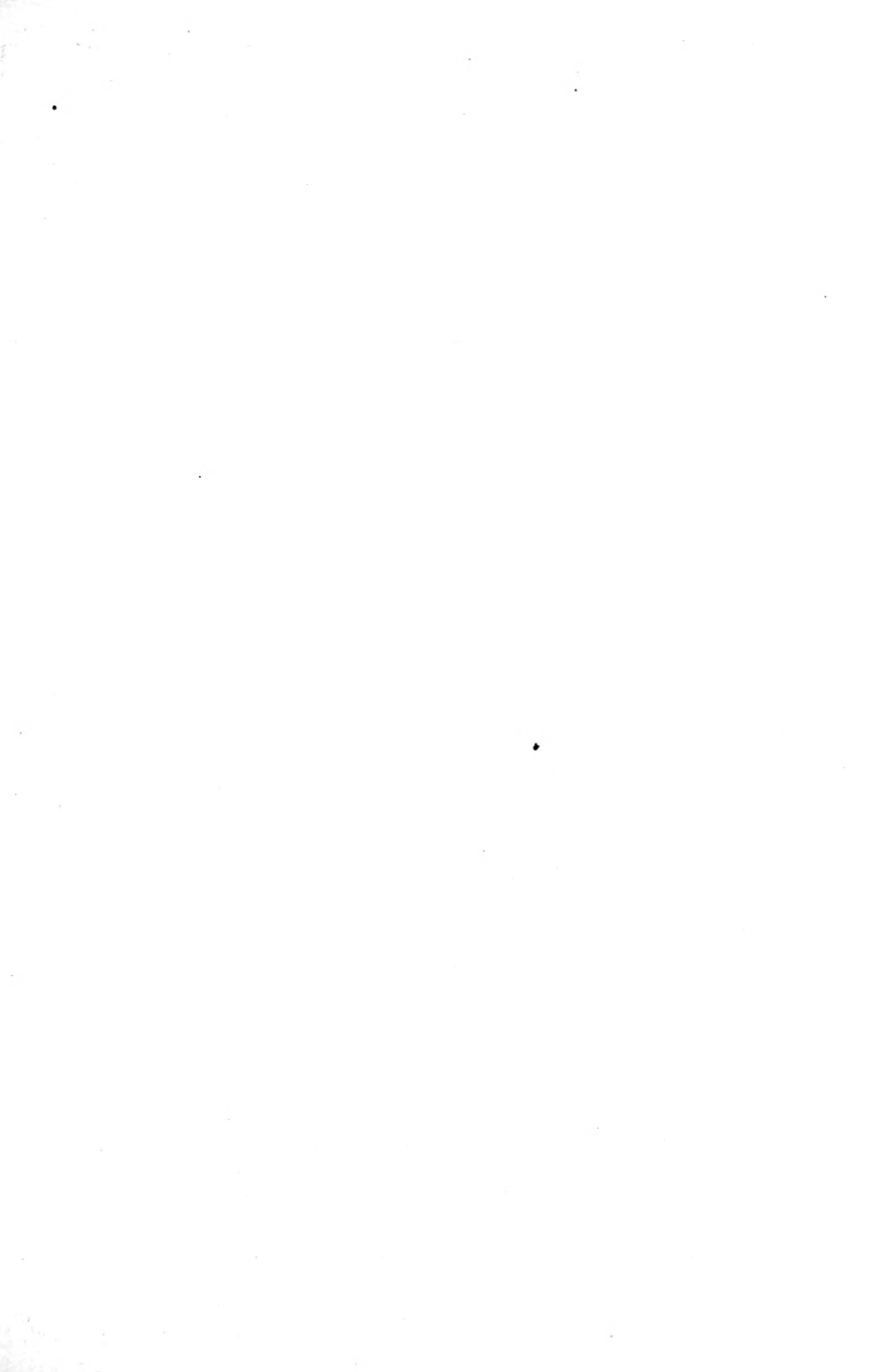
² *Vide* Appendix IV. on the Sulu language.

little else but an account of the constant civil wars which have raged on the island, and the almost equally constant struggle with the hated "Castillans," who, almost from the very date of their seizure of the Philippines, sought to establish their power in Sulu. Three centuries have passed away since that time, and it cannot be said even now that they have advanced much beyond "suzerainty" in the English latter-day acceptation of the term. Wearied of constant feuds, the Spaniards directed large expeditions against the island in 1628 and 1637, but their efforts were fruitless, and in 1646 they concluded a treaty by which, under certain conditions, they agreed to evacuate the main island and retire to Tapul, Siassi, and Pangutarang. In reality they were making a virtue of necessity, for at this period they were in constant dread lest their enemies should call in the Dutch to their assistance. The treaty was hardly concluded ere it was broken, but it was not until many years later that any decisive steps were again taken for the conquest of the islands. In 1731 a fleet of thirty Spanish vessels attacked Sugh, anticipating an easy victory, but so well did the Sulus fight that they succeeded in capturing their enemies' colours, and the fleet shortly afterwards sailed away. A few years later the Spaniards were again established upon the island with a garrison of 100 men, and made renewed but fruitless attempts to subdue this warlike and untamable race.

In our own time, as may be gathered from the foregoing pages, matters have been little, if at all, more settled. In 1871 an attack in force was once more directed against the chief island, and fourteen gun-boats and other vessels bombarded and destroyed the large native town where Jolo now stands, and afterwards burnt some villages on the coast. A blockade was established, and the Spaniards commenced building Jolo and its fortifications. In February, 1876, their flag was hoisted. It floats at only three other settlements in the archipelago—Siassi and Tataan, to which I have already alluded, and Ysabela in the island of Basilan.

By the Agreement concluded March 7th, 1885, between England,

Spain, and Germany, with reference to the Sulu Archipelago and North Borneo, the sovereignty of Spain is recognised over the entire archipelago, by which is understood all the islands lying between Mindanao and the Bornean coast. Spain renounces all claims to North Borneo and the islands of Banguey and Balem-bangan, together with those of the Malawallé Channel, in favour of England, and also acknowledges British sovereignty over all the islands within three miles of the mainland of North Borneo. It is stipulated that there shall be perfect freedom of commerce and navigation in the Sulu Archipelago. Neither export nor import duties are to be levied, and the British Government undertakes similar obligations with regard to the territories of the North Borneo Company.



CHAPTER V.

BRITISH NORTH BORNEO.

The British North Borneo Company—Its formation—Land grants from the Sultans of Brunei and Sulu—Territory acquired—Sandakan Bay—Elopura—Poorness of the soil—Silam—Ascend the Sigaliud River—Narrow escape of the *Vigilant*—Forest scenery—Graves of the Buludupis—Legend of the origin of the tribe—Birds of the jungle—Exports of Sandakan—Edible birds' nests—Sport in North Borneo—Proceed to Kudat—Murders at Bongon—Visit to Bongon with H.M.S. *Fly*—Bird caught in spider's web—We are presented with a "white man"—Leave for Banguey Island—The German Borneo Company—Massacre of the English at Balembangan in 1775—The Abai and Tampassuk Rivers—Gaya—Kimanis—Terrible epidemic of cholera—Floods—Advantages of Sarawak.

SOME four or five years ago the British public learnt,—with some interest perhaps, and certainly with no little astonishment,—that in a remote corner of Borneo, the very coast-line of which was hardly known, a "New Republic" had suddenly sprung into existence; a private company established by Royal Charter, a nineteenth century East India Company on a small scale which, it was said, was destined to revolutionise the East, and to open up a new and salubrious field for the superabundant agricultural talent which is generally believed to be the endowment of most young Englishmen, and to be evidenced by a love of out-door exercise, a tendency to smoke short pipes, and a disinclination for all except the most cheerfully-bound literature.

The Executive was formed upon the most approved principles. There were residents and assistant residents, immigration commissioners, surveyors, superintendents of agriculture and the

like, and there was certainly no lack of room for them to exercise their proper functions. The British North Borneo Company's steamship *Leila*, 276 tons (Thames measurement), formed the nucleus of a future navy. Cannon were imported, and Sikh policemen to discharge them. More peaceful avocations were not discouraged. The Sabah Mutual Supply Association was formed, upon whose premises various intoxicating liquors were permitted to be consumed, and the presence of billiard-tables soon rendered civilisation altogether complete.

With all these, and many other advantages, it was not to be supposed that British North Borneo, or Sabah, as it is more tersely called, would be content to remain unseen and unknown. The Company hen had laid its egg, and was wisely determined that the world at large should become fully aware of the fact. A book was produced which set forth the many advantages of the country. Various contributors to the journals of Hongkong and the treaty ports of China visited the new territory, and were astonished to discover that the soil, as well as could be judged from the samples submitted to their examination in biscuit-tins, appeared to be peculiarly adapted for the growth of every kind of tropical produce. The dangers of the return voyage over, they wrote in glowing terms of the "New Eldorado," and spoke of the great future that lay before it. Their exertions were not without result. A stream of Chinese immigration set in, which rapidly increased in volume. The value of land in the settlements rose enormously. At the beginning of 1883, urban lots in Sandakan which, but a couple of years before, were dense jungle where a white man had never set foot, fetched as much as £896 per acre, and in April of the same year the Chinese were pouring in in shoals, and land-speculation had reached its height.

Before enlarging further upon the achievements and vicissitudes of the Company, and describing our experiences of the new territory, a few words on the history of its foundation are necessary. In bygone days the whole of Borneo was, nominally at least,

under the authority of the Sultan of Brunei,—the former name being merely a corruption of the latter. At the present time his possessions have waned to almost infinitesimal proportions. Brunei is now no longer synonymous with Borneo. The Dutch own the southern three-fourths of the island, and of the remainder the larger portion to the west is under the rule of the Rajah of Sarawak, who has now extended his dominions as far eastwards as Barram Point. The British North Borneo Company occupy the extreme north-east, and the Sultan's country is thus sandwiched between two English states, with one of which it will doubtless before long become amalgamated.

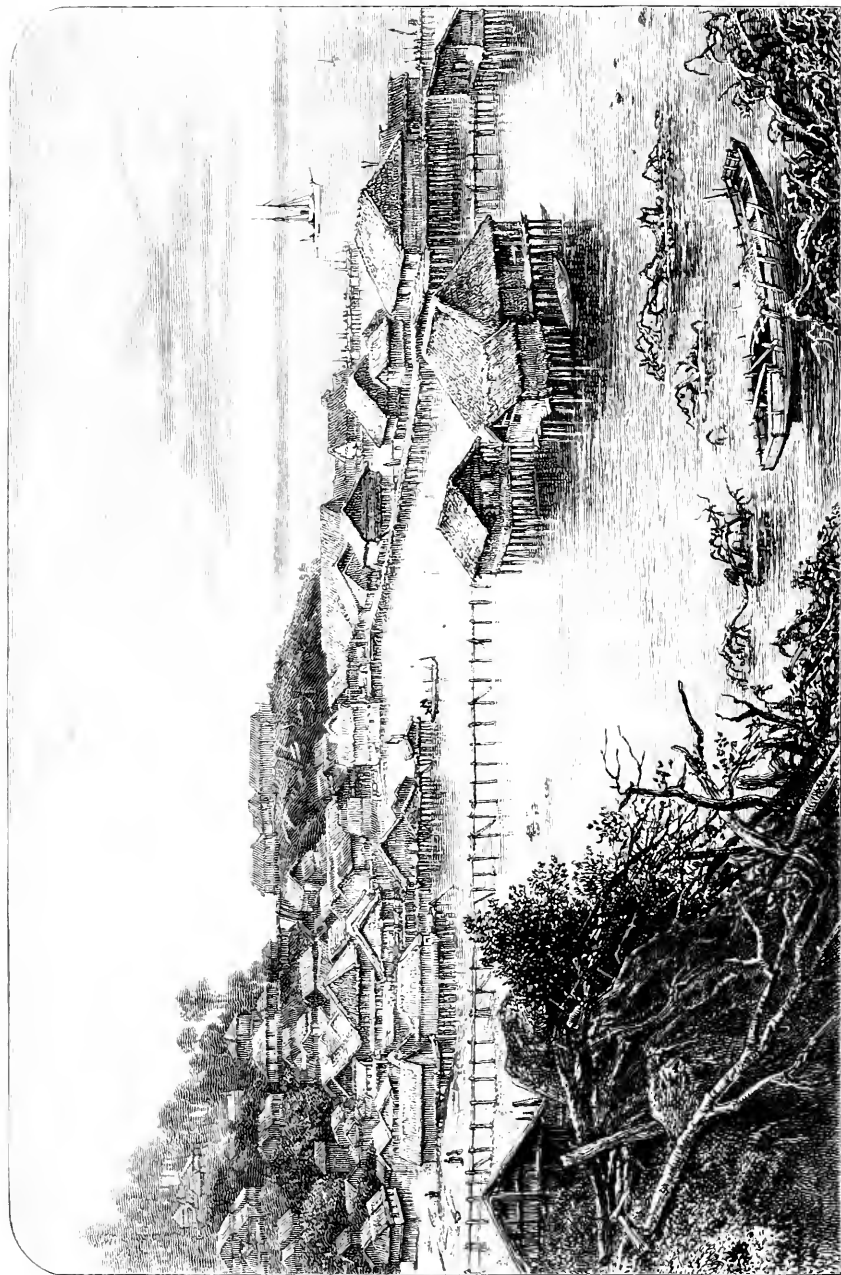
In December, 1877, a Mr. Alfred Dent, in conjunction with a certain Baron von Overbeck, concluded negotiations with the Sultan of Brunei for the transfer of the latter's right of possession of the district from Papar on the north-west coast to the eastern limit of the island, together with certain islands adjacent. On the same day a similar agreement was entered into with the Pangerang Tunonggong—the Sultan's heir—for the cession of the districts of the Kimanis and Benoni Rivers, which formed his own private estate. It was not the first time that such a grant had been made. Twelve years before, in 1865, the American Consul in Brunei obtained certain land concessions from the Sultan, which, if not actually co-extensive with the territory acquired by Mr. Dent, at least comprised a very large portion of it. The result was the formation of the American Trading Company of Borneo, and a large number of Chinese having been imported, a settlement was founded on the Kimanis River. The venture was a failure; the Chinese settlement was not long afterwards abandoned, and in 1877 the Americans formally ceded their rights to the new Company.

Much of the land thus granted, however, was also claimed by the Sultan of Sulu. It would have been difficult, if not impossible, to settle the validity of the title of each claimant, and hence an agreement of a similar character to that made with the Brunei Sultan

was entered into with the Sulu potentate, by which, for the sum of £1000 paid annually, he agreed to convey the district to the grantees in fee simple. The annual sum of £3000 was to be paid to the Sultan of Brunei and the Pangerang Tumonggong under the same conditions. A provisional clause inserted at the instance of the British Consul for Borneo stipulated that "the rights and privileges conferred by the grant should never be transferred to any other nation, or company of foreign nationality, without the sanction of our Government being first obtained." These arrangements having been settled and a provisional Company formed, a Royal Charter was applied for. It was granted, and on the 1st November, 1881, the British North Borneo Company, with a nominal capital of £400,000, commenced its existence.

The territory thus acquired occupies the northern extremity of Borneo, and is said to have an area of about 24,000 square miles. From its position it is completely surrounded by the sea except to the south and south-west, and the coast-line, which is extremely irregular, is believed to be over 600 miles in length. There are several most excellent harbours: the Kina River is navigable for a distance of 200 miles by large steam launches; and the great mountain of Borneo, Kina Balu, the height of which is estimated at 13,700 feet, lies within the territory. The Company have five settlements. Silam lies on the east coast and is unimportant; Sandakan, and Kudat in Marudu Bay, the two chief places, are on the north; and Gaya, Papar, and Kimanis, all of which are of no great size, are situated on the west coast.

To those who look for the low, mangrove-lined shores that are a leading characteristic of many parts of Borneo, and, indeed, of most tropical countries, the first view of the entrance of Sandakan Bay is, to a certain extent, an agreeable disappointment. Mangrove swamps, indeed, there are in abundance, but they keep pleasantly in the background, and on rounding the north-west headland the fine red sandstone bluffs of Pulo Balhalla greet the eye in their stead. They rise almost perpendicularly to a height of



six hundred feet or more, and in the far recesses of the many caves with which they are pierced the so-called "Edible Swallow" (*Collocalia linchii*) constructs the nests, which are destined in due season to be gathered by strong-headed natives, and to serve as dainties for the table of some rich Chinese. The little township of Elopura soon comes into view, placed on the north-west shore of the bay, but long before the anchor is down one has time to realise the fact that Sandakan is a magnificent harbour,—the best, perhaps, in the whole of Borneo. With an entrance a mile in width, it has a length of sixteen and a varying breadth of from three to ten miles. One eighth of the bay only has been fully charted,—that portion nearest the entrance, but a running survey of the remainder shows that there is an abundant depth of water to its very head. Once well within it the favourable impression given by the cliffs of Balhalla Island is somewhat dissipated. The low, flat land stretches in every direction, nearly as far as the eye can reach, unbroken save by the little island of Bai and the hills which form the immediate background of the settlement, and though several rivers are said to debouch into the bay, there is no ocular evidence of any one of them.

Elopura, I believe, means "the beautiful city." There is a wealth of Oriental imagery in many of these Sanskrit words; a luxuriance of poetical idea which the unromantic Westerner occasionally finds a little startling. The most imaginative of travellers would hardly have hit upon the name as an appropriate one. The township, which, by the more sanguine of its inhabitants was even at the time of our visit regarded as the possible future capital, presents itself as an uninteresting forest-clearing about a mile in length, traversed by yellow paths whose colour is derived from the soft sandstone which appears commonly to form the soil in this neighbourhood. The tree-trunks lay where they had been felled, but where the ground had been cleared it was carpeted with bright green but coarse grass. In front, built entirely on piles, half over the sea and half over fetid black mud, is the native town, composed

of Malay and Chinese huts. The former race comprises individuals of many nations,—Borneans, Sulus, true Malays from the Straits Settlements, and “Manila men,” as the natives of the Philippines are called—but of all these the Sulus were, at the period of our visit, by far the most numerous, though compared with the Chinese they were in the minority. The huts are mere sheds built with mats or “attaps” of Nipa leaves, and the streets between, if streets they can be called, are palm-stem gangways, elevated on piles to a height of six or eight feet above the water.

We disembarked—I had almost said landed—on one of these erections late in the afternoon of April 3rd, and made our way landwards with a certain sense of insecurity as the pliant palm-laths bent beneath our feet. Clattering over these somewhat rickety roads through a motley crowd of natives congregated around the little booths where vendors of dried fish, bananas, and Chinese small goods were driving a brisk trade, it seemed some time before we reached *terra firma*, for the houses are built for a considerable distance over the water, and the odours that arose from the sea of black mud beneath us were none of the pleasantest. We found some friends whom we had previously met in Singapore, and it was not long before we had exhausted all the sights of Elopura. Behind the native town the hills rise steeply to the height of a couple of hundred feet or more, and were being cleared of the jungle as fast as possible, the sound of the axe and the crash of falling timber being audible in all directions. The houses of the Europeans were placed upon the hill-side. They were built, like those of the natives, of palm-leaf mats, and were about ten or twelve in number. “Government House,” which served the purpose of a dâk-bungalow, or rest-house, was a more pretentious building, but the palm was borne by the store of the Sabah Mutual Supply Association, gay with tins of potted meats within, and proud in the consciousness of its corrugated zinc roof. Chinamen were trotting about in every direction with an *affaire* air. The town was neither picturesque nor beautiful, and even for a new settlement

was as untidy as any I have ever seen ; but it was most certainly busy.¹

Thanks to the exertions of the late Sir Walter Medhurst, the Immigration Commissioner in Hongkong, Chinese from that city and Singapore reached the new country in great numbers. At the beginning of 1882 the population of Elopura was not more than 2000. In April of the following year it had reached 5000. Up to that date the passage-money of the coolies had either been paid or advanced, but this practice was afterwards discontinued. Labour, nevertheless, was extremely high. The lowest price at which it was obtainable was 33 cents (one shilling and fourpence) per diem, but 50 cents was more usual. Such wages were of course well-nigh prohibitive of remunerative farming, and though they have possibly decreased since, it is in the highest degree improbable that labour will ever be obtainable at as low a figure as it is in Ceylon, or even anything approaching it. Yet there is no lack of steam communication. A subsidised steamer arrives every three weeks from Hongkong, and the Singapore mail is due at intervals of about eight days.

The rapid growth of Elopura reminds a traveller to whom "rushes" are not unfamiliar of other townships he has seen spring up, even more quickly, in a "diamondiferous" or gold-bearing locality. There the interest not unnaturally centres in the precious stone or metal which has brought them to the place. In British North Borneo the great fertility of the soil was the nominal inducement. Yet it was singular to note how little people seemed to trouble themselves about it, and how slow they were to profit by the advantages which, we were told, surrounded them on all sides. On our arrival little or no actual planting had been commenced, but about a mile behind the town a large forest-clearing was being made. Some sugar-cane had been tried, but the soil was unsuited for its growth, the canes being small and scrubby, and with very short internodes. Lanook (*Musa textilis*) was doing fairly

¹ In April, 1886, almost the whole of the lower town was destroyed by fire.

well, but the few oranges and pummaloes that had been tried were covered with blight. The soil appeared poor, and the judicious planting (in a metaphorical sense) of a town lot must, no doubt, have been a far more profitable employment.

At Silam, in Darvel Bay, the best land in Sabah is said to be met with. Thirty acres were cleared shortly after the establishment of the Company, and planted experimentally with tea, coffee, cinchona, cacao, sugar, and other products. Of these coffee and sugar seem to have done well, far better indeed than the four Europeans who were looking after the plantation. As we arrived in Sandakan we found the doctor starting to their assistance, intelligence having just arrived that they were all down with fever. We did not visit the settlement, and had consequently no opportunity of judging of its success, but although the cultivation of tobacco was recommended, that of cinchona and blue-gum trees would also appear to be not inadvisable.

We had heard a good deal of the rivers flowing into Sandakan Bay, and of the fertility of the soil that formed their banks. On the 11th of April we accordingly started for the Sigaliud in a heavy steam launch drawing nearly seven feet of water aft, provisioned for a four or five days' absence. The river is a large one, and debouching at the head of the bay is nearly fifteen miles distant from Elopura. With the *Marchesa's* cutter and skiff in tow we reached the mouth in a couple of hours' steaming, passing a picturesque native village at the entrance. There is a depth of sixteen feet on the bar at low water, and the stream is navigable for barges and such craft for about thirty miles from the mouth. There is a striking and wearisome monotony in all these Bornean rivers. At first nothing is to be seen but mangroves. The actual breadth of the river it is impossible to guess, for land and water merge imperceptibly into one another behind the thick curtain of dull, lifeless green. Four or five miles are passed thus, and then a stray Nipa palm rises here and there from the hot and muddy stream. It is just as much a water plant as the mangrove, and

its huge fronds are not only among the most graceful of tropic forms, but have the additional advantage of utility. From them the *attaps* are made,—the large mats used in the construction of the native huts. The young and tender leaves supply the place of cigarette papers, and the heart of the palm, like that of many others in this part of the world, makes an excellent “cabbage,” which, either raw or dressed, is by no means to be despised even by the most fastidious. Soon the dreary-looking mangrove swamps become almost entirely replaced by this tree, and ere long a glimpse of the bank is caught, and the huge forest-trees close in on either hand, forming walls a couple of hundred feet in height, between which the stagnant-looking river is dwarfed almost to a ditch. The heat increases, and but few signs of animal-life are evident. The inevitable whimbrel of course is to be found, and the Common Sandpiper (*T. hypoleucus*) flies past with its clear note of alarm. Were the traveller to confine himself to the lower portion of these rivers, he would find the exploration of one of them quite sufficient for a sample.

We steamed steadily up stream for five and twenty miles or more without incident, except on one occasion, when an unusually sharp bend proved too much for the steering capabilities of the *Vigilant*, and we found ourselves crashing full tilt into the jungle. It was the first time I had ever attempted to navigate a forest with a steam launch, and our utter helplessness as the heavy craft was brought up all standing among the Nipas was rather laughable. However, we at length managed to disentangle ourselves, and once more proceeded on our course. No signs of human habitation or clearings were to be seen until we reached our destination—the highest point that the 7-foot draught of the *Vigilant* permitted her to attain. Here we found a couple of huts, which were inhabited by some natives of the Buludupi tribe, and made fast our craft a short distance farther up stream. It was high water at the time, but as we were assured that there was only a rise and fall of eighteen inches, we did not regard our proximity to the bank with

any apprehension, and left in the cutter for a cruise in search of natural history and photographic objects.

On our return we found that the captain and owner of our vessel, as well as others who had accompanied him, was fast becoming hilarious. We had hardly finished dinner before it became evident



BULUDUPI HUTS, SIGALIUD RIVER.

that the *Vigilant* had taken the ground—a proceeding that was in no way necessary, as we had carried three fathoms of water the greater part of the run up, and had still a depth of twelve or fourteen feet in mid-stream. It was soon apparent that the affair might become serious for the owner of the craft, as she careened over more and more, her list being unfortunately towards the centre of the river. If the tide only fell low enough her fate was merely a matter of time, for the banks sloped at an angle of many degrees,

and while there was six feet of water on one side of the vessel, we found six inches only on the other. Soon everything began falling over to leeward, and in a few minutes the cook's galley, live coals and all, went across the deck with a crash. The *impedimenta* of our party lay in a confused pile mixed up with chairs and the *débris* of our dinner, and we set to work to rescue what we could with all despatch,—an affair of some difficulty, as we were no longer able to stand upon the deck. Meanwhile the gallant captain was engaged in a full-flavoured altercation with the mate and crew concerning the making fast of certain hawsers to the trees, which we had advised him to do some time before. From our point of view, the incident was ludicrous enough as we crawled about the deck on all fours in search of our property, but judging from the expletive richness of the captain's language, the comic element of the affair was evidently lost upon him. At length, however, the tide turned, and with the young flood all doubts were at an end. Before daylight the *Vigilant* was once more on an even keel, and we were all comfortably turned in.

A dense, sluggish mist hung over the river in the early morning, and did not entirely clear off until nine o'clock. It reminded one unpleasantly of Africa, and was immediately suggestive of quinine. Two of our party started at once for Batang Ipil,—the farthest point to which the Sigaliud is practicable for small boats,—in the hopes of obtaining wild cattle, which were said to be numerous in the neighbourhood. As the sun got higher the heat became tremendous, and at mid-day, finding it almost insupportable ashore, I returned from a collecting trip in the jungle, hoping to find a breath of air in mid-stream. The cabin temperature was 95° Fahr., but it was distinctly cooler. What heat of this kind is, in a damp climate like that of Borneo, can only be realised by those who have experienced it. The far higher thermometric temperatures in dry climates, such as Australia and Africa, are child's play in comparison.

In the afternoon I explored a small tributary stream which joined the Sigaliud a mile or two above the Buludupi huts. It is

a mistake to suppose that all tropical rivers are alike, and, as I floated gently up stream on a rising tide, I could not help feeling how much more to my taste were others I had seen in other parts of the world, in spite of the undoubted beauty of the jungle and the enormous height of the trees. The stream, forty or fifty feet in width, looked a mere runlet beneath the huge forest giants rising so abruptly from its banks. Towering up as clean, straight, branchless trunks, often for a hundred and fifty feet or more, their tops were merged in those of others by the dense masses of creeper which had sprung from branch to branch and overwhelmed them. The roots of these monsters of the vegetable world are strengthened in their hold by buttresses of corresponding size, smooth and flat as though constructed by the hand of man, and supporting the stem for a distance of perhaps thirty feet from the ground. Doubtless also the creepers which bind the trees together at their summits help in no small degree as a support, but in this region there are few high winds, and typhoons are non-existent. High up, in the forks of the branches dozens of yards above our heads, are thick dark masses which the glasses reveal as clumps of the Birds'-nest Fern (*Neottopteris*), or the still more curious *Platyccerium* or Elk's Horn, whose upper fronds, deeply dentate, cling to the trunk with their base, from which the long, seaweed-like, fertile fronds hang pendulous. Orchids, too, there are in abundance, could we only see them, but their flowers are too small, or, like the *Grammatophyllum*, too dull in colour for us to distinguish them with ease. Not a breath of air stirs leaf or water, and the oily, pea-soup-coloured river with its oozy banks looks untempting enough beneath a sun whose heat seems to penetrate to one's very marrow. Few visible signs of life appear to break the monotony of the scene, save when a flash of vivid cobalt blue tells us that an *Irena* has crossed the stream, or a party of monkeys swing chattering from bough to bough. But if there is rest for the eye there is little or none for the ear. The forest is alive with sound, from the dull, hoarse cry of the hornbill and the slow *swish, swish* of its powerful

wings, to the loud booming note of the large Fruit-eating Pigeons (*Carpophaga*) and the ceaseless and ear-piercing *whir-r-r* of thousands of cicadas. It is tropical nature indeed, but in its least pleasing aspects, and, lying sweltering between the walls of vegetation that shut him in on either hand, almost too inert to lift the gun to his shoulder, the traveller longs for a less vehement nature,—for the restfulness of an English

. . . “hidden brook
In the leafy month of June
That to the sleeping woods all night
Singeth a quiet tune.”

Coolness of a comparative sort comes with the setting sun, and the nights are more pleasant with a light blanket than without, but the heat we experienced in these Bornean rivers during the day was almost as trying as that of New Guinea or West Africa.

The following morning we started early upon a photographic tour. The Buludupi huts were our first object, but we tried in vain for a long time to get a photograph of one of the dug-out canoes of these people, which was manned by four little heathens in a state of nature. Some of the children had their heads completely shaved, but in others a small tuft of hair was allowed to grow over the forehead, after the manner of Chinese small boys. I do not know whether this custom is general among any of the interior tribes, but the fact seems interesting when the connection between China and Borneo in bygone times is borne in mind.¹ Proceeding up stream for some distance we noticed traces of an old footpath upon the bank, and on landing and following it into the forest, we came upon a clearing which was evidently a burial-ground of the Buludupis. It contained about a dozen graves. Oblong pieces of wood with a narrow mortice cut longitudinally through them lay upon the slightly-raised mounds, and at the head was a small wooden post, roughly carved after the Malay

¹ Many instances of this connection might be adduced in Bornean nomenclature, such as *Kina-balu* (Chinese widow), *Kina-batangan* (Chinese river), etc. etc.

fashion. By the side of several graves was placed a sort of rude bier, upon which the corpse had evidently been carried to its last resting-place, and here and there a miniature bamboo flagstaff was planted, from the top of which still hung a few tattered rags of linen.

The scene was beautiful as well as quaint, for the ground had been liberally planted with crotons and dracænas, whose coloured leaves stood out in bold relief against the heavy dark green of the forest around. Close by, a few arecas and an old coco-palm revealed the age of the clearing. A few years ago, when the pirate fleets from the Sulu Islands ravaged the countries far and near, the natives lived far up the rivers, where they were safer from attack, better able to defend themselves, and more free to grow their crops. Now that security is greater, many of the clearings are deserted, and have become rapidly overgrown.

The Buludupis have a curious account of their origin. An old woman—but of what nation history does not inform us—one day instructed her daughter to light a fire. Again and again the young woman tried; again and again she failed. At length, wearied by her non-success, and by the abuse of her mamma, who, as far as it is possible to judge of historical personages, seems to have been a woman of violent temper, she exclaimed, “The Fire Fiend may take me, if he will only let me get this alight.” No sooner had she spoken than her wish was gratified, but at the same instant she disappeared from view. Time passed by, and at length she returned from the lower regions, and interesting as must have been her adventures, of which, by the way, history gives us no account, they were not more so than her condition. In a few days she gave birth to a son, who was the progenitor of the Buludupi tribe.

We continued our voyage up stream after having taken photographs of the burial-ground, and constantly passed the remains of old clearings. The river had become much narrower, and the forest-trees were larger than I ever recollect seeing them in

any other part of the world. The heat was perhaps slightly more bearable than on the preceding day, but a succession of tremendously heavy rain-showers drenched us to the skin. Such weather is always most unfavourable to the naturalist, not only as regards his health and comfort, but his work also. Beasts, birds, and beetles alike take shelter from the pitiless rain, and photography becomes an impossibility. Between the showers, however, we managed to obtain a few birds, conspicuous among which was the exquisite *Irena*,—the whole of its upper surface of the most vivid cobalt blue. The feathers of this bird are sent from Borneo to Canton, where the Chinese use them for making a very effective blue enamel in articles of jewellery. Hanging back downwards in all sorts of attitudes, searching the blossoms of the flowering trees for insects, the little so-called Spider-hunters (*Arachnothera*) were common enough, but difficult to shoot, owing to the great height of the trees they frequented. They are remarkable for the great size of the beak, which in some species is nearly as long as the body. This abnormal development is no doubt of the greatest assistance to them in searching the deep corollas for their insect prey. The Racquet-tailed Drongo-shrike (*D. brachyphorus*), a striking, but tolerably common object in the forests of Borneo, also fell to my gun. In many of the drongos the two outer tail feathers show a greater or less amount of corkscrew twist, but in this species the shaft is prolonged to a length of twelve or fourteen inches, and is perfectly bare except at the end, which presents a small, curved spatula of a blue-black colour.

The soil along the banks of the Sigaliud was, as might be expected, of far better quality than that in the neighbourhood of Elopura. As we floated back to the *Vigilant* its many advantages for sugar-raising were being expatiated on at length by a land-prospecter who formed one of our party. The moment chosen, however, was not a very lucky one for the advocate of river-side planting. At that instant we happened to be passing beneath an overhanging tree, in the branches of which, twenty feet or more

above our heads, an irrefutable argument in the shape of a lump of grass and driftwood had stuck. The country round is for the most part low and flat, and of the effect of the floods in the rainy season we had afterwards a good opportunity of judging during our



FOREST-CLEARING AND LARGE TREE NEAR SANDAKAN.

visit to the Papar-Kimanis district. Towards evening the rest of our party returned from Batang Ipil, having been unsuccessful in the way of sport, although much spoor had been seen. The following morning we returned to Elopura.

The export trade of the Sandakan district at the time of our visit lay entirely in the natural products of the country. Rattancanes, gutta, dammar, camphor, sharks'-fin, *bêche de mer*, and pearlshells were the chief, and the supply of all these in the forests

and seas of the Company's territory is, with the exception perhaps of gutta, practically inexhaustible. But of all the exports the edible birds' nests are by far the most important. The Gomanton Hill, in the neighbourhood of the Sapugaya River, alone produces enormous quantities,—to the annual value, indeed, of over £5000. The caves of Bodmadai in Darvel Bay are reported to be nearly as valuable, and there are eight or ten others which are for the most part either indifferently worked or as yet unexplored. The nests are divided, according to their colour and purity, into three qualities, *puti*, *manas*, and *itam* (white, medium, and black), which at a low estimate are severally worth about eleven hundred dollars, two hundred dollars, and ninety dollars per *picul* of one hundred and thirty-three pounds. That the value of this article of commerce is considerable may be judged from the fact that for the half-year ending June, 1882, the duties on birds' nests exported from Elopura at five per cent amounted to a sum of eleven hundred dollars. On the 1st of January, 1883, the duty was raised to ten per cent.

The "Birds'-nest Swallow" is essentially a gregarious bird, roosting and building in huge caves which it shares with vast quantities of bats. It does not invariably breed thus, for I have seen a couple of nests built close together on the face of a small cliff barely ten feet from the sea-beach, exposed to the full glare of daylight. Such instances, however, are exceptional. In the vast majority of cases the nests are placed on the sides and roofs of caves where the light is generally dim, and often entirely absent. We were unable to visit the Gomanton Hill as we had intended, but I am indebted to my friend Mr. Bampfylde—one of the few Europeans who has explored it—for the following account of the method of collecting:—

"The nests being situated in such awkward positions, at a great height, much skill and ingenuity is employed, and only skilled collectors can collect. The rule is to have one head-collector (*Tukang*) for each cave, with three or four coolie collectors to assist him, though all the caves cannot require so

many, and I fancy, with a proper division of labour, ten head-men with fifty coolies would be sufficient to collect at Gomanton. The higher the nests are situated the better they are, being drier and freer from dampness. For taking the nests situated lower down, and for getting those out of arm's-reach, a very long bamboo, spiked, and with a candle near the spiked end, is used; with this they can see and detach the nests. Those situated higher up, and consequently the most valuable, being the majority of them situated in such dizzy heights (up to 600 feet), are taken by means of rattans or rattan-ladders lowered down between holes and small outlets, some of them too small to permit a man to pass through, of which there are many. Where a man can pass through, they employ a rattan or ladder long enough to reach down to the nests, otherwise a ladder long enough to reach the ground is let down, so that the collector can ascend. By using sticks and bamboos inserted in crevices and holes they can, in a most extraordinary manner, work their way along the faces of these precipices to a required point, and in one or two places I have seen stages fixed right on to the roof, where it would seem utterly impossible for a man to work his way. One I noted about 300 feet from the ground, with no outlet close to it, and situated equidistant from the walls, right in the middle of the roof, to get to which, by means of rigging a stage or up the walls, would seem to be impossible.

“Long bamboos with steps up them, and secured by rattan stays, with sitting stages, are also employed to work from the ground. The caves can be worked equally as well by night as by day, without any fear of scaring the birds.

“The natives collect in a slovenly manner, and not always in the proper season. Great care should always be taken after detaching the nests to sweep the various lodgments so as to remove all mess and feathers, which would otherwise adhere to the next lot of nests, and deteriorate them in value. This is invariably done by the Sarawak Land Dyaks, and owing to superior knowledge on the part of the collectors, and more careful management, the nests from the caves on the Sarawak River are very valuable, though the caves, and consequently the amounts produced, are greatly inferior to those of Gomanton.

“For some years back there appear to have been only two seasons for collecting, viz. the *Papas* and *Kapala*; one about March, and the other about two months later. I am, however, informed, on the authority of experienced collectors and others, that the most remunerative way is to divide the year into four seasons, as formerly done. No fixed date can be given for these seasons, and the gathering depends on the laying of the eggs, and when this commences the nests must be taken. The natives say that the birds will lay four times a year if four collections are made, but if there are only two

collections they lay twice only. The first three seasons always produce white nests, the last only *manas* and *itam* (the medium and black qualities), but it must be worked to insure a good harvest for the next coming *Papas* season.

“By these means a larger quantity and a far finer quality of nests are obtained than by dividing the year into two seasons only, when the birds are allowed to add and add on to their old nests,—as they will invariably do,—which rapidly deteriorate, becoming dirty and of low value. As the nests are taken only when the eggs are laid, a danger of over-collecting might be apprehended, but I am assured no such danger exists, as the birds carry on the breed in nooks and crannies inaccessible to the collectors.”

The trade of Sandakan, as well as of the other ports of British North Borneo, appears to be almost entirely in the hands of the Chinese. The following figures represent the value of the exports and imports of Elopura from 1881 to 1884 inclusive:—

	Imports.	Exports.
1881 . . .	\$160,658 . . .	\$145,443
1882 . . .	269,597 . . .	133,665
1883 . . .	428,919 . . .	159,127
1884 . . .	377,885 . . .	184,173

The sport to be obtained in North Borneo is not such as would repay a visit. Elephant and rhinoceros are both to be found, as are also the tapir and the Malayan *Rusa*, but for many reasons the sportsman's bag is not likely to be a heavy one. The elephant, as far as is known, is confined to this, the north-east promontory of the island, and is believed to have been introduced by man. It is now chiefly to be found in the Darvel Bay district. Gaur are said to exist, and there are, no doubt, great quantities of pig. But it is worthy of note that two English officers, both of them well-known sportsmen, who devoted four months to big-game shooting in British North Borneo in 1883, returned to Hongkong entirely unsuccessful. Game, no doubt, there is, but it is quite another thing to shoot it. The climate is by no means a healthy one, and there is considerable difficulty in obtaining transport and provisions. There are no trained shikaris, for hunting does not seem to be

taken up as a regular pursuit by any of the natives, as is the case in India and Africa. If big-game shooting in this part of the world be contemplated, there are no advantages in Borneo which Java, Sumatra, or the Malay Peninsula could not show, while for variety of game, easy accessibility, and comfort in travel, the latter countries are to be preferred.

During our visit to the new colony we made no attempt at any larger game than pig and deer, preferring the acquisition of some knowledge of the various settlements and their prospects to the shadowy possibilities of an elephant. Libarran Island, which lies some twenty miles or more to the north of Sandakan Bay, is believed to be, and no doubt really is, full of deer, but an excursion we made thither in search of them was unsuccessful, owing chiefly to inefficient beating, and we had to be content with the inspection of their numerous tracks. Ornithologically speaking, however, the visit was not unproductive, and we added several species to our collections. Among them was an exquisite little black Sun-bird (*Chalcostetha insignis*), its head and throat glittering with metallic emerald and ruby. It is a not uncommon species, but during the whole of our visit to North Borneo we never met with it elsewhere.

We left Elopura for the second time on the 22nd of May, in company with H.M.S. *Fly*, and proceeded to Kudat, which at the time of our visit was the seat of Government and the headquarters of the Company. The present capital is Elopura, in which place, ever since its foundation, trade has centred. Kudat is situated in a small harbour on the western shore of Marudu Bay, and is, roughly speaking, about one hundred and fifty miles from Sandakan by sea. Between the two settlements lies the difficult Mallawallé Channel, a network of reefs and shoals which is only navigable by day, and even then only with great care. Kudat has, therefore, the double advantage of greater proximity to Hongkong and Singapore and absence of risks in navigation. The latter can certainly be avoided by taking a more northerly passage, but only at the expense of several hours. The visitor's first impression of

the township is a favourable one. Its situation is far prettier than that of Elopura; it is neater and cleaner, and the bungalows, instead of being constructed with palm-leaf *attaps*, have here their walls of wood. There are walks and woodland roads in many directions; there is a splendid sea-beach extending for miles, and, wonderful to relate, we actually found some attempts at gardening. Happily, too,—though doubtless unfortunately, from the colonial point of view—there is a paucity of Chinese population. In point of size Kudat is not great. It boasts of little more than a thousand inhabitants, and its trade is, or rather was,—for in speaking of a new country it is at least polite to put these facts in the past tense,—comparatively insignificant. Bad water and alleged unhealthiness have made the settlement an unpopular one with the Chinese, and though the former evil has been remedied, and the climate is at least no worse than that of Elopura, the latter town has remained the favourite in the eye of the Celestial, and, in consequence, much the same feeling exists between the inhabitants of the two places as that between Sydney and Melbourne, or the “Eastern” and “Western” districts in South Africa.

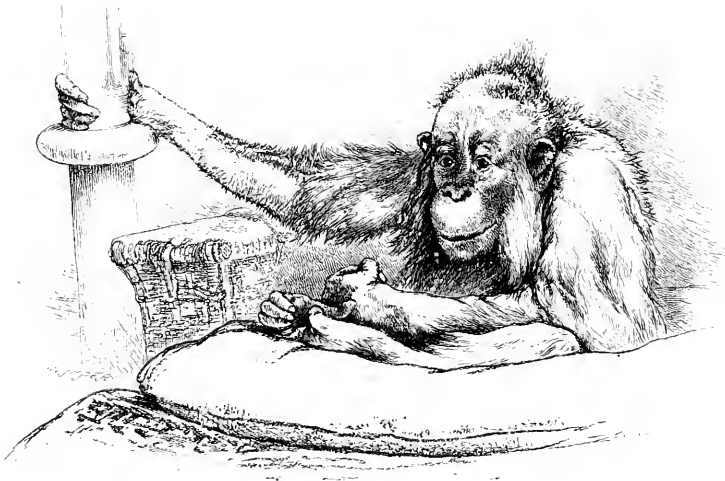
We celebrated the Queen’s birthday in the most approved colonial fashion. H.M.S. *Fly* and the yacht were gaily dressed; the royal standard was saluted from “The Battery;” a cricket match (the Marchesans and Borneans *v.* the Flies) was played; a tug-of-war between the officers and crew of the two ships contested, and our kind host, Sir Walter Medhurst, then Acting Governor, entertained us at tiffin. Loyalty, public spirit—and the temperature—were at fever heat.

The *Fly’s* visit to Marudu Bay was on particular business. Just two months previously a Chinaman had accidentally shot a Bajau woman at Bongon, a small village at the head of the bay. He was immediately seized by the natives, and though intelligence of the disturbance was at once sent to Kudat, the wretched man was despatched with kris and spear. A small body of Sikh police was sent to the spot to arrest the murderers, but the latter refused

to give themselves up, and attacked the Sikhs unexpectedly. In the skirmish that ensued three Bajaus and two of the police were killed, and both parties withdrew. Ten days later a larger force of Sikhs was sent to the village, and a fine of \$100 imposed, which was eventually paid. It was with a view of ascertaining the state of affairs that the *Fly*—with Mr. Gueritz, Resident of Kudat, on board—sailed for Bongon on the 25th of May, in company with the *Marchesa*. We anchored nearly three miles from the mouth of the river on which the village is placed, for the bay is here very shallow, and the rise and fall of tide considerable. It is, indeed, facetiously related that early one morning one of the watch of a certain gun-boat reported that the “anchor was in sight two points on the port bow on a mud-bank.” We proceeded in the cutter and steam launch to the village, and were well received, the natives flying little white flags on their huts in token of submission; and from what we learnt there was no doubt that the disturbance had no political significance whatever. In the eyes of these natives the taking of a human life is a little thing. When they realise the fact that each Sikh policeman brought to bag costs fifty dollars, it is to be hoped that they may relinquish the sport.

The pleasant jungle walks and long stretches of beach fringed with *Cycas* and *Casuarina* proved a source of great enjoyment to us during our week's stay at Kudat, and we added considerably to our collection. In one of my morning rambles I came across a small bird (*Mixornis borneensis*) fast entangled in the web of a spider of the genus *Nephila*. These structures in the tropical forests of this part of the world are often of large size and great strength, but I was astonished to find that they were sufficiently strong to capture a bird which, in this instance, was as large as a goldfinch. For the moment my feelings of humanity overpowered me, and I released the captive, but directly afterwards I regretted that I had done so, as the conclusion of the drama might have been of interest. The spider, though evidently somewhat deterred by his unusually large capture and the violent shakings of the web,

showed no intention of flight, and quietly watched the issue of events close by. I am not aware that this genus is avivorous, but the huge *Mygale* is supposed to be. One of these is a common species in Borneo, living in holes in banks. The entrance is perfectly circular and about two inches in diameter, and the smooth tunnel leads backwards to a small chamber eighteen inches or more from the mouth. This creature is of enormous size—the body as much



“BONGON.”

as three inches long, by an inch in width, and it is no doubt quite strong enough to cope, not merely with a callow nestling, but even with an adult bird of small size.

A day or two after our Bongon expedition we became the fortunate possessors of the best pet that ever took up his quarters on board the *Marchesa*. He was a present from Mr. Gueritz, the Resident of Kudat, who received him from an English-speaking Malay in the Company's service, accompanied by the following note announcing his arrival:—

“My bast Compliments to yau. I was sent yau 27 faowels and One while man. Plice Received By the Bearar and Plice Ped the Bord Hayar, and I was sick.
A. C. PITCHY.”

The “while man,” I need scarcely say, was an orang-utan,—a formidable-looking beast enclosed in a large wooden cage. We had at first the greatest respect for him, and he was fed through the bars with all possible precaution. One day, however, he managed to escape, and we suddenly discovered that he was of the most harmless and tractable disposition. From that moment “Bongon” became the pet of the ship, and was spoilt alike by the crew and ourselves. Indirectly this was, no doubt, the cause of his death,—a much-deplored event that took place some months later on the coast of Celebes.

We left Kudat May 30th. The northern part of Borneo is by no means plentifully supplied with good water, and we tried in vain to fill our tanks in the neighbourhood of Cape Sampaumangio. We were equally unsuccessful in our search along the coast beyond, and as our supply was nearly finished we decided to return eastwards and try Banguey Island. It is the most northern possession of the Company, and but little is as yet known of it, though Balambangan—an island in close proximity to it—was in the middle of the last century an English settlement. We anchored a little to the south of Banguey Peak—a conspicuous, sharp cone of nearly 2000 feet, which is believed to be an extinct volcano—and were fortunate enough to hit off the entrance of a small river, the existence of which, though not discovered by Belcher and other explorers of these seas, had been made known to us by some of the officers of the North Borneo Company. The mouth was completely hidden from the ship by a long strip of sand running out from the left bank, and on entering we found ourselves surrounded by pretty scenery, which was the more striking from the absence of mangroves. We were able to row up stream for nearly a mile, when we came to a sudden bend where the stream ran briskly over pebbly shallows. The water was clear and good, and we at once

began filling the lifeboat and cutter. The knowledge of this stream would be most useful to those cruising off this part of the Bornean coast, for to the south-west there are few, if any, places where good water can be obtained.

The contrast between the island and the coast we had just left—for the mainland of Borneo is only eight miles distant—was rather striking. Banguey Peak is almost certainly volcanic, although we did not examine the crater which is said by the natives to exist at its summit. Near the entrance of the river is a cliff of red granitic rock, and pebbles of mica-schist and quartz were abundant in the stream, with large lumps of “pudding-stone” conglomerate. Mr. Dalrymple, who had visited this spot in the preceding month and had explored some distance inland, found micaceous schist, talcose and gneiss formations, and red and blue clay slates. The vegetation also was a little unfamiliar, and I noticed two species of *Pandanus* which I had not seen before. Along the river there were no signs of human life. The island indeed is but thinly peopled. A few Dusuns—about two or three hundred, we were told—had migrated thither from the mainland, and to the south some Bajaus, the roving sea-gipsies of Borneo, trade with them for bees’ wax, which appears to be very plentiful. The season for gathering it begins in August, and, according to Mr. Dalrymple, each man reckons on collecting about a *picul* (133 lbs.), for which the Bajaus pay barter to the nominal value of £5.

We were fortunate enough to have Mr. Gueritz with us, and guided by one of his men—a Dusun Dyak who was himself an old inhabitant of the island—we ascended the river for some distance, and striking inland, followed a narrow jungle path for a mile or more. Birds were few, and all those we noticed or that fell to our guns were species that were familiar to us in Borneo, but flowering trees and a beautiful white jessamine seemed abundant. We arrived at length at a tiny hamlet, but the male portion of the population were away, and five Dyak women were the only inhabitants. They did not appear at all afraid of us, and brought

water to us as we ate our tiffin. Some attempts at cultivation had been made near the huts, and the soil here—as indeed elsewhere upon the island—appeared tolerably rich. Some of the sugarcane was good and heavy, and tobacco also was doing well, but the food of these people is chiefly fish and rice obtained from the Bajaus. The only cereal grown is maize.

Not many months after our visit to Banguay the “German Borneo Company” took up 10,000 acres upon the island, with the intention of growing tobacco. The manager was a German familiar with tobacco-cultivation in Sumatra, where, as I have already mentioned, the “wrappers” of many of the good Havana cigars are grown. Labour was imported, and the prospects appearing excellent, they claimed the option of selecting another 10,000 acres. Disturbances with the natives ensued, however, and in a fracas with the coolies two of the latter were shot by the whites. Whether the venture was given up or not I do not know, but the German Borneo Company appear to have since transferred their attentions to Sulu Island, where they have obtained land grants from the Spanish, and, in September, 1885.—as stated on a former page,—they had commenced tobacco-growing with every prospect of success.

We left a few little presents with our hostesses, and struck westwards through the jungle to the sea. At the edge of the beach spoor of wild pig, and of, probably, the little muntjac, was abundant. During our walk we were attracted by dismal howlings, and on searching in the forest came across a small puppy who had lost his way. We carried him off to add to the number of our pets, and “Banguay,” as he was afterwards named, exchanged the precarious existence of a life among the Dyaks for the *cercle* of Newfoundlands and Dachshunds on the *Marchesa*. With his queer appearance and the absurd gravity of his manner he soon became a favourite, and would play sadly with the parrots and monkeys, with whom he seemed to have more in common than his own kind. But he was a Bohemian and *vaurien* by birth, and the *amari*

aliquid doubtless lingered even in the flesh-pots of civilisation, for whenever he was given "shore-leave" he immediately did his best to lose himself in the jungle.

From the shore the magnificent outline of Kina Balu, the great mountain of Borneo, was visible to the S.S.W., eighty miles away, but our attention and interest was directed to a nearer object—the island of Balembangan—where, a hundred years before, the inhabitants of the East India Company's settlement had been massacred almost to a man. In those days neither Singapore, Malacca, nor Penang was English, and it was considered above all things important to establish posts in the neighbourhood of China. Accordingly, when, in the middle of the last century, the Sultan of Sulu was found imprisoned in Manila on the occupation of that city by the English, Admiral Drake succeeded in obtaining from him the cession of Balembangan as a reward for his release. A post was established there in 1763, which acted in some degree as a check upon the pirates with which these seas at that time swarmed. The garrison at first numbered nearly four hundred men, composed of Sepoys and Europeans, in addition to Bugis traders and others, but at the time of the massacre in 1775 the climate had told so severely on the inhabitants of the little settlement that only seventy-five infantry and twenty-eight gunners were left to defend it. The position was a tolerably strong one, but the guns all pointed seawards, and in rear the fort was but little protected.

The Spanish were at this time intriguing against the English in Sulu, where opinion seems to have been divided among the Datus, some being in favour of the English while others wished to expel them. The Datu Tenteng, together with his cousin the Datu Dakula, belonged to the latter party, and as much with the hope of obtaining a heavy booty as from any political reason, determined on attacking the English. His force consisted of three hundred men, most of whom were Sulu and Illanun pirates. The sequel of the story is best given in the words of a Spanish historian, which I extract from Beleher's "Voyage of the *Samarang*":—

“Tenteng and his people knew that it would be easy to attack the battery from the forest in rear, where his people could unite and hide themselves, and thus they took advantage of this want of care of the English, who had neglected to defend that side, not dreaming of an attack from a point from whence they did not expect an enemy. In the meantime those at Banguey exerted themselves, transporting the people across the sea to the woods of Balambangan, and without being discovered by the English. The natives had only three small boats, each of which would scarcely convey seven persons, but these boats, after many trips, succeeded in transporting all the people to Balambangan, disembarking them on the opposite side of the island, where the English were established, and in this manner they approached silently, concealing themselves in the wood immediately behind the fort.

“The English little dreamed of what was about to happen, and the officers slept profoundly, having enjoyed themselves at a fête given the day and night preceding in celebration of the Governor’s birthday.

“At dawn on the 5th of March, 1775, they formed in three divisions, attacked and burned simultaneously the Governor’s house, fort, and barracks; shouts and shrieks on both sides were dreadful, those who died from wounds, as well as those who conquered, seemed to unite in fearful din to celebrate this easy conquest. At that period there were in the port two brigs, two pontoons unladen, and a large bark belonging to the English; the Governor always had a small boat in readiness at the gate of his house; he, with six men, escaped to one of these brigs, and those that were armed with guns opened a brisk cannonade towards the land. The Chief, Dakula, who had made himself master of the fort, returned this fire, and by a chance shot cut away the only cable of one of the brigs, which was anchored nearest the land. The sea-breeze driving her on shore, the crew jumped overboard; some were drowned, and a few gained the other brig, where they met the Governor. A flag of truce was hoisted, but he did not succeed in saving any of those remaining on shore, therefore, making sail, he quitted the smoking ruins of this position, over which he now ceased to have command.

“Tenteng captured forty-five cannon, two hundred and eight cwt. of powder, two hundred and fifty muskets, twenty-two thousand shot, a great deal of iron, lead, tin, and gold in bars, more than fourteen thousand dollars (Spanish) in coined silver, a large quantity of muslins and other kinds of merchandise, the whole valued at one million Spanish dollars.”

The Sultan of Sulu, although nominally repudiating this act, received a great part of the spoil, and no reparation appears to have been exacted by the English. Some little time afterwards the settlement was re-established, but it was again abandoned in



1803. A few overgrown ruins and traces of the old clearings are all that now remain to mark the spot.

We left Banguay behind us, and set our course westward once more for the Abai River. As morning broke Kina Balu defined itself above the mists as a wall of clear dark purple. At sunset the night before it had been dyed a glorious pink. We anchored before mid-day off the mouth of the river, and started shortly afterwards on a little expedition, intending to ascend the stream for some distance, cross the lower spurs of the mountains, and return by the Tampassuk River. It was in reality an official trip. The Tingilan Dyaks had raided on the Tawarrans, and had succeeded in taking two heads, which the North Borneo Company's Government had ordered to be returned, but apparently without much success. Mr. Gueritz was accordingly anxious to meet the Chief of the former tribe and have a *bichara* upon the subject. We started in the cutter and skiff, but at the entrance of the river were told that the two heads had been brought down to the coast about eighteen miles farther to the south-west. We afterwards found that this was true, but Mr. Gueritz thought it better to push on to the Datu's house. We rowed about five or six miles up stream between the usual dreary mangrove-swamps before arriving at Abai village—a place of about 200 inhabitants. Here the scenery changed suddenly, and abrupt hills and grassy slopes met our view, with many cultivated plots of land. Leaving the river here, we started at once for the Datu's house, which we reached before nightfall, drenched to the skin, for the rain had fallen in incessant sheets for some hours. The Chief was away, but we took possession of his house, and having brought some food and a change of clothes with us, we soon made ourselves pretty comfortable on mats spread on the split bamboo flooring. Next morning the rain had cleared off, and we obtained a magnificent view of Kina Balu, which stood out cloudless beyond a sea of hills and valleys to the south-east. We started on our journey without delay, and in a short time reached the summit of a range of hills

about 1000 feet in height, whence the view was even grander. The country here was quite different from that in the neighbourhood of Sandakan and Marudu Bay. Instead of the dense, interminable forest, a vast extent of park-like country lay before us, with wide stretches of clearing. On the farther side of the hill we descended into a marshy plain, intersected by sluggish, muddy streams of no great size. Here, struggling almost to our waists in mud and water, we lost our way, and our party separated, two eventually gaining the coast on buffalos and two in canoes. On comparing notes, we came to the conclusion that the former were the preferable means of conveyance. They seemed to go indifferently through either mud or water. The canoes, even in a Bajau's hands, were not equally amphibious.

Next morning it was blowing fresh from the south-west, and as we rolled heavily at our anchorage, we decided on shifting round into Usukan Bay, which was within a mile of us, and afforded perfect shelter. On the following afternoon the Datu came off to us here, accompanied by several very unprepossessing retainers, and the matter of the two heads was settled. In the evening we sailed for Gaya Bay, having said good-bye to Mr. Gueritz, who intended to make the return voyage to Kudat in a native prau. We afterwards heard that he had been picked up by H.M.S. *Maggie*, at that time engaged in a survey of the coast. It was fortunate for him, for he had encountered very bad weather and run short of food.

Gaya is beautifully situated under the western side of Kina Balu, whose height here appears increased by its presenting only its lesser diameter to the view. At the time of our visit the settlement had only been in existence for nine months, and consisted of a couple of rows of *attap* huts, a resident's house perched half way up a steep hill at the back, and a little barrack and battery of three guns. The police department numbered ten men of Dyak and Malay nationality. The settlers had not been idle; for a beautifully-made pier ran out a distance of over three hundred yards from the shore, solidly constructed of the trunks of the

Nibong palm. At the end of it there was a depth of four fathoms at low water. The township is placed on the little island of Gaya, which with the mainland, sundry reefs, and another island, forms a fine harbour, even more protected than Sandakan. Native canoes can cross to the mainland in all weathers. The soil in the neighbourhood is not particularly good, and no attempts at planting had been made. What trade existed was chiefly in rattan, bees' wax, dammar, and other natural products. Since then, however, a number of Chinese have immigrated from Singapore, and a sago factory has been established. The population in 1885 had increased to 1000, nearly half of them being Chinese. The place was said to be tolerably healthy. It was at any rate quite as much so as could be expected, for the clearing of jungle and erection of houses must almost inevitably be followed by more or less malarial fever in the tropics. There were a few cases only during our visit, one of which proved fatal.

In places such as these I cannot hope to interest the general reader, unblessed with the love of dry facts and still drier figures. The struggle between civilisation and Nature in a new country, however interesting to a traveller, is rarely so when put on paper. I confess to a slight predilection in favour of the latter of the two opposing forces, but I will take no unfair advantage by filling my pages with statistics. These can be obtained by consulting the pages of the "China Directory," or the official publications of the North Borneo Company. I should, however, say that from its admirable harbour, and for other reasons, Gaya is likely to prove the most important post on the west coast of the Company's territory.

Some twenty-five and thirty miles farther to the south-west are the settlements of Papar and Kimanis, both situated on rivers of the same name. The coast here is low and flat, and subject to heavy rollers in the north-east monsoon, and, as there are no harbours, both these stations labour under considerable disadvantages, the bars of the rivers being dangerous at that season. Between them lies the Benoni River, winding through a flat plain

covered with thick forest. We were anxious to take in water, but though we searched along the coast in this neighbourhood for some miles it was without success,¹ and we resolved on trying the Kimanis River, off the mouth of which we accordingly anchored late one afternoon. A strong breeze was blowing as we started in the lifeboat to row up the river, and we were prepared for a good wetting, if not something worse, in going over the bar, which is rather an awkward one. Fortune favoured us, however, and we crossed without mishap. The river runs between mangroves and Nipa palms for three or four miles, but the scenery is saved from monotony by pretty peeps of distant blue hills. We found the Residency a carefully-kept and really attractive bungalow, inhabited by a solitary European. A neatly-trimmed lawn with flower-beds and sandy paths sloped down to the river, and the verandahs, hung with ferns and orchids, gave an air of comfort and homeliness to the place which was all the more attractive from its having been entirely unexpected. Beyond, on either side of the river, stretch the native huts,—the usual pile-supported buildings of the country. The station had barely recovered from a blow which at one time bade fair to annihilate it altogether. In August, 1882,—some ten months before our visit,—cholera broke out, and in a short time *one half of the entire population had fallen victims*. Before its advent Kimanis numbered just under three hundred souls, and of these one hundred and seventy-seven were attacked, and one hundred and forty-four died. All trade ceased, and the inhabitants could scarcely be got out of their houses. Mr. Dahymple, the then Resident, and the sole European in the settlement, exerted himself with the greatest courage and devotion in aid of the sufferers, but was eventually obliged to go for assistance to the nearest station. The monsoon was blowing strong at the time, and the native boat

¹ The watering-place spoken of in Findlay's "Directory" (Indian Archipelago, 1878, p. 503) is not to be relied on, for the water, like a great deal of that to be found on this part of the coast, is of a rich peaty brown, and though perfectly clear, cannot be used with safety, owing to its liability to cause fever and to turn bad in the tanks.

capsizing upon the bar of the river, the occupants were nearly drowned. On the passage one of the crew died of cholera. Aid and medicine were at length obtained, and the epidemic shortly afterwards ceased.

Hardly recovered from this calamity, however, Kimanis was visited by yet another. On the night of the 31st of December of the same year a tremendous flood carried away a number of houses, and the neighbouring district of Papar suffered even more severely, over sixty natives being drowned. The crops were either entirely destroyed or greatly injured, and the course of the river so altered that it now debouches by another mouth. Such disasters as these would seem almost sufficient to prove the death-blow of a young settlement, but the station had already begun to recover itself. The population had risen again to nearly two hundred, and trade had re-commenced.

At the time of the formation of the North Borneo Company the Kimanis formed the limit of their territory to the south-west. Lately, however, they have acquired an additional tract of land which extends their boundary to the Sipitong, a small stream emptying itself into Brunei Bay. This acquisition adds about sixty miles of coast-line to the Company's territories, and includes what is supposed to be one of the richest mineral districts in Borneo. Grave accusations have, however, lately been made against the Company in the English journals, and the action by which their Government seized and condemned to penal servitude certain chiefs who resisted their annexation of the new territory was, if the facts have been accurately stated, at least high-handed.¹ The experiment of permitting the foundation of a nineteenth century East India Company in such an out-of-the-way corner of the world was a somewhat risky one, for the British Government is morally responsible for its acts. That it is a good thing that

¹ A check has been lately placed on any further annexation by the Company. The Rajah of Sarawak has acquired the belt of country which is drained by the Trusun and Pandernan Rivers, and intervenes between British North Borneo and the now fast-disappearing Kingdom of Brunei.

this part of Borneo, rich in natural products and furnished with magnificent harbours, should come under British rule none—except such as are of the “perish India” school—will deny. But whether such a territory is best administered by a private Company is altogether another question. Were England to take it over she would have a most excellent bargain, and I do not imagine the shareholders would contemplate the possibility of such a proceeding with any great alarm. The country, as I have already said, abounds in birds’ nests, gutta, camphor, rattans, pearl-shells, coal, and a hundred other articles of export that a bountiful Nature has provided ready to hand. Worked under the wise Dutch system with native agriculturists, the land would doubtless also produce sugar, coffee, and other tropical vegetable products with advantage. But that it will ever prove a suitable field for white planters is very improbable. Close at hand, Sarawak offers easy communication with Singapore; it is three days nearer England, and its climate is at least as good as that of North Borneo. In point of civilisation, it is nearly forty years in advance of the latter territory. It offers nearly double the extent of land to choose from, with a soil that is quite as good, and, in the opinion of some judges, better. Land, labour, and living are alike cheaper. The Rajah of Sarawak is willing to make free grants of land under certain conditions, and, if a planter has definitely resolved on choosing this part of the world as a field for his labours, it is difficult to see what possible reason he could have for preferring British North Borneo to Sarawak.

CHAPTER VI.

LABUAN AND BRUNEI.

Victoria Harbour—The home of pluralism—A walk across the island—Retrospection of the Colony—A deserted town—The coal mines—Mine at Moaro—Facts about Labuan—History of the occupation—Visit to Brunei—The Venice of the East—John Chinaman—Native manufactures—Brunei market—The Sultan's palace—Interview with the Sultan—"Crabbed age and youth"—Departure for Sarawak.

WE entered Victoria Harbour, Labuan, in the sweltering heat of an afternoon sun on the 7th of June, and were delighted to find our old friends of the China station—H.M.S. *Champion* and *Maggie*—at anchor. Two days later the *Sheldrake* arrived, and an unwonted air of business pervaded the little settlement, for it was a long time since four ships had been seen together in the port. Labuan is a small colony and a modest; it has but little communication with the outer world, and to the globe-trotter it is as yet an undiscovered country.

Looking from the sea, the leading idea impressed upon the mind is one of heat. Broad stretches of white sand, rows of white huts, and a few low, white bungalows meet the eye. Everything seems flat and white and hot, and the view is rather African than Bornean. To the right a level plain of short turf, dotted with casuarina trees, stretches away from the beach for nearly a mile. Forest there is none, but below and on either side of the little church some cool-looking dark greenery, on which the eye is glad to rest, betokens the houses of the few Europeans who inhabit the island. How few of these unfortunate individuals there were

we had no idea until our arrival. We had pictured to ourselves an English society of not more than a hundred perhaps, but still large enough for a dance, a picnic, or some such form of entertainment, and had misgivings as to the state of our wardrobe. We might have spared ourselves our anxiety: to the best of my recollection there were but four Englishmen in the whole colony.

Labuan is the home of pluralism. Anchoring in the harbour, one is of course boarded by the Captain of the Port, with whom the latest news is discussed before proceeding ashore to make the customary calls. At the bungalow of the Colonial Treasurer we meet him again, and discover, to our surprise, that he is the master of the house. Referred to the Postmaster General on a question anent the mails, we once more find our friend in a new capacity. He is like the public building in the famous story of Theodore Hook, and, were the office of Lord High Executioner existent on the island, he would doubtless fill it as efficiently as his other posts. No one, I feel sure, could object to being ushered out of the world by such a pleasant and interesting companion. The revenue having for some years fallen short of the expenditure, a considerable reduction in the staff was made. It is, in fact, a *reductio ad absurdum*.

Next day we made an excursion to the farther end of the island. Here, at the extreme northern point, are the now deserted coal-mines, which were the chief inducement to the English occupation. Horses not being obtainable, we were reduced to walking, and though nine miles in such a climate, with no forest to keep off the sun's rays, is somewhat of an undertaking, we were well repaid for our trouble. Labuan is so un-Bornean that that reason alone would make it interesting for a change. But at the same time it is decidedly attractive. Behind the level plain by the sea-beach the road, thickly overgrown with grass, leads for nearly a mile through an avenue of shady trees to the church. In spite of Labuan having been once an Episcopal see, there is not a single

clergyman in the colony, and no services are held. For a long time the congregation consisted of two or three persons only. When it dwindled still further the church was closed. Around, scattered over the slopes of the little hill, are the bungalows of the Europeans, many of which are now deserted. The colony, in official language, "has only partially fulfilled the expectations formed of it." An American would say that it was "played out." Yet it was here that Low, with incalculable care and trouble, formed one of the finest fruit gardens in the East. Even crime has fallen into desuetude. In the country the sole guardian of the peace is a policeman who has lost both his arms: in the town twenty-five Sikhs form the only force.

The island is low and flat for the greater part of its extent, but rises slightly towards its northern end. The forest with which it was once covered has, for the most part, been cut down or burnt, especially on the eastern side, and a low undergrowth, in which a small rhododendron-like plant forms a conspicuous feature, has sprung up in its stead. Here and there some white-stemmed trees are left standing, and the landscape bears a curious resemblance to that in many parts of Australia. The road, which in the palmy days of the coal-mines was well kept, is now rapidly becoming overgrown. From time to time it leads along the beach, where the sea idly laps the blocks of white coral, and washes the roots of the trees that overhang it. Soon the low sandstone bluffs of Koubong Point come into view, and crossing the brow of one of the few hills of which the island boasts, one comes suddenly upon a small valley filled with huts and deserted bungalows. We found the little railway overgrown with grass, and in the sheds the engines stood rusting, just as they had been left when work had ceased. Close by were the workmen's "lines," where at one time over five hundred coolies lived; and on the cliffs overlooking the sea, surrounded by a pretty garden and orchards, stood a charming bungalow, formerly the residence of the manager. It was tenanted by a solitary native, the only inhabitant of the place. All around

lay the ruins of ironwork and gear of various descriptions. The place seemed a second Pompeii.

The mines have proved the ruin of no less than three companies, in spite of the fact that the coal is both good and abundant. The right of mining was leased by Government at an annual rental of £1000, but the difficulty of keeping the workings clear of water has hitherto alone proved an insuperable bar to success, although other circumstances have combined to produce the failures. The seams apparently extend throughout the length and breadth of the island, and have been found as much as eleven feet in thickness. The dip is not great, and the coal obtained, though burning very fast, is extremely good. The output in 1876 was about 6000 tons, but in 1881 only 800 tons were raised. With more efficient engines and Chinese labour, there is apparently no reason why the mines should not be remunerative.

Some twenty miles from Labuan, opposite the island of Moaro at the entrance of the Brunei River, another coal-mine was opened in the autumn of 1882. Three seams of great thickness had been found, running north and south, and the coal was of excellent quality. Although the workings had only been in operation for nine months, a considerable quantity had been raised, and the captain of the *Royalist*, who had traded on the coast for some years, and was largely interested in the venture, spoke most hopefully of its success. From what we saw during our day's visit to the place, his anticipations seemed well founded. The price of the coal at the pit's mouth was \$4 per ton; at Labuan \$6.

The island of Labuan, which has been an English colony for forty years, is well situated on the north-west coast of Borneo, and guards the entrance to Brunei Bay. It is about ten miles in length, by five in extreme breadth, and is distant 700 miles from Singapore. Its population is under 6000, and the bulk of the inhabitants are of Malay race. Nearly all the trade, however, is carried on by Chinese, of whom there are over a thousand on the island. It taps the neighbouring coast of Borneo, the Sulu Islands, and Palawan,

but the establishment of the North Borneo Company has considerably affected it. There is little doubt that Sandakan will prove the future market of the greater part of this district, even if it has not already done so. Victoria Harbour is an excellent one, well protected in both monsoons, but the heat of it is excessive. The climate, at the period of the first occupation by the British, was extremely unhealthy, but owing to the clearing of the jungle it has now much improved. In spite of the destruction of the forests the rainfall is still enormous.

A large portion of the island is unfit for cultivation, and the soil is, on the whole, extremely poor. The low and marshy ground forming so large a proportion of the acreage is, nevertheless, well suited for growing the sago palm, and rice is largely cultivated. Coconuts are also grown, and a considerable quantity of the oil exported, and lately a plantation of the West African oil palm has been established on Daat Island off Victoria Harbour. A fine specimen of this tree grows near the beach, in front of the town battery. The value of the oil is £41 per ton,—about £8 higher than the price obtained for coconut oil. Sago factories, where the raw product as used by the natives is washed and dried into the European commercial article, have been established for many years. The flour thus obtained is sent to Singapore, and forms the principal item in the list of exports. Over £30,000 worth leaves the island annually. In 1881 the imports amounted to the value of £182,113, the exports to £194,904. In 1884 both had decreased enormously—the imports amounting only to £84,874, and the exports to £85,741. In the same year the revenue exceeded the expenditure, the former being £4589, the latter £4216.

The Government is administered by a Governor appointed by the Crown and a nominated Legislative Council; but for the present the post of Governor is unfilled, and his duties are taken by the Acting Governor, Dr. Leys. The Legislative Council is apparently permanently convened in the person—I use the singular advisedly—of the Colonial Treasurer, the Captain of the Port, and

the Postmaster General. There has been no garrison on the island since 1871.

To the ornithologist Labuan is interesting as being the western limit of the Megapodes or Mound-builders,¹ a genus that is peculiarly Australian. The bird (*Megapodius lowi*) seems to be chiefly confined to the Kuraman Islands, at the south-west end of Labuan, although its nests are occasionally found on the main island. We were unable to visit the breeding localities, but the nests were described to me as large mounds, ten or twelve feet in diameter, built at the junction of the forest with the beach, just as in the case of many other species of this genus. The eggs are hatched by the heat of the soil. The Labuan Megapode is very closely allied to the Philippine species (*M. cumingi*), and has also been found on Balabac and Mindanao. A further investigation would probably reveal its existence in the little-known islands at the north of Borneo.

The history of the occupation of Labuan by the English is to a great extent mixed up with that of Borneo in Rajah Brooke's time, which is too lengthy for recapitulation. The main facts, however, are these. The Sultan of Brunei—Omar Ali—had been guilty of endless acts of piracy, and of an attempt to murder an English naval officer, and in consequence the town of Brunei was bombarded by the English. In a treaty subsequently signed the Sultan engaged to put an end to piracy, and to cede the island of Labuan to the British. On the 24th of December, 1846,—H.M.S. *Iris* and *Wolf* lying in Victoria Harbour,—the ceremony of annexation was performed, and a stone was placed at the foot of the flagstaff on the plain to commemorate the event. It still remains, and bears the following inscription:—

“On the 24th December, 1846, this island was taken possession of, in the name of Victoria, Queen, by order of Sir Thomas Cochrane and Captain R. Mundy of H.M.S. *Iris*.”

¹ The Megapode of the Nicobar Islands is considered by Mr. Wallace to have been introduced by man. That this is not impossible must be evident to every traveller in the Malay Archipelago, for birds of this genus are often seen in captivity.

In the following year Sir James Brooke was appointed the first Governor.

Some four hundred years ago the great island of Borneo was conquered by the Malays. To be strictly accurate I ought, perhaps, to say that it was re-conquered, for the Dyaks are themselves of Malayan stock, and have probably only supplanted a previous race, of which nothing certain is at present known. The new-comers did not penetrate very far into the interior, but established themselves at various places on the coast, and of these settlements Brunei rapidly rose to be the chief. From its size and importance it was naturally the first place with which Europeans became acquainted, and hence it came about that the great water city of the East and the island on which it was situated were known by one and the same name. Its large size and the extraordinary manner in which it is built have astonished travellers for the past three hundred years. Pigafetta and other old voyagers have described it, and in later times it has become familiar to those who have read the works of St. John, Keppel, and Earl. Even in these days of easy steam communication, however, Brunei is but little visited, and it is remarkable as being one of the largest places in the Eastern Archipelago, and at the same time destitute of a single European inhabitant.

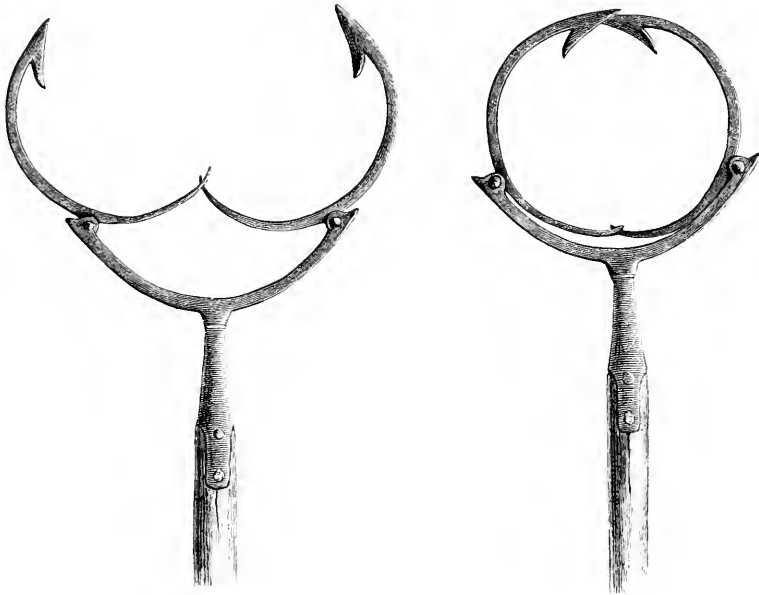
We had, of course, determined on visiting the city, and since the *Marchesa* had too large a draught to permit of her entering the river, we gladly accepted the loan of a large steam launch belonging to the North Borneo Company, which the Governor, Mr. Treacher, kindly placed at our service. From the harbour at Labuan to Moaro at the entrance of the Brunei River is a distance of about nineteen miles, and the city lies fifteen miles farther up stream. Unlike most Bornean rivers, it has no mangroves or Nipa palms along its banks, or so few that they do not attract attention. There is high land on either side, and the range of hills on the left bank is believed to be very largely carboniferous, since there are surface outcrops of coal in many places. The scenery is in no way

characteristic of the tropics. Rounding a sharp bend, we suddenly came in sight of the city, and a few minutes later we were safely at anchor in the main street.

Scarcely a traveller has described Brunei without speaking of it as the "Venice of the East," and it is, on the whole, a not inapt comparison. The palaces, it is true, are of a somewhat different order, and their architecture decidedly utilitarian, but the main features of the "Queen of the Waters" are there. The Grand Canal, crowded with boats, intersects the city, and the *vii* are represented by side-canals of a similarly puzzling nature. The life, indeed, is even more aquatic than in Venice, for it is generally impossible to enter or leave a house except by canoe. As for mal-odourousness, it is perhaps one of the few points in which the resemblance between the two cities fails. Venice can hardly be called deficient in this respect, but even the worst *vio* cannot approach the horrors of low tide in the main street of the Bornean capital.

The vast collection of houses, which is said to give shelter to a population of between twenty and thirty thousand people, lies in the middle of a lake-like expansion of the river, shut in on all sides by hills, which, though of insignificant height, are not unpicturesque. But the most striking view is of course obtained when looking down from them upon the city below. Hardly anywhere is an inch of ground to be seen, and many of the houses are built in deep water. To the north some large patches of mangroves mark out the position of a shallow bank, and here and there a coco palm, which is presumably rooted in dry ground, rises above the sea of huts. Myriads of canoes dart about in every direction, from the Pangerang's barges propelled by twenty paddles, to the little flat "dug-out" with a bare inch of freeboard, manned by a solitary naked native. The Brunei people are practically amphibious, and the children cruise about in miniature canoes almost before they are weaned. The safety of these craft is perfectly immaterial. At the age of five or six these little urchins

have done far more swimming than walking, and their chief amusement seems to be the capsizing of each other's boats. What a Brunei man does when he is desirous of "running amok" I have no idea. If practised in a canoe—which seems the only course open—his opportunities must be restricted. In any case, however,



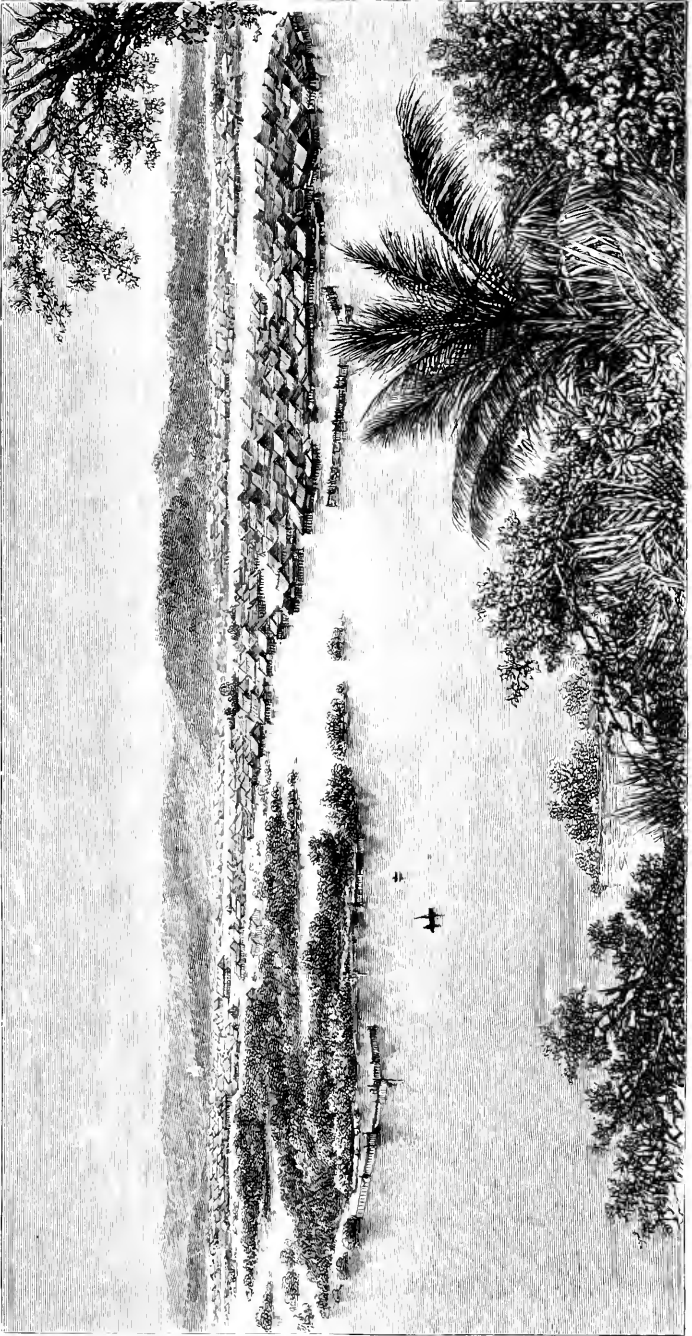
A MALAY "MAN-CATCHER."

there can be no need for peaceful householders to keep the ingenious instrument used in securing individuals engaged in this pastime which we found in Macassar. This article—as will be seen from the annexed illustrations—is of most simple construction, and, no doubt, effective enough when once applied. But I should imagine the adjustment of it a somewhat risky proceeding.

We had anchored close to the wharf of the leading Chinese merchant, the agent for the North Borneo Company, and our first visit was to his house. He had been made a Datu, and was a

personage of considerable importance. Throughout the length and breadth of Malaysia the Chinaman has made his way. How he swarms in Singapore we are all aware, but that he is equally at home in the Aru Islands, and bids fair to monopolise the trade of the Philippines is, perhaps, not so generally known. At Macassar he shares the mercantile plum with the German. In the Moluccas, the vast amount of graves around Ternate testify to the number of his race who have lived and died there. In New Guinea alone he is not to be found, for neither white man nor Malay has, as yet, fairly established himself there, and the Celestial is rarely or never a pioneer. Every one who has visited Australia and California has seen what he can do where competition runs high, and money-making is the chief object, and should chance lead the traveller afterwards to the islands of the Malay Archipelago, the almost universal success of the Chinese population will cause him but little astonishment. The free-masonry existing among their race obtains work for the new-comer from the moment of his arrival, and as soon as he is able he embarks in trade. The indolent, dreamy Malay is as a child in his hands. Little by little his money-bags grow. Soon he has a clerk, and ceases to pare his finger-nails. An air of commercial prosperity beams upon his countenance, and he is clad in purple and fine linen. It is not long before he is owner of a highly-ornamented house, a small, but select harem, and the best brands of Champagne. He has reached the summit of all earthly ambition, and life has nothing further to offer.

Our host had long ago acquired this furniture of a terrestrial paradise, and produced some of it in the shape of a bottle of excellent Jules Mumm, which we discussed while chatting over Brunei politics and examining his goods. The city is renowned for its sarongs and krisses, and the goldsmiths' work is also tolerably good. The latter is, however, chiefly limited to cylindrical earrings, kris hilts or sheaths—which, by the way, have a large admixture of silver in their composition—and thin gold plaques,



worn round the neck by the children of those of high rank, and inscribed with sentences from the Koran. Both the sarongs and krisses seemed very dear. The former were in many instances liberally worked with gold thread, so liberally indeed as to make them extremely heavy, and for these as much as \$40 was asked. Good krisses will cost even more, especially if the handle be much decorated with gold, but inferior weapons can be obtained for a couple of dollars or less. Brunei gongs are likewise celebrated, their tone being supposed to be peculiarly sweet, but the traveller in this part of the world has generally suffered too much from their incessant noise to be at all anxious to purchase them.

We made our first acquaintance with the city in a "dug-out" procured for us by our friend the *Datu*. It was manned by four paddlers and a steersman, and giving ourselves up to their guidance, we threaded our way through the narrow and crowded thoroughfares with a speed and skill which would have astonished a Venetian gondolier. I have never seen anything equal to the dexterity with which our men worked their paddles. From a rapid and beautifully clean stroke of forty or more to the minute, they would drop instantaneously to a long steady swing of twenty, without any apparent signal having been given, and without a hair's breadth of deviation from the perfect time.

There is but little to see in Brunei with the exception of the market; little at least for a traveller to whom the Malay pile-built dwellings are no longer a novelty. Rickety huts with slippery steps leading to their dilapidated entrances, canoes of all shapes and sizes, stretches of fishing-stakes, Chinese stores, little brown urchins gambolling and splashing in the water, and a multiplicity of intolerable stenches,—these are the most striking features of the city. A little round island with coconuts on it is nearly the only break in the regular monotony of the huts. Here and there a tall cross raised above the platform of one of them tells, not of the Christianity of the occupants, but of their industry in fishing. Here and there too a light bamboo bridge connects one group of

buildings with another, but for the most part all communication is by water. The market is probably one of the most extraordinary sights that the East has to show. Each stall is a canoe, and it would puzzle an onlooker to form any estimate of their numbers, for the water is covered with craft of all sizes in incessant motion. At one moment there is a dense pack around some Chinaman or other trader, and each vociferates the prices of the produce on sale. At another there is a rush in the opposite direction, and the former buyer is deserted. Rarely, except perhaps in the Bourse at Constantinople, have I come across such an animated scene. The occupants of the canoes are almost without exception women, and for the most part old and ugly. Each wears a palm-leaf hat of enormous size, which serves the purpose indeed of an umbrella also, for it is large enough to protect the whole body from either sun or rain.

Our first night in Brunei was not a pleasant one. Whether the heat, the stench, the mosquitos, or the incessant tom-toms were the most unbearable it was hard to say, but any one of them would alone have been sufficient to banish sleep. On the following afternoon we had an interview with the Sultan. His palace is a dilapidated old building, only to be distinguished from the surrounding houses by its decoration of a dozen or so of small flags, and by the presence of a few antiquated Malay guns upon the platform. In front of the house lay the royal barge at anchor. It is almost too large to be paddled, and when the Sultan goes yachting, it is generally towed by a steam launch. Amidships is a sort of carved cupola, but otherwise there is no attempt at decoration, unless indeed the figure-head be excepted. This is no beauteous dame with bosom bared to the ocean breezes, no stately goddess with proudly-extended hand, such as one sees in back yards at Portsmouth or Greenwich. It is something more refined, and at the same time more fitting, for, at the time of our visit, the poor old Sultan was far advanced in his second infancy,¹—it is a child's rocking-horse!

¹ He died in 1884, in his hundredth year.

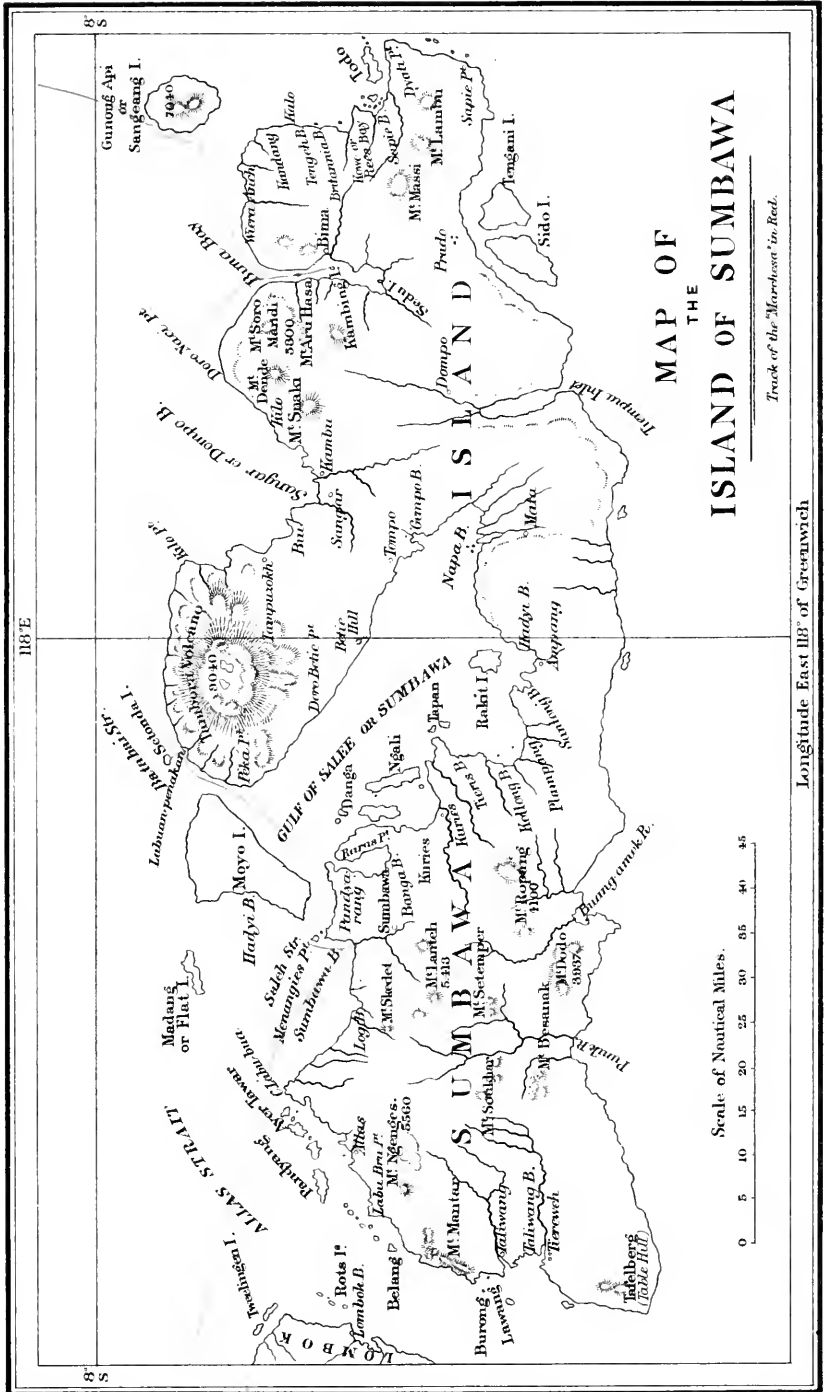
We entered the palace and were shown into the audience chamber. Happy is it for Mrs. Loftie that fate has never led her to Brunei. The room was a poor, whitewashed apartment somewhat like a church, with a sloping roof and two side aisles. At the farther end was a triptych-shaped door opening into a small chamber which contained the throne—a piece of furniture composed of an arm-chair mounted on a carved and gilded sofa. We were given seats in the nave, and had time to take stock of our surroundings before the Sultan appeared. There were two rough tables covered with red tablecloths. The leg of one of them had been knocked off, and its place was supplied by a piece of rough planking. Two strips of dirty stair-carpet covered the floor, flanked by two other strips of kamptulicon. On the walls the only decorations were eight dilapidated old mirrors which had once been gilt.

In a few minutes the Sultan made his appearance, and we were struck at once by his likeness to Pio Nono, which has been remarked by former travellers. He entered half pushed, half supported by his attendants, and after shaking hands with us, was hoisted on to his throne, where he sat puffing away at his *roko*. He was little better than an imbecile, and was evidently unable to realise our visit or to understand what was going on, and in a short time he was shuffled off again on the plea of a bad headache. Few of us look forward to becoming a bridegroom at the age of ninety-eight, yet we were told that barely a fortnight previously he had married a girl of fifteen.

Some disturbances had been anticipated upon the death of the Sultan, more especially between the Pangerang Anak Besar—a well-known character in the court at Brunei—and the Datu Tumonggong, who was the rightful heir according to Bornean law; but happily these anticipations have since proved incorrect. We could not help pitying the poor old Sultan, who, if he had any capability for reflection left, must have sighed over the gradual absorption of his kingdom. On the one side the North Borneo

Company were seeking fresh territory beyond the Kimanis River; on the other the Rajah of Sarawak had extended his dominions as far as Barram Point. He must have felt it time that he should be gathered to his fathers.

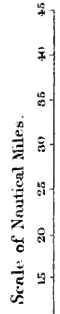
We left Brunei for Labuan shortly afterwards, and on the following day sailed for Singapore *via* Sarawak, at which latter place, thanks to the kindness of the Rajah and other friends, we spent a most enjoyable fortnight. So short a stay in so well-known a country requires no description, and I shall ask my readers to accompany me to the less frequently visited islands of the Malay Archipelago.



MAP OF THE ISLAND OF SUMBAWA

Track of the "Marchesa" in Red.

Longitude East 113° of Greenwich



Shantveldt, Geog. Statist. Landver.

CHAPTER VII.

SUMBAWA.

Arrive at Batavia—Cholera again—Lombok Peak—Anchor in Sumbawa Bay—Parched aspect of the country—Sumbawan huts—Trade in ponies—We start for the capital—The natives—Spears and krisses—Characteristics of the vegetation—Birds—Prevalence of Australian forms—The town of Sumbawa—*Bichara* with the Tungku Jirewi—The Istana—The Sultan of Sumbawa—Leave Sumbawa Bay—Labuan Penakan—The Tambora volcano—Its eruption in 1815—Arrive at Bima—Languages of the island—A six months' drought—Tombs of the Sultans of Bima—Gunong Api Island—New species of quail—Leave Sumbawa for Celebes.

WE picked up our mails and took in stores at Singapore, and on the 26th of July sailed for Batavia. Passing through the Rhio and Banka Straits, and threading our way between myriads of islands of all sizes, we found ourselves at length in the Java Sea, and early on the morning of the fourth day came to anchor in Batavia roads.

We were the bearers of letters of introduction to H.E. the Governor General of the Netherlands India, a post from which our Viceroy of India only differs in the lesser amount of ceremonial attending him, and our chief, if not sole reason for visiting Java was to present them. Our future route lay entirely in Dutch waters, and without letters from the authorities we should doubtless have found the way less smooth. The Governor General was kind enough to furnish us with a general letter, requesting any Dutch Residents or Kontroleurs with whom we might be brought in contact to assist us. An order to supply us with any coal we might need from the various naval coal depots was also

given us, and fortified with these and all the Dutch charts that we could obtain—for the English surveys of this part of the world are but few—we felt prepared against all emergencies. I may here say that these recommendations were of the greatest service, and that we found the Dutch officials not only cultured and interesting companions, but also the kindest and most obliging hosts. Every facility appears to be given to naturalists visiting the archipelago, of whatever nationality they may be, but it is of the first importance that they should obtain proper letters of introduction from Batavia before starting.

Cholera was very prevalent in the port at the time of our arrival, and, as we heard in the following year on our return to Singapore, it developed a little later into an unusually severe epidemic, which carried off several of the Europeans. We were anchored next to one of the guard-ships, an old hulk which was no doubt in an insanitary condition, and, as eight or ten fresh cases were occurring every day, she was paid off and broken up, and we met her sailors on their way to new quarters a week later as we returned from the beautiful hill station of Buitenzorg. We called upon our Consul, and the conversation turned on the epidemic. With a gesture he indicated an unconscious Javanese who was busily engaged in uncorking a bottle of soda-water for our benefit. "This man," he quietly remarked, "is the third I have had this week!"

The easterly monsoon was blowing fresh as we left Batavia, and we hugged the coast as closely as possible in order to avoid it. Passing between Raas and Sapudi Islands at the east end of Madura, we lay an E.S.E. course towards Bali. The mountains on this part of the coast of Java are very fine; the Kendang range, close to the Bali Strait, attaining 11,000 feet. At daybreak on the 9th of August we were close to Lombok. The height of the Peak of Lombok is given as 12,460 feet in the charts, and a rough sextant measurement that we took made it nearly the same, but it seemed to us hardly to look its height, and it is certainly far less

striking than the Peak of Tenerife, with which it has been compared. Late in the afternoon we entered Sumbawa Bay—an unimportant indentation of the coast on the north side of the island of that name—and anchored off a little village at its head.

Sumbawa, which together with the neighbouring islands of Flores and Sumba is but little known to Europeans, is of considerable size. From our accepted English custom of representing the whole East Indian Archipelago in one map, most of us have acquired extremely erroneous notions of the extent of the Dutch possessions, and have equally under-estimated their size and value. Though insignificant enough by the side of Java or Borneo, Sumbawa is, nevertheless, over 170 miles in length, and is tolerably thickly populated, chiefly with people of Malay race. In the interior there is said to be a tribe of aborigines who are most probably of Papuan or Negrito stock, but no scientific account of them has hitherto been published. Previous to the great eruption of the Tambora volcano in 1815 there were believed to be about 170,000 inhabitants, but this number was very largely reduced by the catastrophe. That only 25,000 of them survived, as stated by Mr. Van den Broek, is, however, probably an exaggeration. Some years afterwards there was a large immigration of Bugis people from the south of Celebes. They established themselves chiefly on the north side of the island, and the rice is once more growing over what, a few decades back, was a scene of desolation. There are two Sultanates—Sumbawa and Bima—the latter including the almost unknown island of Komodo to the eastward and part of Flores, and over both the Dutch exercise a certain amount of authority. It is administered by a Kontroleur who resides at Bima—the sole European upon the island.

Sumbawa Bay, we found, afforded us tolerable protection, but during the westerly monsoon it must be decidedly unsafe. The surrounding country was parched to a degree, and the greater part of the trees seemed as devoid of foliage as they would be during an English winter. A greater difference than that existing between

the islands of the Sunda chain and those of the Sulu group which we had left only a month or two before, could hardly be found. Here the south-east winds, sweeping over the dry desert lands of Australia, parch up the countries that lie in their path as far as Java, and from April to July little or no rain falls. The effects were obvious enough, and even from our anchorage we could see the buffaloes moving in little clouds of dust.

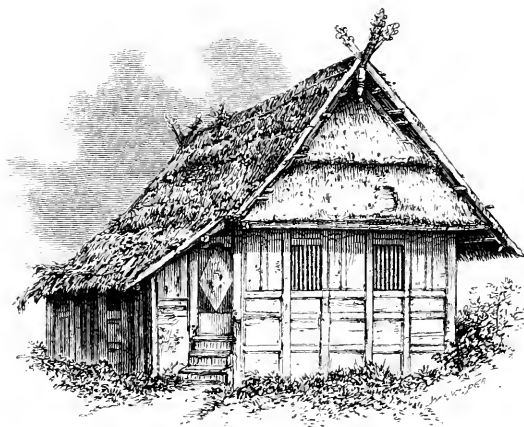
The village was composed of a few huts only, but over one of them, very shortly after our arrival, a Dutch flag was hoisted. Rowing ashore we found a half-breed, Omar by name, who spoke Malay and a few words of Dutch, and appeared to be the chief man of the place. From him we learnt that the town of Sumbawa, the residence of the Sultan, lay a few miles inland, and we accordingly despatched messengers to inform the latter that we were desirous of paying him a visit on the following day. It was just sunset, and we had but little time to explore our surroundings, but close to the kampong¹ we found a pretty little dove (*Geopelia maugei*) in great abundance, and also shot the Malayan Goatsucker (*C. macrurus*), a bird of general distribution from India to New Guinea.

We were ashore early next morning, but there was some difficulty in getting bearers, and we loitered about for an hour or more before starting. The shores of the bay were of dark brown sand, which seemed to be entirely composed of disintegrated lava and scorïæ. Close to the sea, and along the bank of the shallow but bright little stream which debouches at this spot, the kampong is built. Each hut had the roof overlapping considerably at the gable, and beneath it two other little roofs protected the end of the building,—an arrangement that we found almost invariable throughout the island. Recurved and carved gable finials, such as, I believe, are to be seen in Sumatran houses, were very general, and some of the lintels of the entrance-doors were

¹ *Kampong* is the Malay word for village. Its corruption "compound" has, in the Straits and British India, got to mean a garden or enclosure.

rudely painted in dull red. The houses were raised on piles, according to the invariable custom, but, owing to the space below the flooring being enclosed by bamboo fencing or mats, they had a more solid appearance than the usual style of dwellings to which the Eastern traveller is accustomed. Almost all were roofed with beautiful neatness by tiles made from split bamboo; little slips raised from the under surface sufficing to hang them on.

At a shady corner a little market was going on. There were



A SUMBAWAN HOUSE.

barely half a dozen vendors, and one of them, to our great astonishment, we found to be an old Swahili woman, a type that, though familiar enough to us at Zanzibar, seemed incongruous in Malaysia. Many of the people were importations, and though the inevitable Chinaman was absent, there were Banjermassin men, Buginese from Celebes, and even Klings. The marketables were chiefly dried fish, bananas, and tobacco. The greater part of the latter comes from Lombok, and is excellent in quality and well cut. That grown on the island would no doubt be equally good if properly cured, but the natives apparently did not know how to prepare it. A few common Chinese and even English plates and

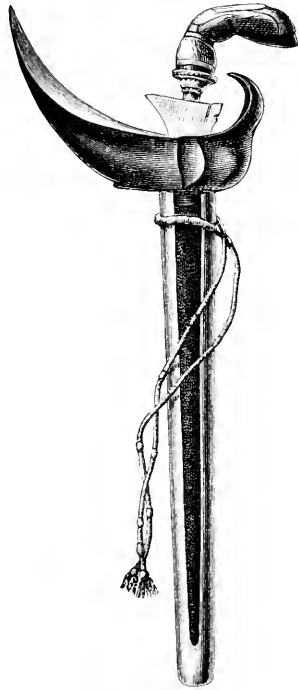
cups were also for sale, but, with the exception of the bananas, no fruit was to be had.

Omar met us in brilliant attire, ornamented for the occasion with a bright silk *sarong*, and having a large naval sword dangling from his waist. He showed us a couple of letters signed with French names, in which it was stated that he was to be trusted. It appears, singularly enough, that a ship comes to this place every year from Mauritius to buy ponies. With the exception of the monthly steamer to Bima, it is probable that not another vessel worthy of the name visits the island. Both Sandalwood and Timor, however, export a good number of ponies. The Sumbawan animals are admirable little beasts, standing about twelve hands, and generally brown or skewbald. They are of good shape, and in spite of their small size seem to carry almost any weight. Their price ranges from twelve to fifty dollars. Buffaloes were numerous in the fields, and sheep and goats were also kept by the natives, who asked as much as four dollars each for them. Tame pigeons, very much like our English runts, were housed in pigeon-cots elevated on poles—doubtless a wise precaution, as rats were said to be very abundant.

Our bearers having at length appeared, we at once started. Several stray natives had joined us, and we formed a large party. The road was broad enough to have admitted three carriages abreast, but we saw no wheeled vehicles on the island. It led straight southward through a plain yellow with ripe padi. Everywhere great numbers of the natives were to be seen. Many were engaged in the fields, cutting rice and stacking it on the backs of the ponies. Groups of them met or overtook us, all of whom were mounted, and all, whether at work in the fields or riding, were armed with spear and kris. The latter weapons are of excellent workmanship. The steel is purposely left unpolished, and is, in fact, quite rough. The blades are valued according to the "twist," which is often as well worked as in a pair of Damascus barrels by a good English gunmaker. Most of them have a sinuous curve and

pistol-shaped or right-angled handles; none the beautifully-shaped grips of the Sulu *parangs*, which are in reality far more effective weapons, though less murderous-looking. The spears, even of those of the lowest rank, had hilts of worked silver reaching down the shaft for eight or ten inches from the insertion of the blade.

A mile or two after leaving the sea we again struck the Sumbawa River, which, in spite of the long-continued drought, was still running as a stream of clear water about a foot in depth. Many of the Sumbawan rivers, we were told, fail altogether in the dry season. Leaving the more cultivated land behind us, we came to a wilder part, with occasional patches of thorny thicket, and it was here that I was able to realise for the first time that we were in a totally different zoographical region from Java and the other great Malay Islands. However well one may be acquainted with the facts of regional division, and with the zoological and other characteristics of the various parts of the Malay Archipelago which have been so admirably described by Mr. Wallace, the personal realisation of them gives an amount of pleasure to a naturalist which few people can imagine. Java was the last country we had visited, but here the vegetation was of quite a different type. Euphorbias of two or three species were abundant, and it was scarcely possible to enter the dry and scrubby jungle without being brought constantly to a standstill by the thorns. In the Malayan jungle the rattan is almost the sole impediment of this



SUMBAWAN KRIS.

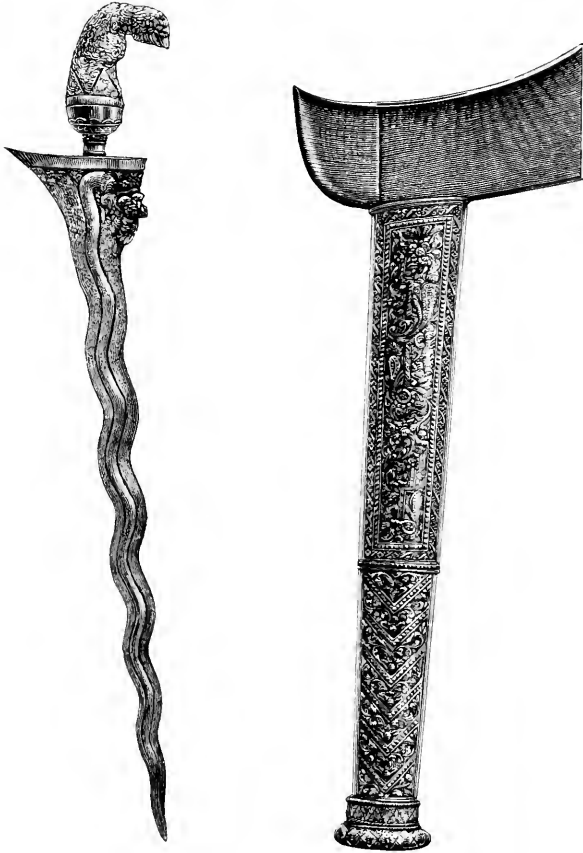
kind. The forest-trees were unfamiliar, and owing to the leaflessness of many of them, there was a remarkable absence of colour in the landscape. Here and there only a *Bombax* caught the eye, its crimson flowers conspicuous at the ends of the bare branches. The prickly pear was growing everywhere, and to judge from its abundance, must have been introduced into the island many years ago. No rain had fallen for five months, and the heat and dust were intolerable. The latter lay thick upon the trees and plants, and enveloped us in a light impalpable cloud as we walked. Our surroundings were indeed different to the eternal verdure of a Bornean forest.

Among the birds too there was a strong element of novelty. Two species especially obtruded themselves on our notice that were eminently of Australian type,—one, the Lemon-crested Cockatoo (*C. sulphurea*), whose snowy plumage rendered it very conspicuous, the other a singularly ugly Meliphagine bird (*Tropidorhynchus timoriensis*), of uniformly dull brown plumage, and with a bare neck and face, which, in small flocks of eight or ten, kept up a continuous and most discordant chatter in almost every thicket. Several specimens of a lovely golden oriole (*Oriolus broderipii*) also fell to our guns, the male of which is of a brilliant orange yellow. It is a species peculiar to the islands eastwards of Bali.

It was not long before we arrived at what was called the Bugis kampong, a straggling village nearly a mile long, which closely adjoins the town of Sumbawa. It is entirely occupied by these people, and we were told that there were only three Buginese in the capital itself. Every "compound" was fenced in with the greatest care, as were all the fields also, and there were many evidences of high cultivation. We saw a considerable quantity of tobacco growing. It was topped in the same manner as it is in America and other countries where it is grown for trade—from eighteen to twenty leaves only being allowed to remain.

We entered the town, which was apparently without palisades or fortifications of any kind, and a large number of natives turned

out to stare at us as we passed. All were armed with spears, which one would have imagined no little hindrance to them in their ordinary avocations, but they appeared rarely or never to



KRIS WITH WORKED GOLD SCABBARD, SUMBAWA.

leave their hands. One party we surprised were screaming with laughter and splashing one another with water, old and young alike,—rather contrary to the usual quiet and undemonstrative habits of those of Malay race. We were informed that the Sultan

was asleep, and were accordingly led by Omar to the house of the Tungku Jirewi. It consisted of three small rooms, in the outer one of which, adjoining the balcony on either side of the wooden steps, he received us. He was a little man, wasted almost to a skeleton by opium-smoking, and was dressed in the usual bright-coloured silk *sarong* and *baju*. He wore a flat cap of plain black silk, of the shape which used five and twenty years back to be termed a "pork-pie." It was decorated with a gold band, not of lace, but a thin plate of the metal itself. A large gold stomacher nearly the size of an octavo book adorned the region of his waistcoat, and a kris, with its sheath and handle covered with the same metal, hung at his side. A dozen or more old muskets, mostly with flint locks, stood in a rack at the back of the room together with some spears, one of which was beautifully hilted with worked gold. There is, of course, no ivory in the island, but both this and gold are imported, and largely used for kris and spear decoration. These weapons excited our admiration as much as our guns did theirs, but although we tried on several occasions to buy them, we were seldom able to come to terms. Many of them were heirlooms, and the prices asked were in all cases very large. Omar told us that he had known two hundred dollars offered for a spear blade only, so highly prized are some methods of working the steel.

After a long *bichara* of the usual character, we asked the Tungku's permission to eat in his house, and he retired meanwhile into the adjoining room, whence sounds of various female voices were audible. From time to time an eye peeped through a chink in the bamboo wall, and it was evident that we were being freely inspected and criticised by the ladies of the harem, who in these islands have not the freedom permitted to those in Sulu. We had brought with us a couple of bottles of champagne, which experience had long ago taught us to have even more power than music in soothing the breast of Oriental potentates, and, disregarding the Koran, we sent some in to our host and his companions. It had the effect of bringing him out for some more, and we prevailed on

him to share our tiffin, which, however, was evidently less to his taste than the wine. We were anxious to get him to sit for his photograph, and on the operation being explained he readily consented, and retired to get himself up for the occasion. He reappeared arrayed in a large gold crown which must have been



THE TUNGKU JIREWI.

nearly a foot across, and was made of the pure metal, although not much thicker than a sheet of stout brown paper. His state umbrella was held over him, his spearmen grouped on either side, and two antiquated cannon guarding the house placed in a conspicuous position, but, with all these martial and gilded accessories, the effect was not imposing, and Thackeray's delightful sketch of "Rex.—Ludovicus.—Ludovicus Rex" occurred at once to one's mind.

Our noble sitter was shrivelled to a mummy, and his one request was for "some medicine to make him fat."

We adjourned to the house of the Datu Banda, where we had Chinese tea offered us, and were informed that the Sultan had gone *ka igreja*—a phrase that required no knowledge of Malay to translate, so we went out to inspect the town. In a large open square beneath trees, and adjoining a cemetery which was planted *selon règle* with champacs, a crowded market was going on. The vendors were all women, and were guarded by spearmen, who permitted none of the sterner sex to enter, and would make no exception in our favour, greatly to our disappointment. Reaching the neighbourhood of the Sultan's Palace we were again stopped. It appears to be against etiquette, if not worse, to approach it. On the outskirts of the town we came upon a veritable Aeldama, —a small field where all the animals of the town appeared to be slaughtered. It was covered with ox-bones and dried blood, and was a gruesome sight.

Returning to the Datu Banda's, we were told that the Sultan would see us, and at once proceeded to the Palace. It was a wooden building of considerable size, surrounded by a low stone wall and double gates. A small guard of spearmen occupied an open bamboo guardhouse near the entrance. Entering, we found a long flight of covered wooden steps, up which we were conducted to the reception-room, a large hall with its roof supported by massive wooden pillars, which, like the doors, were painted a bright pea green. The walls were of plaited bamboo, and had five or six large kites hung against them, made, as is the custom here, in the shape of birds. At the farther end of the room were evidences of European civilisation in the shape of a table and some chairs, behind which stood racks of flint lock, and percussion guns.

The Sultan, who was nearly seventy-four years of age, had evidently been a good-looking man in his day, and was comically like a benevolent old English lady, the resemblance being heightened by his wearing his grey hair in side puffs over the ears. He

received us pleasantly, and told us that the English were a good people, and that their Queen had sent him a gun, which was brought for our inspection. As it was evidently of Belgian make, we had our doubts as to the donor, but did not, of course, undeceive him.¹ Tea, cakes of banana meal, and a sort of wine were brought in for us, and our objects and reasons for visiting Sumbawa demanded, though in the politest manner. Such questions, as may be imagined, are extremely difficult to answer in such a manner as to be comprehended by the native intellect. The naturalist travelling alone is, perhaps, within their grasp, but that any one would sail about the world in a large ship merely for the purpose of travel and natural history is too much to expect any one to believe, and our explanations were received with a politeness which only half concealed the underlying doubt. As usual on these occasions, we were the "cynosure of neighbouring eyes," which watched us unremittingly from the tiny little windows of the ladies' apartment, and behind us row after row of natives, for the most part wearing a sarong and kris only, squatted on their haunches listening to the conversation. Our interview ended by the Sultan arranging to return our visit on the following day, and we eventually left the town for our homeward ride late in the afternoon. It was long after dark when we arrived at the beach.

Next day our time and energies were devoted almost exclusively to the entertainment of our guests. The Sultan, who had previously bargained for a salute of twenty-one guns, made his appearance at eight o'clock in the morning, and remained on board for some hours. After his departure the Tungku Jirewi, who also intimated by a special messenger that his rank required seven guns, came off to the ship, and it was late in the afternoon before we finally got rid of our visitors. A shooting excursion that we had previously

¹ We afterwards found out from the authorities at Macassar that the story was in the main correct. The ship *Inverne* having been lost on the coast of Sumbawa, the Sultan had taken charge of the crew, and treated them kindly until they were taken off the island. The Dutch authorities had been commissioned to present him with the gun.

planned was consequently a failure, and we got neither deer nor pig, although both are said to be fairly abundant in the neighbourhood. The low jungle which we beat looked quite dead, but the natives told us that in the rainy season it would soon be in full leaf. It was ankle-deep in powdery dust, which floated round us in little clouds as we walked. After sundown nightjars of two species (*C. macrurus* and *C. affinis*) hawked over the dried-up padi fields in hundreds. In no other part of the world have I ever seen birds of this genus in such extraordinary abundance.

On the 12th of August we sailed at daybreak for the coast to the eastward, as it was our intention, if possible, to ascend the great Tambora volcano. We passed to the south of Majo Island, and crossed the mouth of the Salee Gulf, which divides Sumbawa almost in half. The land to the south is low, and the monsoon, crossing it, blew strong from the south-east. Majo, like the country round the town of Sumbawa, looked dried up and withered to the last degree. The gulf is even now the haunt of pirates, and its shores are more or less deserted for some distance inland, where the natives live in fear and trembling within stockaded towns. The first sight of Tambora—one of the most tremendous volcanoes in the world, with a crater eight miles in diameter—is not a very striking one, owing perhaps to the very breadth of its summit, but the forests on its slopes were beautifully green and fresh-looking, contrasting strongly with what we had until then seen of Sumbawan vegetation. We slowly approached the land, and passing to the south of the little island of Setonda, which is what the Sicilians would call a son of Tambora, and merely a crater sticking up from the sea, we anchored to the east of a small bay, with the centre of the great volcano bearing about S.E.

This place—known to the natives as Labuan Penakan—had been spoken of by the Sultan as being a possible locality for obtaining help in the ascent of the mountain. A few huts were visible on the beach, and soon after our arrival a dug-out canoe came off, manned by two men, who brought the carcase of a deer

(*Cervus timoriensis*), which they wished to sell for rice. We had none of this to dispose of, but we eventually bought the animal for six yards of "Turkey red"¹ and a small packet of tobacco. It was unfortunately not entire, and we were therefore unable to add its skeleton to our collection.

From the natives we learnt that the ascent of Tambora from this side was impracticable, or at least attended with so many difficulties as to be nearly so. There was no track whatever, and we should have had to cut our way through the jungle, which was very dense and thorny, for three or four days. We therefore relinquished the idea, and occupied ourselves by exploring and making a rough sketch survey of the little bay, which afforded good anchorage in the east monsoon, and had a beautiful stream of clear water at its head.

We took two or three photographs of Tambora, and on the following day sailed for Bima. Slowly rounding the northern and eastern sides of the volcano, we had a good opportunity of admiring its vastness and solidity. Although over 9000 feet, it appears of much less height, and is devoid of the graceful pyramidal shape generally seen in volcanoes which have been slowly built up by less violent but unceasing action. Its slope is a very gradual one, more especially on the south-east side. This, I believe, is where the Dutch traveller, Dr. Zollinger, attempted the ascent, and, as far as it was possible to judge, it seemed the most practicable approach, being devoid of forest, which is the case nowhere else. On the northern side there is an enormous gap in the lip of the crater, through which a stream of lava has burst, and torn its way through the forest to the sea. It was hard to believe that only seventy years had elapsed since the occurrence of the most appalling eruption known in modern times. The rank vegetation of the tropics soon hides the scars which in Europe would remain for centuries.

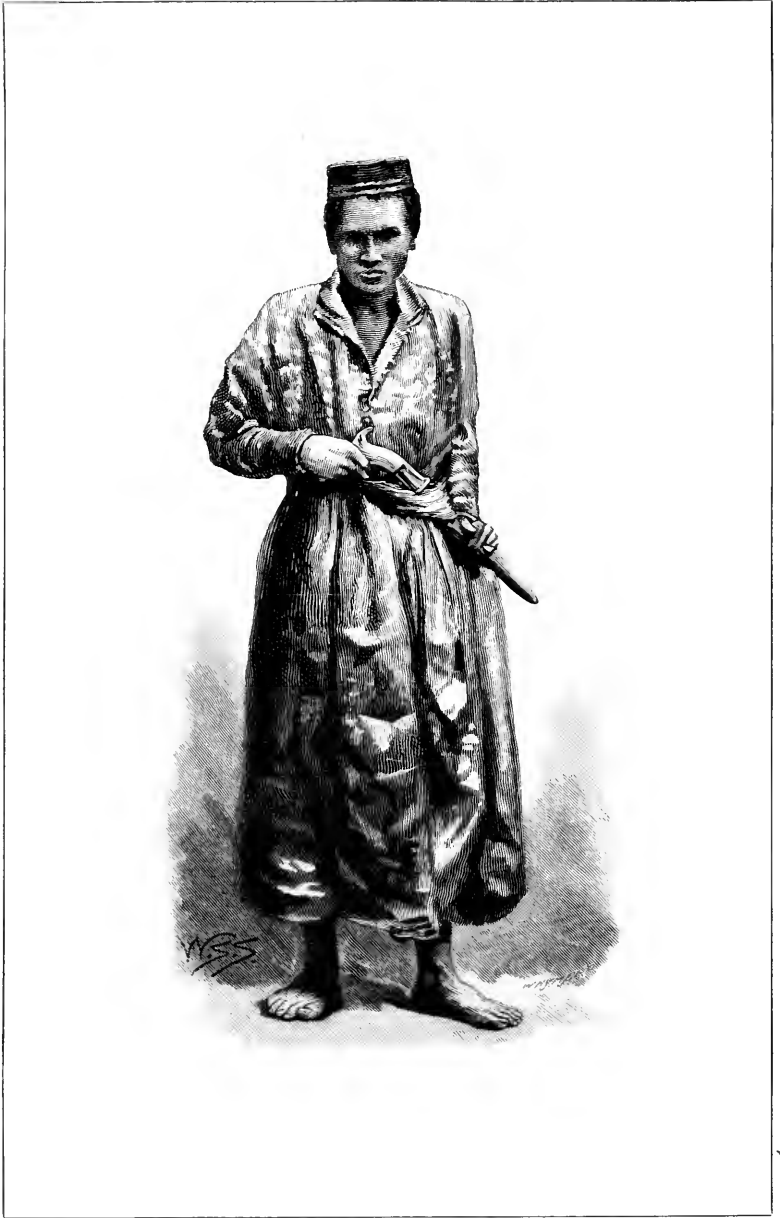
¹ "Turkey red" is a thin cotton cloth, largely used for trade and barter both in Africa and the East Indian Archipelago.

What that eruption was can best be gathered from Mr. Wallace's account :—

“The great eruption began on April 5th, 1815, was most violent on the 11th and 12th, and did not entirely cease until the following July. The sound of the explosions was heard at Bencoolen in Sumatra, a distance of over 1100 miles in one direction, and at Ternate, a distance of over 900 miles in a nearly opposite direction. Violent whirlwinds carried up men, horses, cattle, and whatever else came within their influence, into the air ; tore up the largest trees by the roots, and covered the sea with floating timber. Many streams of lava issued from the crater, and flowed in different directions to the sea, destroying everything in their course. Even more destructive were the ashes, which fell in such quantities that they broke into the Resident's house at Bima, more than sixty miles to the eastward, and rendered most of the houses in that town uninhabitable. On the west towards Java, and on the north towards Celebes, the ashes darkened the air to a distance of 300 miles, while fine ashes fell in Amboina and Banda, more than 800 miles distant ; and in such quantity at Bruni, the capital of Borneo, more than 900 miles north, that the event is remembered and used as a date-reckoner to this day. To the west of Sumbawa the sea was covered with a floating mass of fine ashes 2 feet thick, through which ships forced their way with difficulty. The darkness caused by the ashes in the day-time was more profound than that of the darkest nights, and this horrid pitchy gloom extended a distance of 300 miles to the westward into Java. Along the sea-coast of Sumbawa and the neighbouring islands the sea rose suddenly to the height of from 2 to 12 feet, so that every vessel was forced from its anchorage and driven on shore. The town of Tambora sank beneath the sea, and remained permanently 18 feet deep where there had been dry land before. The noises, the tremors of the earth, and the fall of ashes from this eruption extended over a circle of more than 2000 miles in diameter, and out of a population of 12,000 persons who inhabited the province of Tambora previous to the eruption, it is said that only 26 individuals survived.¹

Bima Bay, a narrow inlet running north and south, and nearly fifteen miles in length, has been a settlement of the Dutch since 1660, if indeed that term can be applied to a post where one European and a handful of coloured soldiers drag out a miserable existence. The bay forms an excellent harbour, protected from

¹ “Australasia,” Stanford's Compendium, p. 425.



all winds, and the town, placed on its eastern shore, is of course provided with its little fort and large flagstaff—two objects that in our subsequent wanderings among these islands we found, together with low white bungalows, gin and bitters, Manila cheroots, and complete *ennui*, to be the leading characteristics of a Dutch settlement in Malaysia. The country round the entrance to the bay was as parched and dusty-looking as that in the vicinity of Sumbawa, but as we steamed down the narrow fjord-like inlet every little cove revealed itself as an oasis of coco palms in the desert around. Two forts, each as large as a good-sized room, guard the narrowest part, which is hardly more than a quarter of a mile in breadth. They were unoccupied, but a few rusty old cannon peeped out of the embrasures. Beyond these narrows the bay expands to a considerable size; to the west a fine range of mountains, 6000 feet in height, shuts it in, and southward, seven miles away, some dark blue, Scotch-looking hills indicate its farthest limits.

The town is placed on a flat, which in the west monsoon becomes a swamp, and hence fever, generally of a severe type, is prevalent, more especially on the advent of the rains. We got ashore with some difficulty,—for a mud-bank with an inch or two of water on it makes landing anywhere opposite the town an impossibility,—and paid our respects to Mr. Diepenhorst, the Resident. He welcomed us with such evident pleasure that it expressed, better than any words could have, the monotony of the life he led. He talked English fluently, and had not been away from civilisation long enough to have lost his interest in the world's affairs. His house was entirely open in front, with no other security than blinds, yet he assured us that he felt perfectly secure, and had never lost any of his property. He accounted for it by the fact of there being only three Chinese in Bima, but the 700 Klings who were said to be settled in the district must have been of unusually immaculate character. Mr. Diepenhorst estimated the entire population of the island at about 70,000, of which 5000 live in Bima. About the same number, the Sultan had informed

us, inhabited the town of Sumbawa. Crawford¹ speaks of three languages as existing in the island,—the Bima, the Sumbawa, and the Tambora,—all of which are written in Bugis character. Two of them, the first and last, are very distinct, and have but a slight admixture of words of foreign origin. Mr. Diepenhorst, however,



VIEW IN BIMA.

who was a good linguist, informed us that there is a fourth, and perfectly distinct language spoken in Dampo, a district to the south-west of Bima, and that in the country around Bima itself two widely-different dialects exist.

There had been no rain in the town for six months—a period of drought unusual even in Sumbawa. The water has in all

¹ “Grammar and Dictionary of the Malay Language,” vol. i. p. 92.

seasons to be brought from the hills by coolies, an affair necessitating much labour, as the spring is five miles distant. In the vicinity of the town large quantities of rice are grown, the low-lying land lending itself especially to its cultivation, and an elaborate system of irrigation exists, the water-supply being drawn from a small river, the mouth of which is close to the town. Coffee is cultivated in the hills, but it is of poor quality, and fetches less than half the price of that grown in Northern Celebes.

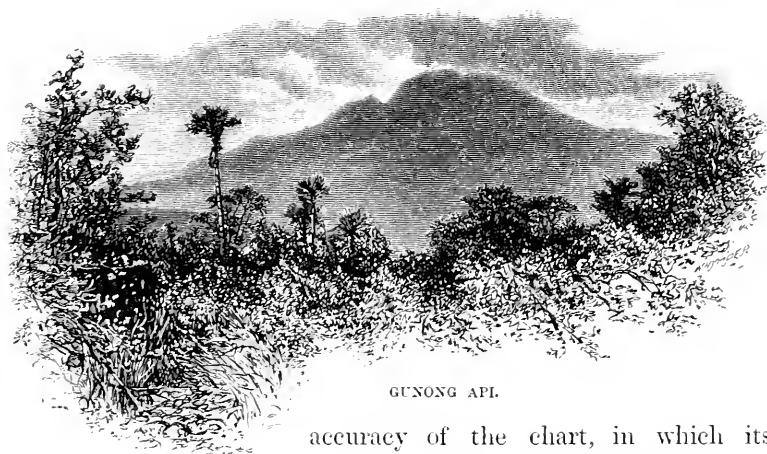
Birds were numerous in the fruit gardens in and around Bima, and placed as Sumbawa is on the outskirts of the Austro-Malayan sub-region, it was interesting to note the mingling of the Indian and Australian forms. The Ashy Tit (*Parus cincreus*), which has extended as far eastward as Flores, was one of the first birds that attracted my attention; its clear and unmistakable note almost exactly resembling that of our own Great Tit. A small woodpecker (*Yungipicus grandis*, Hargitt)—another alien genus in this region—was far less common. Side by side with these Indian forms occurred other genera of Australian origin,—*Pachycephala*, *Stigmatops*, *Geoffroyus*, and a beautiful brush-tongued lory (*Trichoglossus forsteni*), which seems to be peculiar to the island. Our bag at the end of a long day contained over sixty specimens, and we sat up skinning them until it was nearly daybreak, for in such a climate the heat admits of no delay in these matters. Among them was a *Zosterops* new to science, with a brownish head and the rest of the body a pretty golden yellow.¹

The most productive shooting-ground was in the neighbourhood of a large cemetery at the back of the town. The tombstones were for the most part smooth and club-shaped, and were placed at the head and foot of the grave, the outline of the latter being marked by pebbles. Three tombs however—those of the old Sultans of Bima—were conspicuous among the rest; large oven-shaped erections of red brick covered with plaster. A low entrance with stone lintels deeply carved with inscriptions led into a little

¹ *Z. sumbavensis*. Vide "Proc. Zoolog. Soc." 1885, p. 501.

chamber in which was a raised wooden grave of an ordinary Malay type—much like a child's cot. These tombs were said to be about 200 years old, and were much dilapidated and cracked, no doubt in great part owing to the earthquakes and eruption of 1815.

At the north-east end of Sumbawa, and barely six miles from its shores, lies the island of Gunong Api¹ or Sangeang. The distance at which we had sighted it had led us to doubt the



GUNONG API.

accuracy of the chart, in which its height is given at 2040 feet, and on taking measurements as we approached, we found it to be slightly over 6000 feet,—a great elevation upon so small a base, for the island is less than seven miles in breadth. The coast is steep to on the western side, and as we steamed slowly along, almost within gunshot of the beach, in search of an anchorage, we had plenty of time to admire the fine scenery it afforded. From a shore of black ironstone sand the mountain rises steeply up, at first as a series of hummocky hills, covered with green and yellow lalang grass, and separated from one another by narrow gullies filled with dark-foliaged trees. Beyond, a sharp slope of dense

¹ A Malay name (*Gunong*, mountain; *api*, fire) applied to two or three different volcanic islands in the Eastern Archipelago.

forest reaches nearly to the summit, which is formed by two bare peaks. The diversity of colouring was wonderful, and both in this and other respects the island bore a singular resemblance to Madeira. The presence of a few white houses dotted over the hills was alone wanting to make it almost complete.

Our object in visiting the island was chiefly to procure water, for that obtainable in Macassar, which was to be our next port, was, we were warned, of bad quality, and in cruising in these climates it is of the first importance that the drinking water should be pure. We tried at two or three places without success, but on despatching a boat ashore when off the W.N.W. point, the boatswain returned with the intelligence that there was a spring close to the sea, so we at once landed to inspect it. The ground was dry and dusty even in the gullies, but between high and low water mark rapid runlets of clear water streamed out for a distance of three or four hundred yards along the beach. It would, however, have taken a long time to fill our tanks, and we decided to defer that operation until we discovered a better place. We found many natives on the island, and one of those we met was able to understand Malay. They are Sumbawans who have immigrated from the adjoining coast, and speak one of the two Bima dialects. We picked up the skull of a large pig, and the natives also told us that there were numbers of deer on the island. That snakes of a very respectable size also existed we inferred from our finding a piece of the shed skin of one of them, which measured over seven feet in length. Among our ornithological spoil was a quail of a new species (*Turnix powelli*), which I have since named after my friend Lieut. R. ff. Powell, R.N., who accompanied the *Marchesa* in her voyages to Kamschatka and New Guinea.

At our next anchorage, about two miles farther along the coast, we were more fortunate in our search for water, the proximity of which was evident from the presence of a rather large village of scattered huts. The most marked feature in the vegetation here was the large number of Palmyra palms (*Borassus*),—a rather coarse-

stemmed tree crowned with a disproportionately small bunch of fan-shaped fronds,—which, though conspicuous enough in those parts of the island that we visited, more especially from the fact that dead ones were exceedingly numerous, do not so often attract the notice of the traveller in the islands farther west. Like some other palms, it flowers but once, and dies immediately afterwards. Behind the village a tremendous gorge leads steeply upwards towards the peaks, through which in the rainy season a large body of water must find its way to the sea. The prolonged drought had reduced the stream to a mere rivulet, which flowed through a wilderness of huge boulders, but we found enough water for our purpose, and a few hours' hard work sufficed to fill our tanks. On the following day we weighed anchor and set our course N.N.E. for Macassar. Our visit to Sumbawa had been too short to get anything more than a passing glimpse of the country, and we had been disappointed in our plan of ascending Tambora, but we had added considerably to the number of our photographs, and by diligent collecting had succeeded in obtaining forty species of birds, two of which, as I have already mentioned, were new to science.

CHAPTER VIII.

CELEBES.

Macassar—Visits of ceremony—Dress of the Dutch ladies—"Floating the liver"—
Life in Macassar—The King of Goa's house-warming—Bandit and butler—
Cock-fighting—Visit to Maros—A beautiful valley—Sail for Northern Celebes—
The Spermonde Archipelago—Menado—Stranding of the *Marchesa*—Start for
the mountain district—Lotta—The "Major" of Tomohon—Arrive at Tondano—
The coffee industry—A doubtful delicacy—Languages of Minahasa—Tondano
waterfall—Nutmegs and Vanilla—The Kanari nut—*Anoa depressicornis*—Birds
of Celebes—Mr. Wallace on the Dutch system.

THE southern part of Celebes is affected by the easterly monsoon quite as much as the islands lying to the south of it, and, as we neared the coast, the thick haze characteristic of the dry season rendered our position a matter of some uncertainty. We at length recognised the small island of Tana-keke, and passing through the network of shoals which here and to the north present considerable difficulties to navigation, we came to anchor in the roadstead of Macassar. We had passed the guardship on entering, and two or three vessels only lay off the town, but everywhere innumerable praus were to be seen, from the large Aru trader of forty tons or more to small dug-out canoes. The Buginese are the *orang khalasi*—the seamen—of the Eastern Archipelago, and trade as far eastward as New Guinea.

Macassar is not attractive from the sea. The land around is low and flat, and as we landed the place fairly grilled in the heat, which the whitewashed houses and the thick, greenish-white water of the anchorage helped, in appearance at all events, to increase.

But putting Java aside, it is the most important town in the whole of the Dutch East Indies, and the centre of trade of a vast extent of country. Ternate, Amboina, and Banda are the only other places worthy of the name of town in Netherlands India, but though the former of these was settled earlier by the Portuguese,¹ and the spice trade of the others has been renowned for centuries, they will always remain of inferior importance as compared with the more western town. Batavia is the Singapore of the Dutch; Macassar their Hongkong.

It is seldom that an Englishman is found in these regions, and, indeed, the traveller, if he be of that nationality, may safely calculate on seeing the last of his countrymen for some time to come on leaving Batavia for a voyage to Celebes and the Moluccas. Our ships rarely cruise in these waters, but, just previous to our arrival, H.M.S. *Champion* had visited Macassar,—the first English man-of-war, it was said, that had entered the port for thirty years. Whether this is accurate I do not know, but the ship was received with such kindness that the interval might well have been a century, and the letters of introduction we carried from her officers ensured us a warmth of hospitality that was as pleasant as it was unexpected. Our first call after presenting these was upon the Governor, and though we were more or less acquainted with the etiquette to be observed on these occasions, it is probable that my reader is not, and I may as well describe it once for all.

A ceremonial call is generally paid at 7 P.M., dinner being at a quarter or half-past eight, and a black coat with tails is a *sine quâ non*. A dress-coat and waistcoat are considered *de rigueur*, but a frock-coat or even a “cutaway” may be worn without a breach of decorum. Tails, however, are absolutely essential, and a coat

¹ A few Portuguese apparently settled near Macassar in 1512, the year following Albuquerque's conquest of Malacca, but it does not appear that they fairly established themselves until many years later, whereas Ternate had been garrisoned by De Brito in 1521, and was held continuously for sixty years. The Dutch occupation of Celebes dates from 1660, in which year they destroyed six Portuguese ships off Macassar, captured their fort, and concluded an alliance with the King of Goa.

destitute of these ornaments, even if black, would fail to guarantee one's respectability. The trousers should be white, and a hat, even if only carried, is indispensable. To Englishmen this latter rule may appear superfluous, but in the Dutch East Indies no head-covering of any kind is worn after sunset by either sex. The guests on arrival are seated round a table, generally in the verandah, and Port, Madeira, Hollands, and bitters are placed before them—drinks that, in defiance of the climate, no well-regulated Dutchman would dream of omitting as a prelude to dinner. Manila cheroots are handed, for smoking is of course universal, and behind the master of the house squats a native with a firestick, ready to respond to the "*kasi api*" of any guest who may require a light.

He must be "*robur et æs triplex*" who would venture upon gin and such like fiery liquids in these latitudes before dinner, but the Dutch customs in Malaysia are not all so unsuitable. In the way of dress especially the ladies are far in advance of their Anglo-Indian sisters. In the morning they appear in native costume. A short lace-edged *kibaya* of thin white linen buttons up to the throat, and a silk *sarong* reaches to the feet, which are without stockings, and clad only in a pair of gold-embroidered Turkish slippers. The effect, although perhaps at first a little startling to European eyes, is decidedly good, especially in a young and pretty woman, and in the way of comfort and coolness there is little to be desired. English prejudices are, I fear, too strong to admit of the adoption of such sensible garments in our own tropical settlements, where, alas! corsets and black dress-coats have taken too deep a root in the fashions to be easily got rid of.

The society in Macassar was very pleasant, and not less so from the fact that almost every one spoke English or French nearly as well as their own language. One of the first entertainments to which we were invited was a private theatrical performance followed by a ball. It was given in a public hall, which on Sundays served the purposes of a church! A large number of people were present, and we were astonished at the abundance of the fair sex,

if indeed the "chocolate ladies," as they are here termed, can be included in that category. There appeared to be none of that separation of colour which is so marked a feature where Briton meets Eurasian. The reason no doubt lies in the fact that, after a time, life in these regions renders a return to the gloomy skies and winter of the north a pain rather than a pleasure. The official in Netherlands India, condemned to a preposterous length of service before he can obtain furlough,¹ feels that his lot must be to live and die there, and that his Fatherland is as impossible to him as to the Lotus-eaters :—

"For surely now our household hearths are cold :
 . . . our looks are strange ;
 And we should come like ghosts to trouble joy."

And so he marries ; not perhaps a half-caste, but some one whose dark hair and rich warm colouring betray the presence of other than European blood. Should his constitution survive the ante-prandial port and bitters, he retires to Batavia or Buitenzorg on the completion of his term of service, and spends the remainder of his life in the society of his fellows.

The acting was good, but the *blijspel* rather heavy. After it was over the seats were removed and dancing began. Champagne appears to be a favourite wine with the Dutch, and the supply of it was inexhaustible. It had, we learnt, a prophylactic power of which we had till then been ignorant. The advent of cholera was expected, and we were instructed how to avoid it. "Float the liver, my dear sir ; keep your liver constantly floating in champagne, and you will never catch the cholera," was the advice given us, and every one certainly seemed to act up to it to the best of his ability.

The town is much as other Dutch Malayan towns. A row of white shops and merchants' offices lines the sea, and dust of a lightness and powderiness that is not excelled even in California or the Diamond Fields covers the streets to the depth of an inch

¹ It is—I believe I am right in saying—as much as fifteen years.

or more. These are otherwise clean enough, and the spare time of the native servants—and they appear to have plenty of it—is occupied in perpetual watering. There is, of course, a fort, and equally of course, a *plein*. The cemetery is significantly full. Almost all the tombs are kept whitewashed, and, as many of them are curious chapel-like erections with flying buttresses, the



A NATIVE STREET—MACASSAR.

effect at a distance is something between an ice-palace and a clothes' drying-ground. The houses of the Dutch residents, shadowed in peepul or *galala* trees, stand back a little distance from the road—long, low, and cool, with thick white posts at their entrance-gates. A long avenue of magnificent overarching trees leads eastward from the pier, adown which the Governor may be seen driving any afternoon in a four-in-hand with sky-blue reins. It is lighted by means of lamps hung midway between the trees, for the Hollander, even although gas may be unattainable, considers civilisation incomplete without these adjuncts. Then, too, there is

the club, with its zinc-topped tables set out café-fashion beneath the trees. It is called the "Harmonie," as is every Dutch club in Malaysia, and within all is dark and cool and deserted during the mid-day heat. The servants are curled up asleep behind the bar or in the corners of the rooms, and would stare in dumb astonishment at the apparition of a European, for the early business of the day over, and the *rijst tafel* or lunch despatched, the white residents get into their pyjamas, and take a siesta till three or four o'clock. A couple of hours or so are then devoted to business, and towards sunset the male portion of the population meet at the "Harmonie" to chat and drink *pijtjes*. Billiards is the most violent exercise taken; cricket, bowls, and lawn-tennis are unknown.

While we were at Macassar the King of Goa gave a house-warming, to which most of the Dutch and German residents were invited. This monarch, although on friendly terms with the Dutch, occasions them a considerable amount of inconvenience from the proximity of his dominions to the town, and robberies by his people are not uncommon. We drove over in company with some of our Dutch friends through mile after mile of padi field and dense clouds of dust, which the excessive heat did not render more bearable. As we neared our destination the large number of natives proceeding in the same direction betokened a general holiday. The palace, which was built of wood, was the work of a Chinese architect, and its exterior was gay with gold and colours. We entered a large room on the first floor by means of a covered stairway, and were duly introduced to royalty. The king and members of his family were conspicuous by wearing plain black satin *sarongs* without trace of ornamentation, but their *bajus* and caps were gold-laced, and they carried krisses with beautifully-worked gold sheaths. Several Dutch officials and their wives had preceded us, and numerous servants passed noiselessly from guest to guest handing trays of sweetmeats, tea, and coffee. Various hangers-on, naked save their caps and *sarongs*, squatted in the corners of the room, and the grandchildren of the king, clad in little else except

bracelets and rows of gold plaques hung upon the breast, trotted about with evident delight. These latter ornaments, which are inscribed in relief with verses from the Koran written in Bugis character, are made in Macassar, and are often of beautiful workmanship.

We learnt from an initiated Dutchman that lager beer and *sagueir* were being dispensed to a favoured few in a corner. The



A GOA CHIEF.

latter is a sweet palm wine, not unlike cider, and is made from the juice of *Arenga saccharifera*,—a tree which, with its thick fronds and heavy pendulous masses of globular green fruit, soon becomes a familiar object to the traveller in Celebes and the Moluccas. Our servitor had a history. Now the major-domo of the king, and a most important personage in his way, he had seen many vicissitudes. By birth he was apparently part Malay, part Portuguese, and part negro, but of however many nationalities he may have been, he was at one time in affluent circumstances. An unlucky speculation lost him all his money—nearly £4000—and he took to the road, or rather to the mountains, where for eight years he

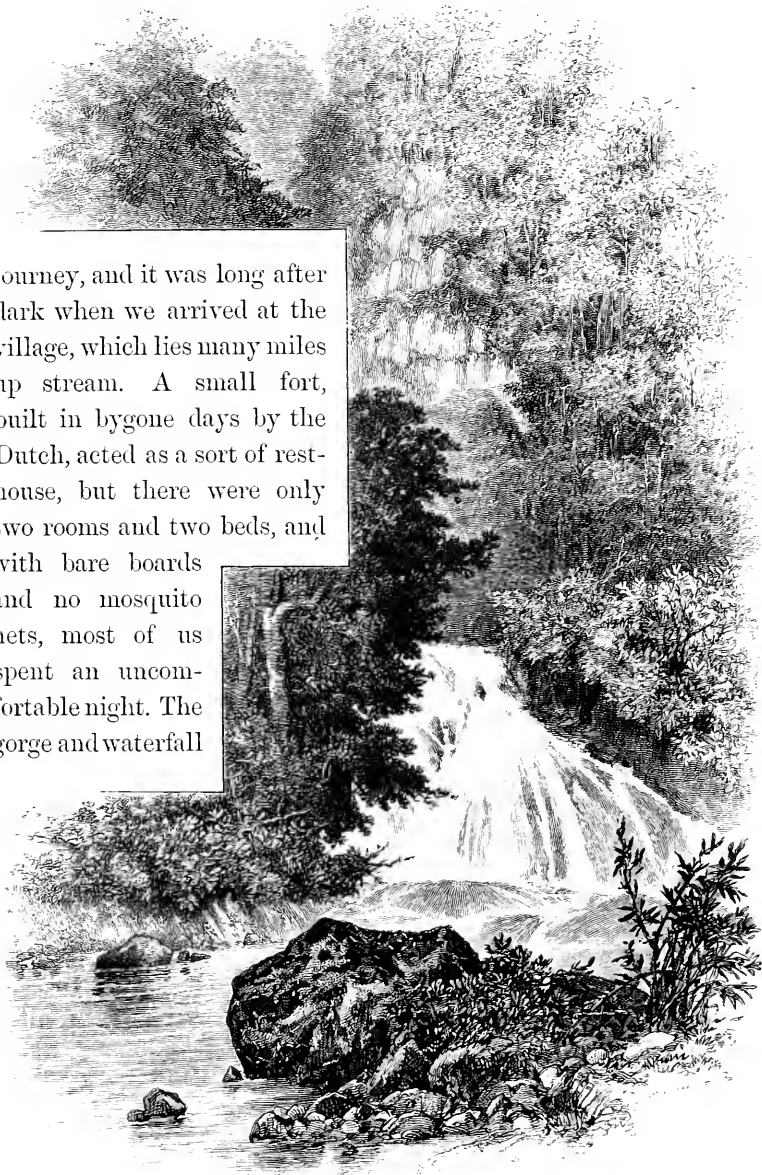
managed to elude the authorities and to earn his livelihood. At length, however, he had to give in, in consequence of the number of Dutch troops sent out against him. History does not relate the cause of his being pardoned, but a more respectable-looking butler than he appeared while directing the management of his cellar I never saw.

Our tiffin was evidently intended to be equally suited to Malay and European tastes. Various little rissoles, coloured rice cakes, and half a hundred other indescribable comestibles were done up in neatly-plaited bamboo cases hardly bigger than one's finger, while a few joints of mutton represented the cuisine of the West. Champagne and claret, both far better than could have been expected, were handed, and after a couple of speeches from the Governor and their replies, we escaped gladly from a durian-eating neighbour into the fresh air outside.

Our entertainment terminated, as a matter of course, with cockfighting, a sport beloved by all of Malay race. The spurs used were about three inches long, and made of the blades of razors, ground down to excessive thinness. With such weapons there is but little cruelty in the affair. We waited to see a main fought before we left. The king and other royal personages made their bets; the combatants were placed opposite to one another; they made two feints, and in less than half a dozen seconds the vanquished bird lay motionless on the ground. Had he met his fate legitimately at the hands of the poulterer his death could not have been more rapidly effected.

The descriptions of our Dutch friends, and the account given by Mr. Wallace in his "Malay Archipelago," made us anxious to pay a visit to Maros, a district lying twenty or thirty miles north of Macassar, and early one morning a small party of us started in a steam launch kindly lent us for the occasion. We ran along the coast for some miles until the mouth of the Maros River was reached, but owing to the shallowness of the water on the bar, we had to tranship into small native boats to convey us for the rest of our

journey, and it was long after dark when we arrived at the village, which lies many miles up stream. A small fort, built in bygone days by the Dutch, acted as a sort of rest-house, but there were only two rooms and two beds, and with bare boards and no mosquito nets, most of us spent an uncomfortable night. The gorge and waterfall



FALLS OF THE MAROS RIVER

for which Maros is famous, lie a considerable distance beyond the village, and the path thither leads over a vast plain stretching from the sea to the base of the limestone cliffs, which rise with extraordinary abruptness from the level rice-fields. A depression of a few feet only would submerge a vast area of land, and bring the sea to the foot of these almost vertical walls, and in past ages such a condition no doubt actually existed. Curious outlying rocks—*islands* indeed they might be called—guard the entrance of the gorge from which the river debouches, and near one of these we were shown the site of a battlefield where the British forces encountered the natives at the beginning of the present century.¹

I have seldom seen quainter scenery in the tropics than that within the gorge. The perpendicular sides close in very rapidly after passing the entrance, and become in some places overhanging, with curious protuberant stalagmites of huge size. The level bottom of the valley, clothed at first with bush and small trees, soon becomes narrow and uneven, hardly admitting of a path beside the little river. It is closed in by a fall of about fifty feet in height, the water of which slides gracefully over a half dome of smooth basaltic rock, which here, as Mr. Wallace has remarked,² underlies the limestone formation. Scrambling up by the side of the waterfall, an upper gorge is reached, the scenery of which is very pretty. The placid little stream of milky blue water flows between an avenue formed by perpendicular bush-covered cliffs, and half a mile beyond there is a second fall, in the basin of which we had a most refreshing bathe. Still farther the gorge contracts almost to a fissure, with walls of great height.

The house in which Mr. Wallace had taken up his quarters five and twenty years before still stood at the mouth of the valley, although uninhabited and much out of repair. In these countries,

¹ The Dutch colonies, like the mother country, became absorbed in the French Empire, and the French Governor-general of Java having capitulated to the British in 1811, Celebes was also occupied. It was restored to the Dutch in 1816.

² "Malay Archipelago," Seventh Edition, p. 238.

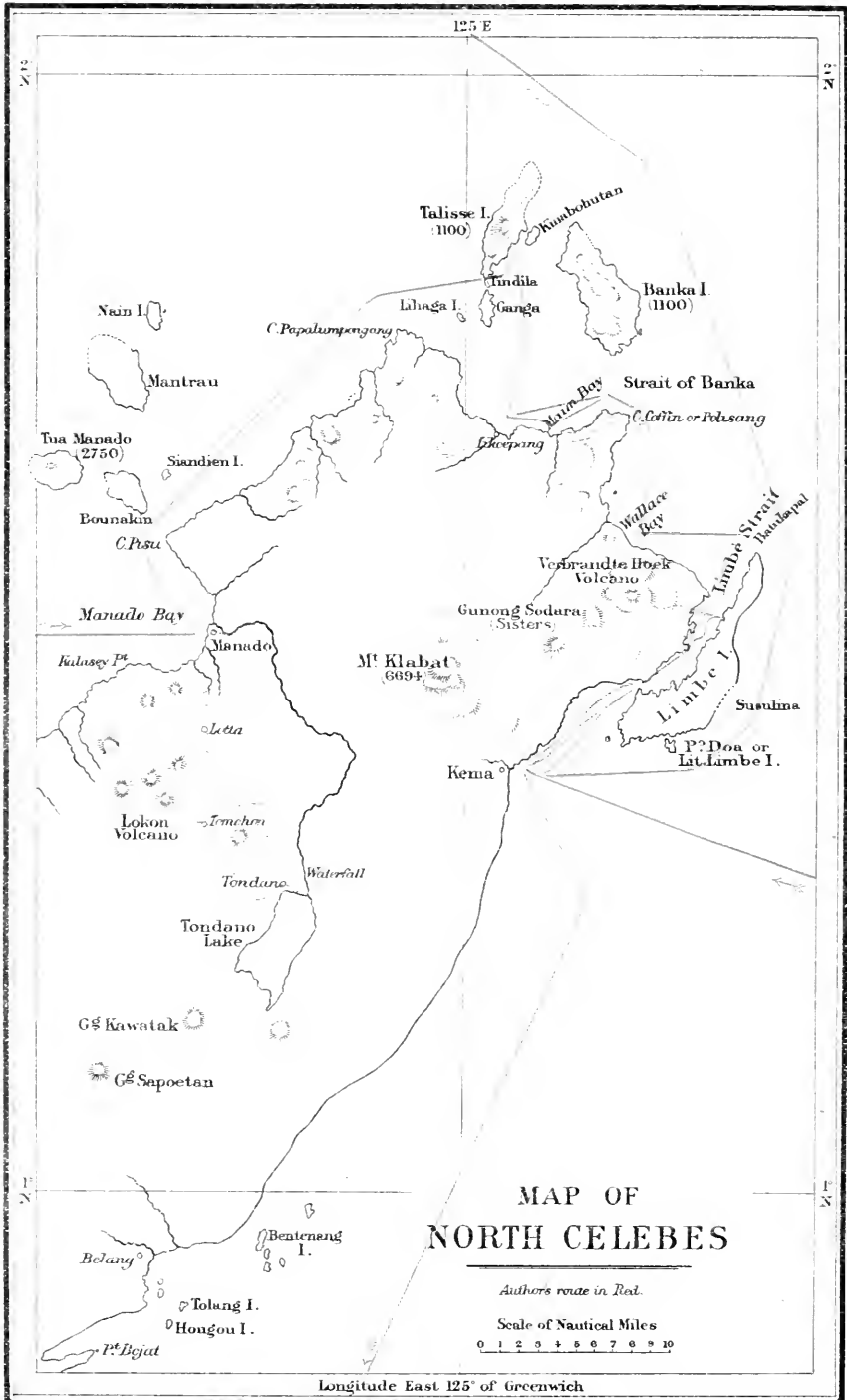
however, where palm-leaves are plentiful, it does not take long to make a habitation comfortable, provided the uprights are still standing, and it would be difficult for a naturalist to find a pleasanter collecting-ground. Birds were tolerably abundant, and butterflies extraordinarily so, but among the thousands that fluttered around the pools we looked in vain for the large Swallow-tail (*P. androcles*), which is one of the finest of its genus. Our time was too limited for any serious collecting, and our naturalists' bag was a light one as we paddled down the Maros River on our way back to Macassar. We had an opportunity of making a large addition to it in the shape of a young crocodile, which we suddenly encountered lying asleep on the bank with its mouth partially open. Our bullets failed to stop it, and it instantly disappeared. A good story with regard to these animals is told of a certain Dutch gentleman whose name is frequently mentioned in the "Malay Archipelago." The Government had offered a reward of two dollars for every crocodile killed, and Mr. X—— not infrequently claimed it. In process of time these claims became so extraordinarily numerous as to lead to an investigation, when it was discovered that he had established a most successful breeding-ground by staking a small reach of river at some distance from civilisation, and that his stock of Saurians was nearly as profitable as an American cattle-ranche appears to be in a prospectus.

On Sunday, the 26th of August, 1883—memorable in the annals of the East Indian Archipelago as the date of the appalling eruption of Krakatau in the Straits of Sunda—we left Macassar for the north of Celebes. For forty miles or more northwards from the roads the coast is guarded by a complex network of islands, reefs, and shoals, the navigation of which is always avoided by ships. A survey of this Spermonde Archipelago, as it is called, had just been completed by the Dutch, and we resolved to attempt the passage. We found the charts admirable, and had no difficulty whatever in getting through. The route is a great saving in point of distance, and can easily be attempted by a steamer, but day-

light is necessary. The islands were all low and sandy, and evidently supported a large population, for they were crowded with huts and coconut palms.

In spite of the large size of the island, and the immense extent of seaboard it affords, the Dutch have practically no settlements in Celebes except at Macassar in the south and the district of Minahasa at the extreme north. The former, as I have already stated, is chiefly a port of trade, but the country in the neighbourhood of Menado and Kema included under the latter name is one of the best coffee-growing districts in the world, and it was with the intention of seeing something of the Dutch system of management, and at the same time of adding to our zoological collections, that we resolved on spending a month or so in this part of the island, of which Mr. Wallace's descriptions had led us to form the highest expectations. Realisation in these cases is very often disappointing, but in this instance it happily was not, and I may anticipate by saying that there were few places in our Malaysian cruise with which we were better pleased.

On leaving the port of Macassar for Menado the mariner has, roughly speaking, to steer north for four hundred and twenty miles, and then east for another three hundred before arriving at his destination, and during that time he will have materially altered his climate. He will have crossed the equator and passed beyond the Australian influence of the south-east monsoon, and instead of the arid rice-fields and their attendant powdery dust, he will find himself once more in a region which, although occasionally subject to drought, is practically one of perennial verdure. In our voyage north our course led us from time to time within sight of the coast, and the mountains of the interior were usually shrouded in heavy mist or rain-cloud, beneath which the dense jungle loomed out a sombre green. Farther east, towards the end of the peninsula, the land is of lower elevation, and here we experienced better weather, bright sunshine alternating with heavy showers. On the morning of the fourth day we arrived off Menado.



The entrance to the roadstead is a picturesque one. Eastward the Klabat volcano stands up boldly, its graceful cone nearly 7000 feet in height; while to the north the little volcanic island of Tua Menado forms a shapely pyramid which reminded us of Gunong Api. On the left bank of a small river, behind a bright sandy beach, the white houses peep out here and there between the dense foliage of fruit-trees and palms. But we had little time for admiring the scenery, for an event occurred on our arrival which was within an ace of bringing the cruise of the *Marchesa* to an abrupt termination.

The anchorage off Menado is an exceedingly bad one, and is only available for ships during the south-east monsoon. The westerly monsoon sends a heavy sea into the bay, which is completely exposed, and hence, at the latter season, any vessel visiting this part of Celebes is obliged to anchor at Kema, a small port on the opposite side of the peninsula, whence the goods are conveyed overland to Menado. The two towns, although only twenty miles apart as the crow flies, are really considerably more by road, owing to the mountainous country which has to be traversed. But even during the south-east monsoon, the anchorage at Menado is extremely unsafe, owing to the steepness of the bottom—the soundings decreasing within a few cables from 150 to 2 fathoms. For this reason hawsers have to be laid out astern and made fast on shore, or the first puff of the land wind drives the vessel off into deep water.

We were about to take up a position which we afterwards discovered was the best, when a boat rowed out to us with a half-caste on board, who professed to act as harbour-master, and offered to show us the anchorage usually taken up by the Dutch gun-boats. It did not appear correct by our chart, but as he seemed perfectly confident, we dropped gently astern towards the place in compliance with his instructions. Directly afterwards a native he had brought on board spoke to him, when he turned round hurriedly and said, "*Niet meer achter*,"—no more astern. The engines were put at full speed ahead before he spoke, but it was

too late and we took the ground. The sea-breeze blowing fresh at the time the ship's head rapidly payed off, and in less than a minute we were aground stem and stern.

A small brig was lying a short distance from us, and as quickly as possible we got hawsers out to her, and, when fast, weighed our anchor—which we had vainly let go in the hope of stopping the vessel's head from swinging round—and commenced hauling off. To our dismay, however, the hawser carried away, and our bow was in consequence driven farther on the bank by the sea, which had by this time somewhat increased. We now began to bump heavily, —a most unpleasant sensation—and as every send of the sea ground us down more and more into the bank, we feared lest the ship might become firmly fixed before we could adopt further means for getting her afloat. We sent ashore for large boats and hands to aid in getting out our bower anchor, and meanwhile laid our stream anchor out to sea and got another hawser to the brig. We hauled on both only to meet with another failure, for the anchor “came home,” and for the second time the hawser gave under the strain. We had now but one chance left us,—that of getting out our bower anchor—which we had been unable to try before, owing to the lack of proper boats. By this time, however, we had obtained a small barge, to the stern of which we slung the anchor, putting in eighty fathoms of chain cable. The cutter took another thirty, and the two boats proceeding seaward let go in twenty-three fathoms, an operation attended with some difficulty, owing to the uncomfortable sea running at the time. This time we were successful, and between 2 and 3 P.M. the *Marchesa* floated off into deep water, having been ashore five hours.

Our troubles were nevertheless not yet over, for the cable smashed at a shackle when anchoring for the second time, and we lost our anchor. We were more fortunate on the third trial, letting go in 55 fathoms and veering to 145 fathoms. We then made fast with two hawsers to the shore, and felt that we had earned some rest. All hands were fairly tired out.

We had been told that the wind would drop about noon, but this prognostication proved incorrect, for it increased in violence during the day, and in the evening the surf was so heavy that two of our party who had gone ashore were unable to get off to the ship. Had we failed in our final endeavour the *Marchesa* would have made her last voyage. The natives of the place, who had seen more than one vessel lost here, were rather surprised at our good fortune. The so-called harbour-master, who had been the sole cause of the occurrence, took good care to keep out of our way. Our only consolation was that the yacht, which was a very strongly-built vessel, appeared to be quite uninjured.¹

Our misfortunes had caused us early to become acquainted with the chief Dutch residents in the place, and through their kindness we had but little difficulty in procuring horses and oxen to take us to the Tondano lake, which lies in the mountainous district in the middle of the peninsula. We started early on the morning of the 1st of September, and as we crawled slowly through the village in an ox waggon we had every opportunity of admiring its beauties. It is, I think, the prettiest settlement in the whole of the Dutch East Indies. Each little cottage is surrounded with its garden and fruit orchard, and the neatly-trimmed hedges fairly blaze with scarlet hibiscus. Pink ixoras and magnificent crotons of many varieties, some of them five and twenty feet or more in height, add to the colouring. The village is in reality a vast garden, and an exceedingly productive one to boot.

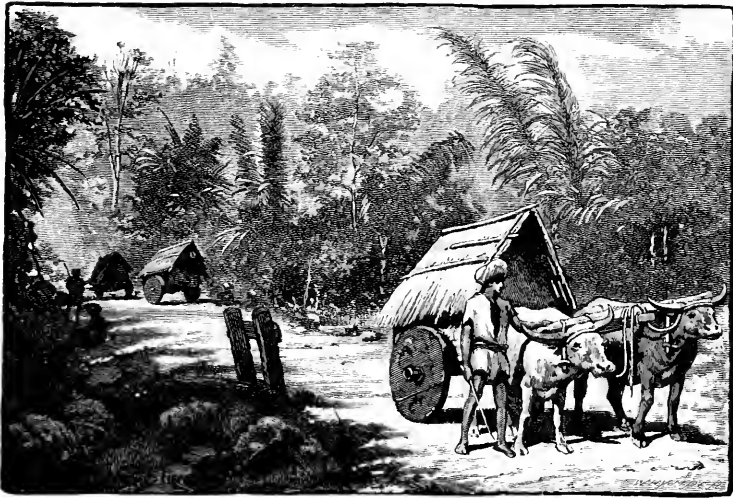
The road for nearly five miles was excellent, and we walked along shooting by the way, for our bullocks went but slowly, and the gardens of fruit-trees, nutmegs, and cacao were full of birds. The latter tree has lately been a failure, owing to a

¹ The method adopted by the captain of the brig for anchoring in Menado will amuse my nautical readers. On approaching the port—with which he was well acquainted—he let down his anchor with 60 fathoms of cable attached and went in under all plain sail. Directly the anchor took the ground he shortened sail, and as the ship swung to the sea-breeze, the hawsers were got out, and she was soon fast head and stern.

peculiar disease which causes the pod to shrivel up after it has been fully formed, and it is in consequence no longer planted. One of the commonest birds we found was a kind of starling (*Scissirostrum dubium*), with a most peculiar bill, and with the feathers of the rump tipped with scarlet, in a manner somewhat resembling the wing of the Bohemian waxwing. It appeared to be very abundant, packing in small flocks and frequenting the tops of trees. This bird is peculiar to Celebes, and it was with the greatest interest that I watched it for the first time, for, as Mr. Wallace has long ago remarked, it has no representative in any of the surrounding islands, and is perhaps more closely allied to the tick-eating Buphaga of Southern Africa than to any other bird. Another equally interesting bird which fell to our guns was the Racquet-tailed Parrot (*Prioniturus platurus*), a genus which is confined to Celebes and the Philippines. On our way we met a man carrying a small animal with thick woolly fur—a little Phalanger (*Cuscus*), peculiar to Celebes, which, after some discussion, he consented to part with for a guilder. These animals, which are characteristic of the Austro-Malayan sub-region, make very engaging pets, and we had two or three different species of them on board the yacht during her cruise in the archipelago. They are about the size of a rabbit, and appear to be entirely arboreal in their habits, climbing slowly about among the branches of the trees on which they feed, aided by their long claws and prehensile tail, which is completely bare for some inches at the tip.

Our road led southward, and about a couple of miles before reaching Lotta, a pretty little village with about two hundred inhabitants, we commenced a steady ascent, and left the gardens of Menado behind us. Our bullocks were so poor that it soon became doubtful whether we should reach Tondano that evening, although it was only twenty-two miles from our starting-place and we were provided with relays. As we went on the road became still steeper, and our dāk not having been well laid, in

Anglo-Indian phraseology, the doubt soon resolved itself into a certainty. At sunset we had made little more than ten miles, the steep climb and bad road having obliged us several times to out-span and rest our bullocks. We had reached an altitude of two or three thousand feet on the shoulder of the Lokon volcano, and the road, skirting a deep ravine filled with a wild tangle of jungle, gave us a magnificent view of the country. Opposite to us, across



ON THE ROAD TO TONDANO.

the gorge, Mount Klabat hid the Gunong Sodara and other volcanoes from our sight, its summit touched by the setting sun; and to our left lay the Bay of Menado, where we could just discern the two ships lying at anchor. Large tree-ferns were very abundant here, and formed a marked feature in the foreground of our landscape. The dampness and mossiness of the forest indicated the heavy rainfall that these elevated regions experience, and the trees were covered with a marvellously luxuriant growth of parasitic plants and creepers.

For more than an hour we trudged on through the darkness

before reaching the village of Tomohon, where we inquired for a night's lodging at the house of the "Major."¹ From Mr. Wallace's description of the "Major" of this identical village just a quarter of a century before, we were not unprepared for the reception we experienced. Our host was a new one, but the house perhaps was the same. It was a pretty cottage standing in a little garden bright with flowers, with a deep verandahed room leading to another sitting-room beyond. Behind these were four bedrooms and the kitchen and offices. The sitting-room was furnished just as a Swedish post-house might be:—white-painted walls and floor, white muslin curtains, a duplex lamp, two sofas, a circular table with books, a portrait of the King of the Netherlands, and a large six-tune musical-box. We were reminded of Mr. Wallace's description, and felt with him how difficult it was to believe that our host's grandfather had worn "a strip of bark as his sole costume, and lived in a rude hut abundantly decorated with human heads."

Much of the neatness and nice appearance of the house was no doubt owing to our hostess, a pretty but rather shy little Dutch girl who had married the "Major" only a few weeks previously: he having settled the sum of 5000 guilders *on her parents*. Neither of them seemed to regret this somewhat extraordinary transaction, and they were evidently a most attached couple. The Major was a bit of a musician in his way, and favoured us after dinner with a tune on the accordion when the large musical-box had exhausted its *répertoire*. It is worthy of remark that this was almost the only occasion in Netherlands India on which we were called upon to speak Dutch, for our hostess was unacquainted with any language but her own and Malay, and our knowledge of the latter was hardly sufficient for conversational purposes.

The high elevation of Tomohon caused us to feel the night and

¹ "Major" is the title given by the Dutch to the village chiefs in these districts. They superintend the coffee industry in their own parishes, and receive a certain percentage of the produce.

early morning air almost too cold to be pleasant, and though the thermometer could not have been much, if at all, below 70° Fahr. we were glad of a thick blanket. We bade our kind host and hostess adieu after a cup of excellent coffee, and continued our journey. Nothing can be more absolutely neat and clean than these Minahasa villages. Indeed their perfection of tidiness would be almost irritating were it not for the beauty of the flowers and the tropical vegetation. The roads are ditched on either side, and beyond are the bamboo fences of the gardens, all aligned with the greatest care and regularity. Above them, topped down with whimsical preciseness to the same level, rise the hedges of coleus or holly-hock, according to the fancy of the cottager. Here and there the hedge is of climbing roses, but these are evidently considered too untidy to be adopted by the well-regulated majority. As I picked a bud, and looked over into one of the gardens, which seemed as carefully tended as that of a suburban villa, I felt it hard to realise the fact that the owner was what an Englishman, in the expressive language of his country, would term a nigger.

Just beyond the village of Tomohon the ground is swampy, and is given up to the cultivation of the Sagueir palm. To the wine obtained by the fermentation of its juice I have alluded on a previous page, but it is also largely used for making sugar. This tree when young has a leaf-sheathed trunk of tolerable height, but when full grown the stem is straight and smooth at the base. Another palm, apparently a species of *Borassus*, was also growing in some abundance. About a mile farther on our road we came upon the first regular coffee-plantations we had seen in the hills. The trees were from twelve to twenty feet high, planted very closely together beneath a thin shade of tall, bare-stemmed forest-trees. There was an abundance of berries, many of which were turning red. The ground beneath was carefully cleared, but the trees themselves were in most instances covered with moss and small ferns. In other plantations we found a much better cultivation, the trees well pruned and planted at wider intervals. They

were looking well, and there was no trace of disease of any kind.

After a slight ascent we rounded a sudden corner and the lake of Tondano lay below us, a beautiful sheet of water about eight miles long. The mist of the morning had cleared away, and the view was lovely. Northwards a long stretch of yellow padi field bounded the lake, which on the western side was shut in by steep hills clothed with thick jungle. A quick descent on a good road brought us to the little village of Tata-aran Tomohon—hardly longer than its name, and shortly before noon we drew up before a pleasant-looking house, the residence of the Kontroleur of Tondano, whose guests we were to be.

Our host was a very handsome man of about five and thirty, who had been specially appointed to the district by the Dutch Government on account of his knowledge of coffee-planting. We found him reading the "*Revue des Deux Mondes*," and soon discovered that his ideas were by no means exclusively centred in coffee. Keenly interested in European affairs, in politics, and in art, he proved a most pleasant companion, and, by his kindness and readiness to show us the district, made our visit a most agreeable one. In addition to his own language he spoke Malay, Javanese, and Tondano, besides English, French, and German.

The coffee-tree was first introduced into the Minahasa district in 1822, and thirty years later about five million trees had been planted. It has been the means of converting the country from a wilderness of jungle, peopled by head-hunting savages, into a well-cultivated garden tilled by natives who are almost without exception Christians. Yet this result has been brought about by a system which most Englishmen would condemn untried—that of enforced labour. Any person of the peasant class not having a trade is compelled by law to plant coffee. Each must, if required, plant twenty-five trees every year, but the number depends on his last year's production, and is regulated by the Kontroleur, who can order him to plant more, or less, or none at all, according to

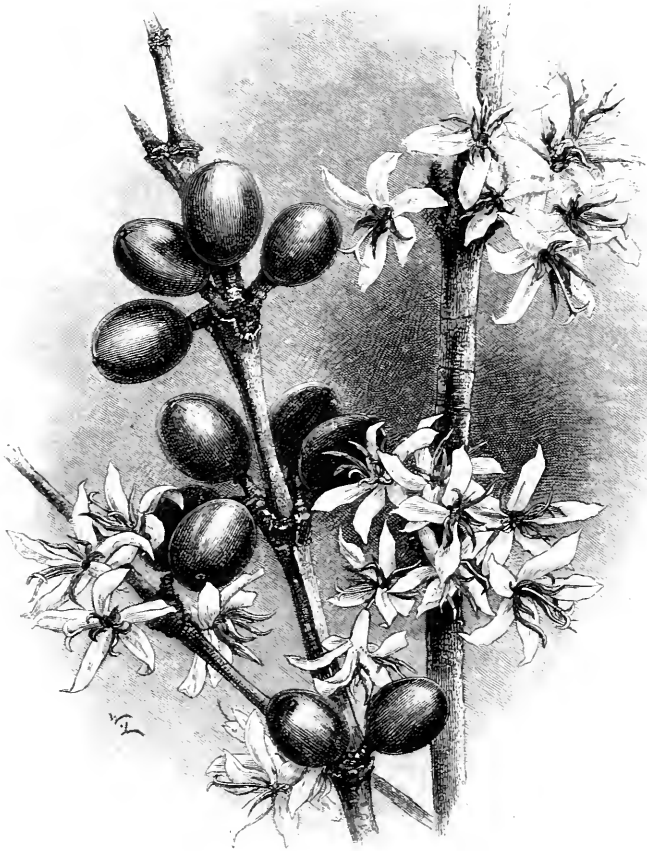
circumstances. There are Government plantations in every village, and both the land and the seedlings are supplied by the State. The tree does remarkably well, being unaffected as yet by disease of any consequence, and gives two or three heavy crops in the year. This is in great measure owing to the equable rainfall, the north of Celebes herein differing greatly from Java, which is exposed to a long-continued drought during the easterly monsoon and excessive rains in the wet season. The berry is of particularly good flavour, and finds its market chiefly in Russia, fetching a far higher price than that produced in Java.

All the coffee thus grown by the natives has to be sold to Government at a fixed price. It is divided into two qualities, for which fourteen and seven guilders¹ are respectively paid per *picul* of 133 lbs. This price is, however, not all that it actually costs the Dutch Government, since presents have to be given to the head-men, and, as the money is paid for the produce on the spot, the cost of transit is very considerable. Of these two qualities the best is sold by Government at seventy guilders the *picul*. It is apparently entirely for export, as it is not to be bought in Menado, and the Government guarantee the quality, so that a European grower cannot obtain more than sixty guilders for the same article. The second quality, which is drunk throughout Minahasa, is so little inferior that it needs a connoisseur to detect the difference, yet it is obtainable for fifteen guilders.

The annual produce of the Minahasa district amounts to about 15,000 *piculs*—roughly speaking, 2,000,000 lbs. At the present time the industry is by no means so lucrative as it used to be, not from any failure in the crop, but chiefly from the fact that much money has been lately expended in opening up the country and making roads. Another reason lies in the scarcity of labour, which seems principally owing to the great mortality among the children. Thus it is not common for a woman to rear more than one or

¹ The guilder is nearly equivalent to the rupee; twelve and a half at that time making the English sovereign.

two children, yet they often bear eight or ten. The "Major" of Tomohon, for example, was the last of a family of thirteen. Our friend Mr. Van de Ven, the Kontroleur, ascribed this large infant



FRUIT AND FLOWER OF THE COFFEE-TREE.

mortality to a form of malarial fever which is said to be not uncommon in the low land in the neighbourhood of the lake, but it did not seem to me that this accounted for it satisfactorily. In Mr. Wallace's time the death-rate appears to have been equally high.

Should a Dutchman wish to plant coffee, he is permitted to do so, the system being only a Government monopoly as far as the natives are concerned. He is allowed to take up land at a rental of one guilder per *bouw*, and pays a head tax of a dollar on his coolies. The wages of the latter are six guilders a month, and a catty ($1\frac{1}{3}$ lbs.) of rice per diem. Every adult male is, however, compelled to give thirty-six days in the year to the service of the Government, for road repair and work of a like nature, or else to provide a substitute.

Mr. Van de Ven told us a curious fact about the Minahasa coffee. There is an insect peculiar to the district—or at least not found in Java—which eats its way into the bean. The berries thus attacked are much esteemed for their flavour, and are picked separately and sold at a high price. We were unable to procure a specimen of this grub. Still more curious is a similar fact occurring in some parts of Java, for the authenticity of which the Kontrolleur vouched. A “species of wild cat” (probably *Viverra tangalunga*) is said to eat the berry for the sake of its fleshy pericarp. The bean remains undigested, and is gathered as a great delicacy.

That the languages of the Malay Archipelago are innumerable can nowhere be better realised than in the north of Celebes. Here, in a small tract of country sixty miles by twenty, more than a dozen are spoken. Some of these may perhaps be more or less dialectic, but the majority are said to be quite distinct, and the people of the different tribes cannot make themselves understood except through the medium of Malay, although, perhaps, their villages may be within three miles of one another. Lying as it does in such a central position in the archipelago, Celebes appears to have drawn its languages from several sources: from the Philippines, from the Malay Islands to the west and south, from the Papuan region, and, possibly, from some of the islands of North Polynesia.¹ But whatever may have been their origin, there is no doubt that at

¹ Wallace, “The Malay Archipelago,” Seventh Edition, pp. 262 and 605.

one time, not very long ago, there were three distinct and powerful tribes living in the neighbourhood of the Tondano lake, without taking into consideration others established on the east coast. They were the Tondano, Tonbulu, and Tonsaya,—the “men of the lake,” “men of the bamboo,” and “strangers.” The Tonsaya lived to the south of the lake, and, as their name implies, were later comers, while the Tonbulu, so called from the legend that their ancestors sprang from a bamboo—inhabited Tomohon, which word has the same meaning. Until the beginning of the present century, or even later, these tribes were always at war with each other, and even now, although they are on perfectly friendly terms, no inter-marriage ever takes place, and each man keeps to the villages of his tribe. This custom tends, of course, to preserve the type as well as the language, and Mr. Van de Ven told us that he could at a glance distinguish between individuals of the different tribes, but I was unable to do so myself. That it takes some little time to learn the alphabet of physiognomy among new peoples I knew from my own experience in other countries, but when once learnt the student probably wonders how he could have failed to discern what he now perceives to be strongly-marked characteristics. Similarities or dissimilarities, as noticed by a passing traveller, are as a rule of little value. To us the people of all these districts appeared pleasant-looking, and some of the women were decidedly pretty. The faces were broader, but less flat than the usual Malay type. Their contented look struck us greatly. Every one saluted us smilingly, but perfectly naturally and independently, and without a trace of cringing.

On Sunday we visited the church. It was a building of the most severely simple style; a large, square, whitewashed room filled with pews, and with a print of *Ecce Homo* where the altar would have been in an English church. There was a congregation of about 450 people, who were listening attentively to the preacher—himself a native. The centre of the church was occupied chiefly by women; the back and sides by the men, but this arrangement

was apparently optional. Mr. Van de Ven told us that when the Dutch missionary preached there were often as many as 700 people present. The increase in attendance had necessitated the construction of a new chapel, which was then nearly finished. The service in use was that of the Dutch Reformed Church.

Schools are also established in all these villages, and at Tomohon we had an opportunity of inspecting one. As far as appliances were concerned, it was superior to an English national school, but it was empty at the time of our visit, and we saw nothing of the teaching. The schoolmistress was a pleasant Dutch woman, who, in addition to two native languages, spoke English, French, and German. Before we left the Netherlands' India we began to feel almost aggrieved at meeting any one unable to converse with us in our own language.

The waterfall in the neighbourhood of Tondano is one of the lions of Celebes, although it must be confessed that there are no tourists to visit it. A small river about fifteen yards broad and four or five feet deep flows out of the north end of the lake, and after a rapid course of a mile through the richest vegetation, precipitates itself into a gorge—which must be six or seven hundred feet in depth—to reach the plain below, ultimately joining the sea at Menado. The river descends in a series of falls, of which the uppermost is alone accessible. It is not more than 100 feet in height, but the scene is one of great beauty, owing to the luxuriant growth of vegetation around, tree-ferns and tangled masses of giant creeper hiding the perpendicular cliffs from view. Below, the stream dashes through a narrow, rugged gorge to another fall, which is invisible from above. The view from the plain beneath must be magnificent, but the descent offered such difficulties, owing to the thickness of the jungle, that we had to abandon it.

We spent three or four days very pleasantly in Menado, chiefly occupied in collecting in the beautiful plantations round the village. Nutmegs and vanilla were the most important crops, and the long black pods of the latter filled the air with a delicious fragrance as

they lay drying on large trays round the houses. The nutmeg, which is a fine shrubby tree with polished dark green leaves, bears



WATERFALL NEAR TONDANO.

a yellowish, fleshy fruit not unlike a peach. When ripe it splits longitudinally, disclosing the scarlet network of mace within, which in its turn overlies an inner husk enclosing the nutmeg as it is

known to us in Europe. Both nutmegs and mace are sent to the Singapore market, and it is essential that the latter should arrive before it has lost its scarlet colour and faded to yellow, which is the condition in which it eventually reaches London. The nutmegs are shipped to Singapore in their inner shells, which are there removed before they are despatched to Europe.¹

It was in Menado that we made our first acquaintance with the Kanari nut—an event to be remembered, for when eaten fresh it is, I think, incomparably superior to any nut I ever tasted. The Kanari-tree grows to a very great height, and bears a fleshy fruit enclosing a shell of extreme hardness—so hard indeed that it needs a heavy hammer to break it. Within are from one to three kernels, covered with a thin skin, and on this being removed the nut falls into a number of irregular flakes, snowy white, and of delicious flavour. The flesh of the Kanari is eaten by large pigeons, but the great Black Cockatoo of New Guinea (*Microglossus aterrimus*), by means of his enormously powerful beak, is able to open the nut itself. The labour is considerable, but the bird may be considered to be amply rewarded.

Our collections grew apace in this part of Celebes, one of the most noteworthy additions being a young bull Sapi-utan (*Anoa depressicornis*) which we obtained alive from a native. This animal, one of the many peculiar Celebesian forms, though considered by anatomists to be most closely allied to the buffaloes, has no great resemblance to any of the wild oxen, and is rather antelopean in appearance. The horns are short and rather slender, depressed, ringed at the base, and pointing nearly straight backwards; the body small but powerful; the limbs clean. The little creature, which appeared to be about two years old, and was very tame and tractable, was destined for the Zoological Gardens, but he never reached England, succumbing in the following year to the effects of a gale in the Bay of Biscay.

Many of the birds of Celebes are of great beauty, although

¹ *Vide* illustration on p. 211.

several of the more vividly-coloured forms met with in Borneo, Java, and the Malay Peninsula are wanting. Perhaps one of the most beautiful is a tiny Pigeon (*Ptilopus melanocephalus*), with shining green body and French grey head. At the nuche is a small black velvety patch, the throat and vent are bright yellow, and the under tail-coverts crimson. New Guinea is the home of many species of this genus, which are yet more brilliantly coloured. The plantations abounded with a species of Golden Oriole, bright green Lorikeets with scarlet heads (*Loriculus stigmatus*), and a Brush-tongued Lory (*Trichoglossus ornatus*), gay in a dress of dark blue, scarlet, yellow, and green. This last bird is the most western representative of a Papuan genus of parrots possessed of extensile tongues, with the tip formed by a bunch of fine filaments which are admirably adapted for sucking up the juices of the soft fruits on which these creatures live. Kingfishers were very numerous on the river and in the forest, and we obtained no less than ten different kinds during our stay in the north of Celebes. Temminck's Roller (*Coracias temmincki*) also fell to our guns,—a dark sapphire-coloured bird, with the head and upper tail-coverts of pale greenish blue,—especially interesting as an instance of discontinuous distribution, for no other Rollers are found in the Malayan region.

We had not succeeded in obtaining any of the curious Megapodes or Mound-builders, whose method of nesting we were very anxious to see, and accordingly we determined on visiting the islands and coast to the north with that object. But before leaving Menado and the coffee districts, with their "iniquitous system" of management by the Dutch, I cannot forbear quoting Mr. Wallace's words¹ upon this subject, with which, so far as our limited visit permitted of a judgment, I confess I entirely agree:—

"No doubt the system seems open to serious objection. It is to a certain extent despotic, and interferes with free trade, free labour, and free communication. A native cannot leave his village without a pass, and cannot engage himself to any merchant or captain without a Government permit. The

¹ Wallace, *op. cit.* p. 256.

coffee has all to be sold to Government at less than half the price that the local merchant would give for it, and he consequently cries out loudly against 'monopoly' and 'oppression.' He forgets, however, that the coffee-plantations were established by the Government at great outlay of capital and skill; that it gives free education to the people, and that the monopoly is in lieu of taxation. He forgets that the product he wants to purchase and make a profit by is the creation of the Government, without whom the people would still be savages. He knows very well that free trade would, as its first result, lead to the importation of whole cargoes of arrack, which would be carried over the country and exchanged for coffee; that drunkenness and poverty would spread over the land; that the public coffee-plantations would not be kept up; that the quality and quantity of the coffee would soon deteriorate; that traders and merchants would get rich, but that the people would relapse into poverty and barbarism. That such is invariably the result of free trade with any savage tribes who possess a valuable product, native or cultivated, is well known to those who have visited such people; but we might even anticipate from general principles that evil results would happen. If there is one thing rather than another to which the grand law of continuity or development will apply, it is to human progress. There are certain stages through which society must pass in its onward march from barbarism to civilisation. Now one of these stages has always been some form or other of despotism, such as ferdalism or servitude or a despotic paternal Government, and we have every reason to believe that it is not possible for humanity to leap over this transition epoch, and pass at once from pure savagery to free civilisation. The Dutch system attempts to supply this missing link, and to bring the people on by gradual steps to that higher civilisation which we (the English) try to force upon them at once. Our system has always failed. We demoralise and we extirpate, but we never really civilise. Whether the Dutch system can permanently succeed is but doubtful, since it may not be possible to compress the work of ten centuries into one; but at all events it takes nature as a guide, and is therefore more deserving of success, and more likely to succeed, than ours."

Wherever we went in Minahasa we found a contented, happy people, amongst whom drunkenness and crime were almost non-existent. The land was highly cultivated, the villages neater and cleaner than I have seen them in any part of the civilised world. Schools were established in every district, and the natives were almost without exception Christians. Where can we, who call ourselves the greatest colonising nation in the world, point to a

like result? What is the condition of the natives in our colonies; in Australia, in New Zealand, in Western Africa? Year by year hundreds of Englishmen travel round the world, just as the former generation made the "grand tour." But they follow one another like sheep in the beaten track, and hardly any turn aside into the by-paths. It is, of course, almost an absurdity to suppose that an Englishman could have anything to learn from the management of another nation's colonies, but those who have not this idea too deeply rooted may visit Northern Celebes with advantage.

CHAPTER IX.

CELEBES (*continued*).

Tarsius spectrum—Talissee Island—Extensile bill of *Carpophaga*—Likoupang—Maim Bay—Forest scenes—Hornbills—The Livistonia palm—Useful property of the rattan—Characteristics of the sea-beach—The Babirusa—The Sapi-utan—A dance at Likoupang—Wallace Bay—The Celebean Mound-builder—Description of the breeding-grounds—Theory as to the enormous size of the egg—Limbé Strait and Island—Dangerous anchorage—Kema—Babirusa *keddah* on Limbé Island—Boat accident—Result of the hunt—Leave Kema for Gorontalo—Kettlewell Bay—Gorontalo—The Limboto Lake—News of the Krakatan eruption—Smallpox—Pogoyama—Existence of gold—Singular burial-pit—Zoological peculiarities of Celebes—We leave for the Moluccas.

OUR collection of live birds and animals, which, at a later period of our cruise, almost turned the *Marchesa* into a floating Zoological Gardens, made its first real commencement in Northern Celebes. Here, in addition to the Cuscus—of which we had two or three specimens—and the Anoa, we became the possessors of several Fruit-eating Pigeons (*Carpophaga*), to which I shall presently allude, and four of the beautiful *Caloenas*, a ground-loving pigeon we afterwards obtained in the Moluccas, which from its long and pointed neck-hackles has at a first glance almost the appearance of a gallinaceous bird. But the most interesting addition to our menagerie was a tiny Lemuroid animal (*Tarsius spectrum*) brought to us by a native, by whom it was said to have been caught upon the mainland. These little creatures, which are arboreal and of nocturnal habits, are about the size of a small rat, and are covered with remarkably thick woolly fur, which is very

soft. The tail is long, and covered with hair at the root and tip, while the middle portion of it is nearly bare. The eyes are enormous, and indeed seem, together with the equally large ears, to constitute the greater part of the face, for the jaw and nose are very small, and the latter is set on, like that of a pug dog, almost at a



THE TARSIER. (*Tarsius spectrum*.)

right angle. The hind limb at once attracts attention from the great length of the tarsal bones, and the hand is equally noticeable for its length, the curious claws with which it is provided, and the extraordinary disc-shaped pulps on the palmar surface of the fingers, which probably enable the animal to retain its hold in almost any position. This weird-looking little creature we were unable to keep long in captivity, for we could not get it to eat the cockroaches which were almost the only food with which we could

supply it. It remained still by day in its darkened cage, but at night, especially if disturbed, it would spring vertically upwards in an odd mechanical manner, not unlike the hopping of a flea. On the third day it found a grave in a pickle-bottle, and was duly consigned to a shelf in the *Marchesa's* Columbarium.

Our destination on leaving Menado was Talisse Island, wrongly called Salicé on the English charts. It lies at the extreme north end of Celebes, and is distant some five and twenty miles N.W. from Menado. Lately some Dutchmen in the latter village have established a small plantation on it, and we were anxious to see the results of the venture, as well as to secure some of the peculiar Mound-builders or Maleos (*Megacephalon malco*), which were reported to be found there in some abundance. We made for the southern point of the island, but our charts gave no indications whatever as to the depth of water, and on approaching the little island of Tindila, which lies immediately to the south of it, the passage between the two appeared so narrow that we hardly liked to try it. The southern and safer route would, however, have cost us another hour or two, so we decided in favour of the attempt. At the entrance we encountered a heavy tide race, running from six to seven knots, in which a sailing vessel would have been unmanageable, but putting the engines at full speed, we came through slowly without mishap, and shortly after anchored in about fifteen fathoms on the eastern side of the island. This anchorage is really the best in this part of Celebes, being more or less protected in both monsoons. It is without reefs, and a small stream of good water is accessible close to the beach.

We went ashore and introduced ourselves to the manager of the estate, a half-caste gentleman of the name of Rijkschroeff, whom we found reading a life of Dryden in Dutch! He was a most pleasant fellow, had been wounded in the Atjeh war, and had seen many vicissitudes. His life upon the island must have been lonely enough, but the neatness of his house and its surroundings showed that this had had but little effect upon his energy.

From him we soon learnt the few facts of interest connected with the plantation. Cacao, coffee, bananas, and coconuts had been tried, and the former was doing well. The island, which is nearly seven miles long, and rises into a central lofty ridge about twelve hundred feet in height, supports a native population of 400 people, 150 of whom are engaged on the plantation. They are almost all of the Talautse or Sanghir tribes, and speak a language distinct from any found in Celebes.

Talisse was the haunt of numbers of the large Fruit-eating Pigeons, *Carpophaga radiata* and *C. paulina*. The latter is a fine bird, weighing a pound and a quarter or even more, and its metallic green back shot with bronze, and a curious tawny patch upon the nuche, render it conspicuously handsome. The lower mandible of birds of this genus is capable of being expanded laterally to an enormous extent,—a special adaptation to enable them to feed on the various large fruits of the forest-trees. The size of those they manage to swallow is astonishing. I have found fruits nearly as large as a small Tangerine orange in their crops. The only other bird of interest that we met with on the island was a Glossy Starling (*Calornis neglecta*), a genus supposed by Mr. Wallace to be absent from Celebes.

Mr. Rijkschroeff told us that there were but few Maleos upon the island, so after a couple of days' stay we left for Likoupang, a village on the mainland about ten miles to the south. Our host accompanied us, together with a native who was supposed to have a good knowledge of the coast, and who, when a child of six, had been rescued from the pirates of Illanun. We found the anchorage a tolerably good one, though with many surrounding reefs and sandbanks, and lay about a mile off the mouth of a little river, on the banks of which the village is situated. Huts were too plentiful in the surrounding forest for us to expect to obtain either the Anoa or Babirusa, so we made arrangements to visit Maim Bay—an uninhabited part of the coast four or five miles farther east—having previously asked the chief for men to act as guides. We

embarked in the lifeboat and two native praus on the evening of September 8th, and after a rather unpleasant passage, owing to the frequent squalls from the land, arrived at our destination at midnight, and finding a ruined attap-shed, spent the remainder of the night beneath its shelter as comfortably as the unceasing attacks of sandflies and mosquitoes would permit.

The Hukum Kadua—in other words, the chief—had himself accompanied us, as being one of the greatest sportsmen of Likou-pang, and we left him to settle the plan of action. It was simple enough, being merely what a Dutchman would term “be-creeping” the animals, the ground by its conformation not lending itself to beating, especially with our limited number of native followers. Accordingly each of us took the bush separately, attended by two men, one of whom went in advance, clearing a path through the creepers by means of his razor-edged kris, while the other followed, bearing our lunch of biscuit and coconuts. I have seldom seen a finer forest than that in this neighbourhood. The buttressed trees were magnificent. One especially, which seemed to be quite familiar to my guide, who had often hunted the Babirusa in these jungles, struck me as being the largest I had ever met with. The buttresses sprang from the trunk fully thirty feet from the ground. On one side two had grown at right angles to one another, and one of them turning sharply again at a right angle, a sort of walled enclosure was formed, which might with very little difficulty have been turned into a hut of respectable size. The thickness of the foliage around only permitted us to see that the tall, straight trunk rose at least a hundred feet before sending off a branch. What the entire height of the tree might have been it was impossible to estimate, for less than a dozen yards away this giant of the forest was completely invisible.

The rattans, of which the natives told us there were nine or ten species here, formed the chief obstacle to our progress. This climbing palm is one of the chief characteristics of a Malayan forest, and its sharp, hooked thorns bring the traveller to a stand-

still as effectually as the *wacht-cen-bietje* of Southern Africa. Starting as a trunk as thick as a man's leg, it winds erratically through the forest, now wrapping a tree in its folds like some gigantic snake, now descending again to earth, and trailing a sinuous course along the ground. This sub-arboreal growth, however, is unnatural to it, and has probably only been produced by the fall of some tree to which it has been attached. Like everything else, it is striving upwards for the light and air, and, if it were possible to follow the windings of any one particular palm, its terminal spike would, in all probability be found shooting up like a miniature flagstaff a dozen feet or more above the summit of the trees. A thick layer of dead leaves covered the ground, some of them of enormous size. As these fell, striking from time to time against some bough, they made a clattering sound audible at no little distance in the airless forest, and on the ground their dry condition when newly fallen rendered noiseless walking a matter of considerable difficulty. Some were blood-red in colour, but for the most part there were few departures from the varying shades of green in which every Malayan forest is clothed. Large *Raphidophora* and other dendrophilous plants swarmed up the tree-trunks and shrouded them with their fleshy, fenestrated leaves, and here and there, in damp localities, deep beds of various species of *Selaginella* covered the ground. As we were in quest of nobler game we left the birds unmolested, but numerous hornbills tempted us to add them to our collection. These birds (*Cranorhinus cassidia*) are of large size, measuring as much as three feet six inches in length, and their plumage, although not brilliant, is atoned for, as far as regards colour, by the orange-yellow of the gigantic bill, and the bright cobalt-blue bare throat. They confine themselves usually to the tops of the highest trees, and are consequently difficult to shoot. When taking to flight their wings make a noise which is really much like the starting of a locomotive—as described in the imaginary travels of "Captain Lawson" in New Guinea—a series of loud puffs increasing in quickness as

the bird gets fairly on the wing. Their note when disturbed resembles the single bark of a dog—*wow ; wow ; wow*—and is audible at a great distance.

We saw plenty of spoor and droppings both of the Babirusa and Anoa, and before long came suddenly upon two of the latter. Their appearance, however, was only momentary, and I did not catch sight of them myself. Very shortly afterwards we disturbed a Babirusa much in the same way, and it was evident that, in spite of our precautions as to noiseless walking and the sharp eyes of the natives, our game had decidedly the advantage of us. The forest had occasional little muddy clearings about forty or fifty yards across, which appeared to be the favourite haunts of these animals and wild pigs, and at one of these I at length obtained a shot—the only one that offered throughout the day—and secured a nearly full-grown specimen of *Sus celebensis*, a species which, like most of the Celebes mammals, is peculiar to the island.

I ate my tiffin beneath a gigantic *pokok sila*, as the natives here call the *Livistonia rotundifolia*, the most magnificent palm of the Eastern tropics. Like the aloe, it flowers only to die. The trunk of this one, nearly two feet and a quarter in diameter, rose like an arrow for at least 140 feet, bearing little at the crown but the dark inflorescence and a few dead leaves. A leaf of the same species, circular and with deeply-toothed edges, formed my seat, and as I extended myself at full length upon it to search the summits of the trees above me with my glasses, there was at least a foot to spare at my head and feet. These leaves are much used for thatching by the natives, and, I daresay, for a dozen other purposes undreamt of by the European, to whom the infinite possibilities of palms and bamboos are unknown. Were he to visit these jungles he would learn another, and far more pleasant use of the rattan than that with which, as an erring schoolboy, he may have become acquainted. A piece of this, six or eight feet long, will supply a good tumblerful of pure water, and the traveller in the Malayan Archipelago, however much he may suffer from the

thorns of the tree in passing through the forest, has the consolation of knowing that he can quench his thirst from it at any moment.

We saw no further sign of game, and, making a detour, struck the sea and marched back to camp along the beach, which glared in the afternoon sun as only a tropic beach can glare. There is never any lack of life along such shores, however hot the sun may be. The little pools of water and the huge tree-trunks that have been washed ashore would prove a paradise for the marine zoologist. As we pursue our way hundreds of the little Land-crabs (*Gelasimus*) dart away in every direction, their single large claw uplifted. Enormous numbers of them may sometimes be seen congregated around some dead fish or other dainty morsel washed up by the tide, or gathered on the slimy ooze beneath the arching roots of the mangroves, the neighbouring banks being honey-combed with their holes. They are the most striking feature of the seashore, with the exception perhaps of a bull-headed, gudgeon-like little fish (*Periophthalmus*), which lives, apparently, as much out of the water as in it, and startles the pedestrian by hopping out beneath his feet and making for the nearest water by a series of sudden jumps. This curious method of progression is apparently effected by the action of the pectoral fins, and is so rapid that it is only with great difficulty that the fish can be caught.

On reaching camp I found that one of our party had been fortunate enough to secure a male Babirusa.¹ It was a good specimen, although not very old. From tip to tip it measured 58 inches, of which 12 had to be deducted for the length of the tail. The greatest girth of the chest was 39 inches, the height at the shoulder 29 inches, and the upper and lower tusks measured respectively $7\frac{3}{4}$ and $4\frac{3}{4}$ inches round the curve.

The Babirusa, according to the natives, generally has one or two young at a birth; more often one, but sometimes, though

¹ A Malay name; *babi* meaning pig, and *rusa* deer. The animal is, of course, a true pig, and has only acquired its second name from the peculiar hornlike growth of the tusks of the upper jaw.

rarely, three. They are born in the months of November, December, and January, and the sow makes a small underground hole for their reception, lining it with leaves—generally of the *Livistonia*. The young, however, are able to move about on the second day of their existence. We were told that they were of two colours—nearly black and light brown—and that the female can have young of both these colours just as a sow has black and white pigs, a statement which, if true, is very curious. These colours were said to approximate with age, but the natives spoke of “white” and “black Babirusas” even in the adult stage, and the one I have just mentioned was certainly lighter in colour than others we afterwards killed on Limbé Island. Our hunters also told us that, when assailed by dogs, the animal sometimes ascended the procumbent trunks of trees, and got out upon the large lower branches,—a story which, it is almost needless to say, we entirely disbelieved. A week or two later, however, we ourselves actually saw a Babirusa attempt, though only partially succeed in, this feat, as I shall have occasion presently to relate.

Chatting over these subjects naturally led us to talk of the Sapi-utan,—the only other game of any size found in the forests of Celebes. It has one calf only, which may be born at any time of the year. Before the teeth are grown the young are reddish yellow in colour, but in the adult the hair is brownish black. The horns of very old males are sometimes as much as two feet in length, and it is said to be possible to distinguish the age by the number of rings at the base. The female also has horns, but they are small, and seldom more than six inches long.

We spent two or three days at Maim Bay without shooting anything except wild boar, and adding a few species to our collection of birds, and, as it did not appear a particularly good locality, we arranged to return to Likoupan and proceed farther along the coast to a beach where, some years before, Mr. Wallace had succeeded in obtaining many of the Brush-turkeys or Maleos, in search of which we had hitherto been entirely unsuccessful. On arriving at

the village we found that a dance had been got up to welcome our return, apparently at the instigation of our friend Mr. Rijkschroeff. There were no Dutch in Likoupang, and the guests consisted almost entirely of half-castes, known in many parts of Malaysia as the *orang sirani* or Nazarenes, a term which seems to include all those descended from white parents whether Dutch or Portuguese. They correspond more or less to the "burghers" of Ceylon, but differ socially in forming, here at least, the upper stratum of society. Mr. Wallace has noticed¹ the occurrence of Portuguese words among the natives of Amboina and the Ké Islands, and I was astonished to find several traces of this language—with which a previous residence in Madeira had made me tolerably familiar—in Likoupang, although I was unaware at the time, and have not since been able to discover, that the Portuguese ever had a settlement in this part of Celebes. The dance was held in a roomy apartment in the largest house in the village, and five and twenty or thirty people were present. The gentlemen, dressed in black jackets and white trousers, occupied the verandah, and on the music striking up went in search of their partners, who, wearing Malay dress, sat inside round the ballroom. Some of the latter were decidedly pretty, but it was altogether a new sensation to dance with a *sarong*-clad young lady whose stockingless feet were protected only by Turkish slippers. Their upper garments were of laced-edged linen,—garment, however, I ought to say, for in most cases one only was worn. In the rare instances where there were two the *kibaya* was transparent, and revealed another garment bordered with "insertion" trimming. Polkas, a species of quadrille, lancers, and mazurkas formed the programme, and the dance was kept up until two or three o'clock in the morning.

Mr. Rijkschroeff was obliged to return to Talisse Island next day, but the Hukum Kadua, the pilot, and several natives went on with us to the nameless beach where, in 1859, Mr. Wallace camped and observed the curious habits of the Maleos. It was not difficult

¹ *Op. cit.* pp. 300 and 425.

to find the place,—a shallow bay some ten miles across. At the head is a steep beach of very coarse black sand, a couple of miles in length, bounded at each end by high ground and by the dry bed of a stream. We crept slowly in, but altering our depth very rapidly from 45 to 12 fathoms, we thought it best to anchor, although nearly half a mile from shore, as we had no desire to repeat our Menado experiences, and the coast was, of course, entirely unsurveyed. We afterwards discovered that our caution was unnecessary, and that we could have carried six fathoms almost to within stone's throw of the beach. It was at once evident that we had hit upon the right place, for numbers of the birds could be seen vigorously digging on the shore, and with our glasses we could distinguish their every movement.

It was not long before we were in pursuit, and not long either before we discovered that the birds were by no means so easy to bring to bag as we had anticipated. Sinking above our ankles at every step in the loose gravel, and perspiring beneath the rays of a blazing sun, we ploughed wearily along, while our quarry trotted lightly into the jungle a couple of hundred yards ahead of us. The bush was too dense to admit of our taking them in flank, and it was only after some hours' hard work and manœuvring that we succeeded in shooting two birds before we returned to the ship. We were disgusted with our failure, and feared that we had disturbed the birds so effectually that they would not return to their haunts for some time to come.

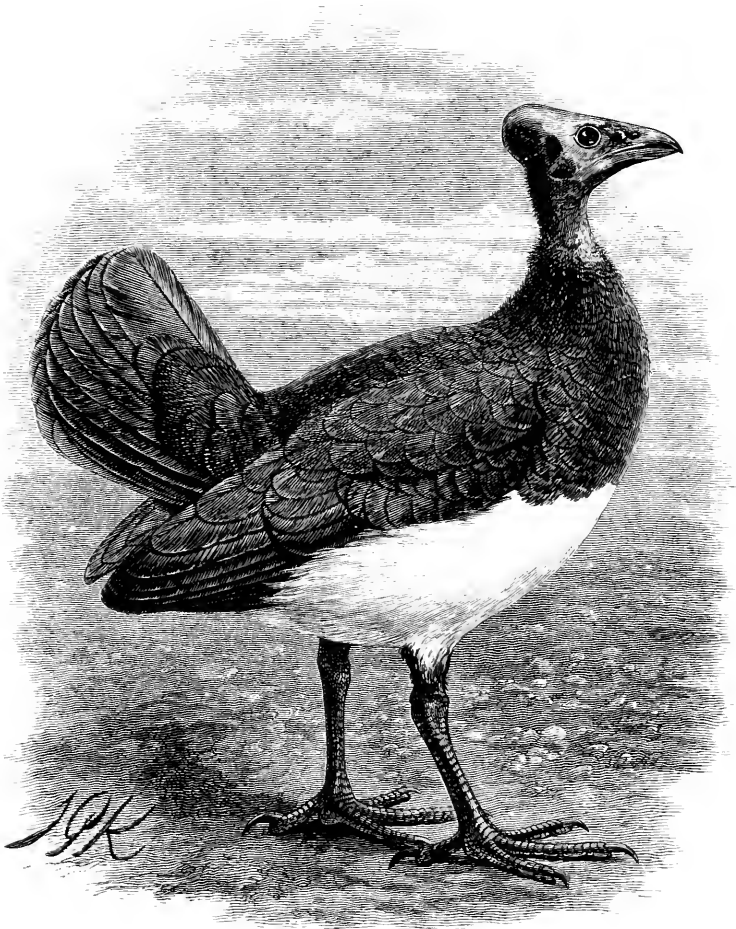
Next morning, however, we could see them digging away in undiminished numbers, and landing shortly after daybreak, we accidentally hit upon the only successful plan of shooting them, which is to approach as near as possible without being seen, then suddenly to run in upon them, shouting, waving one's arms, and firing. The birds, instead of running away, take to flight, and perch almost immediately upon the trees at the edge of the beach. The perspiring sportsman can now rest himself to recover his breath and shake the gravel out of his putties, and, reloading his

gun, may take matters as leisurely as he pleases; for, once in the trees, the Maleo seems to consider itself secure from all danger, and can be shot without even putting to flight a fellow victim on the same branch. There is, of course, no sport in the matter, but to obtain a good series of skins, and to supply our party with as much of the delicious meat as we could get, overpowered such considerations.

The Maleo (*Megacephalon malco*) is about the size of a small turkey, being twenty-four inches in length, and having an average weight of 3 lbs. 8 oz. Of a large series we obtained the lightest was 3 lbs. 1 oz., the heaviest 3 lbs. 14 oz., but the weight of the hen birds varies according as an egg has or has not been just laid, for the latter is enormous, and quite disproportionate to the size of the bird. Male and female are alike in plumage, or, at least, so closely resemble one another as to be difficult to distinguish. They are of an entire brownish black, with the exception of the breast and under parts, which are of a beautiful rosy pink or salmon colour. The head, throat, and neck are bare of feathers, and the occiput is furnished with a large casque, which in the female bird is slightly smaller than in the male. The bill is bright pea-green, blood-red at the base. From our anchorage, which was immediately opposite the beach where the birds were incessantly engaged in digging, we had abundant opportunities of watching them. Their gait is slow and stately, and the tail is kept much elevated and slightly spread, but even on the loose gravel they can run with tolerable quickness,—sufficiently fast, at all events, in spite of their weight, to outstrip a man with ease. When once on the hard ground of the jungle, they dart off with lightning-like rapidity.

Sole representative of its genus, the Maleo is peculiar to the island of Celebes. It belongs to the family of Megapodes or Mound-builders,—gallinaceous birds which are eminently characteristic of the Australian region,—but it differs from them in its habits by using the gravel of the sea-beach alone to hatch its eggs, instead of constructing a mound of sticks, sand, and leaves,

as do most of the Australian and Papuan "brush-turkeys." At a certain season of the year¹ the birds come down in large



THE MALEO. (*Megacephalon maleo*.)

numbers from the forests of the interior to the sea, almost always

¹ Mr. Wallace ("Malay Archipelago," p. 265) says "the months of August and September," but, according to the natives, the period was much more extended.

to fixed localities as clearly marked as a fur-seal's "hauling-grounds." Here they remain during the breeding period, and may be seen from dawn till sunset busily engaged in laying and covering their eggs. The breeding-grounds at Wallace Bay, as we called the hitherto nameless beach off which we were anchored, extend for a distance of two miles and a half along the shore, and, as that distinguished naturalist has remarked, define accurately the limits of an ancient lava stream, for the forest behind is deficient in large trees, and on either side the shore is of white coral sand, not, like the nesting-ground, of fine black gravel. Immediately above high-water mark is a strip of beach about forty yards in width, and on this little groups of birds, from two or three up to ten or a dozen in number, are always to be found at work. No regular mounds are made, but the beach presents a series of irregular elevations and depressions which in appearance I can compare to nothing better than the surface of a rough, confused sea. As in the case of some other of the Megapodes, the nests appear to be used in common by many of the females, or, more probably still, the bird lays its egg on any part of the beach that suits its fancy. The natives would never look for eggs at the bottom of the deepest depressions, or on the summit of a mound, but shallow trenches and the slopes of the irregular hummocks seemed to be always preferred in searching for them. Although we personally found it extremely hard to discover them, our men were adepts in the art. The method is gently to probe the gravel with a fine stick. Where the egg has just been covered this is, of course, much looser, and the stick passes in readily. The gravel is then scraped away, the stick again used to make certain of the direction, and finally the egg is disinterred, often at the depth of a yard or more below the surface. The heat of the beach, on which the sun is always shining, is considerable.

To the size of the egg I have already alluded. It is four inches and a quarter long by two and a half in breadth, and weighs from $8\frac{1}{2}$ to $9\frac{1}{2}$ ozs. On dissecting a bird the next egg is found to be

about as large as a cherry, and it is probable that some days elapse before it is ready for extrusion. As far as can be judged from an inspection of the ovary, about sixteen or eighteen are laid during the season. In colour they are of a pale reddish buff, resembling the eggs of the black Cochin-China fowl, and their flavour, though rich, is excellent. During the operation of covering them with the loose black sand on which they are deposited, the cock bird digs as well as the hen, and it is a most curious sight to watch them at work, the sand being thrown up in perfect fountains at each stroke of the powerful foot. The Maleo does not scratch in the same way as the common fowl,—two strokes alternately with each foot,—but, poising himself on one leg, gives several rapid digs with the other; and the large foot, broad-soled and slightly webbed at the base of the toes, is nearly as effective as a man's hand would be.

That the abnormal size of the egg is closely connected with the nesting habits of the Maleo there can be no doubt, but it seems to me that Mr. Wallace's theory—that the instincts of the bird have been made to suit its unusual ovulation—is an improbable one, and that it is more reasonable to suppose that the latter is dependent upon habits which have doubtless been adopted for the preservation of the species. In a country such as Celebes the eggs of large ground-nesting birds would be exposed to much risk. But buried beneath a layer of sand, or within a mound such as is constructed by *Megapodius*, they are safe from the attacks of depredators. As I have already mentioned, the depth at which these eggs are found is often three feet or more. If the weight of a superincumbent mass of gravel of this thickness be taken into consideration, it will be seen that it must be such that no chick of ordinary size could force its way through it to the surface, and hence it appears to me far more probable that the strength and enormous size of the egg are adapted to the peculiar nesting habits of the species, rather than that the unusual nidification is due to an aberrant reproductive organisation.

We spent three days at Wallace Bay, and obtained no less than forty-two Maleos, of which we preserved a large series. We also shot a rare Kingfisher (*Ceycopsis fallax*)—an exquisite little species, the head spotted with bright blue and the back a brilliant ultramarine. The peculiar Baboon-like Monkey (*Cynopithecus nigrescens*) was very common in the forest, swinging from bough to bough at the tops of the trees in small flocks. It is also found in the island of Batchian, but it is supposed by Mr. Wallace to have been introduced there by man, and to be really peculiar to Celebes, an island which is remarkably rich in isolated forms. Hitherto we had not succeeded in meeting with the Anoa, and had only shot a single specimen of the Babirusa, and hearing that Limbé, an island lying close to the extreme eastern point of Celebes, abounded in these latter animals, we determined on visiting it, first calling at Kema, a village on the mainland just beyond it, in order to pick up some natives to help us in our expedition.

We weighed anchor on the 14th of September, but encountered such a strong head wind and sea on rounding the northern point of Limbé Island that we decided on anchoring in the straits formed between that island and the mainland—a narrow passage about nine miles in length. The northern entrance is rather striking from the bare and desolate appearance of Verbrandte Hoek, as the Dutch have called a small crater that has opened on the eastern slope of an unnamed volcano at the north end of the strait. It is a cone of ashes of regular shape, whence a small lava stream has issued, carving its way through the forest to the sea. That it is of quite recent date is evident, for the ashes and lava are devoid of all vegetation save a few patches of coarse grass. Visiting it a few days later we found that burnt trees were in many instances still standing in the lava stream, so charred at the base of the trunk that we could easily push them down. The cone, which is entirely composed of loose ashes, is distant about a mile and a half from the sea, and its summit has an altitude of rather over 1600 feet. Beyond this desolate scene rise the Gunong

Sudara, twin volcanic peaks of bold outline, and still farther to the south-west the summit of Klabat—6700 feet in height—overtops them. The narrowness of the strait, the high and rugged peaks of Limbé, and the luxuriance of vegetation combine to make the view a very fine one.

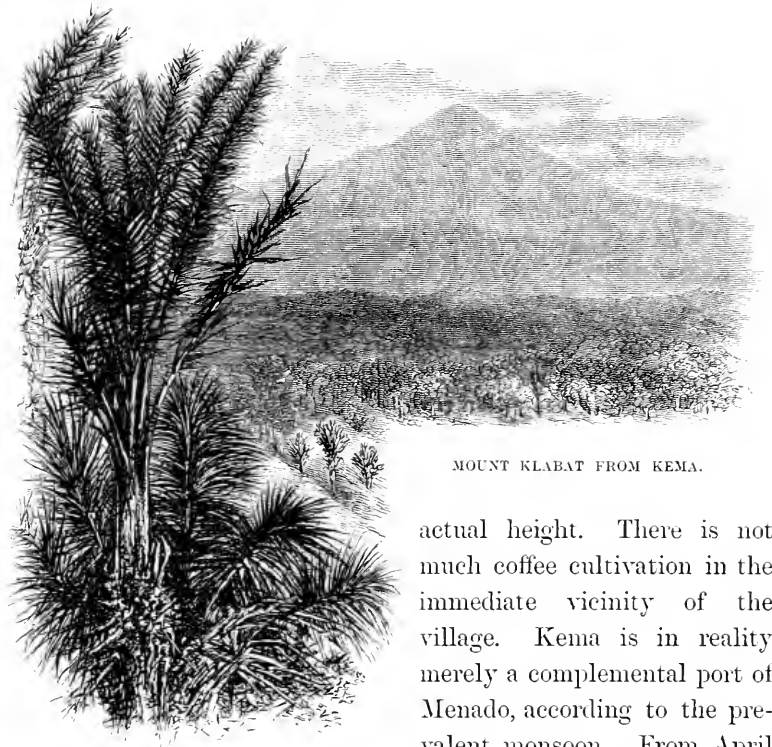
The Dutch charts of this place, although sufficiently good to make the passage with,¹ are of little use otherwise, and we had some difficulty in anchoring. This operation among the coral reefs and islands of the Eastern Archipelago is often a very ticklish one, but before long we all got accustomed to letting go our anchors in thirty fathoms or more, within stone's throw of the beach. Two hawsers were always aft in readiness to make the vessel fast on shore, and Jack of course was equally prepared with some time-honoured joke about "tying her up to a tree." In this instance we were even nearer the shore than usual, and might with ease have shot birds in the branches of the large trees which overhung the water. In this part of the world there would be little difficulty in performing Timothy Tailtackle's exploit in "Tom Cringle," and exploring the forest from the rigging!

The wind continued to blow for two days so strongly from the S.E. that, knowing the exposed nature of Kema roads, we thought it better to remain where we were. Even in the straits it blew sufficiently hard to make boat-sailing both dangerous and unpleasant. Two of our party crossed to Limbé in search of Babirusa, but were unsuccessful, and the only object of interest noticed was a small cliff said to be of chalk, curiously localised, and forming a conspicuous landmark.

We anchored in Kema roads on the 16th of September. The village, spread thinly along the shores of a shallow bay, is laid out with the usual neatness of the Dutch. It is hemmed in by marshes at the back, but is said, nevertheless, to be extremely healthy.

¹ The strong tides and violent and uncertain winds prevalent in Limbé Strait render the passage unsafe for sailing ships and vessels of large draught, but there is good anchorage and shelter in its southern part.

For some little distance inland the country is flat, more or less cleared, and dotted here and there with palms. Six miles north-north-east is Klabat, a noble-looking mountain of regular shape, whose steadily-rising slopes give it an appearance of more than its



MOUNT KLABAT FROM KEMA.

actual height. There is not much coffee cultivation in the immediate vicinity of the village. Kema is in reality merely a complemental port of Menado, according to the prevalent monsoon. From April until November ships anchor off the latter place, which is quite protected from easterly and southerly gales, while from November to April the anchorage at Kema alone is used. Notwithstanding the season, however, we found two craft at anchor in the roads. One of these, a schooner, was taking cattle to Ternate; the other, a small barque, had just brought 300 tons of coal from Sourabaya. There is but little trade in Northern Celebes,

for, despite the march of civilisation, the wants of the people appear to be but few.

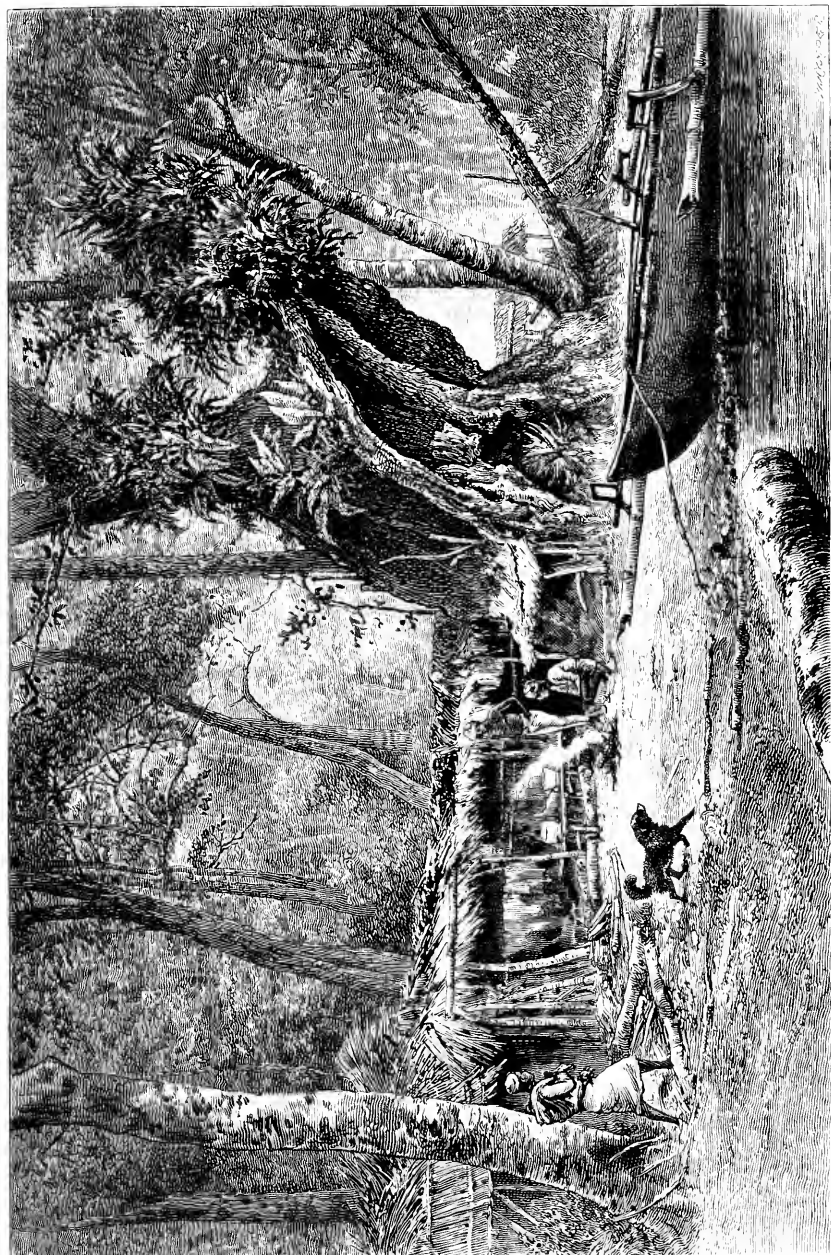
The Kontroleur of Kema, to whom we had already sent letters overland, was fully prepared with native hunters, and having collected nearly fifty, we took about half that number on board the yacht, and despatched the rest in praus to Limbé Island, whither we ourselves followed next day. Anchoring was attended by the usual difficulties, which were in no way lightened by foul and rocky ground and an absence of any chart to aid us, but we eventually found a tolerably secure berth just within the northern entrance of the straits, and landed our hunters. In a tropical country it does not take long to construct efficient shelter of some kind or other. Before many hours had elapsed some admirably-contrived huts had been built beneath a gnarled old forest-tree, whose trunk was clothed with masses of fern and vegetable parasites, and, having fixed roofs constructed of the large leaves of the *Livistonia*, the natives departed for a certain spot known to them about two miles farther to the north, which was destined to be the scene of operations.

The hunt was to be carried out upon *keddah* principles, dependent upon the fact that the island here contracts to a narrow isthmus barely a hundred and fifty yards across, instead of being, as represented in the Dutch and English charts, about two miles in breadth. It was arranged to bar this neck of land across as far as it was possible to do so, and to beat towards it from the north end of the island, a distance of nearly three miles. On the third day the preparations were complete, and we started soon after daybreak in the boats to sail up the straits to the spot where the *keddah* had been built. It was blowing hard from the southward, with an uncomfortable sea running, and when about a mile from our destination an accident occurred which in any other of our boats would have been a serious affair. We had not all shifted our places before gybing, and a little stronger puff happening to catch us just at the moment, we were swamped in an instant.

Fortunately the water-tight compartments with which the boat was fitted sufficed to keep her afloat, and getting her head to wind and throwing overboard our ballast, we managed at length to reduce the water by baling hard with our helmets, and eventually got ashore without further misadventure. Occurrences such as these are apt to interfere with accuracy in shooting, and we were not sorry to learn that we should in all probability have few opportunities of using a rifle. Two of us, from exposure to the wind in wet clothes, were afterwards attacked by malarial fever, which in one instance was of an unusually severe type.

Landing on a rocky beach we scrambled up a steep cliff about eighty feet high, and a few yards inland found ourselves on a small ridge which formed the backbone of the isthmus. From here the ground fell away in a gradual slope to the eastern shore of the island, which was not much more than a hundred yards away, and the open character of the forest allowed of any passing game being seen almost at that distance. The natives told us, however, and, as it proved, quite correctly, that almost all the Babirusa would come along the ridge, and acting on this knowledge, the "currel" had been constructed on its flat summit, its V-shaped mouth embracing the ground from the steep cliff to the commencement of the slope on the eastern side. Just at this point a gigantic mahogany-tree had been felled, and on its prostrate trunk a sort of grand stand, built of rough logs and elevated six or eight feet from the ground, had been erected for our benefit. A stout, large-meshed net blocked the small gap intervening between the foot of our tree and the "currel," and adown the slope a line of netting of a somewhat finer kind stretched to within thirty yards of the eastern shore. This part was left entirely unguarded.

We had plenty of time to wait before the sport began, and meanwhile the natives arranged themselves at their posts. One stood at the door of the "currel" ready to close it directly any animal rushed in, others took up their places on either side of the wide entrance, while the remainder crouched in front of the long

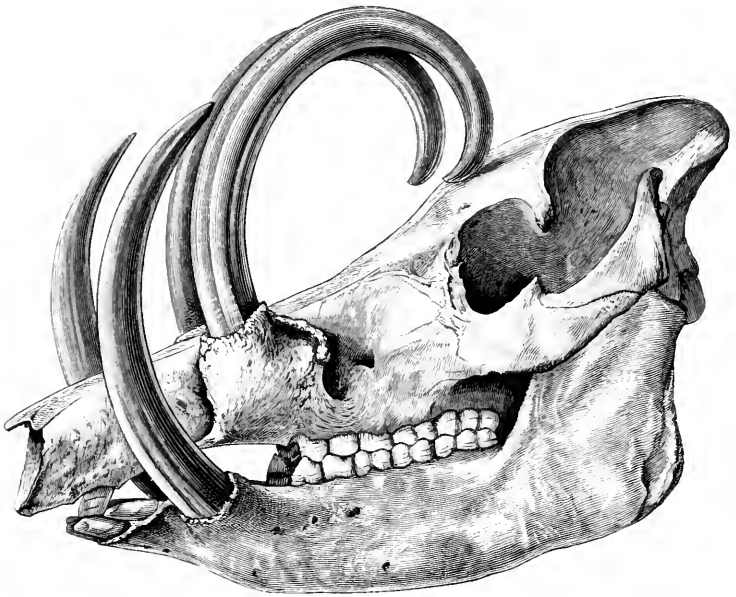


OUR HUNTERS' CAMP, LIMBÉ ISLAND, CELEBES.

net at intervals of a few yards, each grasping his spear, and hidden from view by a huge *Livistonia* frond planted in the ground before him. We had not long been settled before a peculiar barking grunt in the distance announced the arrival of the first victim. Every one was instantly motionless, and directly afterwards a dark object dashed up at great speed and buried itself in the net a short distance down the slope. The staking had been purposely left loose, so that the animals should not be barred by, but become entangled in the net, the top of which was instantly pulled over by the nearest native. There was a short struggle, and in less than five minutes the captive—a full-grown female Babirusa—was quietly reposing on her back with her legs tied together with rattan, and we were once more in ambush for the next comer.

We were hardly quiet before the same peculiar sound was heard rapidly approaching, and the next moment a magnificent old boar Babirusa rushed past within five yards of us, and plunged into the net between our tree and the entrance to the "cural." His long tusks became entangled in the meshes, and the natives ran up to spear him. Just at this moment, however, he broke loose, and turning on his antagonists, scattered them in all directions. It was a most determined charge, and, as we were unable to fire for fear of hitting some of our men, it might have proved a serious affair for the native he singled out. Luckily a convenient tree was close at hand, and the man lost no time in taking advantage of it. The Babirusa pulled up at the bottom, and, to our intense astonishment, proceeded to verify the statement made to us by the *Hukum Kadua* at *Likoupang*, by trying to scramble up the sloping trunk after his antagonist. How far he could have ascended we unfortunately never had the opportunity of knowing, for he had hardly got his feet off the ground before his progress was stopped by a ludicrous incident. Anxious to escape, the man had got too far out upon a branch. It gave way, and the unlucky hunter was suddenly deposited on his back within a yard or two of the formidable, needle-pointed tusks of his adversary. Fortu-

nately for him, the attention of the latter was diverted by another native, whom he immediately charged. The man stood his ground in the most plucky manner, crouching, and receiving the charge at the point of his razor-edged spear. It entered just in front of the shoulder, and although nearly knocked over by the shock, he



SKULL OF BABIRUSA. (*Sus babirusa*.)

contrived to keep the animal off for the few seconds necessary for his companions to run to his assistance. Even with four spears buried in his body the old boar died game, striving to the very last to get at his antagonists.

This incident was the *clou* of the day's proceedings, for we killed nothing of any importance afterwards. A small pig was safely "curralled," and a little later another charged the net simultaneously with a female Babirusa. The latter was secured alive, but the pig escaped, as did another Babirusa, by getting

through the net. The drive was ended by the successful "curralling" of a second pig, and in half an hour's time the beaters arrived. They had speared a wild boar and a young pig *en route*, but the breadth of the island had allowed a considerable quantity of game to break back. Counting our bag we found that we had one boar and two sow Babirusa, and a wild boar and three pigs, which, added to the game our natives had speared on the preceding day, made a total of ten head, six of which were wild pigs and four Babirusa.¹

We returned to Kema on the following day, and having paid off our hunters, again weighed anchor, with the intention of proceeding up the Gulf of Tomini or Gorontalo to the village of the latter name, which is situated on its northern shore. When off Cape Flesko, however, we encountered a strong current setting out of the gulf, which, combined with a stiff south-westerly breeze, decided us to run in towards the coast. Closing the land in the immediate neighbourhood of the cape, we made out the entrance of two bays, unmarked in the charts, which seemed likely to afford such good shelter that we resolved to explore farther. We steamed slowly ahead, the lifeboat preceding us to take soundings, and passing between the mainland and some islands, steered north for

¹ The large male Babirusa we killed was a dirty fleshy grey in colour; the whole body devoid of hair, excepting at the very tip of the tail, where there were twenty or thirty stiff bristles about two inches in length. The surface of the body was covered—thickly on the back, but scantily elsewhere—with very fine yellowish down, about an eighth of an inch in length, which was peculiarly soft and velvety to the touch. The measurements (in inches) of this animal and a full-grown female were as follows:—

	Male.	Female.
Tip of snout to eye	9	7½
Eye to meatus of ear	3½	3½
Tip of snout to root of tail	47	40
Length of tail	13½	12
Girth at shoulder	39	33
Height at shoulder	27½	25½
Lower tusk	7	
Upper tusk	14½	
Weight	128 lbs.	85 lbs.

the entrance of the easternmost inlet. We were not disappointed in our expectations, for on entering we found ourselves in a beautiful little bay affording perfect shelter from every wind. East and west two secondary inlets stretched back, apparently free from shoals, and choosing the latter of these we anchored in twenty-five fathoms about four hundred yards from shore, the water of the bay being as smooth as glass. It was by far the best anchorage we had met with on the coast of Celebes.

Around the bay steep hills rose picturesquely, from a thousand to fifteen hundred feet in height, clothed in thick vegetation to their summits. A belt of yellow sand bordered the forest, and opposite our anchorage a little patch of Nipa palms revealed the presence of a stream of fresh water. Tracing this up we found a narrow ravine down which the little rivulet leapt clear and sparkling from rock to rock, half buried here and there in a wealth of greenery. No trace of human habitation, past or present, was to be seen. Seldom, even in these nature-favoured islands, have I seen a more pleasant spot, and if any of us had a desire for a Robinson Crusoe life, it might doubtless have been passed as comfortably here as on Juan Fernandez. There is something wonderfully fascinating about these places. London with her crowds and misery; the squalor and teeming population of the vast cities of China, seem almost to belong to another planet. Yet one thinks more about them under such circumstances perhaps than one would elsewhere. Surely, so long as the world has places such as these, where the foot of man has rarely trod, rich in soil and natural products, waiting only for the cultivator to give birth to a harvest, the want and misery that meet us at every step in the crowded cities of Europe should not occur. Surely, if we wish to relieve that want and misery, we can do so only by adjusting our population. England has land enough and to spare in every quarter of the globe waiting for willing hands to work it, yet it seems as if we were ready to attempt any solution of the difficulty rather than the only and most obvious one.

We left our bay—of which we made a sketch survey¹—by the same track, and proceeded for Gorontalo. The coast in the neighbourhood is bare and rather lofty, and the Gorontalo River has cut its way through it so abruptly that from seawards the entrance looks like a deep ditch. Nearing it, this appearance becomes still more marked, and the place reminds one strongly of Jamestown in St. Helena, though the little river here usurps the place of the valley thickly dotted with white houses. The anchorage, which is just within the river's mouth and entirely unprotected to the south, is, as usual, a bad one, and the soundings drop suddenly from twenty or thirty fathoms to as many inches. A small Dutch brigantine that we found loading with copra had fourteen fathoms of water at her bow, and thirteen feet over the taffrail, and we had to anchor with the usual hawsers made fast astern.

The Dutch have had a settlement in Gorontalo for nearly as long a period as they have held Menado, but it has been left pretty much to itself, and, excepting copra, little besides natural products—gum copal, tripang, wax, and tortoiseshell—are shipped. The town lies a mile and a half above the anchorage, and though possessing the ever fresh beauty common to all Dutch Malayan settlements,—its houses buried amid luxuriant fruit-trees, its pathways neatly bordered with bamboo hedges,—it has little else to show, with the exception of some ruinous and moss-grown walls, which are said to have been built in bygone days by the Portuguese. There are a bare half dozen of Europeans in this far away sleepy hollow, and among them, as a matter of course, is the inevitable German. He is to be found wherever “dark continents” have been penetrated by the white man, and is as invariable a sign of advancing civilisation as an empty sardine tin, a missionary, or a broken Bass bottle. Most of us know that he bids fair to take the

¹ Admiralty chart, No. 930. The Dutch charts—as also the English, which are copied from them—are quite unreliable for the coast line in this neighbourhood. Kalapa Island, marked in the chart as off Cape Flesko, does not exist, and the islands and coast beyond appear to have been laid down at haphazard. By our sights we also made Gorontalo eight miles east of its assigned position.

trade out of our hands in the Chinese ports and in many of our colonies, but he does not confine himself to the British flag. After leaving Batavia not an Englishman is to be found in the whole of the Netherlands India, but there are Germans at almost every settlement. Although personally often the best of friends with the Dutch, the latter have, nationally, the strongest feeling against them, and the subject is one upon which every Hollander is ready to dilate *ad libitum*.

The Gorontalo River drains the Limboto Lake, and has a course of barely a dozen miles before reaching the sea. We had a great wish to see the lake, and accordingly started early one morning for that purpose. Leaving the harbour, the road leads northward through the curious ditch-like valley to the town, and then emerges on to a level plain of considerable extent, which is surrounded on all sides by mountains. Looking back, the deep gully appears to be almost equally well marked from this side, and it is evident that in past times the whole plain was a vast lake, of which it formed the outlet. We crossed a small affluent of the Gorontalo, and in another mile or two reached the east end of the lake. It is a fine sheet of water about seven miles long, but apparently of no great depth. The water is muddy and of a peculiar pinkish colour, and the shores are bordered by reeds in which there was an abundance of wild-fowl. Our time, unfortunately, was too limited to permit us to pay much attention to these, or to visit some hot springs which are said to exist at the north end of the lake, but we obtained a few characteristic birds at our embarking and landing places. The most conspicuous was a Stilt (*Himantopus leucocephalus*), which occurred in some abundance, stalking about in the sandy ooze far more gracefully than, from its gigantic length of leg, would be thought possible. A beautiful Jacana (*Hydractator gallinaceus*) with a reddish-yellow comb—also a native of Australia—fell to our guns, and we found the handsome purple Coot (*Porphyrio indicus*) common in the reeds. Had we been able to stay in the neighbourhood we might, no doubt, have added

largely to our collections, for the lake appeared to swarm with water-birds and waders.

From the little hamlet of Liuboto on the northern shore a track leads over the mountains to Kwandang, a village on the other side of the peninsula, and by this means, and the help of native praus, communication is kept up with Menado during the prevalence of the south-east monsoon. Of its use we had evidence while we were at Gorontalo, for from a letter sent overland in this manner we got our first intelligence of the appalling eruption of Krakatau. The inhabitants of Macassar had heard it plainly, and, as we had sailed on the same morning with the intention of passing through the intricate Spermonde Archipelago, it was surmised that the *Marchesa* had gone ashore and was firing guns for assistance, and a prau was accordingly sent to discover our whereabouts. We learnt that the eruption had also been heard at sea off the island of Bouton. At a later period of the voyage we found that the sound of the explosions had actually reached New Guinea.

The coast in the immediate neighbourhood of the Gorontalo River is utterly untropical in appearance, and as different from every other part of Celebes that we had seen as could well be imagined. Bold, rocky promontories, and headlands on which there is but little vegetation, replace the usual sandy beaches where the dense jungle hangs over the water, and the wavelets break in short, crisp splashes. Here the formation is granitic, and enormous blocks of that rock, often twenty or thirty feet in height, line the shore, which at this season is washed by a sea sufficiently rough to make landing in a small boat difficult, if not impossible. It is only some distance inland, or in the deeper gullies, that any patches of woodland occur. Pandani of a species we had not seen before grew here—large, and with thick ringed trunks, and at a distance looking like the Candelabra Euphorbia. Nor are the inhabitants less different. Instead of the short, broad-faced natives of the Tondano district, we found a taller and darker people of mixed blood, many of whom had the piercing look of a

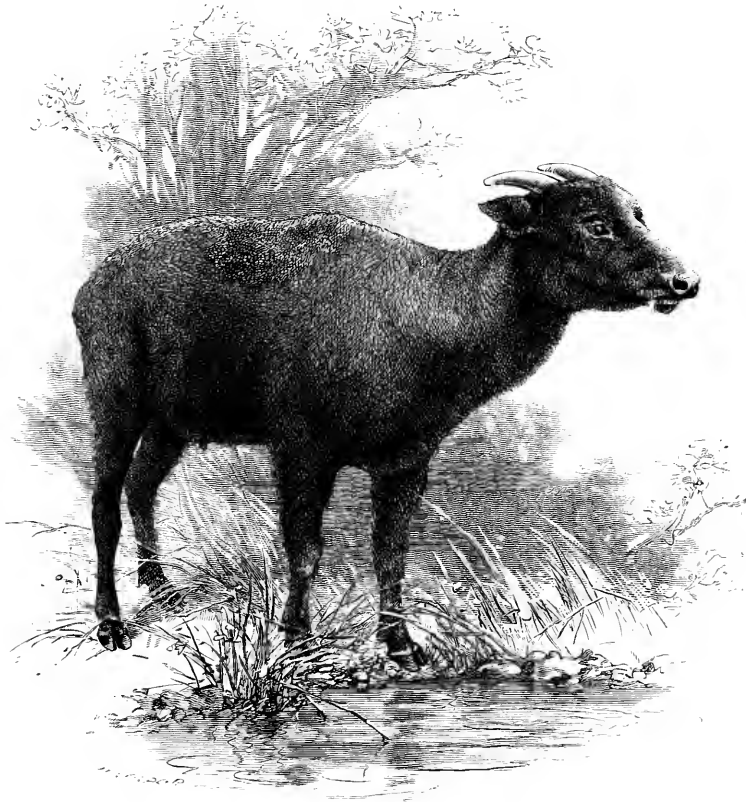
Kling. The language prevailing is quite distinct from any in Minahasa.

The people of the village of Liatto, a short distance eastwards of the mouth of the Gorontalo, are Mohammedans, as indeed are all the natives in this district who are not Pagans, and, in consequence, we found wild boars abundant and unmolested in their plantations, and were able to shoot several of them. Here and in Gorontalo small-pox was very prevalent, and at one village of no great size the chief told us that there were over a hundred cases. The Dutch have not introduced vaccination here as they have in Minahasa, and the disease was consequently very fatal. In Gorontalo itself, where the population is more mixed, and includes Bugis, Klings, and other races, in addition to over a hundred Chinese, the death-rate was not nearly so high.

Thanks to the kindness of one of our German friends, we made an addition to the *Marchesa's* menagerie in the shape of another Sapi-utan. It was a young bull only a few months old, and scarcely more than twenty-four inches high, its body covered with a light yellowish-brown woolly hair, and the horns three inches in length. It remained with us until we reached Ternate, when we despatched it to England, but, like the other we had obtained at Menado, it unfortunately did not live to reach its destination.

The Kontroleur of Gorontalo was anxious to visit Pogoyama, a village lying at the mouth of a river five and twenty miles farther up the gulf, his principal object being to secure a man who had recently committed a murder, or at least to put such pressure upon the chiefs as would ensure his being eventually delivered up to justice. We therefore arranged to proceed to the place in the yacht, and the party—which consisted of the Kontroleur and half a dozen coloured police—having been got aboard at an early hour, we sailed before daybreak for our destination. Native authority also was to be represented, and we carried the son of the late Sultan of Gorontalo and his attendants—a title, by the way, which has been abolished by the Dutch. We arrived off the entrance of

the river after four hours' pleasant steaming, for the sea-breeze had not sprung up, and the surface of the water was almost



SAPI-UTAN. (*Anoa depressicornis*.)

From a Photograph of a Seven-year-old Male in the Rotterdam Gardens.

unruffled.¹ As we crept cautiously in, for we had no charts to aid

¹ At Gorontalo the sea-breeze at this season sets in from the S.S.E. about 9.30 A.M. and blows strong until 3 P.M. or even later. The land-breeze begins regularly at 6 P.M. It blows steadily through the night, and is very cool. Although Gorontalo is almost on the equator, the thermometer between decks during our visit invariably sank to 78°.

us, we encountered a strong stream of the colour of pea-soup, which led us to conclude that a considerable body of water was debouching here. On reversing the engines, however, the screw suddenly revealed deep water of a clear sapphire blue, having washed aside what proved to be merely a shallow surface layer of the muddy river. Anchoring was even more anxious work than usual, owing to the depth of water and its sudden shoaling, and the strong eddies we experienced, but we eventually found ourselves in a fairly secure, although somewhat extraordinary berth. We had seven fathoms of water at our bow, and six at the stern, whilst amidships our keel must have been almost touching. Astern of us the trees were less than twenty yards off, and within thirty feet, on our starboard side, the water was only ankle deep! Truly, one becomes acquainted with strange anchorages in this part of the world.

Landing the *Kontroleur* and his policemen for their interview with the chief, we continued our way up the river in the boats. The scenery was extremely pretty. The bareness of the country round Gorontalo had disappeared, and we found ourselves once more in the midst of tropical vegetation of the usual type. The river flowed between abrupt, forest-clad hills of considerable height, but at a distance of about four or five miles from the mouth became beset with rapids and shallows, the passage of which was difficult even in a native canoe. There was no distinct village, the houses being scattered at intervals along the banks. They were built on land, but each was provided with a little stage or pier erected over the stream, where the natives could be seen embarking and disembarking in their canoes, or dipping up water from the river by means of a long bamboo. The Pogoyama people speak a dialect of the Gorontalo language, and, though probably free from any admixture of Papuan blood, seemed to us taller and darker than is usual among those of Malayan race. Those whom we saw were not of particularly prepossessing appearance, and offered a marked contrast to the mild-eyed Minahasans we had left only three or four weeks before.

We found a number of quartz pebbles in the bed of the stream, and on our return rejoined the *Kontroleur*, who had with him a small nut half full of gold dust, which had been obtained by panning out the river sand. The natives here and at *Pagowat*—a village thirty miles farther up the gulf—pay their tax to the Dutch Government in gold, and are allowed twelve guilders for as much as will balance a one guilder piece. All this gold is alluvial, the natives being unacquainted with the art of quartz-crushing, but, if their statements were to be believed, they knew of gold-bearing rock at a place some miles distant inland; “a face of rock,” to use the words of my informant, “where the gold could be seen like the veins on a man’s hand.” The Government appears to take little or no interest in the subject, and some time before our visit had readily granted a concession to a Dutchman to work the district. He died shortly afterwards in the island of *Batchian*, and no steps have been taken, either before or since, to explore the locality.

We heard a curious story of a deep pit which exists at the west point of the bay, about four miles from the mouth of the river. This pit is said to contain a great number of human bones, and the legend ran that, in ancient times, some great chief suspected the presence of gold at the bottom of it, and sent a number of men down to obtain it for him. The Spirit protecting the treasure, indignant at its possession being thus rudely attempted without some propitiatory offering, revenged herself by slaughtering the intruders, and their bones remain as a warning to the present day. As our time was limited to a single day, and we wished to explore the river, we had to be content with despatching some men to the place with instructions to bring us perfect crania, or, failing these, the best specimens that they could obtain. They returned in the evening with several femora and other bones, but only fragments of skulls. All were of adults, and some of women. The men told us that there was no pit, and that they had found them near the shore, but a native at once said that they had not discovered the right place, and that the pit, which was a very deep one, was in the forest,

It was unfortunate that we could not visit the place ourselves. The theory that the story was in the main correct, and the victims had met their death from the presence of carbonic acid gas at the bottom of the cave, of course presented itself, but it seems more probable that it was merely some ancient burying-place. Although I am not aware that cave sepulture exists in Celebes, it is known to do so in Luzon and other islands of the Philippines.

The peculiarities of the Celebesian fauna and their interpretation have been most ably expounded by Mr. Wallace in his "Malay Archipelago," and are known to every zoologist. To my non-naturalist readers, however, I may perhaps be permitted briefly to mention them. Celebes is singularly poor in mammals, but putting aside those that have most probably been introduced by man, an extraordinarily large proportion of them are found to be peculiar to the island, and many—such as the Anoa, the Babirusa, and the black, baboon-like ape¹—are without near allies in any of the neighbouring islands. The birds, too, are remarkable for the same reason. *Scissirostrum*, the peculiar starling to which I have alluded (p. 168), and another with a curious, laterally-compressed crest of steely blue feathers (*Basilornis*); two black and white magpie-like birds (*Streptocitta*)—known to the natives as the *burong pandita* or missionary birds, from their sober plumage and white collar; the beautiful blue Roller, and still more lovely Kingfisher, *Ceycopsis fallax*; the Maleo, and many others, are forms characteristic of Celebes alone.² Like peculiarities are found among the butterflies and other insects, and for these and other reasons there is but little doubt that Celebes, in spite of the proximity of the surrounding

¹ Mr. Wallace ("Geographical Distribution of Animals," vol. i., p. 427) says, "there is some doubt about the allied species or variety (*Cyno pithecus niger*) of the Philippines being really indigenous there."

² The Maleo, the Babirusa, and other peculiar Celebesian forms were remarked upon by the old Spanish voyagers. Purchas says of the island of Batchian, which seems to have been confused with Celebes, that "there be here small Hennes which lay their egges vnder the ground aboue a Fathome and a halfe, and the egges are bigger than Duck's egges. . . . There are Hogs also with hornes and parats which prattle much."

lands, became isolated at an exceedingly remote geological epoch. "It probably dates," says Mr. Wallace, "from a period not only anterior to that when Borneo, Java, and Sumatra were separated from the continent, but from that still more remote epoch when the land that now constitutes these islands had not risen above the ocean."

We left Pogoyama early on the day following our arrival, and dropping our friend the Kontroleur and his policemen and our other passengers at Gorontalo, sailed the same evening for Ternate. We had been very fortunate in our collections, and had added two birds (*Astur trivirgatus* and *Alcedo bengalensis*) to the list of the Celebesian avifauna; we had had excellent weather and good sport, and had met with many kind acquaintances and friends. But foremost among our pleasant memories of the time we spent in Celebes were those of smiling faces and rose-bedecked cottages in the mountains of Minahasa.

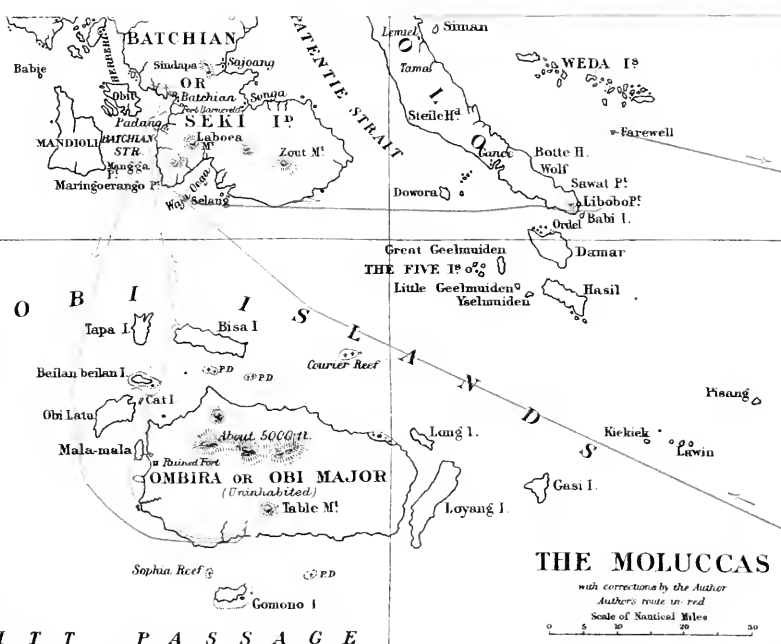
CHAPTER X.

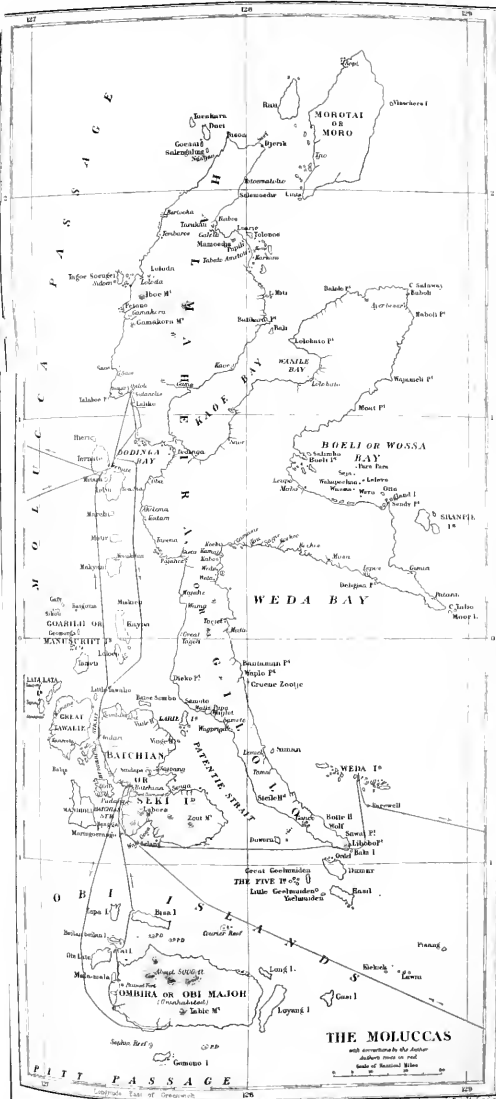
THE MOLUCCAS.

Ternate—The town—The Resident's aviary—Live Birds of Paradise—History of the island—Remains of the old forts—Climate—Moluccan birds—The trade in Paradise Birds—We enlist our hunters—Arrival of the monthly mail—Leave for Batchian—Passage of the Herberg Strait—The “Kapten Laut”—Obi Major—*Tanyseptera obiensis*—Birds of the Obi group—Ruins on the deserted island—We explore the west coast—Obi Latu Island—Dead mangrove swamp—Bisa Island—Return to Batchian—Dance given by the Sultan of Batchian—Fort Barneveld—Wallace's Bird of Paradise—A deer hunt—Sago-making—Visit to the Weda Islands—Sail for New Guinea.

EAST of Northern Celebes, and separated from it by a hundred miles or more of deep sea, lie the Spice Islands. I had nearly said the Moluccas, but this name, restricted in former days to the little chain of volcanic islets lying off the western coast of Gilolo, of which Ternate is the chief, now includes all the islands between Celebes and the Papuan group. Our passage over this strip of blue water, which the soundings tell us to have existed for countless ages, was pleasant enough despite the S.E. monsoon, for here the latter, becoming diverted from its course, blows from the south or even the south-west, and what little wind we experienced was in our favour. Approaching from the west we rounded the small island of Mitara, and early on the morning of the 28th of September dropped anchor off Ternate.

As far as regards magnificence of scenery, Ternate is perhaps the finest harbour in the Dutch Indies, for it boasts of two volcanic peaks—both of them about six thousand feet in height—which are





THE MOLUCCAS
with corrections by the Author
Author's notes in red
Scale of Nautical Miles

of wonderfully graceful outline. That of the island of Tidor, which shelters the anchorage to the south, rises majestically from a mass of wild and gloomy-looking hills, but Ternate consists of the volcano alone, which leaves little room for the town to nestle at its foot. Eastward, across a wide strait, are the rugged blue mountains of the island of Gilolo, or Halmahera as the Dutch call it, whose quaint and spidery shape is almost a replica of Celebes upon a small scale. The view is a very beautiful one, and it was none the less appreciated by us from the fact that, for once in our lives, we were not obliged to lay out anchors all round the ship, or to "tie her up to a tree."

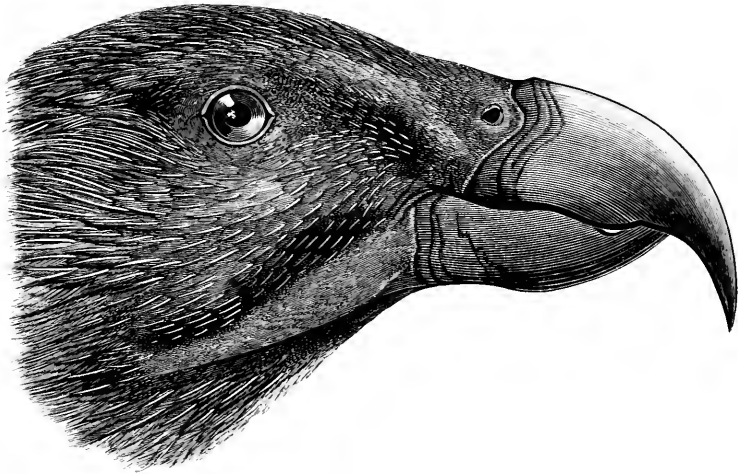
Were a traveller placed at haphazard in any one of these Dutch Malaysian villages—for one can hardly dignify even Ternate by the name of town—he would, I am sure, have no little difficulty in discovering his whereabouts for a moment or two, even if a native of the place. If he were to catch sight of the volcano—for there is always one close at hand—he would, of course, soon get his bearings, as he would too if he were to come across the white-washed "Harmonie" where the Dutchmen are drinking their *pijtjes*. But the streets themselves present an iteration of tropical vegetation and native huts, of bamboo-fenced compounds and low, verandahed houses that would baffle even a resident. Ternate has its avenue—a magnificent row of yellow-leaved, scarlet-blossomed *Galclas*—winding along close to the edge of the sea, so close indeed that the waves lap the roots of the outer trees, beneath whose shade are pulled up praus of all sizes, from the smallest "dug-out" to the large Ceram or Banda trader. Opposite, facing seaward, are the houses of the Europeans, with coloured glass balls, and yet more atrocious red and white striped flower-pots, in their front gardens. Walking inland, past the dark, cool fruit-orchards where mangoes, durians, citrons, and a dozen other tropical fruits are growing, we come to a vast collection of old tombs—Dutch, Chinese, Portuguese, even Spanish perhaps, for they too are among the alien races who spilt their blood in the struggle for wealth

which devastated this pleasant Eden three centuries ago. Overgrown with grass and rank vegetation, they lie unheeded, waiting for entire obliteration at the hands of Nature. Even of the large Chinese tombs little remains in many cases but the merest traces of their horseshoe-shaped walls.

From these memorials of now happily bygone times a slightly-rising stretch of smooth turf, dotted with fruit-trees of every description, leads up to join the lower slopes of the mountain, which is clothed with vegetation almost to its summit, and scarred with deep furrows. The actual apex of the volcano, from which floats a light stream of smoke, appears blunt and irregular from the town, but seen from Sidangoli on the coast of Gilolo, we found it even sharper than the peak of Tidor. For all its seeming peacefulness, however, Ternate has been the scene of many eruptions—of no less than fourteen since the beginning of the seventeenth century, we are told; and earthquakes, slight though they may be, still keep its presence constantly in mind. The Ternatians have a quaint legend about it,—that whenever the number of the inhabitants of the island exceeds the height of the volcano an eruption is not long in coming. Such a condition existed at the time of our visit, but we were not fortunate enough to be witnesses of what the Dutch expressively term an *witborsting*.

One of our first visits was to the Resident, Mr. Van Bruijn Morris. He had just returned from a voyage to New Guinea, in the course of which he had been as far east as Humboldt Bay, the extreme limit of the Dutch claim on the northern coast. The *Challenger*, it will be remembered, touched at this spot on her way to the Philippines, and, like the officers of that ship, the Resident had not met with a very pleasant reception, although no actual fighting with the natives had ensued. We obtained from him, and from the captain of his yacht—the *Sing-Tjin*—some useful information on the localities we intended to visit, together with some Dutch charts and hydrographical notes, which we afterwards found of great assistance. Formal calls having been ex-

changed, we soon became intimate; with the more readiness, perhaps, on finding that Mr. Morris took great interest in birds, of which he had made a large collection on his travels. His aviary, a large and well-lighted room, kept with great care, contained a great variety of the rarest and most beautiful of the parrots of the Papuan region—the gigantic-beaked *Microglossus*, sombre^f of



HEAD OF PESQUET'S PARROT. (*Dasyptilus pesqueti*.);

plumage and slow of movement; the long-tailed *Aprosmictus dorsalis*, of wonderfully vivid hues; numbers of brush-tongued lorries of every shade of colour; the jetty-plumaged *Chalcopsittacus ater*; and lastly, most singular of all its kind, the rare Pesquet's Parrot (*Dasyptilus pesqueti*), half vulturine in appearance, and with the face and throat bare—a native of the mainland of New Guinea. But the gems of the collection were two superb specimens—both full-plumaged males—of the Twelve-wired Bird of Paradise (*Seleucides*). The native-prepared skins seen in European museums give no idea of the glorious beauty of the living bird. The subalar plumes, whose prolonged and wire-like shafts have given the

bird its English name, are of a rich golden yellow, and the pectoral shield, when spread, shows to advantage its tipping of metallic emerald. These exquisite creatures were fed on the fruit of the Pandanus, with an occasional cockroach as a *bonne bouche*. In devouring the insects, which they did by throwing them in the air and catching them again, they displayed the wonderful grass-green colouring of the inside of the mouth and throat. The feelings of admiration with which I watched these birds, which are among the most exquisitely beautiful of all living beings, I need not attempt to describe. My reader, if a naturalist, will divine them; if not, no description of mine would ever make him realise the intense pleasure of the first sight of such masterpieces of colouring.

As we were anxious to overhaul gear and get some small repairs and alterations done on board, we endeavoured to find some kind of cottage or house in the town in which we might instal ourselves until we were ready to put to sea. Only one was available, and, as it was actually unfinished, as well as unfurnished and very damp, we found ourselves in a difficulty, from which, however, we were at once relieved by one of our kind Dutch friends—Mr. de Bruijn Prince—who took us bag and baggage to his house, and made us his guests until our departure. I mention this as only one of the many acts of kindness we experienced at the hands of the Dutch merchants and officials in the Malay Archipelago,—kindness to which our very pleasant recollections of civilisation in these parts are in no small degree due. In this instance it was of the greatest service to us, enabling us to dry and arrange the specimens we had already collected, and to clear the ship of useless lumber in order to make room for the “trade” it was necessary to lay in before starting for the New Guinea region.¹ The house stood at

¹ The following is a list of the articles with which we were provided:—

30 pieces Turkey red	Reels of cotton
50 „ prints	2 gross packets of pins
20 „ dark blue cotton	6 doz. axes
30 cotton shirts	12 bottles of sweets
10,000 needles	Beads, assorted

the back of the town in a little compound, with the usual large whitewashed pillars at the entrance-gates. Here in the Moluccas the Nipa-leaf attaps, which in Borneo and Sulu form the sides and partitions of the native huts, or even the residences of the Europeans, are replaced by the *gaba-gaba*—the leaf-stalk of the sago palm. In section these stalks or midribs are V-shaped, and hence, when placed upright and one against the other, they form an imbricated wall of considerable strength, which, when smoothed and painted white, looks fairly neat.

The gardens and woods surrounding us, though doubtless a paradise for the botanist, were singularly devoid of bird-life, and even our rambles farther afield to the coffee and other plantations on the slopes of the volcano were equally unproductive. But walks in Ternate were nevertheless enjoyable from the history associated with the island, and the moss-grown ruins of old walls which ever and anon crop up to remind one of the bygone struggles of the Spanish, Portuguese, and Dutch for its possession. Now an air of placid somnolence pervades the place, and will remain, probably, for all time, except it be for the mighty forces which lie dormant within the huge volcanic cone. At this distance of time we catch ourselves wondering how it could

Coloured scarves and handkerchiefs	150 lbs. Chinese tobacco
12½ doz. clasp-knives	50 lbs. American „
500 round gold Chinese buttons	12 bars of iron
6 gross Chinese buttons	Brass-wire
220 Chinese looking-glasses	Fish-hooks
6 small musical-boxes	Malay sarongs

Besides these we carried muskets and gunpowder, not for bartering with the untrustworthy natives of the mainland, which would have been contrary to Dutch law as well as our own principles, but for exchange with the half Malay hunters of the *Rajah ampat*, as the district over which the Sultan of Tidor claims authority is named. Perhaps the most marketable of all the above articles were the Chinese gold buttons, of which the natives made earrings, but the axes and iron were also a good deal run after. The “Turkey red” and cottons were almost useless, for the Papuan is—from a medical point of view—a wise man, and does not set his affections on clothing. Curiously enough, the natives did not seem to care for the fish-hooks, although their own, which are generally cut out of the clam or some other shell, are very clumsy.

possibly have come about that the trade in such insignificant objects as cloves and nutmegs should have been considered as of almost equal importance with the riches of the New World. Yet Ternate for nearly two centuries was the scene of as much bloodshed and cruelty as any spot on the surface of the globe. So long ago as the end of the fifteenth century the spices of the Moluccas were made known to the civilised world by the Bugis and other native traders, but it was not until 1511 that Antonio d'Abreu sailed into these unknown waters and returned with his laden galleon from Amboina. His accounts excited the cupidity of the Portuguese, but the constant fighting that their conquests in Malacca and Sumatra entailed obliged them to postpone their designs on these still more distant regions. Ten years later—the year of the discovery of the Philippines by Magellan on his memorable voyage round the world—an expedition was fitted out under Antonio de Brito. It reached Ternate, and finding the *Trinitie*—one of the ships of Magellan's squadron—in the port, seized her and sent her crew as prisoners to Malacca. De Brito and his people were received with the greatest kindness by the Ternatians, and before the year was out had built a fort upon the island. Once fairly established there was no longer need for the concealment of their designs, and they commenced the hateful policy which, in those days, characterised the Dutch and Portuguese alike. For more than sixty years the history of the islands is little else than a record of the most atrocious cruelties and the vilest acts of treachery. At the end of that time their power, which had been gradually waning, was practically crushed by a rising of the islanders and the capture of their forts. Meanwhile the Spaniards, in spite of having agreed in 1529 to renounce their claim to the Moluccas for the sum of 350,000 ducats, had not only intrigued against the authority of the Portuguese in the islands, but had even fitted out expeditions against them, although without success. In 1606, however, a squadron from Manila succeeded in taking both Tidor and Ternate, but, strangely enough, no garrison

appears to have been established. The unhappy natives were nevertheless not destined to be left long undisturbed. The intrigues of the Dutch, whose vessels had for years haunted Moluccan waters, were at length successful, and in 1613 they contrived to conclude a treaty with the Sultan of Ternate, by which the latter agreed that the trade in cloves should be the exclusive privilege of Holland. It was the beginning of the end,—a jump from the Portuguese frying-pan into the Dutch fire,—for once furnished with a handle so convenient as the treaty afforded, the latter nation did not scruple to use it. It is needless to say that a strict adherence to the terms of the agreement was practically impossible for the natives, and under the pretext of their infraction the various islands were reduced with short ceremony. Thus, bit by bit, the Moluccas passed into Dutch hands, and their miserable inhabitants were not long in discovering that Dutch treachery and Dutch cruelties were even worse than those of the Portuguese rule. Revolt after revolt occurred, the intervals between each becoming longer as the grip of Holland tightened, but in 1681 the last expiring effort was made, and thenceforward the Spice Islands sank gradually into the condition of dreamy *laissez aller* which characterises them at the present day.

Signs of these ceaseless struggles, in the shape of ruined walls and gateways, are visible, as I have mentioned, at almost every step on the outskirts of the town, but in most cases little enough can be made out of them, so tumble-down is their condition. Three forts, however, still remain. The largest, which is placed in the middle of the town, about a couple of hundred yards from the sea, and is said to have been partly built by the Portuguese, is still garrisoned by the Dutch, and bears its name—"Fort Oranje"—over the gateway. At the extreme north of the town, perched on a little promontory just above the beach, is a small blockhouse which probably dates back to the middle of the sixteenth century. It is now in a half-ruined condition, in spite of attempts having been made in later times to repair it, and vegetation sprouts from

the fissures in its walls. The view from it is magnificent. A beach of dark sand and pebbles, lined with picturesque huts half-hidden in masses of banana and fruit-trees, stretches away to the south, and leads the eye up to the rugged hills and great peak of Tidor, which with its sister cone of Ternate dominates the calm blue waters of the harbour. From this point the last of the three forts must be four or five miles distant, situated as it is beyond



PORTUGUESE FORT AT THE NORTH END OF TERNATE.

the outskirts of the town on the south side. We came upon it quite unexpectedly during one of our ornithological rambles, for though we had asked our Dutch friends if there were any ruins in the neighbourhood, it had not been thought worthy of mention. Although considerably larger than the northern fort, it is of no great size, but it appears to have been built with great care and skill, to judge from the perfect laying of the heavy masonry of the embrasures, and in those days must have been well-nigh impregnable. It is no doubt contemporaneous with the Portuguese occupation; possibly indeed the first fort they built on landing

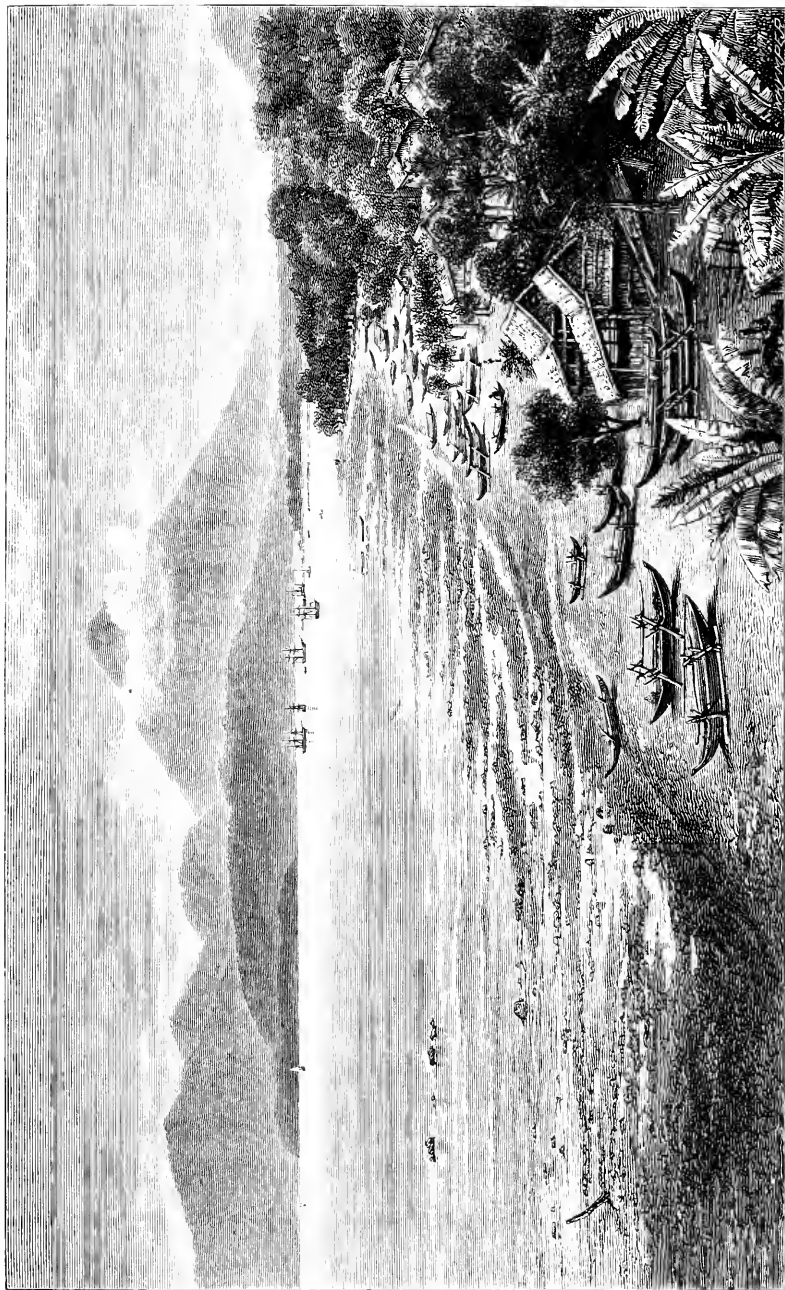
here in 1521. Now the jungle has left it nothing but a picturesque ruin, almost invisible at a little distance amid the confused mass of greenery. Trees grow within the walls, and, with the rank tropical undergrowth, have almost choked the old chambers. It was a snake-suggesting place, and its exploration did not appear to us particularly tempting. Nor were we repaid for our trouble, for neither date nor inscription nor anything else of interest was to be found. In the blockhouse, of which I give an illustration, two coats of arms were cut in the masonry just within the doorway.

The Sultan's palace, a dilapidated-looking house in the European style, is the most conspicuous building in Ternate. It is perched on the summit of a small hill, and overlooks an expanse of thoroughly English-looking grassy common reaching to the sea, on whose shore, hauled up beneath a large open shed, lay the imperial prau. This boat, which was canoe-like in form with a cabin amidships, and about sixty feet in length, was a most shapely craft. It was provided with double-banked outriggers on either side, thus permitting the paddlers to be seated out-board. This form of prau is common enough in various parts of the archipelago, but we had never seen one of finer lines. Just below the palace is a guard-house, where, hanging up on the walls, we found some quaint old hats which had belonged, no doubt, to the Dutch troops in bygone days. They were of two kinds; one of much the same shape as the hat worn by some of our own soldiers at the beginning of this century—like our own "stove-pipe" shorn of its brim, provided with a peak, and of considerably larger diameter at the top than at the bottom. The other may perhaps be best described as a flat-topped "pot-hat," brimless at the side, but cocked back and front. Both of these head-coverings, leaving the nape of the neck entirely unprotected, must have exposed their wearers to every chance of sunstroke. We were told that they were still worn on grand occasions by the Sultan's guard.

Although eight years' meteorological observations taken by the

Dutch at Ternate show that rain falls on the average on 216 days in the year, and that the mean annual temperature is 80° Fahr., the climate is on the whole said to be a very pleasant one, for, except in the months of December and January, the rain for the most part occurs in heavy showers which alternate with bright sunshine. Those who spend their lives under England's gloomy skies can hardly realise the fact that a high rainfall does not necessarily mean an unpleasant climate, and that the British half-inch of rain is attended with more gloom and discomfort than half a foot would be in most tropical climates. We had several extremely heavy showers during our visit, but no day that was not sunny and bright, and with the constant light sea-breeze the temperature seemed delightful. We made but two excursions worthy of the name; one to Sidangoli on the coast of Gilolo, where, in company with some of our Dutch friends, we went in pursuit of deer, of which, in spite of their abundance, we failed to shoot a single one; the other to Tenoto, half-way up the volcano, whence, after an uncomfortable struggle up a steep slope of plantations, we obtained a superb view:—a wonderful panorama of island, strait, and volcano as beautiful in its outline as in the richness of its ever-varying colour.

We added but few birds and still fewer insects to our collections, partly owing to our time being occupied in other ways, partly because Ternate is not apparently rich in either. Perhaps one of the most beautiful birds on the island—one at least which would be most likely to catch the traveller's eye—is a Sun-bird (*Cinnyris auriceps*) of velvety black plumage, the head metallic emerald, the back and throat of equally brilliant steely blue. This lovely little species haunts flowering shrubs and the crowns of the coco palms, and is inconspicuous enough till its emerald head flashes back a ray of sunlight. A brilliant blue Kingfisher (*Halcyon diops*) inhabits the island in abundance, the female differing from the male in having a pectoral band of dull cobalt; but a still more strikingly-coloured Ceyx (*C. lepida*)—coral-billed, the under surface



TIDOR VOLCANO FROM TERNATE.

reddish orange, and the rump bright ultramarine, we found much rarer. Gilolo produced us two of the rarer Pigmy Doves (*Ptilopus monachus* and *ionogaster*), their grass-green plumage varied with shades of lavender, yellow, and magenta, and the magnificent Ground-thrush (*Pitta maxima*), the giant of its genus. This bird is, like all the Pittas, of the brightest plumage, but, as it runs along the ground, these colours are invisible, the whole of the upper surface being a deep velvety black. Beneath, the abdomen is crimson, and the breast snowy white faintly shot with blue in some lights, while the shoulders are of pale metallic blue of extraordinary brilliancy.

The true Birds of Paradise are, as my reader is perhaps aware, entirely confined to New Guinea and its islands. A solitary exception exists to prove the rule in Wallace's Standard-wing, which, as far as is yet known, occurs only in the two Moluccan Islands—Gilolo and Batchian.¹ But though we could look for no living Paradiseidæ in the forests and plantations of Ternate, we found an abundance of their skins in the cabinets of Mr. Bruijn, a collector who nearly every year sends hunters to the little-known regions of New Guinea. Some of them had only recently returned, and as the expedition had been a fortunate one, we had the advantage of examining several of the rarer species with which we were destined later to become better acquainted. The skins were beautifully prepared—no easy matter in damp climates such as these,

¹ From the earliest writers up to those of the present day the erroneous statement is constantly made that the Birds of Paradise are found in the Malay Islands. Camoens may be allowed a poet's licence when he sings—

“Olha cá pelos mares do Oriente
 As infinitas ilhas espalhadas ;
 Vê Tidor, e Ternate . . .

 Aqui ha as aureas aves, que não decem
 Nunca á terra, e só mortas apparecem.”

(*Cant.* x. cxxxii.)

but Miss Bird, in her “Golden Chersonese,” brings them another thousand miles farther west, and tells us of their existence in the Malay Peninsula !

where they often remain limp for weeks after they have been removed from the birds' bodies. This difficulty is obviated by the universal custom in vogue among Malay hunters of fixing a small stick in the base of the skull, the other end of which is allowed to protrude at the vent, thus keeping the head and neck in good position. The skins of Birds of Paradise, as an article of trade, are prepared in quite a different manner, and almost always by Papuan natives, not by Malays. Stripped off with little or no care, the legs cut away and the skull removed, the skin is pressed flat between two strips of bamboo, and smoke-dried; and, when finished, it bears as little resemblance to a bird as can well be imagined. These specimens are, of course, useless for the cabinets of a naturalist, even if they are not largely moth-eaten, as is usually the case, but great quantities of them are sent to Europe for dress and hat decoration. The trade, which has existed for more than a hundred years, is almost entirely in the hands of Chinamen, and the largest markets in the East are Macassar and Ternate; Amboina sending a few only to Batavia.

Through the kind assistance of Mr. Bruijn, we were able to engage hunters for our approaching visit to New Guinea. We had already three Malays on board, one an English-speaking Singapore "boy" who skinned fairly well, the others two hunters we had brought from Malacca—Momin and Achi by name, the latter of whom was an excellent fellow and a good observer. We now added nine others, in two lots of five and four, the one headed by Usman, a native of Ternate, the other by Tahirun, a Gilolo man, and one of the most unmitigated scoundrels in appearance I ever came across. Never did any one's face belie their character more. He was an untiring hunter and a good naturalist, spoke two New Guinea languages, and skinned well, and after a little instruction I found that I could depend upon his measurements, accounts of the habits of the birds, and other details as well as if I had made the observations myself. Of the remainder of the men two had visited New Guinea before, and were fairly good shots and skinners,

two were perfectly useless, and the other three neither good nor bad. A youth of about sixteen, some relation of one of our hunters, asked permission to accompany us, which we gave him. He was of assistance in carrying the birds while shooting in the forests, and before long became an adept in the use of the butterfly-net and a good beetle-hunter. Our natives, of whom there were thus



TAHIRUN.

thirteen, had a separate part of the ship's deck assigned to them, where they managed to live and do their work pretty comfortably. By our sailors this was always known as "Queer Street," or the "Malay quarter."

In Ternate people take life easily. A "dreamful ease" lulls one in these islands which renders exertion an impertinence, and I remember that I was five days in getting together the ingredients for some arsenic soap. Nearly every article belonged to a different owner, and though careful to avoid siesta-time for my calls, the usual answer given me by the Malay servant, in reply to my inquiry if his master was at home, was, "*Tr'ada, tuan: dia tidor*"—"He is asleep, sir." Sleep, indeed, appears to be the chief occupa-

tion in the Moluccas, until it is cool enough in the evening to walk down to the "Harmonie" and drink *pijtjes*. The Malays are more energetic than their masters, and pass their time in kite-flying, an amusement which is of absorbing interest to almost every one of that race. It is a decorous sport, demanding no great exertion, and as such, I suppose, commends itself to the impassive Malay



USMAN.

character. The kites are of many shapes, but in Ternate birds did not appear to be in fashion as in Sumbawa. One very pretty one I noticed was a butterfly, whose wings quivered and fluttered in a very lifelike manner. Most simple of all was that patronised by the little fisher-boys—a single leaf of large size, with a tail of bunches of bamboo-leaves.

On the 7th of October the monthly mail came in, and Ternate leapt suddenly into life. Coolies hurried to and fro with bales of copal, bundles of deers' horns, tortoise-shell, and other products; the merchants, foregoing their siesta, checked the number of the packages that left their stores, and the avenue was crowded with carts and natives passing and repassing. At the pier a sort

of fair in miniature was held, and Malays squatted in all directions selling food and cigarettes for the coolies, cockatoos and lories of every hue and size, Bird of Paradise skins, and the huge Crowned Pigeons of New Guinea. Cockatoos screamed, officers shouted their orders, the donkey engine rattled, and an endless stream of bales and packages clattered over the rickety pier. By and by the steamer gave its final whistle, and the gangway was cast off; the crowd waited to see her slowly disappear, and half an hour later the town was once more plunged in its wonted condition of somnolence. The monthly transformation scene was over.

Mr. Van Bruijn Morris having to pay an official visit to the island of Batchian, and the Kontroleur—Mr. Monod de Froideville—being also bound south with the intention of searching for coal reported to exist in the uninhabited Obi group, we arranged to sail in company. Accordingly we weighed anchor at 5.30 P.M. on the evening of October 9th, running up the Dutch ensign at the fore as the Resident stepped aboard. His yacht, the *Sing-Tjin*, preceded us with the Kontroleur, and we steered our course between the little chain of islands to which I have alluded and the coast of Halmaheira. From a little to the south the volcano of Ternate revealed itself as a mathematically accurate and business-like looking cone. A band of fleecy cloud hung half-way down the mountain, and from the summit, which was just tipped by the setting sun, a light streamer, more of steam than smoke, floated away to the north-west. The sea was as calm as glass, and as we steamed past Maré, Motir, and Makian their outlines showed sharp and clear in the bright moonlight. The two former are extinct volcanic islands, but Makian was in 1862 the scene of a frightful eruption, in which nearly 4000 people lost their lives. Most of them, however, were not actually killed by the eruption, but perished by drowning, overcrowding the praus in their frantic efforts to escape. The mountain had been quiescent for more than two centuries, and, as is so often the case, but little warning of the outburst was given. Now it has returned to its former peacefu

condition, and not a trace of smoke was visible at its rugged summit.

This chain of islands, with Batchian, were the "Moluccoes" of the old geographers; the natural home of the clove. The tree is not much grown now, although in Batchian its cultivation has been recommenced. In 1652 the Dutch compelled the "King of Tereuate" to destroy every clove-tree in his dominions, and, in order to obtain the entire monopoly of the spice, restricted the plantations to Amboina, which has until lately supplied Europe to the almost entire exclusion of other localities. It is curious that, although there is but little difference in latitude, and apparently none in soil, the clove has never flourished in its new so well as in its old home.

The village of Batchian—our destination—lies in the middle of the western side of the island of that name, and more for the pleasure of an exciting bit of navigation than with any idea of saving time, we resolved to attempt the passage of the Herberg Strait, a narrow channel dividing Batchian from numerous islands lying to the westward.¹ It was still dark when we arrived off the entrance, and we therefore lay to and awaited daylight. The *Sing-Tjin* then intimated that she would give us a lead, but before long, as we were much superior in speed, we decided to pass her, which we did, in spite of our excellent friend the captain's loud shouts of disapproval. During the passage of the narrowest part, desperate but illegible signals were hoisted by the other ship, which were meant to signify that the total loss of the *Marchesa* was imminent, but secure in a good look-out and perfectly clear water, we carried on, and in another half hour came safely to anchor off the village.

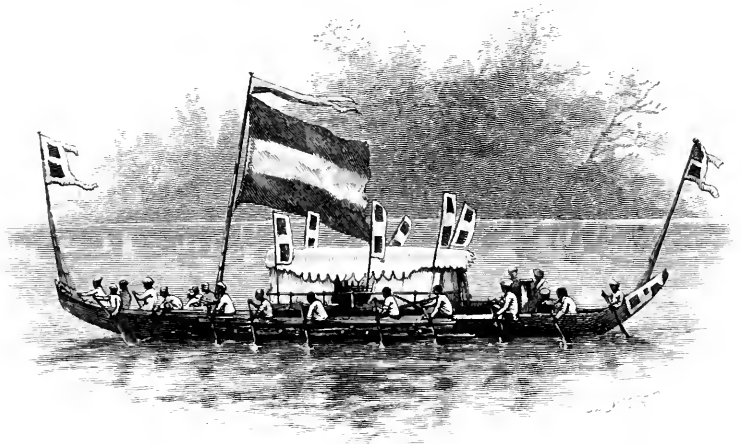
¹ The Herberg or Batchian Straits, which are over forty miles in length, are but little known and are unsurveyed. We found them apparently devoid of danger, holding a mid-channel course throughout, but a large ship might have some difficulty in passing the first narrows, owing to the sharp turn necessary for entering them and the strong currents generally experienced. The passage is easiest from south to north, as we afterwards discovered on our homeward voyage. At the south end of the northern part of the strait are two islands unmarked even in the Dutch charts, which still further narrow the channel.

The Herberg Straits, although possessed of no grand scenery, are extremely picturesque, and as fascinating as narrows where one steams almost within stone's throw of the land must always be. Rounding a corner the great mass of Labua looms up as a huge wall, its summit hidden in the clouds. It rises a few miles behind the village, shutting it in much as Table Mountain shuts in Cape Town, though with an even greater altitude, for it is over 7000 feet in height. We were astonished to find the wreck of a fine iron ship of about fifteen hundred tons in a place so far from the great ocean highways. Five years before, while on her voyage from China to Australia, she had taken the ground near Gebi Island, and being afterwards beached at Batchian, had become a total loss. Her hull formed a favourite resort for crocodiles, who sunned themselves on the sloping deck, and a fishing-ground for the natives, who had long ago despoiled her of everything movable.

Our anchor was hardly down before the Sultan's prau put off—a large, outriggered boat manned by six and thirty paddlers. Many hangers-on crowded her with colour, and she flew ten or a dozen little flags in addition to a large Dutch ensign. It would be pleasant enough travelling in the boats of these native potentates but for the incessant tom-tom accompaniment that it is considered obligatory to keep up without a second's intermission while under way. *Răm-tăm-tăm, rām-tām; rām-tăm-tăm, rām-tām* and so on, *da capo*, soon arouses the most long-suffering individual. Some music, we know, excites feelings too deep for words. That produced by the tom-tom is of this kind. I have heard it in many parts of the world, but I will fearlessly assert the Malayan instrument to be more provocative of bad temper than any other, though it must be confessed that the Indian music of this class is not far behind it.

The Sultan did not come off to the ship in person, but sent his *Kapten laut* or Admiral as his representative, one of the queerest and most comical little individuals we ever had the pleasure of entertaining. He was a lively young spark of seventy or there-

abouts, and was dressed in a little coat of navy blue faced with scarlet, and furnished with miniature tails which stuck out in a most ridiculous manner behind. Large gold epaulets decorated his shrivelled old shoulders, and a midddy's dirk dangled at his hip. He had a debonair appearance about him that was delightful, and one felt at once that he must necessarily regard Batchian with contempt. His proper sphere undoubtedly was the Row, where



PRAU OF THE SULTAN OF BATCHIAN.

with a good boot and an eyeglass he would have been a complete success. With him came the Kontroleur, Mr. Storme, for Batchian had at that time been recently made a Dutch station, and, wonderful to relate, an Englishman—the first and last we met with in our travels in this part of the world—an old Carthusian whose wanderings had extended even to New Guinea. Under his guidance we explored the town. At the back is a river, which we crossed by a neat bridge of split areca palm-trunks, and followed a narrow path leading through a dense sago swamp for a mile or more, which brought us to some plantations, both native and European. The *Batjan Maatschappij* have coffee and cacao

growing here. Of the latter there was a considerable quantity, and it was looked upon as likely to prove highly remunerative. Like that in Celebes and other parts of the Dutch Indies, however, it had suffered from a disease which causes the fruit to shrivel and drop off even after it has reached its full size. At the season of our visit there had been an improvement, and we found many of the trees looking extremely well and loaded with pods. These plantations were excellent collecting-grounds both for birds and insects, and we visited them several times on this occasion, and also on our return from New Guinea.

We divided forces at Batchian, and two of us taking Tahirun, Usman, and three other hunters, sailed for Obi with M. Monod de Froideville in the *Sing-Tjin*. The night was perfect in its loveliness, and the moon, which shone with a brightness unusual in the tropics, was mirrored almost unbroken in the surface of a wonderfully calm sea. Under such circumstances even the thought of bed is a direct insult to Nature, and we sat up far into the morning watching the faint loom of the dark mountain masses of the central island as we circled round it, for we had decided to land on the southern side. At daybreak we were able to run in towards the land, and a couple of hours later we anchored off the mouth of a small river, in a perfectly unprotected position, for, as far as is yet known, the island is without harbours.

Obi Major, the chief of the group, is a fine island about forty-five miles in length by twenty in breadth. The mountains of the interior reach a height of 5000 feet or more, but appear to be clothed with forest to their summits, as indeed is the whole island. Its shores abound in tempting-looking beaches, and the land is apparently both fertile and healthy. Yet, oddly enough, the group is totally uninhabited, the only instance of the kind in the whole of the East Indian Archipelago, and that too in spite of its central position. Now and then it is visited by Malay fishermen from Batchian, who build huts and remain for a week or two to smoke fish or catch turtle, but no permanent settlement exists, and it does

not appear that any people of Papuan race ever established themselves here, as was the case in Gilolo to the north, and the islands of Bouru and Ceram to the south.

The spot where we landed had been contemplated as the site of a future settlement, and with that end in view some tomatoes and pumpkins, as well as a few coconut palms, had been planted by the Kontroleur on a former visit. He was anxious to inspect them, and also to explore the forest for gutta and other trees of commercial value, and we started up the river at once. Although nearly sixty yards broad at the mouth, it soon became so shoal that we were unable to ascend it for more than a few hundred yards, and we accordingly disembarked and scattered in various directions through the jungle. Birds were numerous, and conspicuous among them small flocks of a little scarlet lory common enough in the Moluccas (*Eos riciniata*) flew from tree-top to tree-top, far beyond the range of a gun. Another lory of brilliant colouring (*Lorius flavo-palliatus*), peculiar to Batchian and the Obi group—crimson and olive, with a splash of golden yellow in the centre of the back—I could perceive in little parties of half a dozen or so, busily engaged in devouring the soft fruits of some species of *Ficus* just then ripening, and before many minutes I had a couple of specimens in fine plumage in my collecting-bag. But for a long time I could see nothing of the magnificent racquet-tailed kingfisher of which I was in search.¹ I tried some marshy ground by the river in vain, and was on my way to the seashore when I suddenly came across Usman, and to my great delight saw that he had got two of these rare and lovely birds slung at his breast—the method of carrying their spoil that the Malay hunters almost invariably adopt. I soon reached the spot where he had shot them. It was an untempting-looking bit

¹ This genus (*Tanyiptera*), which is so remarkable for beauty of colouring and the extraordinary length and shape of the tail, is confined entirely to the Papuan and Moluccan regions, and includes a dozen or more different species, almost all of which have the plumage of various shades of blue. Obi is furnished with a peculiar species—as it is in several other genera—discovered by Bernstein, the first and only naturalist visitor to its shores.



W. C.

II.

RACQUET-TAILED KINGFISHER.
(*Tanyiptera obiensis.*)

Page 237.

of forest, dark and damp and fever-suggesting, just at the edge of a mangrove swamp, whose trees were fighting with the jungle for mastery. The ground, bare of vegetation, was covered with a layer of greasy black mud, riddled in all directions with the holes of the little *Gelasimi* or Calling Crabs, who scattered before me in dozens at my approach, cracking their claws defiantly with that peculiar tiny snapping sound which alone would suffice to recall to one's mental vision with lifelike vividness every characteristic in such a scene as these mangrove-clad tropic shores present. I perched myself on a dry root clear of the fetid mud and waited. This time it was not in vain, for before I rejoined my companions on the beach I had shot three specimens of my much-desired prize. The Obi Island *Tanysiptera* has the head and wing coverts brilliant ultramarine, and the rest of the back and wings deep indigo. The entire under-surface of the body is creamy white, and the beak vermilion, while the median pair of tail feathers are greatly prolonged—to a length, perhaps, of nine or ten inches in full plumage. They are dark ultramarine in colour and very narrow, but terminate in a racquet-shaped expansion of snowy whiteness. I watched the bird sitting on the boughs a few feet only above the ground, motionless but for an occasional rapid movement of the head. Suddenly there was a flash as of a blue meteor descending to the ground, and a moment later the lovely creature had returned to his perch, and sat hammering away at the small crustacean he had found; the whole action reminding me strongly of that of the Bee-eaters.

Our hunters turned up one after another on the beach, and almost all of them had obtained the *Tanysiptera*, which must exist in tolerable abundance on the island. They had also several species peculiar to the Obi group, most noticeable among which was a gaily-coloured Parrot (*Geoffroyus obiensis*) closely allied to its congener (*G. cyanicollis*) of Batchian and Gilolo, and a miniature crow approaching the Paradiseidæ in form (*Lycocorax obiensis*), a curious genus exclusively confined to the Moluccas. Presently

the Kontroleur appeared, his natives carrying samples of gutta, of which, together with the dammar-producing tree, he had found an abundance. The only one of us who had met with any adventure was the captain's little dog "Tommy,"—a general favourite on board—who appeared in a dismal plight. He had accompanied me in my rambles, and while I was watching for the kingfishers, terrific howlings from an adjoining swamp had brought me to his assistance just in time to see a small crocodile flop back into the oozy water, leaving Master Tommy with a much lacerated hind leg, lucky enough to have escaped with his life.

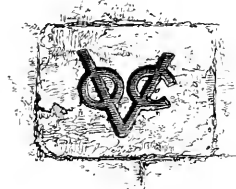
Near the mouth of the river we found three deserted huts, which had evidently been built by fishermen paying a passing visit to the island. Two of them were in ruins and half-overgrown with vegetation, but the other was in tolerable repair, and was furnished with raised sleeping-places and a quantity of bamboo shelves for drying fish. On the attap-wall a little cheap German print of a mother weeping over the dead body of her child still hung—a quaint and unexpected relic to find in a deserted hut on a deserted island.

We anchored next day in a bay at the west end of Obi, our object being to search for the ruins of an old fort supposed to have been built by the Dutch about two hundred years ago, of the existence of which the Kontroleur had heard from a native of Batchian who accompanied us. It was near a small river, for which we searched in vain from the ship, but landing and walking along the beach we at length struck it. On its right bank, hardly fifty yards from the shore, but completely hidden from observation, we suddenly came upon the ruin. It was a small building, hardly fifteen yards square, but the walls were fully three feet thick, and, with their height of nearly eighteen feet, must have been strong enough to withstand any attacks by natives. A few fruit-trees still existed, and faint traces of a path to the stream close by seemed to indicate that the place had been inhabited in later times, but now it was the picture of desolation. The jungle had

carried the fortress, and huge creepers had scaled the walls. Everything was dreary, dark, and dripping, and it was a relief to turn our backs on the place and emerge once more from the gloomy forest into the bright tropical sunlight. We looked in vain for any date—which it used to be the custom of the Dutch to place over the gateway—or for the later monogram of the “Vereendigde Oost-indische Compagnie.” It is said that years ago there were many people living on the island, but that the pirates caused its desertion. Our hunters were very unwilling to visit the group alone, though whether on this account, or from fear of ghosts or fever, I could not discover.

This end of the island yielded us very little, our progress inland being stopped in several places by sago swamps, which, from the traces of felled trees and the remains of old paths, appeared to be occasionally visited and worked. We shot a few small birds, but saw no more of the racquet-tailed kingfisher, and our only prize was a grand orchid of huge size, which was new to us—its long sprays of pea-green flowers spotted with black and yellow.

The Kontroleur, finding his explorations in search of gutta and camphor thus stopped, resolved to anchor farther to the north. We weighed and proceeded cautiously under the direction of the old native I have mentioned, passing between the mainland and Mala-mala, which, instead of a rock, as marked on the chart, we discovered to be an island at least three miles in length. It forms a breakwater to the east, but we were unable to find an even passable anchorage, and eventually let go in an awkward position off a small sandy beach, in the neighbourhood of which, according to our guide, both coal and iron existed. The former turned out to be lignite, of easy ignition and very light, and quartz rock containing an abundance of iron pyrites was common. From other



MONOGRAM OF
UNITED E. I. COMPANY.

parts of the island we brought away specimens of hard granitic rocks, hornblende, mica, and micaceous schist and jasper, and at one spot pure alum in tolerable quantity was found by one of our party.

Obi Latu—an island lying at the north-west end of Obi Major—was our next destination, and here we found an excellent bay, guarded at the mouth by an island, unmarked even in our Dutch chart, which the native called Pulo Kuching, or Cat Island. It was exciting work entering, the crystal-clear water, which was hardly more than four fathoms deep, showing large jagged rocks on the bottom, against which we momentarily expected to run, for the glare of the sun prevented our seeing any distance ahead. Luckily—for in these waters chance has considerably more to do with navigation than in our own—we reached our anchorage safely. It was a good one; well protected in all except easterly winds, and of importance as being the only harbour we found in the group. Our old guide, however, spoke of the existence of another, and a still better one, at the northern extremity of Tapa Island.

We landed our hunters on Obi Latu, and rowed out to Pulo Kuching, which a nearer investigation showed to consist of two islands in process of union by the action of the inevitable mangrove. At one part these trees had perished for a distance of a couple of hundred yards or more, and it would be difficult to imagine anything more grotesquely horrible than the scene they presented. The trunks were as black as if they had suffered from the ravages of a forest fire; dank, greasy, and covered with fungus. Some had fallen, and lay with their gaunt dead branches locked together to form an almost impenetrable barrier. Others still stood; so rotten that the slightest touch sent them crashing into the fetid ooze. The weird, gnarled roots—tougher than the trunks—still remained, forming a precarious network, which from its decayed condition was well-nigh impossible to traverse. Scrambling over these, bathed in perspiration and battling with swarms of mosquitoes that attacked me, at one moment slipping into the inky mud, at another creeping hazardously along a single overarching root, it

seemed to me that I had never got into a more horrible place. A living mangrove swamp at low tide is unpleasant enough, but, to enable my reader to realise a dead one, I should need the pencil of Doré, or the pen of Edgar Allan Poe.

Leaving Cat Island we coasted round our newly-discovered bay, and found it to be apparently quite free from shoals. At one spot, just inside the jungle, we came across a little hut containing an immense store of dried fish, left there no doubt by some Batchian fisherman until he could carry it off in a large prau. There were great quantities of a little sardine-like fish, done up for smoking in small bamboo frames, and our natives at once set to work and purloined hard, completely loading our boat with the spoil. Our excellent friend and skipper, Captain Hakkers, watched them, placidly smoking. When they had quite finished, he made them return it all, even to the last fish!

We sailed on the following day for Bisa, and landed at its extreme westerly point. It is a low and densely-jungled island, thus differing conspicuously from Obi and Obi Latu, the latter of which has some curiously sharp peaks, undoubtedly of limestone rock, at its northern end. The dried-up bed of a small stream permitted us to penetrate some distance into the forest, and we obtained some good birds, among them a brilliant yellow Thickhead (*Pachycephala obiensis*) and a couple of the fine Nicobar pigeon—a generally distributed, but at the same time uncommon bird in the Eastern Archipelago. It is almost entirely confined to small islands, where it is safer from the attacks to which its heavy build and terrestrial habits expose it. Its coppery green plumage and snow-white tail render it strikingly handsome, but the great development of the neck feathers, which are elongated into drooping hackles of considerable length, make it appear to the casual observer more like a gallinaceous bird than a pigeon. We stopped two or three hours only at Bisa, and arrived at Batchian the same night, having had a most enjoyable cruise; none the less pleasant from the sea having been of unruffled calmness throughout.

The Sultan of Batchian gave a dance in our honour upon our return. It was held in a long, attap-roofed room open on three sides, but capable of being closed by tatties of native cloth. At the upper end was a semicircle of seats, the centre one occupied by the Sultan, those to his left reserved for the bare half dozen of



GATE OF THE SULTAN'S HOUSE, BATCHIAN.

Europeans living in Batchian. Before our host a table was placed, with a quantity of excellent Manila cheroots, and some curious wines which claimed to have come from Bordeaux. The sides of the room were lined with seats two or three deep, those opposite the entrance being reserved for the ladies, and those facing them for the gentlemen. Rank is everything even in the island of Batchian, and a gap in the row of chairs served not so much to

permit of people passing into the next room as to separate the ladies of royal blood from those of inferior rank. Each of the former had an attendant sitting behind her, and was dressed in the usual *kibaya* and *sarong*, and covered with bracelets and other ornaments. Many of them were decidedly good-looking, and their magnificent gold-embroidered *sarongs* put the European dresses quite into the shade. The Malay races have almost everywhere adopted dances similar to our own, or at least adaptations of them, and a square dance resembling a quadrille, a sort of mazurka, and a "hop" waltz which formed the programme were not beyond our powers. It was an amusing experience to make the "ladies' chain" in company with a kris-begirt warrior smoking a Manila, but it was still more comic to watch our friend the Kapten Laut. The way the old gentleman flirted with his various partners, the desperate energy with which he danced, and the convulsive waggings of the epaulets and middy's dirk on his shrivelled old body kept us in fits of suppressed laughter for the whole of the evening.

The rest of our party had not been idle during our absence in the Obi Islands. Thanks to the kindness of Mr. Storme, the Kontroleur, we had been permitted to take in a fresh supply of coal from the Government stores—the last that we could expect to get to serve us for our New Guinea voyage. Some observations for the longitude corroborated those of the Dutch, placing "Fort Barneveld"¹ in Long. 127° 27' 30" E.; two miles eastward of the position assigned to it in the English chart. The anchorage off the village affords good holding ground, and is free of shoals. It is well protected except to the S.S.W., but a heavy swell not infrequently sets in from that quarter during the prevalence of the

¹ A fort was established by the Portuguese at this spot in the early part of the sixteenth century, but it fell into Dutch hands in 1539. The present building, which is of very small size and manned by half a dozen coloured soldiers, bears the date 1615 and the arms of Zeeland over the gateway. Just previous to our visit a fire had occurred during the unaccustomed business of saluting the Resident of Ternate, and little was left but the four bare walls.

southerly monsoon. Excellent water is obtainable, and we took advantage of it to fill up our tanks before our departure. The birds and insects collected had not been numerous, but we were more than satisfied with them, as among the former were several specimens of the Bird of Paradise discovered here in 1858 by Mr. Wallace—*Semioptera wallacci*, Wallace's Standard-wing—the only one of the Paradiseidæ found out of New Guinea and the true Papuan Islands. This bird is singularly unlike most of its family both in form and colouring. It is of a more or less uniform *café-au-lait* brown, fading on the wings into a delicate creamy buff. On the throat and breast is a shield of metallic feathers of emerald green colour, and of remarkable brilliancy, terminating on either side in a sharply-pointed tuft. But the leading feature of the bird—the striking peculiarity from which it takes its generic name—consists in two long oar-like feathers of creamy white springing from each shoulder, which, by means of a small muscle attached to the papilla of the feather-case, can be erected or depressed at will.

We obtained sixteen specimens of this curious and beautiful bird, which seemed to be fairly abundant in the neighbourhood of the village. The natives told us, however, that it was very local, frequenting certain parts of the forest only, as is the case with some others of the Paradiseidæ. It is also found in Gilolo, and, although our search for it proved unsuccessful, I cannot help thinking that a further exploration of Obi Major, which by its geological and other characteristics seems to be closely allied to Batchian, would add either this species or one nearly resembling it to its avifauna.

The common Malayan deer was numerous in the forest and plantations at this part of the island. It furnishes a permanent livelihood to a tribe of Gilolo Alfuros, who have been settled in Batchian for many generations. Living for the most part in the hills, they kill and smoke the deer, and bring the meat into the villages for sale. We were fortunate enough to witness and assist at one

of their hunts, in which no other weapon but the spear is used. The side of a large ravine which had been partially cleared, and presented a confused jumble of fallen trees and low brushwood, was assigned to us as our post, and from the extensive view it commanded we were able later in the day to watch one run almost from start to finish, although at first the sport appeared to be successful in every direction but our own. At length a stag broke cover about five hundred yards above us, and descended the slopes of the ravine, but shortly afterwards turned and made for the forest again. He was met by some of the hunters and driven back, but the dogs were now in full cry, and pressed him hard, the hunters meanwhile racing at their utmost speed above, in order to prevent his regaining the jungle. He now altered his direction, and turned down once more towards us, but the fallen trees were here so thick that the dogs rapidly gained on him. He made one more effort for his life by doubling, but it was too late, and in another moment the dogs and hunters had fairly run him down.

The natives who make their living in this manner are, as may be imagined, capable of undergoing a great amount of fatigue, but it is not an uncommon thing for them to die of sheer exhaustion during a hunt. One of our Batchian friends told us that he had actually witnessed such a case himself, and had also been present on another occasion when a hunter had died under similar circumstances. They apparently begin to learn their trade early, for we noticed among our party two boys of nine or ten years of age, who, unencumbered with any clothing whatsoever, and carrying a little spear, managed to keep up with the others, and to be in at the death of the stag. The dogs are most carefully trained, and are always rewarded by the head of the animal, and it was only after much discussion that we were in this case allowed to take the trophy.

It was at Batchian that we first saw sago in process of manufacture by the natives, and it was interesting to note that the method employed was almost identical with that described by Mr

Wallace as in use in Ceram. The tree itself furnishes almost all the necessary apparatus. One of the large leaf-stalks ensheathing the trunk at the base, when placed horizontally and supported two or three feet above the ground, forms a deep trough, at one end of which is a sieve or strainer. This is very ingeniously constructed from the dense mat of dark fibrous substance found at the base of the leaf-stalks. Scraped and teased out until of the necessary mesh, it is kept stretched tense by means of an elastic stick bent over and fastened to the top. The crushed pith is mixed with water in the trough, stirred up and down, and pushed toward this sieve. Passing this, it runs along another palm-stem gutter, which is blocked at the farther end by a handful of the same coir-like substance as that forming the first strainer, and the liquid then falls into a canoe, slightly tilted so that an overflow of tolerably clear water takes place at one end, while the sago is deposited as a pasty substance at the bottom. The raw starch thus obtained is afterwards dried and baked into small cakes or biscuits five or six inches square, which are tolerably palatable and well adapted for a traveller's use, owing to their portability and the amount of nourishment they contain, but the flavour is very different from that of European sago. The double washing, granulating, and roasting which the latter undergoes renders it more attractive in appearance, but robs it somewhat of the characteristic taste of the native article.

We had obtained but two specimens of the Nicobar pigeon during our visit to Obi, and hearing from a native that the Weda Islands, upon which he had once landed while on a fishing expedition, abounded in these birds, we determined to visit them on leaving Batchian. They are an uninhabited group of coral islands lying a few miles off the southern extremity of Gilolo, very numerous, but of no great size, the largest—as far as is known—being not more than four or five miles in length. Their position being purely conjectural, we approached them with caution, but it was to all appearances unnecessary, for there were no signs of

outlying reefs, and the deep blue water ran up to the very edge of the coral. We sought for an anchorage in vain. For some time we obtained no bottom at one hundred fathoms, and as our best cast only offered us a depth of fifty-two fathoms within a few yards of the reef, we had to be content to land for a few hours, while the yacht remained under way a mile or two off the coast.

The little archipelago extended to the west and north; a nest of low and thickly-wooded islands with belts of yellow sand surrounding them. That on which we landed was of no great breadth, and on crossing to the farther shore we found that a reef, just flush with the water, ran apparently for an interminable distance to the eastwards, dotted here and there with tiny islets. Three or four miles away a faint white line was visible, and a dull roar as of distant thunder told us—the chart to the contrary notwithstanding—that it indicated the limit of the group in that direction. There is always a strong element of fascination about an uninhabited island, more especially if it be unknown or nearly so, and our ramble was a very enjoyable one, although hardly as productive as might have been expected. We did not find a single specimen of *Calocnas*, as we had hoped, but other pigeons were extremely abundant. Notable among these was a *Carpophaga* of large size and shining green plumage (*C. myristicivora*), interesting from the fact that it has hitherto been supposed to be confined to New Guinea and the true Papuan Islands. We shot two specimens of a cuckoo almost identical with our own well-known bird—its Eastern representative, in fact—but our chief prize was a new scarlet lory of great beauty, closely allied to *Eos viciniata* of the Moluccas, and intermediate between the latter and a bird of the same genus discovered by Mr. Wallace in Waigiou.¹ With this single novelty we had to be content, for without an anchorage a longer stay on the islands was impracticable. We therefore re-embarked and sailed the same evening, setting our course between Popa and the Kommerust group for the islands of New Guinea.

¹ *Vide* frontispiece, vol. ii.

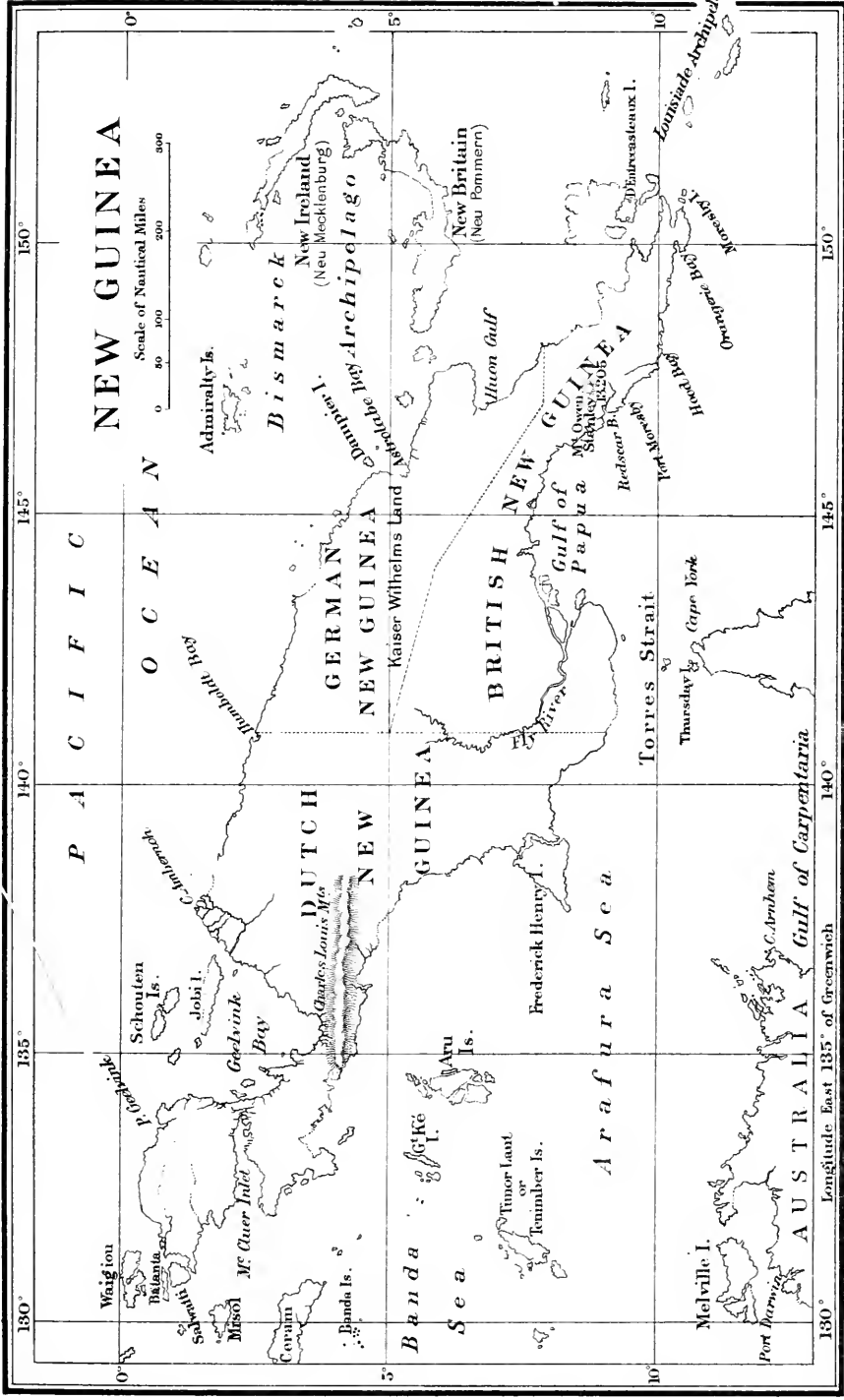
CHAPTER XI.

NEW GUINEA.

Division of New Guinea—The *Rajah ampat*—Land on Salwatti—An anxious night—Our first Bird of Paradise—Batanta Island—The natives—Discover Marchesa Bay—Obtain Wilson's Bird of Paradise—The Batanta Papuans—Momos, Waigiou Island—Ascend the Waigiou Gulf—Pigeons and parrots—Alfuros of Waigiou—The Red Bird of Paradise—Night in the forest—Scenery of the Gulf—Rambles round Momos—A regal trader—Napriboi—Zoological characteristics of Batanta and Waigiou—Sail for Geelvink Bay.

OUR visit to New Guinea was to be confined to that portion claimed by the Dutch—the western half—which, from the variation in species from island to island and the peculiarity in the distribution of the Birds of Paradise, is perhaps the most interesting to a naturalist. It is here too that the Papuan exists as a pure type, unmixed with Mahori blood, as is the case in some places in the Eastern peninsula. Another, and not the least important of our reasons for selecting Dutch New Guinea, was that it was the nearest and most accessible part of the island. The *Marchesa* had already been two years in commission, and we were anxious to lose no time.

The Dutch boundary line, which coincides with the 141st degree of E. longitude, includes what is without doubt the finest portion of the island. Although but little explored, it is known to abound in excellent harbours; the coast-line is deeply indented by the Macluer Gulf and Geelvink Bay; it boasts of several rivers, one of which—the Amberno—is of great size; and the interior is traversed by mountain ranges which in the distant future are no



NEW GUINEA

Scale of Nautical Miles
0 40 80 120 160 200

150°

145°

140°

135°

P A C I F I C

O C E A N

150°

145°

140°

135°

Longitude East 135° of Greenwich

Admiralty Is.

Bismarck

New Ireland
(Neu Mecklenburg)

Dampier Is.

New Britain
(Neu Pommern)

GERMAN
NEW GUINEA

Kaiser Wilhelms Land

Milne Gulf

BRITISH
NEW GUINEA

NEW GUINEA
Gulf of Papua

Open Sea
S. 135° 30' E.

Redoubt Bay

Van Moresby

Torres Strait

Thursday Bay

Cape York

Melville I.

Port Darwin

A U S T R A L I A

Gulf of Carpentaria

Waigiu

Schouten Is.

Jobi I.

Goodwin Bay

St. Michaels

Mt. Quer Jaré

Coram

Banda Is.

Banda Sea

G. Ké I.

Aru Is.

Timor land
or
Tennimber Is.

A r a f u r a S e a

Frederick Henry I.

Standard. Geog. Estab. London

doubt destined to be the site of plantations equal in value to those of Java. The Arfak range which lines the western shore of Geelvink Bay attains a height of about 10,000 feet, and the Charles Louis mountains are the only instances in tropical Asia where the limit of perpetual snow is reached. British New Guinea, the southern division of the eastern half of the island, has also a high range in the interior of the south-eastern peninsula—the Owen Stanley mountains, but the rest of the country is for the most part flat and unhealthy, and the coast is encumbered with coral-reefs. Of the German territory little is at present known, except that a vast stretch of mountain and table land exists at no great distance from the sea.

A glance at the map shows four large islands lying off the north-west extremity of Dutch New Guinea—Waigiou, Batanta, Salwatti, and Misol—all truly Papuan, as is evidenced by the shallowness of the water separating them from the mainland, and by the character of their fauna. These, together with a certain portion of the adjacent northern coast, are known as the *Rajah ampat*,¹ and are nominally under the jurisdiction of the Rajah of Gebi—an island lying a little farther to the west. This potentate holds his authority from the Sultan of Tidor, who in his turn is a vassal of the Dutch, and it was chiefly in virtue of this fact that the latter assumed the suzerainty of Western New Guinea, to which, however, the voyages and explorations of Schouten, Vink, Joannes Keijts, and a host of other navigators thoroughly entitle them.

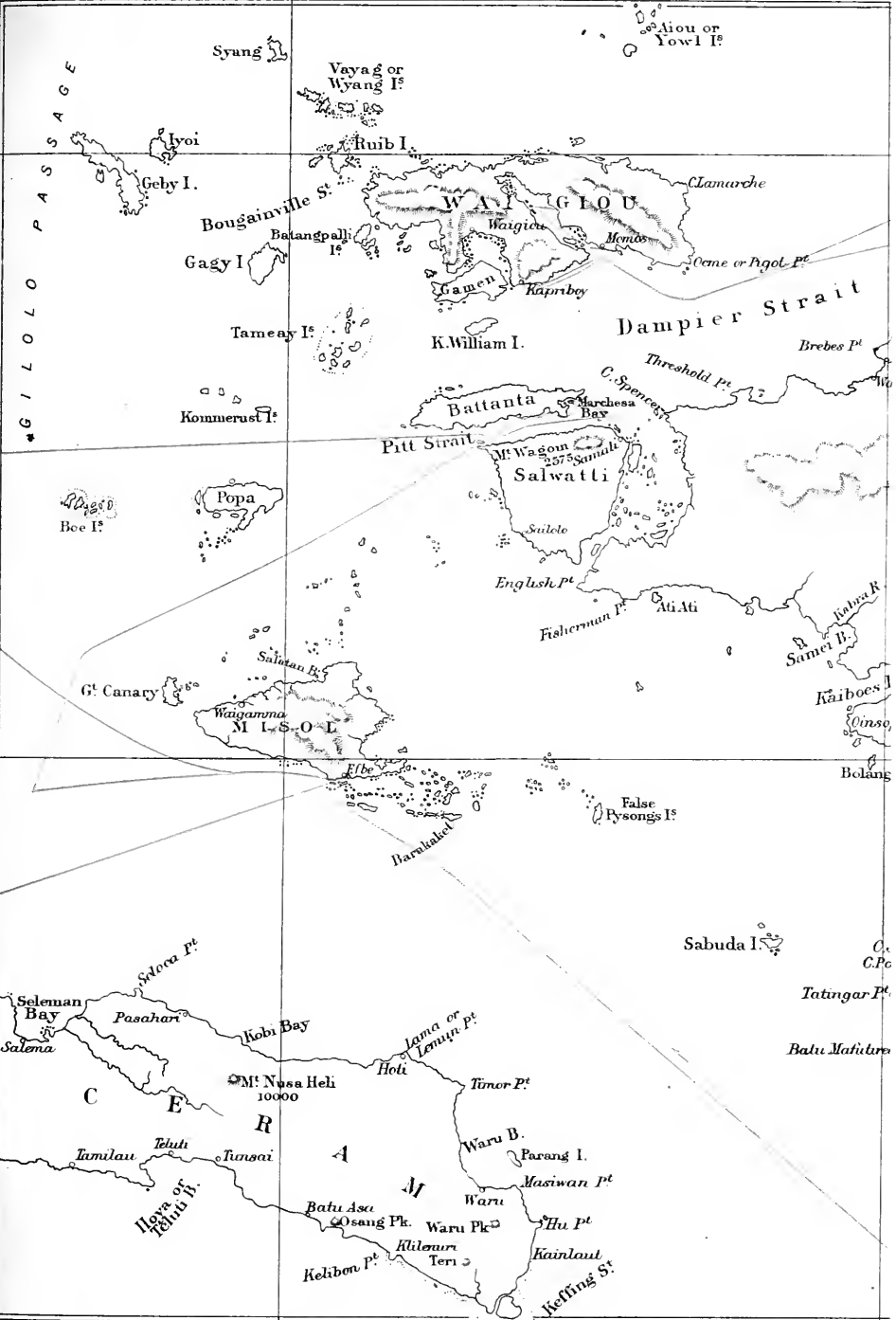
In the whole of the vast extent of country which thus forms the eastern limit of the Netherlands India there is not a single Dutch settlement of any kind. In 1828 a post was established at Triton Bay, but the unhealthiness of the climate and other reasons caused its abandonment seven years later, and, though it is occasionally visited, it has never since been permanently kept up.

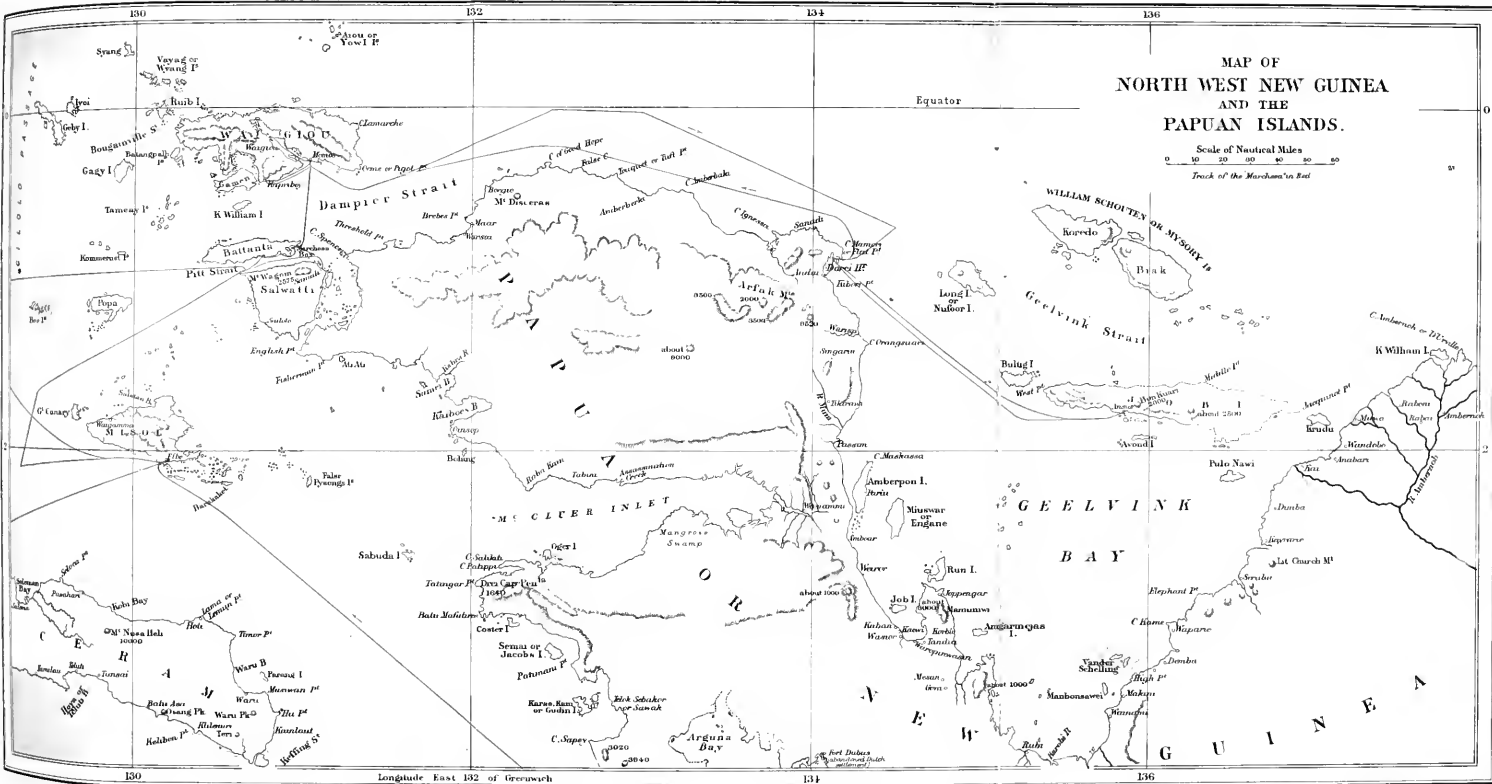
¹ The *Rajah ampat*, or four Rajahs, are those of Waigiou, Salwatti, and Lelinta and Waigamma in the island of Misol, but the term has come to be applied to the districts owning their authority.

But at Dorei, in Geelvink Bay, a mission has been in existence since 1855, and, in spite of the converts having been little in excess of those who have sacrificed their lives in the cause, still continues its work. Here and in the neighbourhood are five Dutch missionaries—the only Europeans in the country—whose acquaintance we made at a later period of the voyage. Shattered in constitution from the pernicious climate, and depressed by the non-success of their work, their condition appeared to us deplorable, and one could not help regretting that their labours were not transferred to some more satisfactory field.

The long and lofty island of Batanta, which is separated from Salwatti by the narrow Pitt Strait, was the first land we made after leaving the Moluccas,—a dark green, shoreless mass of jungle looming through heavy rain-clouds. It is supposed to be uninhabited, but two or three huts were visible at the south-west end, and a further acquaintance with the island revealed the existence of two other small villages. Our intention was to anchor off Sagoien, an island at the entrance of the strait lying close to Salwatti, but not finding any anchorage, we eventually let go in the narrow strait which separated them,—a strip of water hardly three hundred yards across—and shortly afterwards I stepped ashore for the first time in the land of the Bird of Paradise, an event to which—without any hope of its being ultimately realised—I had looked forward from my earliest childhood.

As is usually the case under these circumstances the actuality was disappointing. The woods were gloomy and dripping, and birds were to all appearances non-existent, for owing to some difficulties we had with our hunters, the best part of the day was over. They had refused to go ashore, alleging that the natives were not to be trusted at this place, the malcontents being headed by Lokman, a man whom we afterwards found out to be a most incorrigible shirker. Luckily, however, we were helped out of our difficulty by Tahirun, who declared without much circumlocution that he lied, and we packed them off at once, telling them that





MAP OF
 NORTH WEST NEW GUINEA
 AND THE
 PAPUAN ISLANDS.

Scale of Nautical Miles
 0 10 20 30 40 50
 Track of the Marchant's Red

Longitude East 132 of Greenwich

supplied as they were with guns and "gun-medicine,"¹ they should be more than a match for any number of Papuans.

On entering the strait we had encountered a very strong tide flowing westward, but finding slack water at the anchorage, we had not anticipated any danger on this account, although the precaution of laying out hawsers astern had been taken. We turned in early, but were not destined to remain long undisturbed, the watch calling us on deck just after midnight. A current like a mill-race was setting past us, and catching the yacht on the port side, put such a tremendous strain on our stern hawsers that we were obliged at once to let them go. We then began sheering about in the wildest manner, tugging and straining at our anchors most unpleasantly, and dragging them from time to time. After a little while, however, they appeared to hold, and in an hour or two the tide slackened, for which we were not sorry. Our first night in New Guinea waters was an uncomfortable and anxious one, and it was nearly 5 A.M. before we were able to turn into our bunks again.

Our hunters next morning were more fortunate in their shooting, and among other birds brought in a young male of the exquisite little King Bird of Paradise, wearing a sober coat of dull brown like the female, instead of the brilliant red and metallic green of the adult bird. Usman appeared tottering beneath the weight of a large Cassowary (*C. unoappendiculatus*), its hairlike plumage almost black over the back; the neck and throat blue. The single small wattle and the lower part of the neck were yellow. It was the only bird of this genus that our hunters shot in New Guinea, but we afterwards obtained three live specimens in Andai and the Aru Islands.

In spite of these successes, we were anxious to leave so insecure an anchorage as soon as possible, as the tide had again begun to make with great strength, and weighing shortly after mid-day, we crossed the strait to Batanta in search of shelter. We cruised along slowly, as close inshore as we dared, and after one

¹ *Ubat-bedil*, lit. gun-medicine, is the Malay term for ammunition.

or two unsuccessful attempts, at length found an excellent little harbour in a small bay protected by a reef at the entrance. Here we anchored in perfect safety in seventeen fathoms, within stone's throw of the shore.

From a little village a short distance to the eastward a few canoes put off to visit the ship, and we made acquaintance for the first time with the true mop-headed Papuan. No better description of his character could be given than that in Mr. Wallace's "Malay Archipelago." Arriving in New Guinea after a prolonged visit to the Malayan region, the differences between the two races are striking to a degree. These men, at first a little mistrustful, soon shook off whatever shyness they were possessed of, and clambering boldly up the side, overran the deck, talking and shouting loudly, and examining the many novel objects they saw around them. The striking of the ship's bell astonished them greatly, and was the signal for a burst of cheering, or for a noise which doubtless served as such in Batanta "meetings." They were apparently only acquainted with two Malay words, one of which—if I may be allowed the Hibernicism—was Portuguese (*faca*, knife) and the other cosmopolitan (*tembaku*), but for both of these articles they seemed anxious to barter some shells of the common Pearl Nautilus, and half a dozen coconuts—the latter a rarity in this part of the world. A roughly-carved wooden pillow or head-rest, much like what may be met with in any hut among the Zulus, lay in one of the praus alongside, and I began to bargain for it. The owner immediately asked for three knives, and on my refusing with an emphatic *tida*, indicative of astonishment and disgust at the exorbitant demand, the bystanders mimicked voice and gesture to perfection, and burst into shouts of laughter. The bump of veneration appears to be entirely absent from the cranium of the Papuan, who, as far as the white man can judge, is a noisy, ebullient gentleman of distinct socialistic tendencies, though not without a pretty humour of his own, as the following story will show. Its truth was vouched for by some of our Dutch friends.

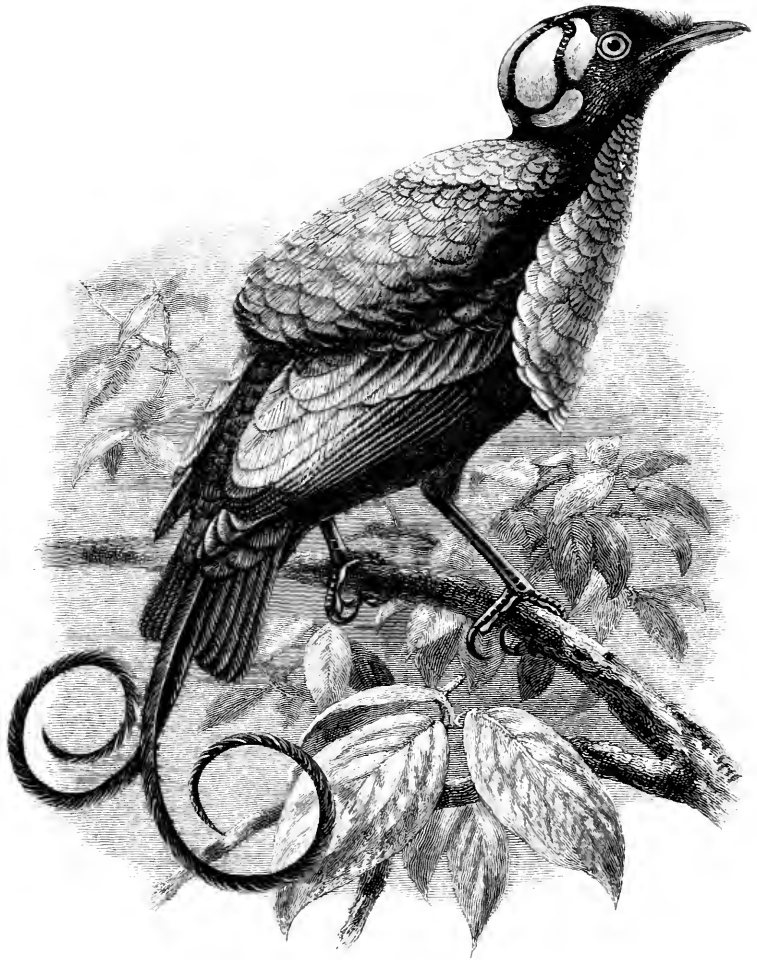
During a cruise of a certain gun-boat on the northern coast of New Guinea a village was touched at which, up to that time, had never been visited by Europeans. The captain, anxious to impress the untutored savage, arrayed himself in full uniform and landed in company with the surgeon, who was similarly attired. The natives crowded down to meet them in hundreds, and appeared tolerably trustworthy, but before long intimated that they were to pay a visit to the chief's house. This the captain resisted, fearing treachery, but in spite of his endeavours they were carried off, and his guard prevented from following. The hours passed away without a sign of the officers, and the boat's crew waiting for them began to fear the worst. Suddenly a crowd was seen approaching. It parted, and disclosed the gallant captain to his astonished sailors, bereft of his uniform and dressed in alternate stripes of red and white paint!

The south coast of Batanta yielded us very little in the shape of birds or insects, the jungle being so thick as to bar our progress at every step. Collecting in localities of this kind is useless, and we weighed anchor on the following day to try farther to the eastward, coasting slowly along about a mile from the shore. At the extreme east end an unexpected gap in the coast revealed a deep bay beyond, but the entrance when viewed from the mast-head was evidently impassable, being beset with reefs and shoals. Steaming still farther, however, we were delighted to find another entrance devoid of dangers, and on steering in, we passed the island at the mouth on the port hand and entered a fine bay nearly four miles in depth. On its northern shore were, as we afterwards discovered, three admirable secondary harbours, but wishing to take advantage of every breath of air, we anchored at the head of the bay in seventeen fathoms, in as snug a berth as could be wished for.¹

¹ This bay, which we named after the yacht (Admiralty chart, No. 912), is a most useful anchorage for vessels going through Pitt Strait, where the tides are so strong that, if adverse, the passage is almost impossible.

Our first ramble on shore was attended with but little success. We searched in vain in one of the lesser bays for a patch of beach on which to disembark, but the mangroves, which in these regions obliterate utterly all boundary between sea and land, met us at every turn, and ultimately, scrambling over their slimy roots and struggling up to our knees in the liquid ooze, we had to reach *terra firma* as best we could. The land rose steeply from the sea, and the jungle, dripping wet from the heavy rain which we had almost constantly experienced since our arrival in New Guinea, rendered our progress anything but comfortable. Forest rambles such as these, it must be confessed, are somewhat trying to the temper. Wet through with perspiration, each yard makes the already streaming traveller, if possible, still wetter, for every leaf encountered pours a little bucket of water upon him as he struggles through the mass of creepers that bar his path. Shooting and walking cannot be combined under such conditions, and almost the only method for the naturalist to obtain specimens is to post himself under some tree in fruit, and to wait patiently until the birds that are feeding upon its summit happen to come within range of his gun.

We returned rather disappointed to the yacht, and found that some of the hunters had already got back. They had shot nothing of any particular interest. Presently, however, Usman and his *compagnon de chasse* appeared, triumphant, carefully carrying a prize that we had hoped, but hardly expected to obtain—the curious and exquisitely lovely little *Diphyllodes wilsoni*, smallest of all the Birds of Paradise. Behind the head a ruff of canary-coloured feathers stands erect above the scarlet back and wings. The breast is covered by a shield of glossy green plumes, which towards the throat are marked with metallic green and violet spots of extraordinary brilliancy. The two centre feathers of the tail, prolonged for five or six inches beyond the others, cross one another, and are curved into a complete circle of bright steely purple. But the chief peculiarity of the bird is in the head, which is bald from



II.

WILSON'S BIRD OF PARADISE.
(*Diphyllodes wilsoni*.)

Page 255.

the vertex backwards, the bare skin being of the brightest imaginable cobalt blue.¹ The *bizarre* effect thus produced is still further heightened by two fine lines of feathers, which, running lengthways and from side to side, form a dark cross upon the brilliant azure background. I could hardly make up my mind to skin this little ornithological rainbow, whose exquisite plumage it seemed almost a sacrilege to disarrange, but the climate of New Guinea allows of but little delay in this operation, and I set about my task at once. The bird had been scarcely injured by the shot, and I succeeded in making a perfect skin of it. We also added a hen bird of the same species to our collection. Its plumage is of a sober brown, as is the case with the females of all the *Paradisæidæ*, but like the male, the bare head is blue, although not nearly of so bright a colour.

Wilson's Bird of Paradise, which we had thus been the first Englishmen to obtain—the naturalists Beccari and Bernstein being the only others who have been fortunate enough to meet with it in its native haunts—is entirely confined to Batanta and Waigiou Islands, but though we afterwards shot it on the latter, it would seem to be much rarer there, and during Mr. Wallace's two months' visit he failed to obtain it. We found it frequenting trees of no great height at an altitude of seven or eight hundred feet above the sea, and there is no doubt that, like many of the family to which it belongs, it is very local in its distribution. This localisation is not necessarily permanent, but seems to be dependent rather upon the abundance in certain spots of the fruit in season, for most of the Birds of Paradise are in the main frugivorous, although occasionally varying their diet with insects.

We remained four or five days in Marchesa Bay, and were fortunate enough to secure ten specimens of the *Diphylloides*. Of the Red Bird of Paradise (*Paradisca rubra*), which also inhabits

¹ The figure in Gould's "Birds of New Guinea" gives no notion of the extreme brilliancy of the colouring of this part. It begins to fade almost immediately after death, is quite dull in four or five hours, and by next day has become entirely black.

Batanta, we shot four females and a young male. The full-plumaged male appears almost always to keep separate from the females, and we did not meet with a single one. Our spare time was fully occupied in making a sketch survey of the bay. Near its southern shore is a small islet, where a few Papuans had established themselves in a couple of little huts, which bore no resemblance whatever to the large, turtle-backed structures characteristic of the dwellers on the mainland and in Jobi Island. These men, who were evidently of unmixed blood, averaged from five feet seven to five feet nine inches in height, and were well built about the chest. The hair, though worn in the usual mop, was perhaps hardly as full as that of the natives farther east. These huge crisp mops, which in their fullest development are as large as a guardsman's bearskin, and not unlike it, are alone sufficient to prove racially the distinctness of the Papuan. The hair is curiously stiff and wire-like, so much so that if the hand be laid on one of these compact and elaborately-tended coiffures, it meets with almost as much resistance as it would if pressed against a short-clipped European beard. The nose would be prominent if Nature allowed it, but, though it is in no way flattened, the tip is rapidly compressed towards the face, and the *alæ nasi*, being attached at a higher level than in the European, leave exposed a large surface of the septum, and the result is a certain Mephistophelian expression which is somewhat unpleasant. The legs, forearm, and chest are partially covered with short crisp hair, but the beard and moustache are scanty. One man in Marchesa Bay had a pair of pincers and plucked out any hair that displeased him, being evidently well acquainted with the looking-glass, but one of the sailors happening to show a mirror to a native on the south coast, the man gave a yell of terror which showed that it was his first experience of the article. None of the Batanta natives had the nose bored, but the ears were pierced and ornamented with small earrings of brass wire. The dress was a mere T-bandage of Malay cloth, the end passed once again round the body and left dangling in front or at the side. Of that of the

women I cannot speak, as they were kept carefully out of our sight. The only tattooing that adorned their dark chocolate-brown bodies consisted in a few raised moxa-produced marks upon the chest, whose meaning, if they had any, we did not discover. In Dorei Bay they were a mark of distinction, only borne by those who had been on voyages or expeditions against their enemies.

The Papuan type is, on the whole, by no means a bad one, the jaw being far less prognathous than in the African negro, and the lips much thinner. The muscles of the leg, however, as in the latter people, are very ill-developed, though the foot is but little



WOODEN INSTRUMENT FOR STIRRING SAGO.

spur-heeled. One characteristic of the race has not, as far as I know, been remarked upon—the peculiar odour attaching to the individual. This is quite *sui generis*, so far as my experience of natives goes, and utterly unlike that of the African. There would not be the smallest difficulty in recognising them in the dark merely by the sense of smell.

The ornaments of the Batanta Papuans were limited. They wore shell bracelets made from the *Tridacna* or *Conus*, and tight armlets of finely plaited grass, two or three inches in width, above the biceps. These served in lieu of pockets, for beneath them they tucked any little article they obtained from us, or their cigarettes, which, like the ordinary Malay *vokos*, were rolled in the delicate young leaf of some species of palm. One or two firebrands at which to light them were carried in every canoe. The canoes were outriggered on both sides, and provided in the bows with

a turtle harpoon and line, the latter coiled up neatly in a little basket. Amidships lay the bamboo fish-spears, of a kind in use in most islands from the South Seas to Singapore, split at the top into five or six points, which are provided with barbs pointing inwards. They can either be shot from a bow, thrown, or used for stabbing. A bow and a bundle of arrows almost invariably completed the equipment.

While in Marehesa Bay we got quite friendly with an elderly and mild-mannered savage, who had also visited us at our former anchorage. He came on board every day and spent hours in examining the ship and her fittings, carrying his little son on his back meanwhile, as the sight of Dick, our large black retriever, terrified him greatly. We tried two or three times to photograph them, but they evidently did not like the operation, and our plates were failures. Finally we succeeded in getting an instantaneous portrait of them as they sat in the canoe, unconscious of what was taking place. From this old fellow, who knew a few words of Malay, I obtained a small vocabulary. The language, as I afterwards found, is identical with that spoken on the neighbouring coasts of the mainland, and the islands of Misol and Salwatti.¹

On the 23rd of October we left Batanta for Waigiou. In the Dutch chart the ominous word *Gevaeren?* (dangers) and a little phalanx of dots and crosses indicated that for more than eight miles off the east end of the former island a network of rocks and reefs was supposed to extend. Captain Hakkers of the *Sing-Tjin* had, nevertheless, told us that the passage northwards was feasible by keeping tolerably close to the island, and we resolved to attempt it. Just at the most doubtful part, having caught sight of the bottom beneath the ship, a tremendous storm of rain burst upon us, so thick that we could hardly see a dozen yards ahead. We had been going dead slow before, but now stopped entirely until the weather cleared. This it did shortly afterwards, and we proceeded without further incident. The passage is probably fairly

¹ *Vide* Appendix V. p. 383.

clear, but there is no doubt that shallow water connects Batanta with the reef that is known to exist seven or eight miles farther to the east.

Our course lay due north to Momos, a village on the south coast of Waigiou just east of the entrance of Chabrol Bay, a narrow gulf twenty-six miles in depth which almost cuts the island in two. It is the residence of the Rajah, who, with a handful of Malays, leads a miserable existence, living upon a diet that is hardly better than that of the Papuans around him. The traveller in New Guinea who is dependent upon the country for his food, must make up his mind to a fare which is probably unequalled in its meagreness by that of any country in the world. Rice, fowls, eggs, coconuts, bananas, and half a score of other pleasant fruits—all these, which in the Malay region are easily obtainable, are here unknown, at all events in those parts where Malay influence has not penetrated, and the *menu* is reduced to sago and fish, with not too much of the latter. In Momos, however, there are a few fowls and such like delicacies, and we had not been long anchored before two or three praus visited us with what little was to be obtained in the way of food. Bartering is a tiring business. One man, perhaps, brings two eggs, another a lime, and so on. Batanta, if I remember rightly, produced us four eggs, for which we paid a needle apiece. At Momos they were rather dearer, but for a common fourpenny clasp-knife we readily obtained two fowls.

The Rajah was away at the time of our arrival, having gone on a cruise to Saonek and Napriboi, two villages farther west along the coast, but he returned on the following day, and we handed him our letter from the Sultan of Tidor—an important-looking missive enclosed in a yellow silk cover. We requested him at the same time to provide us with a large native prau and men, in order that we might ascend the Chabrol Gulf. He seemed anxious to help us in every way, and it was arranged that we should start the next evening.

The village of Momos is a miserable-looking place, boasting of

fifteen or twenty huts only, all of which are built on shore, contrary to the usual custom in this part of the world. The sea appears to be gaining on the land at this spot, for the black stumps of trees of some size can be seen beneath the water a few yards from the beach. The village had only been in existence three years, and neither coconuts nor bananas were to be had, although both were in course of cultivation. The clearing was only a few acres in extent, and a small swamp and dense jungle hemmed it in at the back. On the outskirts, where the fallen trees had remained unburnt, beetles were abundant, and we added several interesting species to our collection. One of the handsomest of all the Eastern bird-winged butterflies (*O. poscidon*, or some closely-allied species) was out in some numbers, and we caught several, though unfortunately their magnificent golden-green wings were in most cases torn and dilapidated. Butterfly-hunting in New Guinea, or indeed in any tropical jungles, is of all pursuits the most trying to the temper. These strong-winged Ornithoptera dash through the woods at a pace that seems intended as a direct insult to the unhappy naturalist, who, with every movement hampered by rattans and other climbers, can hardly, even by a stretch of the imagination, be said to be in pursuit of them. In some ways, perhaps, it is less tiring than shooting. Given a thick jungle, trees 200 feet high, and a mushroom-helmeted sportsman, it will be seen that comfort and a large bag are incompatible. A long training in the Sistine Chapel is necessary for this work. Absurd as it may seem, my spine in the region of the neck eventually became so sore that I was on more than one occasion compelled to give myself a rest.

In the afternoon the Rajah came off in his prau, flags flying and tom-toms beating in the usual approved fashion. He was accompanied by his only child, evidently a great pet,—a nice little fellow, whose heart we won by the present of a small musical-box. We had a long *bichara*, and learnt that the praus—for we were to have two—were to be ready for us the same evening. We



had settled to divide our party, one of us remaining with the yacht at Momos, while the others, taking six of the hunters, were to explore Chabrol Bay; and accordingly just before midnight we got our necessaries on board the boats and started.

Our prau was manned by ten men, two of whom were Malays, the rest coast Papuans of mixed descent, and half-breeds of Papuan and Malay parentage. We were lulled to sleep by the monotonous splash of the paddles, and early on the following morning awoke to find ourselves lying in a small mangrove harbour on the western shore of the gulf, at the mouth of a little stream. We worked the forest from sunrise till late in the afternoon, and on reassembling at the praus and laying out our spoil found that we had not done badly. Among the parrots were the curious *Aprosmictus* (*A. dorsalis*), gorgeous in crimson and cobalt dress, with a broad and graduated tail nine or ten inches in length; the still more brilliant *Lorius lory*, which was perhaps the most common of any; and Wallace's *Eos*—a brush-tongued lory of great beauty. In New Guinea the pigeons, equally with the parrots, have their fountain-head, and the number of species is marvellous. The Pigmy Doves are especially numerous, and exhibit a diversity of colouring that an Englishman accustomed only to the sober plumage of European species would hardly credit. The "lively iris" which "changes on the burnished dove" is indeed almost entirely absent from the tropical genus (*Ptilopus*) to which I refer, but it is replaced by yellow, orange, scarlet, mauve, magenta, and a score of other shades which perhaps are not equalled in any other family for variety. On this occasion we had the largest and the smallest of the pigeons among our collection—the huge Goura or Crowned Pigeon, now a familiar object in the Zoological Gardens of almost every capital, weighing perhaps four or five pounds, and a tiny *Ptilopus* (*P. pulchellus*), the size of a lark, grass-green in colour, with the forehead bright magenta.

Two or three hours before daybreak we again started, in spite of having been up far into the night skinning and making notes of

our specimens, and after some hours' paddling arrived at a little village of four huts built over the water and connected with the shore by rough bridges. The inhabitants were Papuans, apparently of pure blood. This place which lies about eighteen or twenty miles from the mouth of the gulf and on its western shore, also afforded us some good birds, but as we could see and hear nothing of the Red Bird of Paradise, of which we were in search, we left it late in the evening and crossed the gulf in a south-easterly direction for a small river known to our men. The weather had hitherto been favourable—a rarity in these islands, where daily rain appears to be as much the rule as the exception,—but when half-way across a heavy thunderstorm burst over us, and the rain descended in a perfect deluge. We had taken the precaution of getting most of our belongings under cover before it began, but even in the steamy heat of the New Guinea climate rain is almost as unpleasant and chilling as it is elsewhere, and we were glad enough when it had ceased. A little later we sighted the shore through the darkness and came to anchor.

At daylight we found the mouth of the river, which, as far as we could judge, appeared to be the Ham River of the officers of the *Coquille*.¹ We ascended the stream, which was of no great size, for about two miles, and came to a village of four huts. The natives here were Alfuros² or aborigines, distinct even from the Waigiou Papuans of unmixed blood, but dressed in the same way and wearing the same ornaments of plaited grass and clam shell, which indeed seem to be common to all of this race. Mr. Wallace did not meet with these people, and indeed tells us that Waigiou “possesses no Alfuros,”³ but there is no doubt of their existence, and I was able to obtain a small vocabulary of their language. There are altogether three languages or dialects spoken in Waigiou.

¹ Duperrey, during his voyage in this ship, partially explored Chabrol Bay, but it does not appear to have been visited since.

² This is the general term in use in the East Indian Archipelago for aborigines, and has no ethnological signification.

³ *Op. cit.* p. 528.

The coast patois I have already alluded to. It supplies, as it were, the place of Malay as a general means of communication, and is in use on the seaboard of the greater part of North-west New Guinea. It appears to be Nufoor with an admixture of various foreign words. But, in addition, most of the islands—Waigiou among the number—have each a distinct language spoken by the coast dwellers, which in its turn differs from that of the Alfuros or wild inhabitants of the interior. I was unfortunate enough to lose the greater portion of the vocabularies collected in Waigiou, but the few words I have given in the Appendix show sufficiently the distinctness of these three languages.

These Alfuros were phtheirophagous, going over the dense mat adorning their heads with the most praiseworthy perseverance; layer after layer being worked through systematically with the aid of a long bamboo comb. Their method of obtaining fire was new to all of us, the spark being struck from the hard, siliceous exterior of the bamboo and a fragment of pottery, which latter article they had probably obtained from the coast tribe.

We searched the woods in vain for adult males of the Red Bird of Paradise. Females and young males, which cannot be distinguished from one another, were to be met with tolerably frequently, and we shot several, but of the lovely full-plumaged male we never even caught a glimpse. We had nevertheless no cause to grumble, for we succeeded later, and our cruise up the gulf, short as it was, was so far fortunate in that it furnished us with specimens in nearly every stage of development, and before we left the island we had a complete series, showing the various changes in the plumage from the sober-coloured young bird to the beautiful and quaintly ornamented adult.

The Red Bird of Paradise is, like Wilson's *Diphyllodes*, entirely confined to the two islands of Batanta and Waigiou. It is an allied species to the well-known *Paradisaea apoda* of the Aru Islands, and several other kinds,¹ of which one of the most beautiful is a recently-

¹ *Paradisaea minor* in North-west New Guinea and the islands of Misol and Jobi;

discovered species from the D'Entrecasteaux Islands of South-east New Guinea, but the long sub-alar plumes—the chief ornament of this genus—are in the Red Bird hardly so much developed. Their colour, however—a deep crimson with snow-white tips—is not less beautiful. The chief peculiarity of the bird lies in the extraordinary development of the two median tail-feathers. In the allied species these are prolonged into two nearly straight wire-like appendages, but in the Red Bird of Paradise they are ribbon-like in form, much resembling split quills, and hang in a graceful double curve for nearly two feet beyond the rest of the tail-feathers. The series of young birds we obtained in Batanta and Waigiou enabled us to follow out the development of these curious ornaments. The two middle tail-feathers are at first in no way different from the rest, but presently they begin to elongate, and after a time the web of the feather becomes eroded along the shaft, though still remaining webbed in the form of a little spatula at the apex. This spatula indeed may sometimes be seen in the full, or nearly full, plumaged bird. In the process of elongation the now bare shaft becomes thin and widened, though still remaining of a brown colour. Finally its sides gradually incurve until the quill in section presents a half-circle, and the brown shade turning into a jetty black completes the change.

Of the nesting habits of this, as indeed of the other birds of Paradise, we in vain tried to discover anything definite, and though both here and in other parts of New Guinea we offered large rewards to any one who would show us a nest, the eggs and nidification still remain as much unknown as when Peter Heylyn wrote his "Cosmography" and spoke of "the bird called *Monicodiata*, which having no feet is in continuall motion: and (it is said) that there is a hole in the back of the Cock, in which the Hen doth lay her eggs, and hatch her young ones. I bid no man to believe these Relations," he writes; "for my part, I say with *Horace*,

"Quodcumque ostendis mihi sic incredulus odi."

P. nove guinea in the region of the Fly River; *P. raggiana* in the south-east peninsula; and *P. decora* in the D'Entrecasteaux group.

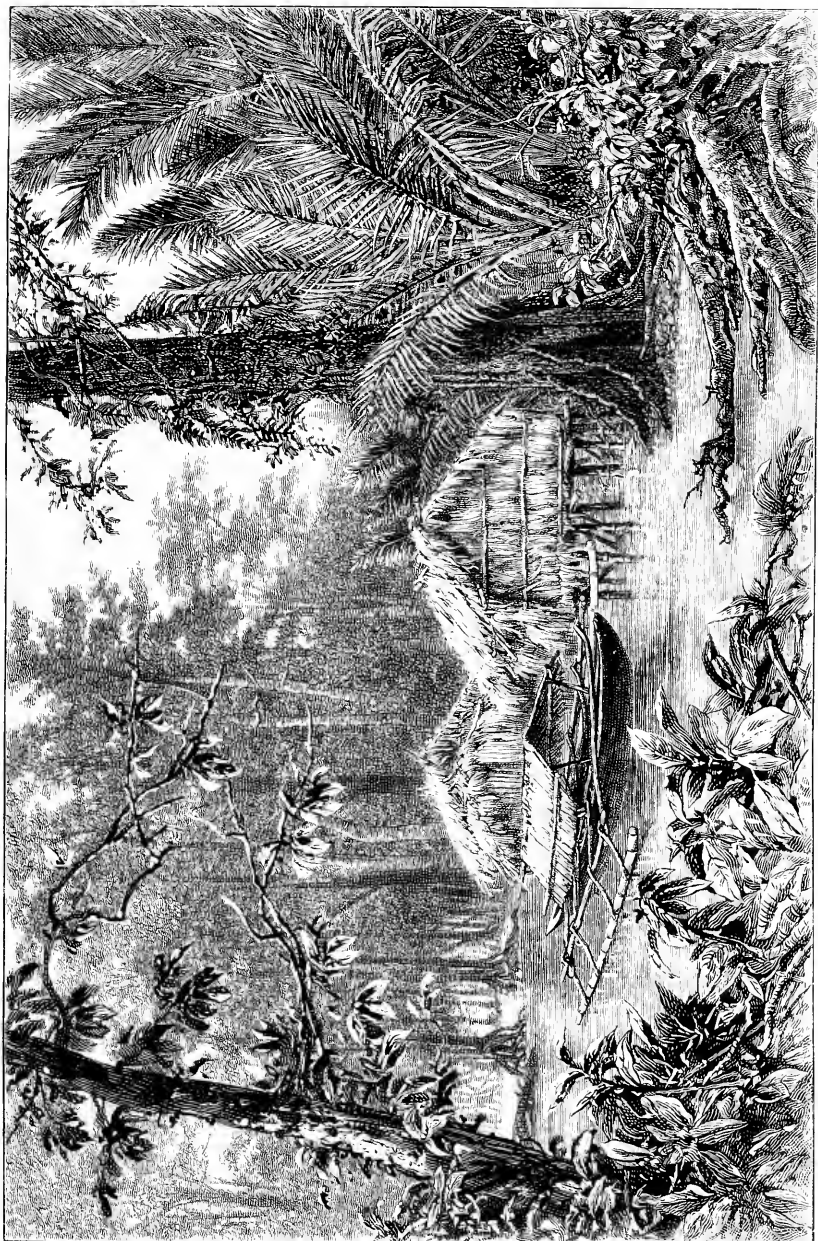
We devoted the day to collecting and the evening to skinning, according to the usual routine, and at night our praus, illuminated by dammar torches, presented a busy scene until a late hour. The tall trees of the jungle caught the light here and there and stood out in strong relief against the inky darkness of the forest beyond. Our Malay hunters, squatting on the ground, held the heads of the birds they were skinning between their toes like monkeys, and worked away steadily, hardly uttering a word, while the woolly-haired Papuans sat watching them, smoking their palm-leaf cigarettes and jabbering noisily. Now and again the weird cry of some night-bird silenced them for a while. The whole scene was romantic enough, or would have been had not certain realities of existence prevented it. The night was suffocatingly hot, and we did not need to be reminded that we were within a mile or two of the equator. The mosquitoes descended upon us in swarms, effectually banishing sleep, and, to crown our discomfort, our legs were covered with quantities of ticks of almost microscopic minuteness, which, in the amount of irritation they produce, beat the very similar little *Ixodes* which haunts the coast of South-east Africa. Tired, irritable, and bathed in perspiration we greeted the appearance of day with delight.

We started early on our return journey to Momos, and for the first time had an opportunity of seeing the scenery of the gulf. The most striking part is just within the entrance, where innumerable rocks and islets dot the calm surface of the water. Some of these are quaintly box-like in shape, with perpendicular coralline cliffs, which at the base are in many cases deeply undermined by the sea. For nearly two miles we passed through a perfect nest of these jungle-clad islands, the average breadth of the strait being from two to five hundred yards. Looking back, the "Cone de Buffle" of Duperrey was visible, rising as a sharp peak to the northward above the little archipelago, the varied beauties of which made us regret that we had not more time to explore them.

We were desirous of taking in water at Momos, and on

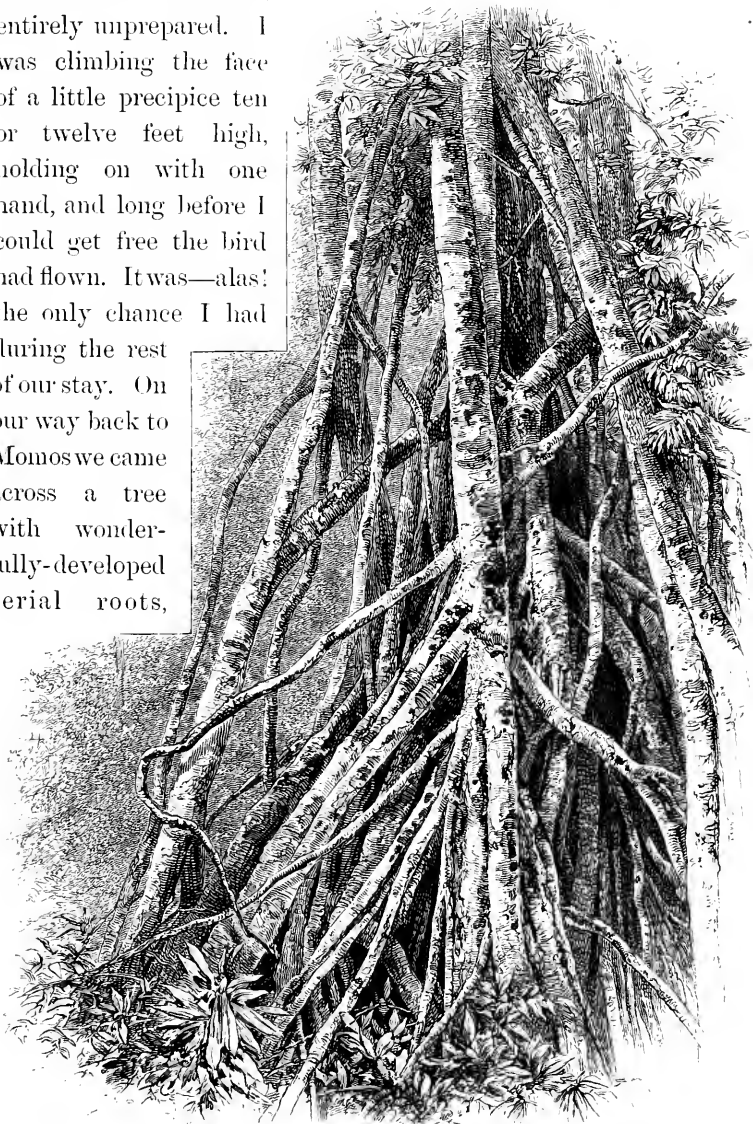
inquiring of the Rajah he told us of a small stream which ran into the gulf on the eastern side, just within the entrance. Its mouth was hardly visible from the sea, but we at length discovered it, and entering a narrow channel completely overarched by trees found a little stream of good water running brightly over a pebbly bed. Up this we poled our dinghy, and hearing the noise of a waterfall in the distance, I left the boat and walked to it through the forest. It was only a few feet in height, but the richness of the ferns and other vegetation combined to render it one of the most charming spots I saw in our New Guinea cruise. It will always remain deeply impressed on my memory, for such places are after all rare in these regions, or at least rarer than is generally supposed by those to whom the tropics are unknown. The individual beauty of any one plant or tree may be absolutely perfect, but the very exuberance of the vegetation—the *embarras de richesses*—spoils all, and the traveller is chiefly conscious of a tangled mass of greenery presenting few characteristics, except impenetrability, to his mind.

Next day, the boats having gone round to the watering-place, I endeavoured to reach it overland with a half-caste Papuan as guide. As I was starting one of our hunters came in, bringing a male *Paradisca rubra* which, with the exception of the beautiful red tufts, was in full plumage, and I learnt that he had seen others at no great distance from the village. The forest, however, hardly yielded me a single bird for a long time, with the exception of a Tanyiptera (*T. galatea*), a lovely racquet-tailed kingfisher not uncommon in North-west Papua. Presently a male Paradise bird flew past me, with long tail-feathers, but, as far as I could see, with the side plumes only partially developed. My guide now commenced calling the birds, placing his hand to his mouth and producing a sort of plaintive croak, loud, and of rather high pitch—an almost exact imitation of their note. We waited silently and with no result for some little time, and then continued our way, but I had hardly started before a full-plumaged male bird perched upon a bough



II. SCENE IN CHABROL BAY, WAIGTOU ISLAND.

within twenty yards of me. These are the moments when one is, as a matter of course, entirely unprepared. I was climbing the face of a little precipice ten or twelve feet high, holding on with one hand, and long before I could get free the bird had flown. It was—alas! the only chance I had during the rest of our stay. On our way back to Momos we came across a tree with wonderfully-developed aerial roots,



TREE WITH AERIAL ROOTS, WAIGIOU.

larger than any I had ever seen before, and rising in a thick mass to a height of about forty feet from the ground. It was impossible to allow such a good specimen to pass, and accordingly, with some little trouble, we took the camera there on the following day and photographed it.

Next day the Rajah came on board early, accompanied by a son of the Sultan of Tidor, who had just arrived in a prau from the coast of the mainland in the neighbourhood of the Macluer Gulf. Instead of wearing the usual Malay dress, which is both dignified and becoming, he was dressed in a suit of rusty black cut in European style, and the effect was anything but imposing. He was owner of two or three small praus which traded in danmar, tortoise-shell, and Paradise birds on the New Guinea coast, and hearing that he had brought some birds' skins to Napriboi—a village beyond Saonek which we were desirous of visiting—we arranged to go there without loss of time, and weighed anchor shortly after mid-day. A great part of the south coast of Waigiu is guarded by a barrier-reef, inside of which we kept for the whole distance, at times approaching the shore almost within stone's throw. Abreast of Saonek Island we altered course to the northward, and shortly afterwards came to anchor in the little bay of Napriboi.

Napriboi, which, if not identical with Mr. Wallace's Muka, must be very close to it, was in every respect a more attractive place than Momos. It consisted of half a dozen huts built over the waters of the bay, remarkable for having high-pitched roofs, an unusual shape for huts among the Papuans. In one of these the Rajah Mudah had his collection of birds, which were of four species only—the Lesser Bird of Paradise, the Twelve-wired *Seleucides*, the little scarlet King Bird, and the Magnificent (*Diphylodes magnifica*)—none of which we had as yet obtained in full plumage, although we had shot some females and immature males of the King Bird. They had all been brought from the neighbourhood of the Macluer Gulf, and having been skinned by the natives, were perfectly useless to us, the legs of nearly every one having

been cut off, and the skins being much moth-eaten. I had hoped possibly to find some rarity among them, but was doomed to disappointment.

Around Napriboi but little clearing had been done, for the Papuan, unlike those of Malay race, is no agriculturist, and is content to live from hand to mouth on sago and what few fish or



AT NAPRIBOI.

turtle he can manage to catch. A few coco palms, however, had been planted, and it was a treat to us to get some of the fresh young nuts, the "milk" of which is the healthiest and at the same time the most agreeable drink in the tropics. The forest was an open one, and not good for collecting, but the isolation of the trees afforded us opportunities for photography which do not often occur in these islands.

Looking southwards towards Batanta across Dampier Strait, the dark hummocks of King William Island or Mios Mansuar are visible, surrounded by a little archipelago of lesser islets. The

intervening sea, little known to Europeans, is a network of shoals which render the northern passage extremely dangerous, and the few ships which pass these wild and lonely shores always hug the line of reefs on the Batanta coast. In the case of Batanta and Waigiou we have an excellent example of the rule—to which there are few exceptions—that the length of time that any island has been separated from the mainland bears more or less relation to the depth of the intervening sea. Batanta is in close proximity to Salwatti—abording it for a distance of more than twenty miles, the strait at no part being more than five, and in some places not more than two miles across. Waigiou, on the other hand, has five and twenty miles of intervening sea between its nearest point and Batanta. It might reasonably be supposed that the fauna of Batanta would correspond closely with that of Salwatti did we not know that the existence of a strait, however narrow, is an almost insuperable barrier to the passage of most of the forest-haunting species. The great depth of water in Pitt Strait renders it probable that the separation of Batanta took place at some long past period, while the shallow soundings and numerous reefs existing in Dampier Strait, together with the fact that Waigiou shows signs of recent subsidence, indicate that the latter island was connected with Batanta at no very remote date. A consideration of the avifauna of the two islands bears out this theory completely. Several species, which do not exist in Salwatti—among them the Birds of Paradise to which I have alluded—are found in Batanta, but they also occur in Waigiou, and, ornithologically speaking, the two latter islands are practically identical.¹

Returning next day to Momos, we prepared for our departure and paid off the men who had accompanied us to Chabrol Bay.

¹ The wide-ranging King Bird (*Cicinnurus regius*) is not found in Waigiou, but it is believed to exist in Batanta. While in the latter island we on two occasions saw a bird closely resembling it, but it may possibly have been the lovely *Rhipidornis Gulaelmi tertii*, which—although its native country is still uncertain—is supposed to be found in Waigiou. Only four specimens of this bird have ever been obtained, and our search for it and inquiries among the natives were fruitless.

We had got beyond the range of money, and they received their wages in cloth, tobacco, and knives. We left two hunters behind us with strict injunctions to search for the Rhipidornis and full-plumaged specimens of the Red Bird of Paradise, and at the same time made arrangements to send Lokman—a lazy rascal who never shot more than six birds a week—in a prau with another hunter to Salwatti Island. They carried a letter to the Rajah of Samati, requesting him to send out natives to try and secure us living specimens of the Twelve-wired Paradise Bird, and intimating our intention of visiting the island on our return. To our friend the Rajah of Waigiou, who, accompanied as usual by his little boy, had come to bid us adieu, we gave some Japanese silk and a few bottles of Hollands. The old gentleman was pleased, but evidently had something on his mind. At last it came out. “Could we give him an old coat, or even a pair of trousers?” A long course of travel has made me intimate with several kings and other such exalted personages, but most of them have disdained these garments like the rest of their subjects, and we did not carry them among our “trade.” A search among our wardrobes was, however, at length successful, and as we slowly moved from our anchorage *en route* for Geelvink Bay, the Rajah stepped on board his prau amid a burst of tom-tom playing, carrying a pair of Savile Row inexpressibles beneath his arm.

CHAPTER XII.

NEW GUINEA (*continued*).

Arrive at Dorei Bay—Dutch missionaries—Mansinau—The Krakatau eruption audible in New Guinea—The Papuans of Dorei Bay—Amulets—The *Manuen*—Houses of the natives—*Korowuar*—The idol-houses—A snake myth—The legend of Mangundi—A cosmopolitan forge—Feasts and dancing—Marriage customs—Government—Survival of the unfittest—Andai—The climate of the coast—Malarial fever—The Hatam Papuans—Birds of the Arfak Mountains—Burial customs—Height of the Arfak range—We sail for Jobi Island—Our pilot Kawari.

EAST of Dampier Strait high seas are frequently met with, the coast of New Guinea being here exposed to the North Pacific, and on clearing the protection afforded us by Waigiou we encountered worse weather than we had had for many weeks. The gloomy sky, rough sea, and sheets of rain might have recalled the English Channel in November had it not been for the thermometer, whose steady register of 85° was sufficient to dispel any such illusion. At daylight on the 1st of November we found we had slightly overrun our distance, and altering our course to S.S.W. we soon made out the island of Manaswari at the entrance of Dorei Bay. As we approached, the weather grew brighter, and we caught sight of the Arfak Mountains, which had hitherto been hidden in gloomy clouds. Rounding Cape Mamori, on which the sea was breaking heavily, we ran immediately into smooth water, and a little later anchored in twenty fathoms close to the three villages of Dorei.

Dorei Bay, well known as the settlement of the Dutch

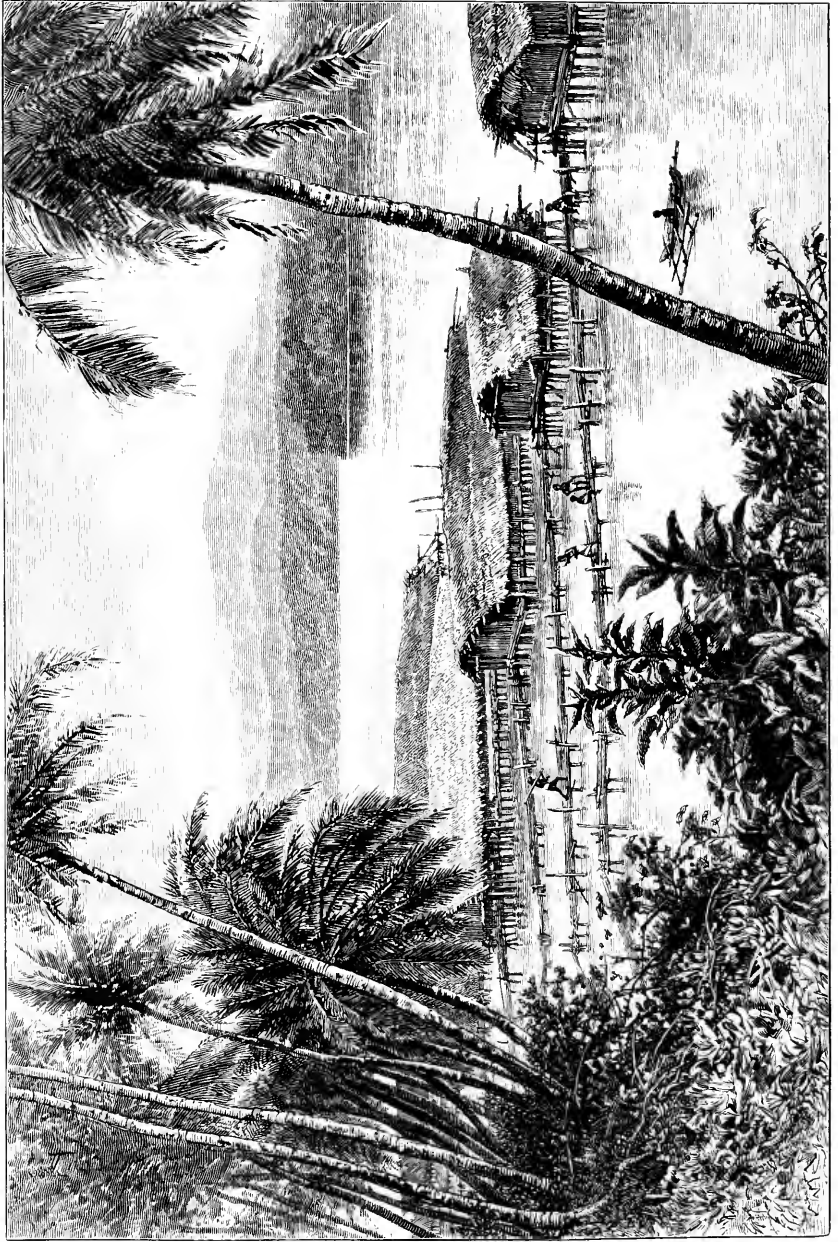
missionaries and the residence of Mr. Wallace in 1858, is protected on the east by the islands of Manaswari and Meosmapi. The latter is uninhabited, but on Manaswari are the three villages Menubabor, Mansinam, and Saraundibu, and the house of Mr. Van Hasselt, the oldest missionary. Dorei itself includes the villages of Ambobridoi, Kwawé, and Rasamberi, and is placed on the northern shore of the harbour about two miles distant from the island. Here Mr. Jens and Mr. Van Balen are settled, and a mile beyond—close to the head of the bay—is Mr. Bink's house, behind the villages of Rodé and Monokwaré. The whole native population numbers, or is supposed to number, over three thousand persons.

We were soon surrounded by native praus and boarded by Messrs. Jens and Van Balen. We had brought a mail for them, which had been waiting for weeks at Ternate before it got into our hands. When they had received the last one we did not inquire, but it was quite touching to see the poor fellows rush at their letters, excitedly exclaiming, "This is from my mother!" "Here is a book from my sister!" and so on, as they held them up. All these missionaries have been chosen from the working-class, as being more fitted to instruct the natives in the useful arts, and can speak little but their own and the Nufoor language. Mr. Van Hasselt, however, having married a German lady, spoke that language fluently, and could also manage a little French and English. He had lived no less than twenty years at Dorei, but the terrible effects of the climate were only too plainly apparent. Bent nearly double, and so enfeebled by repeated attacks of fever and other tropical disorders as to be incapable of much exertion, he appeared to us to be over seventy years of age, and we were astonished to learn that he was only forty-seven. The continued heat and excessive rainfall of this part of New Guinea, especially when combined with poor diet, make it almost as unhealthy as West Africa, and the list of names of the missionaries who have died here is a long one. I am, of course, speaking only of the pestilential mangrove-clad coasts. Inland, on the slopes of the

great mountains, the climate is no doubt very much healthier, although the rainfall at certain seasons must be enormous.

Mr. Van Hasselt's house on Manaswari is the sole bit of civilisation in Dutch New Guinea. Built a few yards only above a pleasant coral-beach in the middle of a grove of coco palms, the neatness and order prevailing ought at least to have had some effect as an example to the natives. Flowers are planted round the house, and ferns and orchids hang in the verandah. In front is a small lawn and a flagstaff, and at the back a good vegetable garden and a cattle kraal. At a little distance stands the small building which acts as church and schoolroom, erected by Mr. Bink and Mr. Van Hasselt with their own hands. A few children were brought out for our inspection. They sang hymns remarkably well, and could read and write, but it seemed to us a pity that the lesson of our Saviour's life on earth was less taught than the dry details of Old Testament history.

Judging merely from the inside of the schoolroom, the Dorei mission would appear to be a success, but in reality it is to be feared that it is not so. The entire result of twenty-eight years of mission-work and the sacrifice of many lives is but sixteen adult and twenty-six child converts. Children are bought by the missionaries whenever possible, and brought up as Christians from their earliest infancy, and it is in this way alone that any real success is possible. It is not easy to obtain them, however, since the natives are unwilling to sell their own, and hence orphans or the offspring of slaves alone come into the hands of the missionaries. The Papuan is bold, self-reliant, and independent, and no rapid conversion to Christianity, as has been the case in some of the Pacific Islands, is ever likely to take place in New Guinea. As far as our short experience of Dorei permitted us to form an opinion, it seemed to us that the mission had little or no influence over the natives. The latter have, of course, become quite accustomed to Europeans, and leave them unmolested, but their habits and customs remain unchanged, and at the time of our visit the *Rum-slam* or idol-



house at Monokwaré, which had been accidentally destroyed by fire, was being rebuilt in all its former hideousness and indecency.

Mr. Van Hasselt was eager to learn what news we could give of the civilised world. We had little enough to tell, with the exception of the eruption of Krakatau. Of the appalling amount of destruction it had caused we were at the time unaware, but we gave him the few particulars which had reached Gorontalo. He at once told us, greatly to our astonishment, that the noise of the explosions had been audible at Dorei, and going into the next room brought his diary, in which, under date of August 27th, an entry had been made to the effect that sounds as of distant cannonading, which they had imagined to proceed from some volcanic eruption, had been heard on that day. The natives, we were told, had also noticed it on the previous day—when, in fact, the outburst was at its height. By the missionaries the volcano at Ternate or in some part of the Moluccas was supposed to be in action. It enables one partially to realise the terrific nature of the eruption when the map shows Dorei to be distant 1710 miles from Krakatau. It seems almost incredible that explosions proceeding from Hecla could be audible in Rome, or that if a volcano were suddenly to make its appearance in Timbuctoo we might be conscious of the fact in England.¹

We spent a good deal of our time in Dorei Bay in trading and visiting the houses of the natives, and each day our decks were crowded with dozens of mop-headed and nearly naked savages, anxious to obtain our cloth and other goods in exchange for spears, bows and arrows, live lories and cockatoos, and little carved wooden gods. The arrows are unfeathered, but the little boys, who are constantly practising with miniature bows and arrows, make some attempt at feathering the latter—which are constructed from the mid-rib of a palm frond—by leaving some of the leaf at the base. No poison is used, except among the Arfak tribes. The arrow-

¹ When at Salwatti Island at a later period of our voyage we learnt that the eruption had been very plainly heard there also.

points are of cassowary or human bone, or of hard wood, but the most effective are made of the needle-pointed and barbed prickle of some species of Sting Ray. At Dorei iron-tipped spears were not uncommon, but the points were more frequently of bamboo, not unlike a cheese-scoop in shape. Very few skins of the Paradise birds were brought off for sale, but the numerous parrots we bought soon gave the ship the appearance of a large aviary. Most of them were the common white Cockatoo (*C. triton*) and the still commoner *Trichoglossus* which is found over the whole of this part of New Guinea, but among them we found a rare bird of the latter genus (*Trichoglossus rosenbergi*), and several other beautiful lories, which we were glad enough to obtain for coloured cotton handkerchiefs or a yard or two of "Turkey red."

The Dorei Papuans vary so much in colour and in type of feature that it is evident that many are of mixed race. Some wear the nose-bar, which is about an inch in length and of the thickness of a quill. It is known as the *koor* or *keru*, according as it is made of bone or shell. Among Europeans its use would in very few individuals be possible without discomfort, for it is thrust through the septum of the nose, and protrudes as far as the *alæ nasi* on either side, but, as I have already mentioned, the high attachment of the latter on the cheek in the Papuan race leaves plenty of room for the ornament.¹ A still more striking feature is the comb, which is rarely or never absent from the heads of those who are possessed of a well-grown *chevelure*—a bamboo stick about two feet long split at the end into five prongs. The handle projects far over the forehead, and is ornamented with feathers or round discs of pith threaded edge to edge on a secondary stick. Across the chest, bandolier-fashion, is slung the *saré* or shoulder-strap, a woven band of coloured grass half an inch in width, and clam-shell bracelets and tightly-fitting armlets complete the decoration, as in the case of the Batanta natives. In almost

¹ This peculiar shape of the nose is well represented in their *korowaar* or so-called gods, and all carvings in which the human features are reproduced.

every part of New Guinea that we visited individuals with quite short hair were often to be seen. Some of these were perhaps unable to grow the enormous mop from which the Papuans—



NATIVE OF AMBOBRIDOI, DOREI BAY.

“the frizzly-haired people”—derive their name, but in many cases it is a sign of mourning.

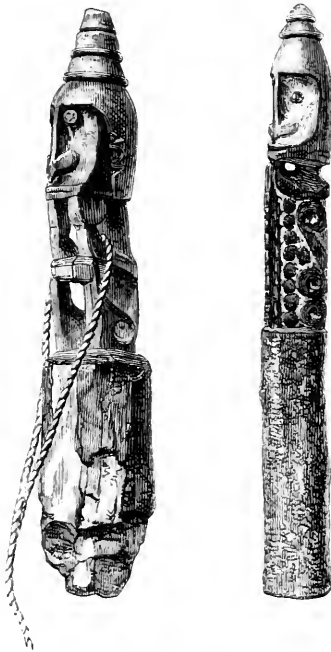
Although tattooing, as we understand it, is not common, numbers of the Nufoor people¹ are decorated with raised scars, such as may be seen in many African tribes. These are produced by the repeated application of red-hot pointed sticks—the continuous moxa producing a lump of gristly hardness beneath the skin. A favourite seat appears to be the shoulder, whence they are sometimes extended downwards so as to meet on the breast in

¹ Dorei Bay is, as it were, the capital of the Nufoor tribe. They inhabit the north-west coast and some of the islands in Geelvink Bay, and, according to their legend, originally came from Nufoor Island (Long Island of the English charts). They claim to have been the first discoverers of fire, which was given to their ancestors by a magician. On seeing it they immediately exclaimed “Nufoor,”—*foor* meaning fire, and *nu* being the dual “we two.”

a V-shaped pattern. After voyages or feats of prowess they add one or two of these marks, and we noticed that a young man from the island of Biak, who appeared to be regarded as a person of

some importance, and was certainly a very fine-looking fellow, was liberally decorated with them.

The equipment of a Papuan would not be considered complete without certain amulets slung around his neck. These are small sticks about six inches long, carved at the upper end in rough imitation of the human figure. One is to guard them in a land journey, another on a voyage; one wards off the evil designs of the dreaded Manuen—the malicious spirit; a fourth preserves them from sickness, and so on, until the wearer is carefully protected from each and all of the “thousand natural shocks that flesh is heir to.” But in order that they should be efficacious, he must be able in



PAPUAN AMULETS.

a certain measure to predict these misfortunes, for the peculiar virtue of which the amulets are possessed is only exerted when they dangle between his shoulder-blades, where it is not considered proper habitually to carry them. Thus, although the owner cannot always have his Manuen charm at work, he may look out his amulet for a voyage on starting for it, or put the one suitable for a headache in action after having dined unwisely. It is needless to say that shipwreck, illness, or any misfortune which may occur is not due to the inefficiency of these useful little articles:—it is merely the result of their not having been put in use at the right moment.

The Manuen are the Papuan bogies,—evil sprites who lurk in the woods and lure the passer-by to destruction. Once under their spell the unhappy victim is beyond human aid. The Manuen changes his arms into his legs, and in this reversed position the doomed native is compelled to dance. He is then released and disenchanted, but returns home only to die. In spite of their power to enter houses and, unseen, to strike the inhabitants with sickness, the Manuen are only able to exert their evil influence over a restricted area, and many localities are said to be free of them. In one form, indeed, they are not unknown to European physicians. When the mists rise in the evening the little children are brought into the huts lest the Manuen—the malaria, as we call him—should touch them. He is, no doubt, the same spirit who compels the Dusuns of Borneo to build their houses on slender piles—to make them temporary, not permanent residences, in other words.

Below the mission-house on Manaswari are the three villages I have mentioned on a previous page. They are so closely situated as in reality to constitute but one, and stand fifty yards or more from the shore, to which each house is connected by a bridge of so sketchy and insecure a nature as to render its passage by a booted European almost impossible. Even more dilapidated still are the houses themselves, built as they are of rotten mats, bits of old praus, *gaba-gaba*, or anything that comes to hand. So treacherous is the floor, with its gaping holes and the loose sticks of which it is composed, that, as one of our sailors remarked, one should be “bird-rigged” before trusting to it; but this feature is not without its advantages, for dirt and rubbish of all kinds can easily be dropped through into the sea beneath. These rickety dwellings are of very large size—for, like the Dyaks, several families live under one roof—and their appearance is peculiar owing to their resemblance to a turtle’s back, from which, indeed, it is said that the idea for their construction is borrowed. To each house there are two landing platforms—that nearest the shore for the women, who

gather there to chat and busy themselves over their domestic duties ; the other for the men and boys. A broad alley-way, which serves as a sleeping-place for strangers, divides the building in half, and from it open out the rooms, like the cabins in a steamer.

If my reader were to enter one of these apartments he would have no wish to accept the hospitality of a Papuan host. It is unlighted probably, except for some accidental gap in the dilapidated wall, and the smoke of the fire—which is placed on a large flat stone—finds its way through the roof as best it can. The furniture is not extensive. A wooden drum, a few mats, some fish-spears, an abundance of bows and arrows, some native-made pots and wooden bowls, and a couple of admirably carved head-rests or pillows would be in nine cases out of ten a full inventory. The wants of a Papuan are few. The heavy tropical rain must stream through the ill-kept roof, but he does not mind, for there is no carpet to damage, and the water has but little more difficulty in finding its way into the sea beneath. He is apparently quite satisfied as long as the holes in the floor are not so large as to permit of his disappearing in like fashion in his sleep.

One article of furniture there is which is found in every room—the *korowaar*, a carved wooden image a foot or so in height, the hands generally represented as resting on a shield, which, like many of the Papuan carvings, is often of very good design. These are not idols, as they have been represented to be by some travellers,¹ but the media by which the living hold communication with, and are kept in memory of, the dead. If any individual die a *korowaar* is immediately constructed, for unprovided with an earthly habitation his spirit could not rest. On the commencement of the carving a feast is held, and as each portion of the image is completed a dance commemorates the occasion. When finished

¹ The rarity of idols—I use the word in its English and not in its classical meaning—must strike every one who has been brought much in contact with savage tribes. In almost every case the images are merely representations of the deity worshipped, like our own crucifixes, and are not supposed in themselves to be possessed of any supernatural power.

the image is either placed on the grave or carried to the home of the nearest relation, where it is treated with great respect. On every occasion of importance—on fishing excursions, in sickness, on undertaking a journey, and so forth—it is consulted, and if nothing take place it is considered a sign of the approbation of the deceased. This is not always the case, as might be supposed, for the consultant sometimes holds the *korowaar* in his hand while propounding his question. Presently his arm vibrates; it shakes more and more until the whole limb is in a state of convulsive agitation. “He speaks; he speaks,” is the cry, and the disapproval of the departed spirit is evident. Should the answer turn out incorrect the augur not infrequently loses his temper, and the unlucky image receives a blow which knocks him from one end of the hut to the other. But in spite of these disappointments the natives do not lose their faith in their *korowaar*, and those that are brought for barter have generally belonged to some one who has died, or are old ones whose names have long ago been forgotten.¹

Two *Rum-slam* or “idol-houses” were in existence until lately in Dorei Bay, one at Mansinam and the other at Monokwaré, but the former was destroyed by an earthquake and the latter by fire,



KOROWAAR.

¹ Mr. Wilfred Powell (“Wanderings in a Wild Country,” p. 248) mentions the existence of images similar to the *korowaar* in New Ireland. Unlike those of the natives of North-west New Guinea they are of chalk, and are kept in a small “mortuary chapel.” The same superstition—“That the ghost must have some habitation on earth or it will haunt the survivors of its late family”—is, however, the cause of their construction.

—events of which the missionaries have naturally not been slow to take advantage, for they have extorted a promise that, should a like fate befall the new idol-house which was being constructed at Monokwaré at the time of our visit, no attempt at rebuilding it for the third time would be made. A single pile of the old temple was alone standing when we examined the spot—a gigantic human figure entwined by a snake. We learnt from Mr. Bink that all the piles were of like nature, and that the temple was thus supported by a series of aquatic Caryatides, alternately male and female.¹ Within were other carved wooden figures of much the same kind—grotesque and indecent—intended to represent the ancestors of the Nufoor tribe, and known as the *Mon* or “first people.”

The construction of these *Rum-slam* and the carving necessary for the piles is, as may be imagined, an affair of some time, and the images had not all been finished when we were at Dorei. At a house in the village of Rodé we found two lying in the centre passage,—huge tree-trunks thirty or forty feet in length carved in representation of a male and a female figure. Like the solitary statue to which I have just alluded, the latter had a snake encircling her neck, its head lying upon her breast. This was Gobini, a mythological character, whose history we learnt from one of the natives standing by. Young and beautiful, her hand was sought in marriage by many suitors, but in vain. One day, however, permitting a snake to share her couch, she became pregnant, and was driven from home by her parents. She resolved to seek her fortune in distant lands, and embarking in a small prau set sail, with Nori the snake on the look-out in the bows. Nearing Ambepon, at the head of Geelvink Bay, Gobini perceived a large oyster with a pearl in it at the bottom of the sea, and told Nori to jump overboard and get it. Yielding to her wish he did so, but paid for his rashness with his life, for the oyster, closing his shell, caught the snake

¹ Stabat ex utraque parte templi, ab aditu paullo distans, simulacrum ingens maris feminaeque in ipso coitu junctorum.

by the head, so that he struggled in vain to escape. Now the land in the neighbourhood ran out into a promontory, which was very narrow, and in the vigorous lashing of his tail to get free Nori cut it through. "And the truth of this everybody knows," concluded our informant, "for Ambepon remains an island to this very day."

This story led to another, which I afterwards learnt to be a favourite legend of the Nufoor people. The native, perching himself upon Gobini's statue, related it at full length to Mr. Bink, who translated it for us, sentence by sentence, into Dutch. It ran somewhat as follows:—

Years ago, "years and years before any one can remember," there lived upon the island of Anki¹ an old man called Mansaäkri. He was old and ugly, and so covered with *cascaido* as to gain for him his pseudonym—"the itching old man." All day long he climbed the sagueir trees and made palm-wine, and, dirtied from head to foot with the sap, returned at night to his solitary hut, for his presence was shunned by the rest of his tribe. By these precarious means he contrived to support himself, until he began to notice a gradual diminution in the yield of juice. His suspicions were aroused, but for a long time he was unable to discover the thief. At last, having watched all one night, he sees Samfari, the morning star, descend and drink his fill. He immediately seizes him and demands recompense, with the result that Samfari endows him with supernatural powers, although to outward appearance he remains unchanged. At the same time he presents him with a magic fruit, which, on being thrown at a virgin, will cause her to become pregnant. Mansaäkri releases the delinquent, and shortly afterwards, captivated with the charms of a maiden of the village, makes use of his present. In due time a child is born, who is endowed with the power of speech from the moment of his birth, and declaring Mansaäkri to be his father, receives the name of

¹ Anki is one of the Isles des Traîtres—a group lying to the north of Jobi Island in Geelvink Bay.

Konur or "the magician."¹ He is not believed, however, in spite of Mangundi or "he himself"—as the old man becomes afterwards named—performing many miraculous acts, and accordingly the latter resolves to leave Anki for ever. Going down to the sea-shore he draws the outline of a prau upon the sand, and lo!—immediately one lies before him. In it he embarks, together with his wife and child, and after a short voyage lands upon Nufoor, which by a wave of the hand he changes from a barren rock into a fertile and forest-covered island. He then takes sixteen stakes and forms four squares, which in the morning have become four large villages filled with people. Here he lives happily enough, but his wife upbraids him unceasingly for his dirtiness and neglect, his personal appearance having remained unchanged. Her remonstrances at length succeed; he retires to the woods and makes a huge pyre on which he sacrifices himself. But instead of dying he springs Phœnix-like from the ashes, young and handsome, and the full power of the great Mangundi is at length acknowledged. This is the climax—the closing scene of the story. Mangundi lectures the people on their want of faith, and disappears. But all look for his return, and with it the coming of a Nufoor millennium, when labour shall cease and food become abundant, when sickness and death shall be no more, and earth become a Paradise.

Mr. Bink, who had been a carpenter by trade, had built himself a most comfortable and neatly-ordered house, and had planted an orchard in which many Malayan fruits were doing well. Small coral-paths, models of Dutch neatness, intersected the flower-garden, which was gay with an abundance of ferns and tropical plants. It was an ideal bungalow, but for all its brightness it must have been full enough of sad memories for the poor missionary and his wife—a kindly-looking woman whose pale, worn face spoke of the unhealthiness of the climate and the sufferings she had undergone. Of their five children but one survived, and that one—

¹ Konur is the name by which the "medicine men" or shamauns are known among the Nufoor Papuans.

alas! for the poor mother—was sinking slowly but surely from an incurable malady. We were glad to learn that Mrs. Bink was soon to return to Europe, her husband and Mr. Van Balen having been ordered to Ron and Meoswaar, two islands at the head of Geelvink Bay where a mission has been established since 1867.¹

Some of the Dorei Bay natives are acquainted with the art of working in iron. They have learnt it from the Gebi islanders, but the knowledge remains confined to one or two families only. These smiths do not eat pigs' flesh; not that they are Mohammedans, but purely from the superstitious belief that the transgression of this rule would affect the goodness of their work. Behind Monokwaré we one day came upon one of their forges. The bellows were composed of two upright bamboo tubes, about a yard high and five inches in diameter. In these worked two valved pistons tightly packed with cassowary feathers, and at the bottom of the cylinders two nozzles led Y-fashion into one, which, in order to prevent its being charred by the heat, was passed through a hollow stone. A little boy sat on a high bench, and grasping a piston rod in each hand, worked them alternately. The whole apparatus (which was of course of Malayan, not Papuan, origin) was almost identical with that I have seen employed in the interior of Africa, and I believe that it is also found in South America.

Pottery-making is a more widely-known art; and many of the women—for the wives and female slaves alone engage in this work—are tolerably clever at it. Vessels of excellent shape are often to be seen, but there is no great variety, and cooking-pots and bowls, all of which are unglazed, seem to be the chief articles made. The only other manufactures are plaited bags or baskets of grass fibre which are often stained with bright colours, and silver bangles, beaten out of Dutch dollars obtained from the Malay traders.

While we were in Dorei Bay a feast was held one night in one

¹ There is reported to be a boiling spring on the island of Meoswaar, but as far as is known there are no evidences of recent volcanic action in the neighbourhood, or indeed in any part of North-west New Guinea.

of the houses at Saraundibu. Among the Papuans singing and dancing are favourite amusements, and almost any event, joyful or sorrowful, important or trivial, serves as an excuse to indulge in them. The great feasts are for the completion of a *korowaar*, or



KOROWAAR.

for the successive steps in the carving of one of the great images of the idol-house—the *Mon* or ancestors. In these cases dancing and singing are kept up the whole night through for several successive days—the performers resting during the day and recommencing at sunset. We had no opportunity of seeing a feast of this nature, but Mr. Van Hasselt told us that a barn is often specially built on shore for the purpose. The men sit apart from the women, much decorated with coloured leaves and flowers of the scarlet hibiscus, which are tucked under their armlets and necklaces, and affixed to their mop-like hair by bamboo hair-

pins. The masters of the ceremony are the *Mambris* or “champions”—men who have distinguished themselves in the ever-recurring intertribal wars. Sago, sagueir, tobacco, and gambier are provided, and the entertainment only ceases with the dawn. The singing is monotonous in the extreme, and the wooden drums are beaten without cessation. These, combined with the dancing, which is so violent as nearly to shake the house down, produce a terrific noise—all the more pleasing to a Papuan, as he knows it to be most effective in guarding him from the evil influence of the *Manuen*. In the lesser feasts there is no dancing, the entertainment being confined to singing, with the usual drum accompaniment.

Whatever may be the case in Eastern New Guinea, the woman is little more than the slave of the man among the Nufoor Papuans.

She has to make his sago and cook his food, to draw the water, make pottery and fibre baskets, and often to submit to ill-usage and the position of a wife is hardly bettered by the fact of her being under the authority of her husband's mother and sisters. Polygamy is common, but it is not usual for a man to have more than three or four wives. Should a woman prove childless she is sent away, and the husband marries again. Children are betrothed when very young, and when the contract is closed the parents of the future bridegroom pay those of the bride a part of the bargain agreed upon, for, as in many savage tribes, woman has a certain market-value. A very curious custom exists resembling one of the forms of *Hlonipa* among the Zulus, whereby the bride and her near relations must avoid the sight of the bridegroom and his people until the marriage. The betrothal is not binding, and if the man does not approve of his parents' choice he need not fulfil the contract. At a wedding at which Mr. Van Hasselt was present the bridegroom went to the bride's house, preceded by a crowd of women, each of whom bore a small present in her hand. Arriving at the room set apart for the ceremony, the young couple were placed back to back, the bystanders meanwhile taking up their position round them—the men on one side and the women on the other. The ceremony is usually performed by the oldest relation, and in this instance an old man undertook the office. Joining their right hands he took a mouthful of water and spurted it over them with the words, "May no enemy kill you, and no evil spirit affect you with sickness." Sago was then brought in and given first to the newly-married couple and then to the guests.

Even after the ceremony various customs have to be strictly observed. The bride and bridegroom must sit up all night. If sleep threatens them they are immediately aroused, for the belief of the people is that in remaining awake they will have a long and happy life. This continues for four nights. By day they are permitted to sleep, but the husband must return to his own house. Not until the fifth day may they meet each other alone, but even

then only by night, and for four days more the husband must leave his wife's chamber before daybreak.¹

At the marriage of widows there is little or no ceremony. The bride walks into the jungle with her husband, attended by a widow or a married woman, whose duty it is to break off twigs and pelt the bride with them—an operation which is supposed to drive away the ghost of the late husband. The widow must leave off wearing her old *tjidako*, or sarong, and hand it over to another widow, and with the giving of some small present to the attendant who has successfully laid the ghost the whole affair is ended.

Families with more than three or four children are not often seen, infanticide and the procuring of abortion being common. The use of ecbolics appears to be unknown, and force alone is resorted to. All deformed children are mercilessly killed.

On the death of her husband the wife is confined to her house for some time, for if the ghost of the deceased individual were to see her going about, he would immediately strike down people with sickness. Her hair must be cut close as a sign of mourning, and her *tjidako* must be of the plainest description. Should any brother of her late husband be alive, he is obliged to marry her; if not, she returns to her own family. The women are kept much secluded from strangers, and though the *Marchesa* was crowded with natives both at Dorei and in Jobi Island, none ever came on board. In their own houses they were rather less shy, but it was only among the Arfak people we met at Andai that they seemed to be on anything like an equal footing with the men. With the Nufuoreans they are little better than slaves. Adultery is punishable by death, but the Papuan has a great eye to the main chance, and as a rule prefers to exact a fine, a portion of which has to be distributed among the heads of the different families in his village.

There are apparently no chiefs or kings among the natives of

¹ For these and other notes on the customs of the Nufuor Papuans I am indebted to Mr. Van Hasselt, whose twenty years' residence in New Guinea has made him thoroughly acquainted with the people and their language.

this part of New Guinea. Each village forms a small republic, which among a primitive people seems to be the most successful form of government. The old men and the heads of every family meet to discuss public matters, and adjudge the punishment of any delinquent. This almost always takes the shape of a fine. Murder, adultery, assault, theft, and so on are punished in this way, but their list of offences against the law is more extended than ours. The Papuans have a saying that "What the eye sees not and the ear hears not, that must no man say," and hence every one who speaks ill of or slanders his neighbour is liable to be fined. Fortunately there is not much chance of our forming our code upon the Papuan model, or the effect of such a law upon the pleasant social intercourse which enlivens our five o'clock tea-tables would be too terrible to contemplate.

In cases of dispute as to guilt, trial by ordeal is sometimes used among the Nufuoreans. The suspected person has to dip his hand into boiling water, and, should no blisters result, is held to be innocent. If suspicion fall equally upon two people, they are taken each to a pile of one of the sea-built houses, and made to duck simultaneously beneath the water. Whoever comes up first is the guilty person. It is not only in civilised communities that the thick-skinned and long-winded flourish as the green bay-tree!

Some few miles south of Dorei Bay is Andai, a small village nestling at the foot of the Arfak Mountains. No huts or houses of any kind are visible from the sea, and the view consists of range beyond range of dark jungle-clad mountains, which at the period of our visit were gloomy and rainy-looking in the extreme. At the village there are but few inhabitants. They are a people quite distinct from those in Dorei Bay, and speak a different language. Their houses, too, are different. A short distance up the little river which joins the sea at this spot, the two or three of which the village is composed come in sight on the left bank. They are built on the land, but are supported by piles so closely placed

together that it would be an affair of some difficulty to pass between them. These poles raise the house to a height of eighteen or twenty feet from the ground, and access to the building is afforded by a notched tree-trunk leant against the platform. Its ascent requires considerable caution, but the miserable, half-starved native dogs manage in some way to accomplish it. These huts differ



HUT NEAR ANDAL.

from the turtle-backed dwellings of the Dorei Bay people in being quite small, and in having a high-pitched roof, but the main features—the platform and the central alley-way—are the same.

We gazed at the rain-swept peaks which lay before us with no little interest, for the dense forests that clothed them were, we knew, the favoured haunts of the rare and magnificent birds of Paradise for which Mr. Wallace had searched in vain. There was the great velvet-black *Epimachus*, with its tail a yard in length; the *Astrapia* in its uniform of dark violet faced with golden-green and copper; and the orange-coloured *Xanthomelus*. There

D'Albertis had shot his *Drepanornis*, with its two fan-like tufts, one flame-coloured, the other tipped with metallic violet, and there Beccari braved the climate to form the splendid collections in botany and zoology with which he returned to Europe. The summits of the mountains were less than ten miles from where we stood, yet although we might send our hunters on their slopes we could not explore them ourselves, as we had settled to visit both Jobi and the Aru Islands before leaving the Papuan region, and the time allotted to the *Marchesa's* cruise was fast approaching completion. We now regretted that we had delayed so long in Northern Borneo, but there was no help for it. The crew had only signed articles for a specified time and were already grumbling at its being exceeded. It was hardly to be wondered at, for the mangrove-swamps, incessant rain, and sweltering heat of New Guinea offered them few attractions, and many of them were suffering from the effects of the climate. In addition, their provisions had run short, and they had no biscuit remaining. We ourselves were much in the same condition, for our flour, which was in tins, had all gone bad, and we were reduced to rice and sago.

Between us we had been in most of the torrid regions of the earth's surface, but we agreed that, perhaps with the exception of the Persian Gulf in summer, the climate of New Guinea was the most trying of them all. Bathed in perspiration from morning till night and from night till morning, we woke utterly unrefreshed by sleep. The temperature, which in a dry climate would not have been unpleasant—for it was rarely above 90° Fahr.—was intolerable. Everything to which damp could cling became mouldy, and our boots, if put on one side for a day or two, grew a crop of mildew nearly half an inch in thickness. We were covered from head to foot with prickly heat, and those who had been unfortunate enough to suffer from "liver" in other hot climates began to feel the sharp pains in the side and shortness of breath which speak so plainly and unpleasantly of an enlargement of that organ.

Both mental and physical exertion is under these circumstances distasteful enough, but it is by active exercise alone that one is able to keep in health, and we took care to give ourselves plenty of it. The mornings were generally devoted to collecting in the jungle, the afternoons to labelling specimens, surveying, and small jobs, the evenings to skinning and journal-writing. In preserving our specimens we had need of all the patience that prickly heat and other small worries had left us. All the bird-skins had to be dried in the sun or by artificial heat and soldered up in tin boxes. The yacht swarmed with cockroaches and minute ants, from which we had the greatest difficulty in keeping them. At meals there were seldom less than a dozen or so of the former on the table at any given moment, but they gave us less trouble than the ants. These were not often visible, but a dead bird or butterfly left for five minutes in any part of the ship would be covered by them in hundreds, and nothing was safe from their ravages. For many weeks, by night as well as by day, a constant stream of these little creatures ascended and descended the foremast, climbing to the very summit of the foretopmast. Many of our crew suffered from malarial fever, which, although not actually serious, was in two cases tolerably severe. It was chiefly of a remittent type with a concurrent affection of the liver, and left the patient weak and unfit for work for a considerable time. We ourselves, although more exposed from constant work in the jungle, were less affected by it, mainly owing to the greater precautions we took. It is almost impossible to get an English sailor—especially if it be his first experience of the tropics—to take even ordinary care of himself. One or more of our hunters was always on the sick list, either from deep ulcers in the feet and legs, caused by wounds and scratches got while shooting in the forest, or else from fever, but with them the latter was of a mild type. The ulcers were a very different affair, owing to the obstinacy with which they refused to heal, and one of our men was incapacitated by them for the greater part of the time that he was with us.

My reader will, I hope, pardon this digression. It is not "the hairbreadth 'scapes," "the moving accidents by flood and field"—of which, by the way, I have few or none to recount—but rather, as in civilisation, the lesser worries of existence that are the drawbacks of a traveller's life. It is the mosquitoes, illness, bad food, and the like, of which he has the most unpleasant recollections, and as one or other of these formed a part of our daily experiences in these regions, they ought not, perhaps, to go unrecorded.

A short distance from the mouth of the river at Andai we came upon the hut of a Dutch missionary, Mr. Woelders, who had been established there for some little time. His predecessor had been Mr. Jens, whose wife, a victim to the climate, lies buried in the little garden adjoining. Mr. Woelders greeted us with effusion in his native tongue,—the only European language with which he was acquainted,—and we had little difficulty in understanding how welcome must be the sight of a white face in such a remote corner of the earth. The mission, we learnt, had not been attended with much success, but to have got the natives accustomed to having a European living among them was, no doubt, a point gained. Mr. Woelders had a small printing-press, and occupied himself in printing a little book of hymns in the Nufoor language for the use of the mission at Mansinam.

The heat was excessive, and the hot steam which rose from a little tract of marshy forest surrounding the house was unpleasantly suggestive of malaria. We were glad to rest in the house and chat with our host. He took, we discovered, a (pecuniary) interest in birds, and told us that he had two native hunters collecting for him at Hatam, a village a few miles off on the slopes of the mountains, where Beccari and D'Albertis had gathered their rich harvests in botany and ornithology. They were expected to return at any moment, and an hour or two later the distant firing of guns announced their approach. They were accompanied by a number of the Hatam people who had assisted them, and were come to claim payment in "trade" from Mr. Woelders,—old and young

men, women with babies strapped upon their backs, girls, and sundry children of both sexes; indeed, when hunting, the master of the house appears to be attended *en masse* by his whole family. The men were sinewy fellows of medium height, and by no means attractive-looking, but they did not seem to differ much from some of the Nufoor people. They were all armed with bows and arrows, and long spears tipped with cassowary or human bone or hardened bamboo, and ornamented with a tuft of cassowary feathers. All the men wore the nose-bar, and the usual Papuan ornaments I have already described, but their hair was dressed in a manner we had not seen before either at Dorei or in the islands. Instead of the usual mop it was either formed into three great tufts or gathered circumferentially into about a dozen bundles, which, almost exactly resembling the tassels of a window-blind, hung down all round the head, one alone projecting horn-like from the crown. One individual wore a frontlet composed of a double row of dog's teeth, and several



NATIVE OF HATAM.

had the long tail-feathers of the *Epimachus* stuck in their frizzly hair. In the women the dress was reduced to a minimum, and

very few ornaments were worn. One girl had distinct pretensions to good looks, but she formed a marked exception to the others, whose faces and figures were equally unattractive. A mainly vegetable diet interferes considerably with gracefulness of shape.

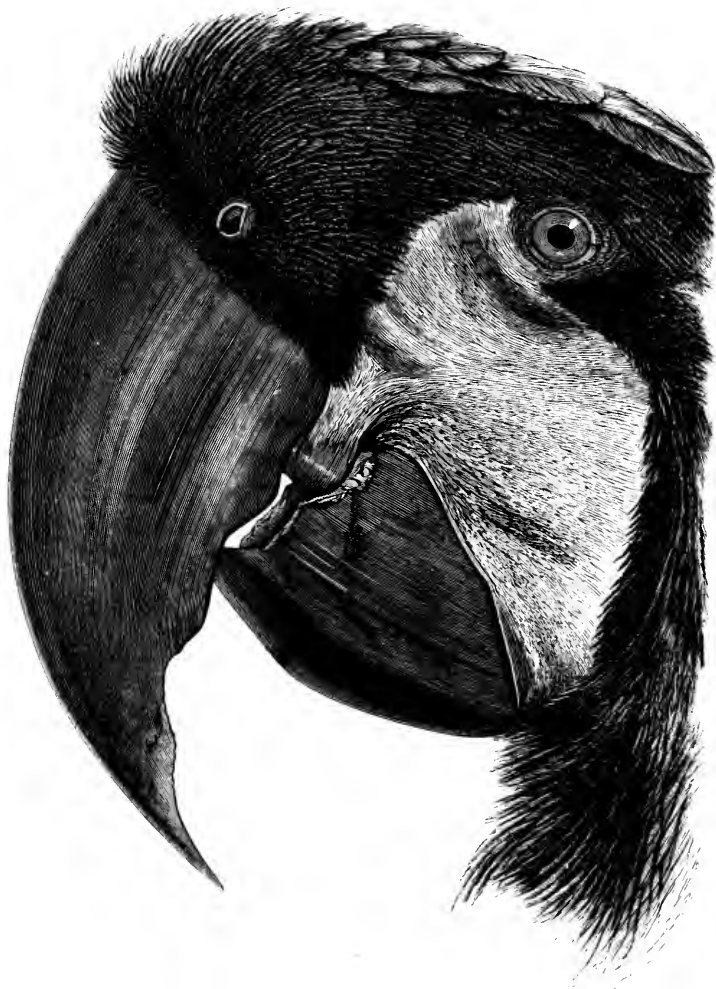
The albino girl mentioned by D'Albertis in his narrative was to have been of the party, but an attack of fever had kept her at Hatam, and greatly to our regret we did not see her. We proceeded, however, to make use of the excellent types at hand, and spent the greater part of the day in photographing, an operation which the Arfak men did not at first seem inclined to submit to. It required unlimited patience and the use of sundry interpreters to explain matters, our wishes and directions having to filter through the Dutch, Nufoor, and Arfak languages before reaching their destination, but we at length succeeded in obtaining some tolerably satisfactory negatives. It was hard enough to get the people to sit at all, and harder still to make them understand that they were to keep motionless.

We ourselves, as I have mentioned, had been obliged to give up all idea of shooting in this locality, but our first care on arrival at Andai had been to send off three of our hunters with a guide, and we were of course anxious to inspect the collection which had just arrived for Mr. Woelders. It contained some beautiful specimens of the rarer birds of Paradise, among them *Epimachus*, D'Albertis's *Drepanornis*, *Astrapia*, and the curious Wattled Bird of Paradise (*Paradigalla carunculata*). The latter, whose plumage is of an entire jet-black, has the appearance of being faintly powdered over



PAPUAN GIRL, HATAM.

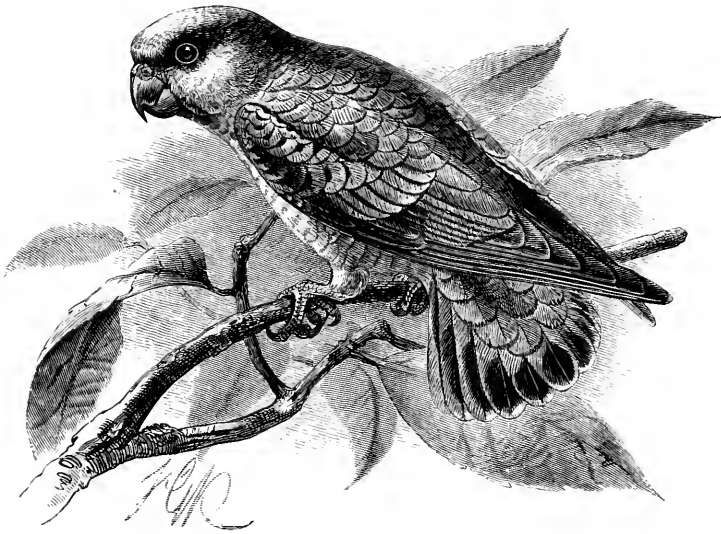
with a bronze-violet dust, and is provided with a trilobate earuncle



HEAD OF GREAT BLACK COCKATOO. (*Microglossus aterrimus*.) Natural size.

on either side of the face, the upper, middle, and lower parts of which are coloured orange, leaf-green, and scarlet respectively.

The collection was rich in parrots of various species, among which were several specimens of a brilliant *Charmosyna* (*C. papuensis*) and the wonderfully minute *Nasiterna bruijni*—pygmy of its tribe—less than four inches in extreme length, and not so large as the bill of the great *Microglossus*! There were other birds of interest and rarity, and as we were anxious to obtain some of them, we broached



BRUIJN'S PYGMY PARROT. (*Nasiterna bruijni*.) Natural size.

the subject to Mr. Woelders. He informed us that he would part with them "for the sake of the good cause," and asked us to make an estimate of their value, which we accordingly did on—as we considered—the most liberal terms. To our astonishment our offer was refused, and a sum demanded which was more than double what the collection would have been worth in Europe. As politely as we were able we intimated that the state of our purses did not admit of the expenditure of such an amount—even for the "good cause," and the matter dropped. At a later period, however, as one of us was particularly anxious for certain of the specimens, we

raised our bid slightly, but with no effect, and no more was said until our departure. The anchor was a-weigh and the yacht just leaving when a canoe was made out paddling hard after us. We waited, and a letter was handed up. "*Bij zoo veel vriendschap en liefde moet ik met liefde betalen*"—and we might have the birds! In this affair it must be confessed that our faith in missionaries sustained a somewhat severe shock.

Both the Dorei Bay and Andai people inter their dead, and have not the custom of keeping their ancestors dried and smoked in their houses, as is in vogue among some Papuan tribes. Here the graves are piled with stones in order to keep off the dogs and wild pigs, or surrounded with a deep trench for the same purpose.¹ Mr. Jens informed us that at the death of any adult, hired mourners, who are generally widows, are employed. These keep up an incessant song of lamentation, and recount the deeds and virtues of the dead man. The body is doubled up in a sitting posture for burial, and bound round with mats, and with it are interred bows and arrows, or cooking-pots and other household utensils, according to the sex of the deceased person, for the Papuans believe in a future life, and hold that it is not much different from the present. Its situation is beneath the earth; it is a happier world than ours, and in it food is abundant and labour reduced to a minimum. The ghosts of the dead, however, do not confine themselves to this abode, but have the power of returning to earth to rest in the *korowuar*, or haunt their living relatives and friends. Persons who have attended a funeral must bathe immediately afterwards, or the ghost of the deceased would kill them. The spirits of the dead are everywhere, and no better field for the researches of the Psychical Society could be imagined.

On our way back to Dorei Bay we took the height of what we considered to be the loftiest peak of the Arfak range, steaming four miles for our base line. The observations gave us 9046 feet,

¹ We learnt from Mr. Van Hasselt that staked pitfalls are used by the Nufoo people to catch wild pigs and cassowaries.

but—though unlikely—it is possible that there may be a still higher mountain lying beyond. This peak lies 16·7 miles S.W. by S. of Mansinam. From November till April—the period of the west monsoon, and the season of the heaviest rains—the Arfak range is said by the missionaries to be seldom clear.

Reaching Mansinam we found a bullock ready for us, a welcome change in our monotonous diet. We had wished to obtain another live one to take on board, but it had been found impossible to catch it. Mr. Van Hasselt had some time back permitted his cattle to roam at large on Manaswari Island, and they had in consequence become quite wild and almost useless to him. The same evening we weighed anchor and proceeded for Jobi, a large island over a hundred miles in length, which stretches half across the mouth of Geelvink Bay. We had three additions to our ship's company; Mr. Jens, whose knowledge of the Nufloor language was most useful to us, an old Papuan named Kawari, and his son. Kawari, who spoke a few words of Malay, and from his knowledge of the coast and out-lying reefs of Jobi Island was taken by us as a sort of pilot, was a character in his way. He was evidently immensely impressed with the importance of his position and the size and beauty of the "big fire-ship," of which he supposed himself to be in entire charge, and his appearance on the bridge, clad chiefly in amulets, was a source of much amusement to the crew. On leaving Dorei Bay the night was very dark, and wishing to test his knowledge, we asked him in which direction Jobi lay. What followed was somewhat amusing. Mr. Jens, happening to come up at the time, also had a guess, and differed some three or four points from the old man. We thought no more about the matter, but shortly afterwards discovered Kawari in a state of great perturbation, of the cause of which we were not left long in ignorance. Taking us on one side, he implored us not to believe Mr. Jens—" *Tuan pandita tida tau, sahaya tau,*" he kept repeating—"the missionary doesn't know; I know," patting his

fat stomach. As gravely as we were able we assured him that, though we had had evidence of missionary infallibility on land, we thought it possible that they might occasionally be deceived in nautical matters, and with the assurance of our entire trust in his navigation the old fellow returned comforted to his post.

CHAPTER XIII.

NEW GUINEA (*continued*).

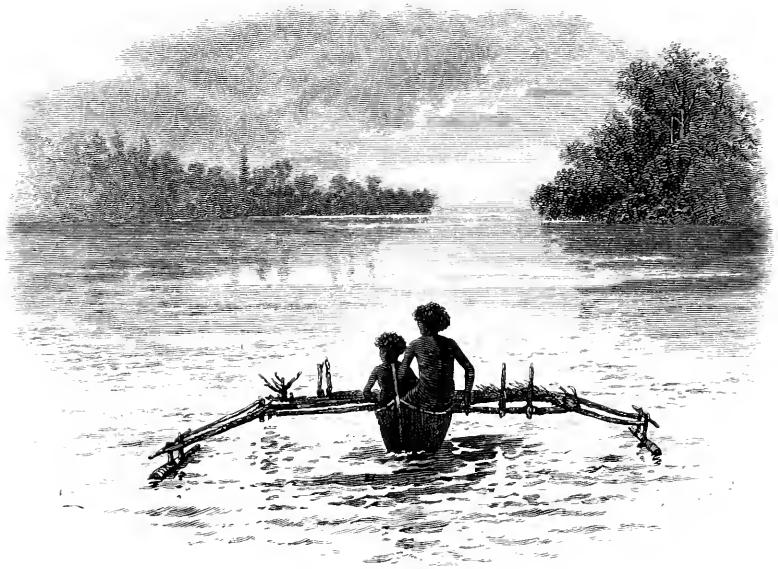
aknik—Arrive at Ansus—Signification of the native comb—Dress of the women—Paperipi—*Paradisca minor*—The King-bird—Development of its plumes—Canoes and their decoration—Skulls and corpses in the trees—Narvoui—*Cascado*—Cooking a corpse—*Korowaar*—An unpleasant adventure—Return of our hunters—Wooden pillows—Return to Waigiou—Leave for Salvatti—How the Rajah lost his nose—We secure a live *Seleucides*—Method of catching them—Character of the Papuan—Leave for Misol Island—Uncertainties of navigation—Anchor at Efbé—Northern limit of the Eucalyptus.

To ensure the safety of the ship on her voyage old Kawari had looked out the necessary amulet from the bunch that hung on his chest, and placed it at its post of action between his shoulder-blades. We were therefore protected from the malevolent designs of the Faknik—evil spirits who are the cause of storms and adverse winds, and whose dwellings are the caves by the seashore. They are ever on the alert to drown the mariner, and to cause him—as does the Manuen on land—every kind of misfortune and distress. A good amulet, we were glad to learn, is most efficacious against their spell, and we were further protected by a very liberal supply of tobacco which, if thrown into the sea as an offering, is often, Kawari told us, of the greatest use in the event of an amulet proving inefficient. The old pilot's charm, however, was by one of the best makers in Dorei, and at the end of our voyage the tobacco was intact.

The village of Ansus lies on the south shore of Jobi Island, at the head of a deep channel formed by various islands and coral-

reefs. The approach is a dangerous one, and without Kawari we should most probably have got into difficulties, for, contrary to the usual rule in these clear waters, there are many shoals and rocks of which the best look-out gives no warning.

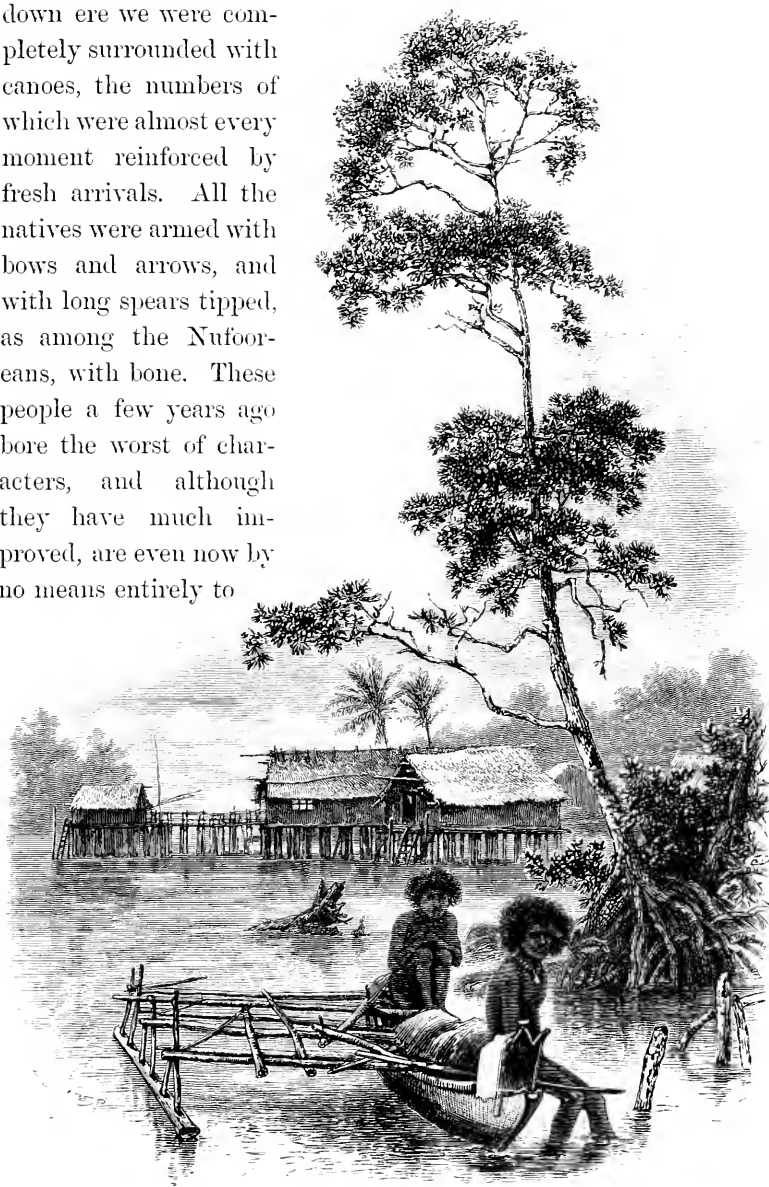
Ascending the channel for a distance of three or four miles, a sudden turn brought us in view of the village. It was of large



CANOE, ANSUS HARBOUR.

size, comprising no less than forty-seven of the enormous houses with which we had become familiar in Dorei Bay. Here, however, they were true lake-dwellings, having no bridges to connect them with the shore, the position of which was a matter of uncertainty from the dense growth of dreary mangroves around the creek. Although built in close proximity to one another, each house was completely isolated, and access was only possible by means of one of the numerous dug-outs tied up in front of the platforms. Our arrival created no little excitement, and the anchor was hardly

down ere we were completely surrounded with canoes, the numbers of which were almost every moment reinforced by fresh arrivals. All the natives were armed with bows and arrows, and with long spears tipped, as among the Nufooreans, with bone. These people a few years ago bore the worst of characters, and although they have much improved, are even now by no means entirely to



WATERING-PLACE NEAR ANSUS.

be trusted. Kawari was in a comic state of alarm during our stay lest we should come to some harm while out shooting, but on our first acquaintance the natives appeared good-humoured enough, and were soon perched in numbers on the bulwarks, shouting and yelling at the top of their voices and making such a noise as can only be produced by Papuans. In circumstances such as these "Dick" was of the greatest use to us, for he alone was able to clear our decks. His size and blackness, his gleaming white teeth, and, above all, his deep bark,—for the native dogs apparently do not bark,—effectually frightened our invaders, and they scattered like a flock of sheep at his approach, tumbling overboard or running up the rigging in their frantic endeavours to escape. No women were to be seen for the first day or two of our visit, and little or nothing in the way of barter was brought off. Our stores of cloth and Turkey red did not tempt them in the least, and almost the only things we found marketable were Chinese buttons and silver dollars—the latter being in great request for the purpose of making bangles. Yet in spite of the absence of demand for garments, the clothing was even more scanty than that worn by the Arfak people, and some of the younger men were guiltless of a single rag. At Yamua, a village on the mainland farther to the east, both sexes, we were told, go entirely naked.

The natives wore the usual long bamboo comb projecting over the forehead, ornamented with feathers of the white cockatoo or *Eclctus* thrust vertically into the handle. I had noticed that in some cases the most conspicuous feather was not an entire shaft, but built up, as it were, of two or more different pieces, and on inquiring the reason one morning from a formidable-looking warrior who was perched upon our bulwarks, I learnt that each piece signified that the owner had disposed of an enemy. The coast people, it appears, are always at war with the interior tribes, who from time to time come down from the mountains and make raids, in which the women and children are carried off as slaves. One of these descents had taken place only a short time before, and

some of the relatives of my informant had been killed. Reprisals, however, were being planned, and from the way in which he spoke of them, it was evident that he looked forward with no little pleasure to the chance of elongating his feather.

The Jobi men are much disfigured by the moxa tattooing to which I have alluded on a former page, and seem to be even fonder of decoration than the people of Dorei Bay. Necklaces of the common cowrie, with a single pendant of the snowy *Ovulum ovum*

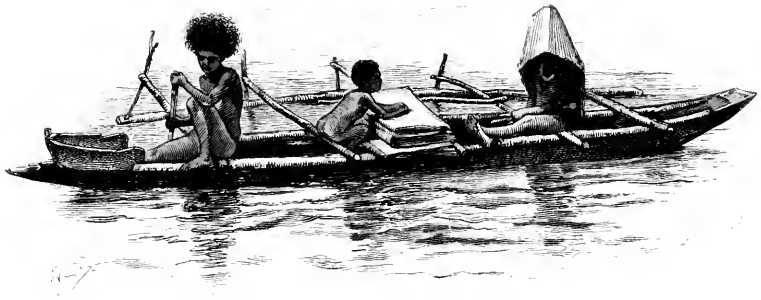


COMB OF ANSUS MAN.

on the chest, are worn by every one, and the bracelets, armlets, and shoulder-straps are extremely well worked. The few women that we saw were very shy, and could not be induced to come on board, or to remain when we entered the houses. They wore nothing but a piece of native-worked cloth resembling the *tappa* of the Polynesians. Several were tattooed with faint blue lines above and on the breasts, to form a diagonal "diamond-pane" pattern, and all wore mats of a most peculiar cowl-like shape over the head and shoulders. In one or two instances we also saw men with them. Mr. Jens told us that, as far as he could learn, these were worn as mourning for the death of a relative. A very similar dress exists among the Dorei Bay people, but it is only seen on women who have been recently confined, the idea being that the sun must not shine upon their heads, or it will cause the death of some near

relation. After a certain period has elapsed a feast is given and the mat discarded.

Shortly after our arrival at Ansus we had made friends with a pleasant-faced, nose-barred savage, who, by the size and finish of his mop and the character of his ornaments, was evidently not a little of a dandy. He was of particularly fine physique, and the ease and grace of his carriage rendered him conspicuous among the others, for the Papuans, unlike most of the African negroes, are not



CANOE, ANSUS ; WITH WOMAN WEARING MOURNING MAT.

remarkable in this respect. The hunting of the Birds of Paradise is but little practised in Jobi, but Paperipi, as he was named, appeared to be the greatest authority on the subject, and after a long discussion, it was arranged that he should take all our available hunters, headed by Tahirim, to the best ground he knew of. This lay rather more than a day's journey to the E.N.E., and we accordingly fitted them out with provision and ammunition for a week's absence, and sent them away without loss of time. They were accompanied by a small escort of Ansus men, in case of a meeting with any of the hill people, but we ourselves remained behind, as we were desirous of getting a sketch survey of the harbour and its approaches, while there was at the same time abundant material to employ us close at hand without leaving the

ship for any length of time, which we were not particularly anxious to do.

We had intended to make our first excursion to Kaiari, a small island close to our anchorage, but the natives rather eagerly dissuaded us from doing so, saying that it was staked in every direction with sharp-pointed bamboos in case of raids by the Alfuros. We did not believe the story at the time, and afterwards discovered that they buried, or rather exposed, their dead upon the island, which was possibly the cause of their unwillingness to let us shoot there. Our first search was for water, and we were rewarded by the discovery of a clear stream on the mainland not far from the mouth of the channel, in close proximity to which sago-washing had been carried on in exactly the same manner as we had remarked in Batchian.¹ The forest was tolerably open, and here for the first time we saw the Lesser Bird of Paradise (*P. minor*) streaming through the trees like a golden comet. Its restless habits render it most difficult to shoot. Like the closely-allied and well-known *Paradisca apoda* of the Aru Islands, it has regular "play trees," where in the breeding-season the males assemble and display their exquisite plumage before an admiring circle of females; but neither here nor in Waigiou, where, according to the natives, the Red Bird of Paradise has the same habits, were we fortunate enough to witness this extraordinary sight. We also came across the little King-bird, which Mr. Wallace has described as "one of the most perfectly lovely of the many lovely productions of Nature," "a gem of the first water," and indeed in writing of the happily-named birds of Paradise—perhaps the most exquisitely beautiful of all living creatures—each of which seems to surpass the last in the glory of its colouring and the marvellous eccentricity of its plumage, it is difficult to find words to express the sense of admiration they arouse when seen for the first time in their native land. As the naturalist tenderly and lovingly handles some new

¹ Among the Geelvink Bay Papuans sago is eaten by means of two rough chopsticks very much like those used by the Chinese.

and long-coveted species of which he has hitherto only seen some deformed and wretched caricature on the shelves of a museum, he realises the inadequacy of superlatives. He can only feel that the little creature that lies before him is perfect and without fault; so perfect indeed that, in spite of the rarity of his prize, he cannot help wishing that he could give it back its life.

The King-bird of Paradise (*Cicinnurus regius*), of which we obtained numerous specimens during the *Marchesa's* cruise in New Guinea waters, is the most generally distributed of all the Paradiseidæ. As is always the case in the birds of this family, the females and young males are alike, and of the most sober colouring,—mouse-brown, with faint barring on the breast and abdomen¹—contrasting strongly with the brilliant plumage of the adult male, in whom the entire upper surface is of a rich, glossy red shading into orange on the head. An emerald green band crosses the breast, below which the plumage is creamy white. But the chief beauty of the bird lies, as in many of its kind, in the strange development of the central tail-feathers and the tuft of sub-alar plumes. The former are prolonged for five or six inches as gracefully-curved wires of extreme fineness, and terminate in brilliant metallic green discs about the size of a sixpence. Concealed beneath the wing, but capable of being expanded into fans of wonderfully regular shape at will, are two greyish tufts of feathers, tipped in the same way with glittering emerald.

The gradual development of these singular and strikingly beautiful tail-feathers we were able to trace in the admirable series of skins we obtained. At first brown and of the same length as the others, they gradually acquire a red tinge, and, when an inch

¹ This type of coloration in the female is adhered to, with more or less variation, in all the birds of Paradise, with the exception of *Paradisæa* and *Paradigalla*, a curious fact when the great dissimilarity between the males is taken into consideration. There is little enough resemblance between the Twelve-wired Bird of Paradise and the New Guinea Rifle-bird (*Craspedophora magnifica*) in the male, but the females are so much alike that by the plumage alone it is extremely difficult to distinguish them.

or two longer, become eroded on the inner web, and somewhat curved, so that the feather is sickle-shaped. This curvature becomes after a time more pronounced, ultimately assuming the shape of the perfect feather, though its colour still remains unchanged. The shaft then becomes completely denuded of feather, and the terminal disc acquires the brilliant metallic green colouring of the perfect plume. This process occurs only during the first change of plumage from the immature state—a change which is produced by the gradual assumption of colour in previously existing feathers, and not by moult. Afterwards, at the yearly moult, the prolonged tail-feathers make their appearance in very peculiar hook-shaped feather-cases, on the rupture of which the plume discloses itself in its complete state.

In the jungle near the village there were few striking flowers, or at least few that we had not met with elsewhere. A *Nepenthes*, which grew in some abundance, with dwarfed and ungracefully-shaped pitchers, was, however, new to us, as was also a *Cypripedium*, of which we found a single specimen only, growing at the bottom of a large tree. This latter orchid was very handsome both as regards shape and colouring, the flower-stalk bearing three or four blossoms with pendulous ribbon-shaped petals, twisted into a graceful spiral, and tinged with purple. The dorsal sepal was marked with alternate stripes of dark brown and yellow, while the lip was of a paler shade of the same colour, less distinctly striated.¹

Numbers of canoes surrounded the *Marehosa* from morning till night during our visit. Such a thing as a built boat is unknown, and all are “dug-outs,” made by burning out the trunks of trees with charcoal. This is an operation over which much time and labour is spent, and after the finishing touches have been put to

¹ This orchid, which I have since learnt to be a species new to science, is allied to *Cypripedium philippinense* (Reichb.), figured in the “Bot. Mag.” pl. 5508, but the twisted petals are very much shorter, being only twice the length of the lip, and the colouring of the sepal of a far brighter yellow. I have named it *Cypripedium gardineri* after my friend Mr. Walter Gardiner of Clare College, Cambridge. The genus *Cypripedium*, I believe, has not been previously recorded from New Guinea.

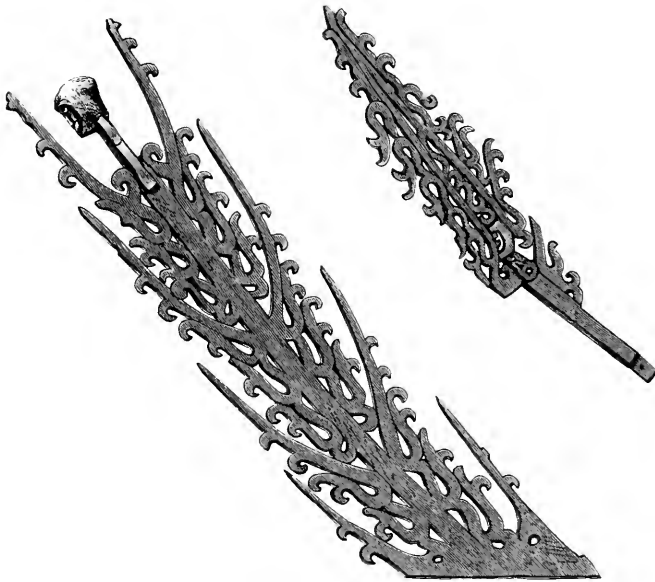
the craft, they are filled with water and kept sunk for a time, in order to counteract the tendency to split. They are outriggered



CYPRIPEDIUM GARDINERI.

almost without exception on one side only, and though the outriggers are but clumsily constructed as compared with those of the Dorei Bay people, the Ansus men are much more given to adorning their boats than their western neighbours. Bits of red and white

rag, coloured leaves or flowers, and various shells are constantly used for this purpose, and the bows of the craft are sometimes ornamented with fretwork figure-heads, which, with the limited tools the natives have at command, must have cost infinite labour to produce. Many of these are of designs that would be really



FRETWORK FIGURE-HEADS, JOBI ISLAND.

creditable to a pupil in a school of art, and they are especially remarkable from the fact that no two of them appear to be alike. The decoration of the praus is apparently most frequent on the occasion of a feast, when the natives themselves appear adorned with the red flowers of the hibiscus, or with yellow leaves tucked beneath their armlets, which have by no means so innocent a meaning as might be imagined.¹

Wandering one day in the forest at the back of the village, we came upon a skull wedged in the branch of a tree, with a well-worn

¹ Quot hostium virgines per vim stupraverunt, tot folia aurea gerere illis mos est.

path leading up to it. What it was, whether the spoil of some encounter with the Alfuros or not, we did not learn, but on another occasion we found a small box containing the skeleton of a young child in a like situation. It was an offering to Narvoii—a spirit in whom the Jobi islanders believe in common with the Dorei people. Narvoii is no malicious demon like the Manuen, but a good spirit, whose abode is in the mists and the tops of giant forest-trees, where he lives in company with a female spirit named Ingira. He is a little mannikin with long white hair, old and decrepid; who wanders ceaselessly at night in the forest and haunts the outskirts of the villages, ever on the watch for children, whom he kills because he loves them and likes to have them always with him. All young children who die, and even those who are killed by their mothers at birth, are offered to Narvoii in the manner I have described, in the hope that he will be thus propitiated, and refrain from killing others.

In Jobi, as in other parts of New Guinea, there is no lack of malaria, and though the sea-dwellings and consequent canoe-life of the people is no doubt a great safeguard against it, they are by no means exempt from its effects. Of other diseases we saw little or nothing, with the single exception of a skin affection which, though not uncommon in North-west New Guinea and, I believe, in other parts of the island and Polynesia also, appeared to be very frequent at Ansus; so frequent indeed that probably not less than fifteen or twenty per cent of the population were affected. It is a form of gyrate psoriasis, which, spreading from various centres, covers the skin with circles of extraordinary accuracy of outline. In time these meet, and ultimately the greater part, or even the whole of the body, becomes covered with these marks, ring forming within ring much as the wavelets caused by the splash of a pebble in a pool. Individuals suffering from this disorder, which would seem to be of a most obstinate character, if not actually incurable, are conspicuous at some little distance, owing to the whitish and scaly appearance presented by the skin. The patterns formed by this

unpleasant but curious disease, which is commonly known as *Cascado*, are sometimes almost ornamental, and when seen at a little distance give the effect of tattooing.

On the day after our arrival one of us had been greeted by a most horrible smell while passing a house in the village, but it was not until some little time afterwards—when it was of a yet more unbearable nature—that we learnt its origin. They were drying the corpse of a man over a fire—an operation which took nine days! In a climate like that of New Guinea the effect of these funeral ceremonies is better imagined than described. The custom is apparently in vogue among several of the Papuan tribes, and in some cases, when the body is sufficiently dried and smoked, it is preserved in the house. The Ansus people have another method of disposing of it, and do not furnish their dwellings with their deceased relatives. On the tenth day the body in question was rowed across to Kaiari Island and placed upon a platform of sticks among the mangroves, where we had no difficulty in recognising its presence within a considerable radius for the remainder of our visit.¹ A pole with a piece of rag fluttering at its extremity indicated the mouth of the creek where the bodies were placed, and conches, shell necklaces, and other articles were hung up in the branches hard by.

Korowaar, or images of the deceased, are constructed as at Dorei Bay, some of them of most ludicrous appearance. One that I was fortunate enough to obtain—whose likeness I here present to my reader—was especially so. The mop was imitated by little



KOROWAAR.

¹ Mr. Van Hasselt afterwards told us that some of the Arfak tribes also dry the bodies of their dead in the above manner, and that it is the custom that the substance which drips from the corpse in the process should be tasted by the widow, under pain of death!

tufts of cassowary feathers, and the individual was represented sitting with his chin resting on his hands, and a comic air of determination in his wooden features. Images of this nature must have existed nearly three hundred years ago, for Purchas makes mention of them. "There is heere," he says, "a Bird as bigge as a Crane, hee flyeth not, nor hath any Winges wherewith to flie, he runneth on the ground like a Deere: of their small feathers they doe make haire for their Idols."¹

In spite of the cemetery and the recent highly-flavoured addition to it, we did not hesitate to land on Kaiari to take some observations. At its western end we found a pole bearing the Dutch arms. At the north-east point a small off-lying shelf of rocks not visible from the village gave us an excellent post to connect various bearings we had taken for our rough survey of the bay and its islands. Having finished this, and wishing to estimate the distance across the bay to the south point of the island, I remained behind to fire guns while my companions rowed over to the other side, a mile and a half away, to time the reports,—a plan of judging distance which with care gives sufficient accuracy for all practical purposes. The operation is usually unexciting enough, but in this instance it was attended with results I had not foreseen. I had hardly finished my series of half a dozen discharges before I heard the splash of paddles and a large canoe shot round the corner, filled with an excited, jabbering crowd of natives with their bows drawn at me in what seemed to me an unpleasant and quite unnecessary manner. They had barely made their appearance when—splash, splash—and a second came into view; then another and another, until I was surrounded by quite a little fleet, and an amount of shouting and jabbering that even from a Papuan's point of view must have seemed excessive. Old Kawari's caution and a certain sentence in Mr. Wallace's "Malay Archipelago"—"Jobi is a very dangerous place, and people are often attacked and murdered while on shore"—occurred to my mind, and at the moment I wished that my

¹ "Purchas hys Pilgrimes," vol. ii. p. 1682.

companions were a little nearer. It would have been difficult to resort to the proverbial remedy of writing to the *Times*, so I waved my hand amicably and opened a conversation in English on the subject of the weather. The scene would have been irresistibly ludicrous to a spectator, but I should probably have enjoyed it more myself had I been a disinterested party, and I was not sorry to see



NATIVE OF JOBI.

our boat approaching. The natives saw it too, and quietly dispersed. Most probably the frequent reports of my gun had led them to the conclusion that our party had come into collision with some of their own people, and they were reassured on learning that such was not the case. The unsophisticated Papuan, however, is such an excitable individual that good temper and caution are all-essential in dealing with him.¹

Tahirun and the other hunters returned successful from their expedition at the end of five days. Of the beautiful golden-

¹ The murder of the captain and four of the crew of the trader *Koredo* at Biak, in July, 1886, has since proved that the natives of this group are by no means entirely to be trusted.

plumed *Paradisca minor* they had obtained forty-two, and of the King-bird nine skins; the former, together with those we had shot in the immediate neighbourhood of Ansus, completing a perfect series in different stages of plumage. The abundance of this bird in Jobi was remarkable, but it is a singular fact that there was not a single female in our collection. The segregation of the males at certain seasons of the year partially explains it, but there is, I think, no doubt that in this species, and indeed among the Paradiseidae generally, a considerable preponderance in numbers in favour of the male sex exists. Among the other birds the most noticeable were three skins of a species of Crowned Pigeon peculiar to the island, not greatly differing from the one we had already obtained, but conspicuous by the star-like white tipping of the crest. Of this bird (*Goura victoria*) we also obtained two living specimens, but, unlike its congener, it did not seem to be at all abundant.

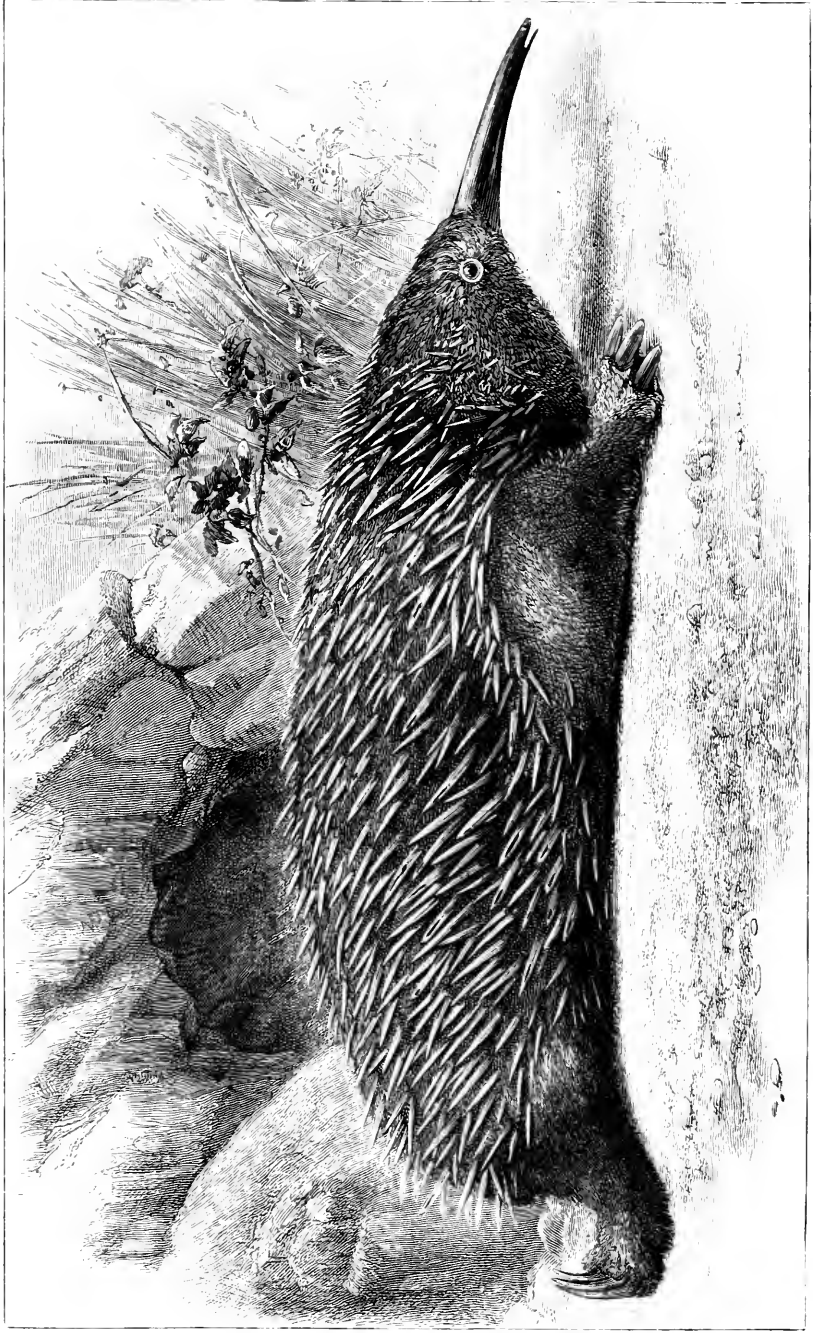
The payment of the Ansus escort was an affair of some difficulty, for, like most natives, however much they may have desired any



PAPUAN HEAD-REST.

given object a few moments before, possession failed to show them its virtue, and they immediately wanted to exchange it for something else. We eventually settled the matter by giving them a *sarong* and a knife apiece, besides some smaller presents, while Paperipi's heart was gladdened with a bar of iron and some cloth. He brought us some excel-

lently-carved wooden pillows or head-rests for exchange, all of different design but of very similar plan, representing two conven-



tional human figures lying on their stomachs and supporting the curved bar on which the neck is intended to rest. It is curious that such an exceedingly uncomfortable article should be in use among such different and widely-separated peoples as it is. The Zulus and other South African tribes use it, and even the Japanese have not discovered anything better. In Egypt it is probably contemporaneous with the construction of the Pyramids!

We returned to Dorei Bay on the 13th, merely waiting long enough to pick up our ornithological spoil from the Arfak district, and to get our hunters on board, and our time was for some days afterwards fully occupied in the labelling and arrangement of our collections.

Among them we were fortunate enough to find a prize,—the rare and extraordinary Echidna that has quite recently been discovered in Northern New Guinea (*Proechidna bruijni*). This curious animal in outward appearance resembles the Hedgehogs in its spine-covered body and the Ant-eaters in its long and tapering snout. The latter is incapable of being opened, and the mouth consists of a small hole at the apex through which the long and vermiform-tongue is protruded. The spines are short and stout, but of needle-like sharpness, and spring from a thick coat of dark brown fur. The fore foot is furnished with three broad and nail-shaped claws, while those of the hinder limb are long, sickle-like, and very sharp. Worked by the powerful muscles with which the creature is provided, these are admirably adapted for digging. The tail is rudimentary. Bruijn's Echidna, which is over two feet in length, and is thus considerably larger than its Australian representative, is said by the natives to live in burrows in rocky ground.

On the 15th we again arrived at Momos in Waigiou. Our friend the Rajah came off almost before we had let go our anchor, followed directly afterwards by the two hunters we had left behind to collect for us. They had not obtained the Rhipidornis, as we

had hoped, but we were pleased to find seven specimens of the Red Bird of Paradise in full plumage among the skins.

Leaving Momos early on the morning of the 16th, we steered south for Samatí, a village at the north-east point of Salwatti, and, the eastern limit of the Batanta reef being a matter of uncertainty, took our old course over the shoal close to the latter island. The approaches to Samatí are difficult, and but for the instructions we had obtained from Captain Hakkers we might easily have got into trouble. Shoal water extends for a considerable distance off shore, and the deep draught of the *Marchesa* obliged us to anchor fully three miles from the village. Presently a large prau with the usual complement of flags and tom-toms announced the arrival of the Rajah—the second of the potentates of the Rajah Ampat. He was accompanied by the son of the Sultan of Tidor, our acquaintance of Napriboi, who was about to start on his return voyage on the following day.

The Rajah of Samatí was a rather pleasing-looking Malay, or at least would have been so but for the loss of the greater portion of the right side of his nose. He is fond of telling the story of his disfigurement. The Papuans of Saonek in Waigiou had stolen a brass coat-of-arms—the insignia placed by the Dutch on most of the islands claimed by them in this part of the world—and the Rajah visited them in his prau to demand its restitution. It was refused, and the Papuans suddenly attacked them. The Rajah, unarmed and unsupported, for his men were all engaged in defending themselves, had a desperate struggle with a man in attempting to regain the prau. To prevent him using his spear the Rajah caught him by the wrists, and the native, foiled in his attempt, fastened on to his antagonist's nose with his teeth. Both held on for their lives, but the Rajah getting free first—at the expense of the portion of the aforesaid organ—kept the less fortunate Papuan beneath the water till he finished him.

We took advantage of the Rajah's prau to land, and the tom-toms were beaten more energetically than ever in our honour.



These boats are wonderfully built, no nails of any kind being used in their construction. Each plank is furnished with studs at regular intervals, left in cutting it out of the tree. A hole is bored through these, and cross thwarts and strong knees having been fitted, the whole is tied together with coir rope. The result is as strong a craft as can well be constructed, albeit somewhat clumsy.

Samatí is unlike the ordinary type of New Guinea village. Marks of Malay influence were visible in the shape of a small herd of cattle pasturing near the shore, and many of the houses were built on land. The Rajah's was among the number, and on the verandah four chairs, a paraffine lamp, and a table covered with a red cloth almost brought us within touch of civilisation. Cigars and *rokos* were brought, and on inquiring about our hunters we learnt that the Papuans we had asked the Rajah to employ had succeeded in catching a live specimen of the Twelve-wired Bird of Paradise (*Seleucides*), and were still away in the mountains in search of others. The bird, a male in full plumage and already tolerably tame, was brought in in its bamboo cage, and although we had previously seen this species alive in the aviary of the Resident of Ternate, we could hardly keep our eyes off our new acquisition, so striking was its beauty.

The method employed by the natives in catching the Seleucides appears almost incredible. Patiently searching the forest until he has discovered the usual roosting-place of the bird, the hunter conceals himself beneath the tree, and having noted the exact branch chosen, climbs up at night and quietly places a cloth over his unsuspecting quarry. The species being exceedingly fond of the scarlet fruit of the Pandanus, the roosting-places are easily recognised by the *dejecta*. The plan would, perhaps, by most of us be regarded as very similar to that counselled by our nurses, in which a pinch of salt is the only requisite, but the noiseless movements of the native hunters overcome all difficulties, and the tree once discovered, the chances are said to be considerably against

the bird. Finding the tree is, however, not so easy, and the month spent by our natives in the forest resulted in the capture of only one bird. Four days after our arrival they returned again, but this time empty-handed. They had discovered a second tree, but one of the Alfuros of the interior had interfered and shot the bird with his blunt arrow. In the discussion that ensued our man got the worst of it and retired from the field, having very narrowly escaped being added to his enemy's bag.

We spent our time at Samatí in our usual work of collecting and skinning. Lokman, the hunter we had sent over from Waigiou, had of course done nothing, and came to us in his usual deprecatory way, with a full powder-horn and half a dozen of the commonest birds. The Rajah, too, rather disappointed us, and we came to the conclusion that the noseless and unprepossessing side of his face was a truer index to his character than the other. The men he had supplied to shoot for us with the guns we had sent over by Lokman had, he told us, obtained nothing, and as Lokman himself declared he knew nothing of the matter, we had to let it rest, and permit recently-killed birds, which were no doubt our own, to be brought to us for barter. There was but little new to us among them, but we were able to complete a fair series of the Seleucides, and also obtained a rare and interesting Lory with plumage of an almost uniform black (*Chalcopsittacus ater*).

The Salwatti Papuans, and indeed those of the Rajah Ampat generally, do not seem to evince any very great desire for the clothes and civilisation of the western world, and are on the whole an unprogressive race, holding closely to the customs of their forefathers. This apathy to improvement has no doubt been the chief cause of the non-success of the missionaries in Dorei Bay. Wonderful to relate, it does not even appear that all are open to the seductions of traders' rum, which, as we all know, usually appeals to the crudest and most undeveloped mind, and is a powerful factor in the advance of civilisation and geographical knowledge. The Papuan strikes the traveller as an individual with no little

backbone in him; one, in short, who is by no means likely to disappear on contact with the white man, and in other ways besides his cheeriness and boldness is not unlike the African. But in spite of this and the supposed denseness of population, it is not probable that New Guinea will form a market for European goods for many a year to come. We learnt in Ternate that the trade with the island had fallen off considerably, and that it now no longer paid to send schooners to the northern coast for pearl-shell and gum-dammar. So little, indeed, do the natives value the cloth which they obtain in exchange, and which is for the most part stored up unused, that an enterprising merchant, aware of the natives' love for silver ornaments, recently despatched a schooner to buy it back with Dutch dollars, and it was currently reported that he had made a remarkably successful venture.

The Salwatti people are good sailors, and are especially renowned for their boat-building. They construct large praus in the manner I have just described, in which voyages of considerable length can be undertaken, and these craft are even purchased by the Papuans of Dorei Bay. The possession of a good vessel is of some importance in this locality, for Samatí and the neighbouring coast is entirely exposed to the Pacific, and bad weather is not infrequently experienced. During the last day of our visit a very heavy sea was running off the entrance to the Galewo Straits, which would have been far too much for any small prau to face.

We induced the Rajah to let us have one of his bullocks, for which we paid him 100 guilders, or rather more than £8. Whether it was owing to our prolonged rice diet or not I cannot say, but the beef appeared to us to be equal to any we had ever tasted in England. Both here and at Mansinam the cattle were in excellent condition.

Leaving Samatí on the 19th of November, we swung ship and steered westward through Pitt Strait, where we encountered very heavy rainstorms and the usual strong currents. We were bound for Misol—an island lying to the south-west of Salwatti, at a

considerable distance from the mainland, to which, however, it is connected by shallow soundings and innumerable reefs and islets. In order to reach it on the following day we decided not to anchor for the night, as we had hitherto done on almost every occasion in New Guinea waters, and therefore steered S.W. by W. on clearing Pitt Strait, so as to pass midway between Popa and Misol, a course that would apparently lead us well clear of all dangers. An hour or two later, on referring to a manuscript chart we had got from Captain Hakkers, we were rather disconcerted to find a rock marked exactly in the path of the vessel, midway between Popa and the Vienna Islands—a small group to the north of Misol. It was not indicated on two other Dutch charts in our possession, and as the night was dark and the passage not too wide when the doubtful cartography and strong currents of these regions were taken into consideration, we resolved to trust to Providence and ignore it. What its position, if any, may be I cannot say. Fortunately for us it was not determined at the expense of the *Marchesa*.

At daylight next morning we were rather surprised to find what appeared to be a small island bearing nearly west. We had expected to have cleared the group some time before, and, concluding that we had probably encountered a strong current, we kept on our course. Our morning sights, however, placed us so far to the west that we thought we had made a mistake, and took another set. They confirmed the others, and shortly afterwards we sighted high land far ahead, which we knew could be nothing else than the large island of Ceram. Instead of encountering the current, we had thus had it with us, and had far overrun our distance. Navigation in these waters is exciting work, attended as it is by a glorious uncertainty which keeps all one's faculties on the alert. In this case we had to begin with been led into error by Great Canary Island, partly owing to its wrong position on the chart, and partly to its being of such low elevation that only a very small portion of it was visible above the horizon. What at day-break we had taken to be a small island, was in reality Misol itself,

which is triangular in shape, and presents a sharp apex to the west, and the land beyond being, like Great Canary Island, too low to be visible, our mistake was easily made.

Misol lies far from the track of vessels, and is little known or visited even by the Malay traders. It is about forty-five miles long by twenty in breadth, and is covered everywhere by dense jungle. The interior is inhabited by wild Alfuros speaking a language distinct from the coast people, among whom a partial civilisation has been introduced by the Malays. Two so-called Rajahs live upon the island, at Waigamma on the north-east, and Lelinta on the south coast, and a few miles westward of the latter village is the small island and kampong of Efbé, which was visited by Captain Forrest in 1775. It was for this place that we were bound, but charts and directions being non-existent, we had to find our way between a group of small islands and the mainland as best we could, fearing lest the night should come on before we could anchor, yet at the same time not liking to go at any speed on account of our total ignorance of the water. Just before sunset we approached the island, and on firing a gun a prau came off to meet us manned by two or three Papuans under the direction of a Bugis settler. A little later we dropped anchor within stone's throw of the shore in a small but beautifully protected harbour, whose waters were as smooth as glass. It is formed by the south coast of Misol and Efbé—the latter a half-moon shaped island with its concavity facing north, a narrow passage past the reefs off its points being the only entrance to the circular basin thus formed.

It was our intention to leave eight of our hunters in Misol, picking them up on our return from the Aru Islands, and in order that every assistance should be given them, it was necessary for us to see the Rajah, who, we learnt, was at Lelinta. With these people it is not impolitic *se faire valoir*, and we therefore sent a message requesting him to visit us. He came next day—a half-civilised Malay, who was not nearly so important a personage as Tahirun,

either in manner or appearance. He could not read, but the sight of the Sultan of Tidor's letter encased in its yellow silk cover was sufficient, and he agreed to take charge of our men, and if necessary to supply them with praus to take them to Waigamma.

The village of Efbé is composed of four houses only, despite the fact that it has been in existence for more than a hundred years. It is placed in a grove of coconut palms, an uncommon sight in Western New Guinea, where this most useful of trees is but rarely met with, for even in those places where the Malays have established themselves they seem to have paid but little attention to its cultivation. Looking to the south and east from the southern shore, myriads of islands are seen to dot the water as far as the eye can reach; not low, irregular, and with tempting sandy bays, such as one sees in the little archipelagos in some parts of the Philippines, or off the Bornean coast, but for the most part small, square, and block-like; devoid of beach and with perpendicular or even overhanging cliffs, reminding us of the nests of islands we had found in the Waigiu Gulf. All are of hard, ringing, coralline limestone which here and there assumes the most fantastic shapes, running up into wondrous spires and pinnacles like some Gothic cathedral gone mad,—quaint and impossible in outline, and from its knife-like edges utterly destructive to one's boots.

While making a rough survey of the harbour, we were astonished to come across several Eucalyptus trees. Although they extend as far westward as the Timor group, it is probable that Misol is the extreme northern limit of this typically Australian genus. Upon Efbé we found a rare black Lory (*Chalcopsittacus*) rather abundant, closely resembling the species I have already alluded to as having been obtained by us in Salwatti, but exhibiting such differences in plumage as almost entitle it to separate specific rank. Another interesting bird which we here added to our collection was a large Graucalus (*G. melanops*), which had not previously been

known to inhabit the north-west islands of New Guinea. The birds of Misol are very much the same as those of Salwatti, but while the latter island is noteworthy for the gorgeous *Seleucides*, and for the absence of the Lesser Bird of Paradise, the latter bird is fairly abundant in Misol and the *Seleucides* unknown.

CHAPTER XIV.

AMBOINA, BANDA, AND THE ARU ISLANDS.

Amboina—The town—Tomb of Rumphius—The clove trade—"Sea-gardens"—The climate—*Microglossus*—Banda—The harbour and volcano—View from Papenberg—Nutmegs—Banda Neira and its forts—Leave for Aru—Non-existent islands—Dobbo—The village and its trade—The pearl-fishery—*Paradisca apoda*—Trading praus—Fruit-eating pigeons—Perils of a collector—*Ornithoptera arruana*—Our hunters return from Wanumbai—We begin the homeward voyage.

LEAVING Misol and our hunters behind us, it was not long before a W.S.W. course brought us in sight of the great island of Ceram, with whose high mountains we had previously but unintentionally made acquaintance on our voyage to Efbé. We rounded its western end, and gliding almost motionless over a glassy sea which reflected the blaze of sunshine too accurately for pleasure, arrived in thirty-six hours' steaming at Amboina.

The town, which, *par parenthèse*, gives its name to the whole island, lies some little distance up an inlet, whose surrounding grassy hills are a relief to the heavy jungle that nearly everywhere in Malaysia greets the traveller's eye. Such harbours hold out a prospect of good anchorage, but we were destined to be disappointed, and the usual operation of running a cable ashore, so as to make fast head and stern, had to be gone through. The Dutch gun-boats *Merapi* and *Samarang* lay at anchor near us. Their officers were by this time old friends of ours, for we had met in several ports of the archipelago. We did not venture to disturb them, for it was siesta time, and we knew that, clad in

pyjamas, they were slumbering peacefully in their cabins until the hour of the ante-prandial "*pijtje*" should arrive. The climate had not been without its effect even upon ourselves, but the desire to get our mails, and to taste bread and vegetables once more was too strong for us, and we landed in the full glare of the early afternoon sun intent on this and other business. We might have saved ourselves the trouble. Amboina slept, and we did but get hot and impatient.

Our walk was not quite fruitless, however. The town boasts of a hackney carriage, which we were fortunate enough to secure, and we drove in it later to pay our visit to the Resident. Almost all the Dutch officials are excellent linguists, and we were therefore rather surprised to find that our host spoke no English, and only a few words of French. Our chief concern was to secure coal, for the supply in our bunkers was nearly exhausted, but it was at first refused us, and we were referred to the Netherlands India Shipping Company, though, thanks to the letters we carried from the Dutch Admiral, we eventually succeeded in obtaining it. Officialism—contrary to what we had experienced in Ternate and elsewhere—appeared to be in the ascendant at Amboina, and, like the *Challenger's* people, we did not succeed in foregathering with the authorities. The Resident indeed, possibly deterred by linguistic difficulties, did not even return our call. Perhaps there were other reasons, for the society in the town had been for some time rent by many schisms, owing to a feud existing between the civil and military authorities, while the third class, the merchants, occupied an uncomfortable position between the two.

The town itself and its surroundings—the old fort through which one passes to emerge on the wide green *plein*; the red laterite roads leading past the cool-looking huts, well-nigh hidden by the masses of dark green foliage of the fruit-trees; the *orang Sirani*, in whose veins flows the blood of half a dozen nations—Portuguese, Malay, Dutch, Chinese and Kling, dressed in their gloomy and utterly unsuitable costume of black,—all these have

been too often described to need repetition. Within the limits of the town may be seen growing almost every kind of fruit or vegetable product that these pleasant islands of Malaysia yield. In a garden to the south, fittingly overshadowed by the wealth of tropical verdure which, in his lifetime, he loved to describe, stands the tomb of Rumphius. He was buried in the grounds of his house, which is, of course, no longer in existence, although another has been built in its place. The monument, a tasteless affair of brick and plaster, was erected at the beginning of the present century at some little distance from the spot where the body lies, and bears, in somewhat curious Latin, the following inscription:—

M. S.

GEORCII EVERARDI

RUMPHII

DE RE BOT. ET HIST. NAT.

OPT. MER.

TUMULUM

DIRA TEMP. CALAM. ET SACRIL. MANU FERE

DIRUTUM

MANIB. PLACATIS

RESTIT. JUSSIT

ET

PIET. REVERENT. PUBL. TESTIF.

H. M.

IPSE CONSECR.

GODARDUS ALEXANDER

GERARDUS PHILIPPUS

LIBER BARO A CAPELLEN

TOT. IND. BELG.

PRÆF. REG.

AMBOINA A.D. MENS. APR.

A.D. MDCCCXXIV.

The clove is now no longer a monopoly of the island as in old days. The trade appears to be growing less from year to year, and the official return for 1884 shows an export of 2158 kilos only. This, however, it should be said, is the private trade only. That of the Government is not specified in the official publication. Java grows a considerable quantity of this spice, and 4495 kilos of the 14,637 exported by private individuals from the entire Netherlands India come from that island. The tree was not only cultivated upon Amboina, but also upon the three islands, Saparua, Nusa, and Haruku, in its immediate vicinity. Now the chief form in which the ordinary traveller is brought into contact with the article is in the shape of toy-ships whose hull, masts, and rigging are entirely composed of the little dried black buds. These curiosities, which, as may be imagined, are more peculiar than beautiful, are brought on board every ship that anchors in the port, and find purchasers in the fo'c'sle, for Jack would think his list incomplete without one of these and a few of the wonderful shells with which the praus that come alongside are laden. Amboina shells, or rather the shells sold in Amboina—for they are gathered from the surrounding islands far and near—have been celebrated for the last two centuries, and most of those to be seen on the praus which tempt the P. and O. passenger at Singapore have passed through the hands of Ambonese fishermen.

We remained nearly a week in the harbour, glad of rest and fresh vegetables, for we had not had much of either in New Guinea. Just beyond the town the inlet contracts suddenly, and then, widening out, forms a second or inner harbour, which is not much used by shipping. Here are the "sea-gardens" described by Mr. Wallace—"the bottom being absolutely hidden by a continuous series of corals, sponges, actiniae, and other marine productions of magnificent dimensions, varied forms, and brilliant colours." Other writers have given glowing accounts of the same spot, and the impression conveyed to the reader is that at Amboina alone can be seen the submarine fairyland which they describe, but of

which, in truth, it would baffle any pen or pencil to give an idea. Nature is not so miserly in her gifts. In each and all of the coral islands of these seas there are a thousand creeks where we may lean over the boat's side and make ourselves for the moment inhabitants of an earthly Paradise teeming with the same exquisite corals, the same rainbow-banded fish. It is merely the fact that Amboina is a port of call for steamers which has given her this undeserved reputation.

It was the *kentering* or change of the winds during the period of our stay, and the north-west monsoon had just begun to set in. This season, which lasts until May, is the driest, or, to speak more accurately, the least wet, for the rainfall is enormous. Meteorological records kept at the station show it to be as much as 191 inches. Judging from a day we experienced ourselves, we had no reason to doubt the accuracy of the register. The wet months are said to have an average of twenty-two days' rain, and with the steady high temperature prevailing it might be imagined that the island would be particularly trying to Europeans. This does not, however, appear to be the case. Slight attacks of fever are common, but the hospital—a wonderfully well-kept and cleanly building—was by no means significantly full.

One of the hospital officials, who took an interest in birds, told us that he had some tame specimens of the Great Black Cockatoo, and we accordingly went with him to his house to see them. We had shot these birds in New Guinea—to which region they are entirely confined—but had tried in vain to obtain them alive, and, though parrots of perhaps a dozen species or more were to be found in the *Marchesa's* menagerie, the *Microglossus* was not among them. It was therefore with the greatest pleasure that we watched these peculiar and interesting creatures. There were three of them, but one only was perfectly adult. They were permitted to go at liberty about the room, and I was struck at once by the extreme slowness, as well as by the clumsiness, of their movements. The common white Cockatoos (*C. alba* and *triton*)

are deliberate enough in movement, at least in captivity, but, compared with *Microglossus*, they are rapid. The huge head and beak are rendered more conspicuous by the meagre size of the body, and the pectoral muscles are so little proportionate to the size of the bird as to render it probable that it resorts to flight as little as it can. It exists solely by virtue of its gigantic beak, for, as Mr. Wallace has pointed out, no other bird is able to open the Kanari nut, which forms its chief food. We should much have liked one of these birds to add to our collection, but we could not prevail upon the owner to part with them.

Amboina market is an excellent one, and the quantity and variety of fishes to be seen in a morning's stroll through it are astonishing, so much so that one no longer wonders at the seven hundred and eighty species recorded by Dr. Bleeker as inhabiting the waters of the island. Fruits, too, are abundant, and among them was a wonderful banana, which none of us had tasted before, pure white, not creamy, in the colour of the flesh, and in flavour something between a pine-apple and a "pear-drop." Out of the many dozen varieties of this plant to be met with, from the large 15-inch long "horse plantain" to the tiny "silver banana," I have never eaten anything at all like it. It was delicious, but no trace whatever of the banana flavour was to be detected in it.

We left Amboina late one night and dropped slowly down the inlet. Around us, in every direction, were the lights of innumerable praus engaged in fishing, causing us no little anxiety from their numbers, which was not lessened by the fact that in many cases the fishermen deferred the lighting of their torches until we were close upon them. Fortunately we passed through without accident, and on the afternoon of the following day the *Marchesa* anchored in Banda harbour.

Banda, the most eastern settlement of the Dutch, lies due south of Ceram, and about sixty miles distant from its coasts. For all practical purposes the group may be said to consist of the three islands which form the harbour—Gunong Api, Banda Neira, and Banda

Lontoir. The latter is half-moon shaped, and produces the nutmegs which for the past three centuries have made its name famous. Opposite its concavity lie the two other islands, almost touching one another, the first one, as its name implies, being the volcano, the other having built upon it the town with its three old forts.

Those who are learned in such matters have suggested that Banda Lontoir forms part of the lip of an ancient crater of prodigious size, from whose centre the present cone of Gunong Api has since arisen, and the appearance of the former with its steep sides and semicircular shape is certainly strongly in favour of the theory. One would have imagined that the thought of living in the very centre of a crater would have been a trial even to the strongest-nerved. But, though they have had no little experience in the way of earthquakes and eruptions, the islanders do not seem to disquiet themselves with possibilities. The usually-smoking peak of Gunong Api showed its head in unclouded clearness during our visit. It had not given any sign of activity for some little time, and the people told us that if it remained quiescent much longer an eruption or a severe earthquake would probably result. The information was given with the off-hand manner in which an Englishman would predict a wet day on the morrow. The volcano is of insignificant size—little, if at all, above 2000 feet in altitude—but the bareness of its slopes and the sharpness and regularity of the cone make it look much higher. Its base is about two miles in diameter. The summit—to which our energetic chief engineer, Mr. Flowers, was the only one of us to ascend—has a crater about a hundred and twenty yards across, and of no great depth. From it small clouds of steam arose in various places, and the stones around were thickly coated with layers of pure sulphur.

A narrow creek—the “Zonnegat”—only navigable by small craft, separates Gunong Api from Banda Neira. It is on this island that the town is placed, its cool white houses overshadowed by dark-foliaged trees dotting the whole length of the southern shore.

Neira is about two miles in length, and with the exception of Papenberg or Flagstaff Hill—an abrupt jungle-covered rock of 700 feet which dominates the town—is of no great elevation. To this *withijk* we one day climbed,—a steep ascent through an almost uninterrupted series of nutmeg plantations. The view, looking down upon the harbour, is very beautiful, and, indeed, what views are not in these favoured islands? It has not, of course, the grandeur of Ternate, with the noble peak of Tidor and the mountains of Gilolo glowing a deep blue across the magnificent sweep of lake-like sea, but in an unpretentious way it is nearly as lovely. At our feet lay the town—the houses of the better class with red-tiled roofs, but all furnished with the snowy white pillars and *stoeps* that are the leading characteristics of Dutch Malaysia. Across the landlocked harbour rose the steep precipices of Banda Lontoir, dark with the large forest-trees shading its nutmeg “parks” and fringed with broad shores of sandy mud. Westwards we looked down on the Zonnegat dotted with fishing praus, the slopes of the volcano rising steeply from its farther bank. Behind us, from the foot of an almost perpendicular cliff, the open sea stretched away to the horizon, with the little island of Suangi in the distance. A lovely view indeed, bathed in the soft haze that enhances the beauty of every tropic landscape. So peaceful and quiet was it that it was hard to realise the loss of life and property caused by past eruptions, and to reflect that others quite as terrible and destructive are, in all human probability, in store for the unfortunate islanders. The Krakatau eruption, we were told, was felt here as a kind of tidal wave rushing through the harbour from west to east, but no damage of any importance was caused by it.

Although, as I have already mentioned, considerable quantities of nutmegs are grown upon Banda Neira, it is upon Banda Lontoir that they are chiefly cultivated. They are articles of export from many settlements in the vast possessions of Holland in these seas, but nowhere do they grow to such perfection as in the Banda group, for the tree is here indigenous, and is attacked by few of the

diseases that impede its growth in other places. All the year round—as seems fitting in these Gardens of Eden—it is in fruit and



FRUIT OF THE NUTMEG, SPLITTING AND SHOWING MACE.

flower, and any and every day the natives may be seen gathering the peach-like-looking spice. This is done with a special instrument—a bamboo pole with a hook, and a basket near the top which catches the fruit as it is detached. The fleshy exocarp is for

the most part wasted; the mace is removed and dried in ovens, and the nut is kept to dry, enclosed in its outer shell, until it is ready for export. The tree requires shade and protection, and is consequently grown beneath the lofty Kanari, the noblest nut-tree in the world. It is an ideal cultivation, this nutmeg-growing,—a sort of high-art agriculture befitting the perfumed product and the sunny isles in which it ripens.

The Government monopoly has long since been given up, and every one is permitted to plant and sell as he pleases. But the industry, so far as we could learn, is chiefly in the hands of large proprietors. The official “Statistiek” gives no information as regards Banda, the exports of which are apparently included in those of Amboina, but from this latter port 635,491 kilos of nutmegs were shipped to Holland in 1884, their value amounting to £76,258.

The neatly-roaded town with its white houses and cool, shady avenues, the sloping beach dotted with canoes with quaint up-turned peaks at the stem and stern, were only such as we had met with half a dozen times before at the various Dutch East Indian ports, unless, perhaps, the roads were a shade neater, the peaks of the praus slightly more elevated. To the west, almost under the volcano, is an old fort, now turned into a “Pakhuis” or magazine. Near it are the houses of the Chinese merchants, dealers in and exporters of the various products of the Malay Archipelago, in the stores of one of whom we found a tolerably large collection of Paradise and other birds’ skins from the Papuan region, interesting enough to examine, but for the most part useless except to the plumassier, from their mutilated and moth-eaten condition. Entire carapaces of tortoise-shell were here too, some of them of great thickness and beauty, and numbers of pearls, for one of which, as large as one’s little finger-nail, we bargained in vain. Eastwards, the town follows the shore almost to the end of the island, where it eventually loses itself among the nutmeg-trees. It is large enough, we learnt, to contain about 7000 inhabitants. Of how

many races and nationalities these may be I would not venture—in this strangely peopled Malaysia—to guess.

Banda is full of forts, relics of the times when spices were things to be fought for. The "Pakhuis," which I have just mentioned, was one, and on the western horn of Banda Lontoir are the remains of another, erected about three centuries ago by the Portuguese. In the middle of the town, and close to the beach, stands Fort Nassau, built by the Dutch in 1609. But the largest and most important of all, the most conspicuous building on the island, both from its size and position, is Fort Belgica, perched on a little plateau just above Fort Nassau. Like the latter, it was built at the time of the first settlement by the Dutch, and has remained almost unharmed through half a score eruptions and earthquakes, so solidly has it been constructed. The steep slope of grass-covered *glacis* leads up to heavily-built walls, within which stands the fort itself, pentagonal in shape, and with a large round tower at each angle. It is painted white from base to battlement, and at a distance is as imposing as Windsor Castle, but its armament is by no means on a corresponding scale. Lord George Campbell, indeed, in his amusing "Log Letters," tells us that there were only two guns capable of returning the *Challenger's* salute, and that one of them was placed *hors de combat* at the second round!

The Banda group would probably prove an interesting locality for the naturalist, for many species are peculiar to it, and there are doubtless many others that yet remain to be discovered. Such work, however, demands time, and we had none to spare. We had determined on visiting the Aru Islands to shoot the Great Bird of Paradise, and therefore restricted ourselves to mere sight-seeing. To those already acquainted with the Malay Archipelago Banda has not much—except its beauty—to show. The nutmegs and the mountain are its only lions, and our three days' stay sufficed to see the spice-groves and to make as close an acquaintance with the volcano as we desired.

We left the harbour by the eastern entrance on the night of December 1st, and set our course east by south so as to pass to the north of the Nusa Tello Islands, a little-known group lying westward of the Ké Islands. Two islands—Topper's Hoedje and Little Fortune—were marked in the English chart as lying in our track, but we passed almost over their assigned position without sighting them, and there is no doubt that they do not exist. On the morning of the 3rd we made the Aru Islands, and little more than an hour later came to anchor in Dobbo Harbour.

The Aru Islands, which are connected by shoal water with New Guinea and have a strictly Papuan fauna, are very numerous, although closely grouped together. They run north and south between the 5th and 8th parallels of S. latitude, and have an average breadth perhaps of thirty or forty miles. As we neared our destination the low flat land was seen stretching away on either hand as far as the eye could reach, thickly clothed with lofty forest-trees. Dobbo is placed at the northern end of the small island of Wamma, and rounding the point we found a good anchorage between it and Wokan, the largest of the northern group. Except to the north-west, from which direction we had entered, the monotonous line of heavy jungle surrounded us on every side. The surface of the water was without a ripple, and the lifeless, steamy air reminded us of the climate of Ansus, whose gloomy, mangrove-lined creeks and oppressive heat had already reduced our stock of energy to a minimum.

The Posthouser, who came off to visit us shortly after we had anchored, had little or nothing to say in favour of the place. He was suffering from fever, and told us that he considered the islands to be most unhealthy for Europeans. The water is deficient both in quantity and quality, and, during the annual influx of traders, cases of Beri-beri are very common,—so common, indeed, that seventy-three persons had died in the season of 1883. The Posthouser was going through the process of acclimatisation, having arrived but a short time before,—the first Dutch official sent to Aru. We

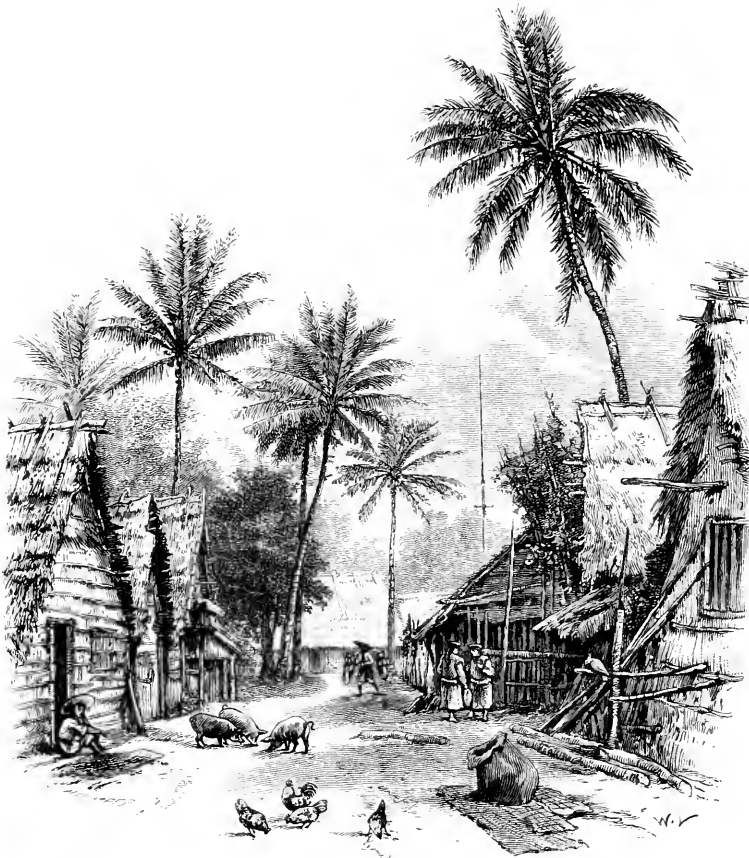
had not heard that a post had been established here, and were much astonished at being greeted by a white man. He, I imagine, was not sorry to see us, for the life to any one but a naturalist must be terrible. A mail reaches Dobbo four times a year. Otherwise there is no communication with the outer world except such as is afforded by the trading praus at the change of the monsoon.

The village of Dobbo is quite *sui generis*. From the northern end of Wamma a flat, wedge-shaped spit of yellow sand juts out into the sea for a distance of a couple of hundred yards. The apex forms a sort of Piazza del Popolo, from which radiate the three rows of houses and two streets that form the settlement, flanked by the two prau-covered beaches. The houses have high-pitched roofs, and the usual untidy appearance that attap walls alone produce in perfection. They are really all shops, as I shall shortly explain, but there is not much sign of this from the street. At the end of what might be termed the Corso, and facing us, stands the Postholder's house, over which wave the graceful fronds of half a dozen coco palms. A few pigs and chickens are routing in the sandy streets, two or three enormous-hatted Chinamen squat at the doors of their huts, and a little group of small black imps with large stomachs and stick-like legs play at a corner. This is all that we see on first landing, and nearly all that the place has got to show. It is not the trading season, and Dobbo is deserted.

The place is the Nischni Novogorod of Malaysia. The existence of some general mart at the extreme confines of civilisation, where the products of human brain and hand could be bartered for those of Nature, became a necessity years ago, and Aru, whose pearls and Paradise birds have been articles of trade for the last two centuries, gradually established itself as the commercial centre.¹ From Java, from Southern Celebes—home of the Bugis trader,—from Bouru, Ceram, and Timor, from a dozen other places in these island-covered seas, so soon as the west monsoon has fairly set

¹ The little island of Kilwaru, between Gissa and Ceram Laut, at the east end of Ceram, is another trading place of this kind, but of much less importance.

in, come the praus, laden with rice, calico, gin, hardware, and the various products of the West. By the end of January trade is in full swing, lasting till, in July, the east monsoon is sufficiently



A STREET IN DOBBO.

established to enable the traders to depart, taking with them the tripang, pearls and pearl-shell, sharks' fin, birds' nest, tortoise-shell, and birds of Paradise, which form the chief articles of produce of these and still more eastern regions. Dobbo during this season, as

has been so admirably described by Mr. Wallace in his "Malay Archipelago," is busy enough, but at the period of our visit there was about as much life in it as in a Belgravian street at the end of August.

We walked up to the Posthouder's house, and chatted with him over the inevitable cheroot. Previous to his arrival all disputes or crimes occurring among the people were tried among themselves, but Dutch authority having stepped in, a gaol was considered necessary, and this, together with the other *desideratum* of Dobbo, —a market-place—he was engaged in constructing. Ironwood alone was to be used, owing to the abundance of white ants. We watched the few Buginese engaged in the work; they used the adze with the dexterity of a European, but leisurely, and as if impressed with the importance of their work. We felt that we should have done the same. Dobbo is not the place for any violent physical exertion.

It was not long before we foresaw that our stay in Aru would be a short one. We had come at the wrong season to see the trading life of the place, and this, of course, we were prepared for. But we had not expected to find—as we were assured on all hands was the case—that the Great Bird of Paradise was out of plumage at this time of year, and would not assume its full dress until April. Every one told us the same story, and that the beautiful plumes remained for not more than two or three months.¹ This was a great disappointment, as we had looked forward to adding the bird to the already large list of *Paradiseidæ* we had collected, and were anxious to watch its curious habit of courtship, when perched, a dozen or more at a time, in the "play trees," the males display their lovely plumage to the sober-coloured females around. We had come, in fact, chiefly for this very purpose, and now that we had failed in it, there was little to keep us in the

¹ It is curious to note that, in the closely allied *Paradisea minor*, of which we had obtained so many specimens on Jobi Island, the full plumage is not merely a breeding dress, but is retained the whole year round.

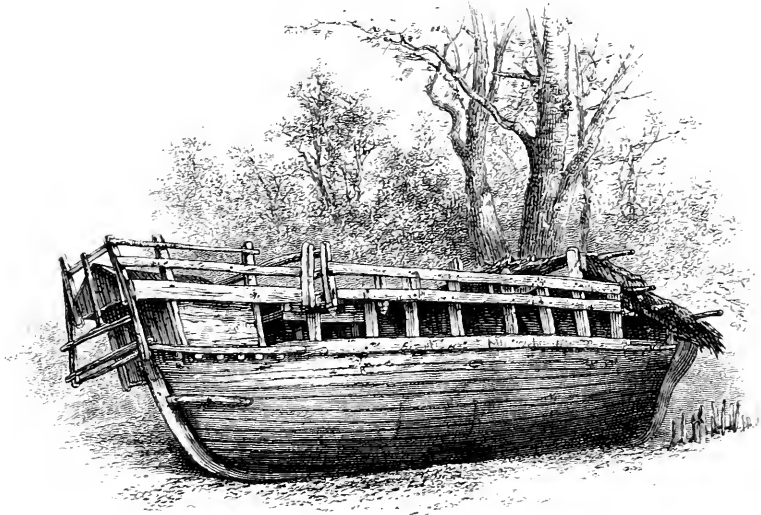
Arus. We had no time to devote to real work in the islands; two or three of our men were suffering considerably from fever and other tropical disorders; and it was therefore settled that we should commence our homeward voyage in a week's time. Meanwhile we sent a prau with our two remaining hunters to Wanumbai, a village to the south of Wokan, with instructions to shoot and collect what they could.

The eastern shores of the Aru group—the *diblakang tana* or “back country,” as it is called in Malay—form the chief locality for the pearl-fisheries, an important industry of the islands. They are unsurveyed, and unvisited by European vessels, few of which indeed come even to Dobbo. Many praus were away fishing at the time of our visit, and as we were anxious to learn the whereabouts of the fleet, and if possible to obtain some pearls, we despatched a canoe to Batulei, a little island on the north-east side, for information. In Dobbo there were no pearls for sale. Those we had seen at Macassar from these fisheries were for the most part small and not of very good colour, but some were of a beautiful deep bronze shade.

It rained heavily and often during our visit, and we understood the reason why advantage was taken by the Dobbo people of every sunny day to expose their goods on mats before their doors. It was tantalising to see the skins of the Paradise birds thus drying, their golden plumes glittering in the sun, and to reflect that we should have to be satisfied with buying them. From the accounts we received it seems that this bird (*P. apoda*) is decreasing in numbers in the Arus, or at any rate in the northern islands. The “play trees,” on which the greater number of them are shot, are known over a wide extent of country, and each belongs to the native who has discovered it. The claim to the tree having once been established by the mark of the finder, his rights are duly respected, and all poaching is by general agreement avoided. The market price of the *burong mati* has risen considerably of late years, and while Mr. Wallace, in 1857, paid as little as sixpence

for the native-prepared skins, they cannot now be obtained at Dobbo under seventeen times that sum.¹

There were but fifty people in the whole village, we learnt, but the Posthouder told us that, at the height of the trading season, there would be between four and five thousand. How they can all



BUGIS PRAU, DOBBO.

find accommodation it is difficult to understand, for there is certainly not house-room for half that number. Many must sleep in

¹ The prices of the six kinds of Birds of Paradise used in trade vary considerably at the different islands. They appeared highest at Ternate. The following are the prices per "koddy" of twenty skins at that place and Macassar, together with those asked by the Rajah of Salwatti:—

	Macassar.	Ternate.	Salwatti.
"Males" (<i>P. apoda</i>)	90-100	...	...
"Females" (<i>P. minor</i>)	70-90	85-120	80-90
"Red birds" (<i>P. rubra</i>)	80-110	100	...
"Many-wires" (<i>S. alba</i>)	110-130	170	140-150
"Green birds" (<i>D. speciosa</i>)	50-70	...	30
"King-birds" (<i>C. regius</i>)	30-40	...	20-30

These prices are in gulden of one shilling and eightpence.

the curious lumbering praus that bring them to the island. Ten or a dozen of these we found hauled up on the sandy beach. They were about the size of a fifty-ton yacht, and were all more or less out of repair.

We spent a long day in the forest on Wokan Island, in chase of the Paradise birds. The little King-bird seemed not uncommon, but, though we heard the loud, rough cry of *Paradiscea apoda* on several occasions, we could not get even a glimpse of it. The deep boom of the large fruit-eating pigeons is a characteristic sound in the forests of the Papuan region. The sense of hearing is perhaps almost equally powerful with the sense of smell in recalling past scenes to the mind, and I am sure that nothing would more quickly conjure up before my mental vision the picture of these magnificent jungles, and the varied and beautiful forms that they display than the sound of this curious and most undove-like note. We obtained here two species of the genus that we had not met with before—*Carpophaga zoeæ* and *muelleri*—fine birds about eighteen inches in length, whose bodies appeared at our dinner-table, while their skins were in due course packed carefully away in our collecting-boxes.

Immediately behind the Posthouder's house the forest rose like a wall. It was impenetrable on account of a small swamp, and we had to take to the beach for some distance before beginning to shoot. A species of *Cycas* grows very abundantly along the shore, as well as great quantities of *Pandanus*, whose bright scarlet fruit we gathered every morning for our Twelve-wired Bird of Paradise, for he had got rather tired of his usual cockroach diet. About a mile from Dobbo is a large plantation owned by the Kapten Laut, the chief Malay of the place, and the outskirts of this furnished us with a fair collecting ground. It was interesting to observe how wonderfully the bananas flourished, although the soil in which they were growing was apparently composed almost entirely of shells and broken coral.

Although there were always half a dozen small dusky beaters to assist us in our shooting excursions, and to carry our cartridges

or collecting-stick, scarcely a single pure bred Papuan was to be seen at Dobbo. Chinese and Malays of various tribes were the chief inhabitants, and in the stores of the former we managed to pick up a few skins of *P. apoda* in fairly good condition, but there was nothing except these to interest the traveller—naturalist or otherwise—who cared to penetrate the gloomy, Chinaman-perfumed interiors of the huts. Every building in Dobbo is a store, if we except two or three little mosques or chapels near the landward end of the village—quaint little edifices built of attap, and with a sort of box in the centre, covered with a white cotton canopy, much like a Datu's tomb in Sulu. Here everybody, no matter of what religion, makes his prayers before departing on his homeward voyage. A little farther towards the forest was the graveyard, over which spot the pretty Brush-tongued Lories (*Trichoglossus nigritularis*) passed every night at sunset, their line as unvarying as that of ducks at flight-time.

Achi, an excellent boy whom we had brought from Malacca, collected daily for us in the forest, and usually returned with his satchel full of pill-boxes, each tenanted by a creature or creatures unknown. The opening of these was, I confess, somewhat of an ordeal to me. Within might be some harmless and lovely butterfly, but the occupant was quite as likely to be a formidable centipede six or eight inches in length, or some great spider carrying about with it, beneath the abdomen, a disc-shaped egg-case as large as a shilling. The adventures we met with in disposing of our captures were numberless, and after a few of them I found it quite unnecessary to caution anybody against opening any stray pill-box they might come across.

The magnificent bird-winged butterfly, known, I believe, to entomologists as *Ornithoptera aruana*—an animated emerald some seven inches across—was apparently abundant in Aru, and Achi brought in four nearly uninjured specimens one morning. We were also fortunate in getting many pupæ of these exquisite creatures. I discovered that it was necessary to suspend these in

a vertical position—a fact of which I had not been previously aware. Unless this is done, the meconium or liquid in the pupa-case—of which there is nearly a teaspoonful—entirely ruins the beautiful plumage. I lost several specimens in this way before discovering the remedy.

On the 8th of December our hunters returned from Wanumbai, and we learnt that two German collectors, of whom we had heard from the Posthouder, were in that neighbourhood. They had been nine months in the islands, and were said to have suffered terribly from the effects of the climate. Our men brought very few specimens, and those of no great interest. The natives who had been over to Batulei also returned with the information that the praus had, up to that time, got few or no pearls, owing to a continuance of bad weather. We therefore determined to sail at once. It was a disappointment to have to limit ourselves to the mere tourist's view of the Arus that we had thus obtained, but the season was unfavourable for us, and it was doubtful whether, under any circumstances, we should be able to reach England before the summer, as we desired.

Our departure was delayed by a final attempt to get a bird we had long coveted, but bid for in vain. It was a tame specimen of the rare Blue-streaked Crimson Lory (*Eos cyanostriatus*)—a native of the little-known Timor Laut group, which lies to the westward of the Aru Islands. Its owner had always refused to sell it, but at the last moment he changed his mind and paddled off with it to the yacht. The price asked was, however, so exorbitant that our negotiations again fell through, and the lory and its owner departed for the shore. The only unpleasant reminiscence I have of the Aru Islands is that of the little spot of red fading rapidly in the distance. A few moments later we were dropping slowly out of the harbour—Homeward-bound.

CHAPTER XV.

THE HOMEWARD VOYAGE.

Our floating menagerie—The Twelve-wired Bird of Paradise—*Paradisca minor*—Pigeons and parrots—Cassowaries—Flying Phalanger—“Chugs”—Tree kangaroos—We return to Misol Island—Scurvy—Death of the boatswain—Arrive at Batchian—Ternate—Beri-beri—Touch at North Celebes—The black Paradise birds—Sulu—A successful amok—A farewell *Malagueña*—Home.

IF my travelled reader has ever chanced to be a passenger on board a West African steamer—where, from the number of monkeys, parrots, snakes, Whydah birds, and other creatures around him, he will come to the conclusion that there is almost as much trade in zoological specimens as in palm oil—he will be able to form some idea of the appearance of the *Marchesa's* decks at this period of her cruise. The burly form of “Misky”—happily for our peace of mind—was no longer to be seen vainly engaged in trying to annihilate his enemy the mongoose. He had taken his passage for England from Hongkong, and had long ago reached his destination—the Zoological Society's Gardens—whither the two Anoa's were following him. We missed, too, the solemn face of “Bongon” the orang-utan, who, seated in his arm-chair, with his blanket drawn tightly round him, was always to be found in his favourite position near the wheel. Their places were filled by fresh additions to our menagerie, to many of which I have not yet alluded.

The gem of our collection was, of course, the Twelve-wired Bird of Paradise. He had got tame very quickly, and would

readily eat from our hands. By day he usually remained more or less quiet, and was fond of resting motionless with the head sunk low on the chest, but in the morning and evening he moved restlessly from perch to perch with a peculiar bounding hop. His manner of feeding was wonderfully neat. Any cockroach that ventured into his cage he would catch with lightning rapidity, seizing it across the body with his long, sharp beak. Then, giving it a sudden snap, he would throw it in the air and catch it lengthways, displaying the vivid grass-green colouring of his mouth and throat in the operation. The only note he ever uttered was a single unmelodious croak. The least fall in temperature seemed to be felt by this beautiful creature, and though every care was taken of him, he died before we got beyond the tropic.

Of the Lesser Bird of Paradise we had four living specimens, of which we succeeded in bringing three to England.¹ They gave us, perhaps, more trouble than any of our pets, owing to the constant care they required and the size of the cages with which they had to be provided, but we were amply rewarded by our success in bringing them to Europe, and by the opportunity they afforded us in watching the development of their plumes. They were without these when we first obtained them, and soon afterwards the feathers of the head dropped off, leaving them partially bald, and in anything but an ornamental condition. New feathers, however, rapidly appeared. They were almost white at first, but soon assumed the delicate yellow shade of the adult dress. The long, splendidly-coloured side plumes, which give the appearance of a golden meteor to the male bird as he flashes through the forest, came rapidly at first, but their later growth was extremely slow. These birds—which we did not succeed in getting as tame as the Seleucides—were fed on boiled rice, cockroaches, and banana, with an occasional meal of chopped meat.

¹ One of the three has since died, but the others are alive and in excellent health in the Gardens of the Zoological Society, where they have now been for more than two years.

The East Indian Archipelago is pre-eminently the home of the pigeon, the parrot, and the kingfisher. Birds of the latter family are, of course, seldom to be obtained alive, but we had numberless specimens of the others in our aviary. The magnificent Crowned Pigeons (*Goura coronata* and *victoriae*) are very lethargic in their habits, and soon get tame in confinement, but we were unable to give sufficient room to the number we had, and in spite of their being very hardy birds, only six or seven reached England out of the twenty-five we had collected. By their side the large Carpopagas, of which we had three or four species, looked almost pygmies. The little doves of the genus *Ptilopus*, conspicuous even more for their extraordinary colouring than their tiny size, we did not succeed in obtaining alive.

Noisiest of all our pets were the parrots. During the mid-day heat we were left in comparative peace, except when a quarrel arose between the occupants of two adjacent perches. But in the early morning, and for an hour or more before sunset, the ship was a perfect pandemonium. Cockatoos swore and chattered; lorries fought and flapped their wings and shrieked at the top of their voices, and the dull, heavy *Electus*—birds as stupid and uninteresting as they are gaudy in colour—alone sat motionless, adding their monotonous scream from time to time to the tumult. Writing was almost as impossible during these hours as it would have been in the parrot-house of the Zoological Gardens. As we got westward the noise diminished day by day. The brilliant coloured lorries of New Guinea seem little able to bear change of temperature or confinement, and long before we arrived at Singapore fully half of them were dead. We missed most of all the rare Black Lory from Misol (*Chalcopsittacus ater*), whose absurdly extravagant demonstrations of affection had made us all very fond of him.

Forward of the bridge, the decks presented still more the appearance of a menagerie. Monkeys sat gibbering on the bulwarks, and large white cockatoos, with their moustaches bristling, siddled solemnly up and down their perches, envying, no

doubt, the freedom permitted to the cassowaries, who roamed from end to end of the ship, devouring now a lump of coal, now the bread or biscuit from the dinner-table. We had, at one time, four of these creatures, but two of them, which were little more than nestlings, soon died. Our largest bird (*C. bicarunculatus*) was obtained in Aru, and judging by his size must have been very nearly adult, although the bright blue colouring of the neck, which seems to be the final sign of maturity, was not quite fully developed. His appetite was excellent. Coming up suddenly from below, I once discovered him in the act of devouring one of a number of bird-skins I had spread out in the sun to dry. A swelling in his neck revealed the position of my specimen, and I in vain endeavoured to effect its regurgitation, both for my own and his sake, for the skin was liberally dressed with arsenic soap. The bird and his œsophagus were, however, equally opposed to this, and I had eventually to assist its progress in the other direction.

Our Dorei Bay cassowary was much younger. He had none of the solemn imperturbability of the other, but was as playful as a puppy. His favourite diversion was to get up a sham-fight with a ventilator, dancing round it in the most approved pugilistic style, now feinting, now getting in a right and left. The blows were delivered by kicking out in front, and appeared to be almost ineffective, and quite unlike the really formidable method of attack adopted by the ostrich. The decorum of our service on Sundays was often considerably disturbed by his appearance among the congregation, engaged in a lively skirmish with a kangaroo,—an amusement which invariably drew a select gathering of our dingo “Banguey,” various dogs, and a tame pig to see fair play.

Of our four-legged pets perhaps the most graceful was a little Flying Phalanger (*Belideus breviceps*), which we had obtained in Waigiou. These creatures are common to New Guinea and Northern Australia, and are chiefly nocturnal in their habits, haunting the thick foliage at the crowns of palms. The tail is not prehensile as in the true Phalangers, but the stout, sharp claws are

well adapted for clinging to the smoothest bark. The fur is exquisitely soft and of a delicate shade of grey, against which the



BELIDEUS BREVICEPS.

black dorsal stripe and white under-surface show to advantage. We quite failed to tame this little animal, whose loud note of alarm and anger when its cage was disturbed made the sailors

give it the nickname of "the clock-work mouse." A whole page of description would not more accurately convey the nature of the sound.

While in Dorei Bay we were fortunate enough to become the possessors of a pig of tender age, who had, perhaps, more character in him than any other member of our menagerie. In many parts of New Guinea the women make pets of these animals, carrying them about and suckling them with their own babies, but I do not remember whether "Chugs" had been reared in this fashion or not. He was bestriped longitudinally with alternate bands of black and yellow, and, though hardly more than eight inches long when he first joined the ship, was afraid of no living thing aboard. He roamed the deck from morning till night, chasing the cockroaches and devouring them with much gusto and smacking of lips, grunting contentedly the while. When tired, he would nestle himself up on the curly coat of Dick, the retriever, or alongside the big cassowary, who would regard him wonderingly, and as if debating his suitability for food. Chugs grew so rapidly that he was soon nearly as big as Dick, but he still continued to use him as a sleeping mat, and towards the end of the voyage poor Dick hardly dared to lie down.

We had various other animals in our collection, but, as I am not writing a description of the Zoological Gardens, I will confine myself to alluding to two, who were certainly the tamest and most attractive of all our pets. They were Tree-kangaroos of two species (*Dendrolagus inustus* and *ursinus*), not larger than small hares, but with tails of great length. The first-named kind is of a uniform dull grey; the other, much prettier, dark brown with a white blaze on the face. It was most interesting to watch the habits of these animals, who roamed freely about the ship, both above and below deck. In Australia we are accustomed to the kangaroo as a terrestrial animal, admirably adapted to the flats or open forest country in which it lives. But in New Guinea the dense jungle necessitates a change in habit, and we accordingly find in *Dendrolagus* an instance of a ground animal which is gradually

becoming arboreal in its mode of life. The hind limb is shortened, although still of unsuitable length, and the claws are sufficiently developed to enable it to cling strongly to any object. But although a tree-haunting animal, it is as yet a tyro in the art of climbing, performing this operation in the slowest and most awkward manner. Our pets, for instance, would take a full minute or more in ascending the back of a chair, but their hold was most secure, and if we wished to pull them off we had no little difficulty in doing so, so tightly did they cling.¹ I never saw any creature tamer than *ursinus*. He was never happy unless at our feet, and would follow our every movement. This habit was, I believe, the primary cause of his death, for he was tumbled over or trodden upon at least half a dozen times a day. The climate of Europe proved too much for his relative *D. inustus*, and he died the day before we reached England.

Leaving Dobbo we set our course N.W. along the deep-sea channel which separates the western coast of New Guinea from Ceram. On the morning of December 10th we sighted a perfect nest of small islands lying around the southern shores of Misol, and, giving them a wide berth, followed as far as possible the track by which we had previously approached the island. An hour or two later we were once more at anchor in the harbour of Efbé.

We sent a prau at once in search of our hunters, who, we heard, were at Lelinta, and the same night they arrived on board. All were well, with the exception of one man, who had suffered rather severely from fever. They had been well treated and supplied with a prau as we had requested, but they told us that, owing to contrary winds and strong currents, they had been five days in reaching Waigamma on the north-west coast. Nearly 150 specimens of birds had been collected, but although there were several rarities among them, there was not a single new species. Perhaps the most interesting bird was a *Nasiterna* or Pygmy Parrot

¹ The tail, although not actually prehensile, is used by them to press against the branches, and is thus of considerable assistance.

(*Nasiterna pygmaea*), hardly larger than the species figured on page 297. Both the King-bird and Lesser Bird of Paradise were in the collection, the former being tolerably abundant, but neither the Seleucides nor the Ptiloris, or Papuan Rifle-bird, had been obtained, and there is very little doubt that the former bird does not exist upon the island.

We paid the men of the prau, giving to each a knife, an axe, a sarong, a coloured handkerchief, and a small roll of blue cloth, and towards midnight of the same day sailed for Batchian, being able to make our way out of the harbour in the dark, thanks to the rough chart we had previously made of it.

Our voyage was saddened by an unlooked-for event. On the 11th December our boatswain, Samuel Scarff, of whom I have made mention on a previous page, died of scurvy. He had been ailing for some little time, but had only sought advice about three weeks before. In spite of everything that could be done for him, he got gradually weaker from day to day, and sank rapidly at the end. The disease was almost typical from its onset, except perhaps in the rapidity of its course.

I had always considered, in common, no doubt, with the majority of physicians, that scurvy was pre-eminently the preventible disease, and that—given the necessary antidotes—no case of it should ever prove fatal. Yet here, in a well-found yacht, which had left a regular port (Banda) but ten days, and another (Amboina)—at which a week's stay had been made—only fourteen, we had evidence that this rule is not an invariable one. There are certain cases of the so-called "land-scurvy" in which antiscorbutics are of little or no avail, and the disease appears to progress steadily towards a fatal termination. Our poor shipmate's case, which was an isolated one, seemed to be much of this nature, and the vegetable diet which we were able to give him was of no efficacy whatever, although adopted from the very onset of the disease. I have been led to mention the occurrence as we are perhaps rather too prone to regard lime-juice as absolutely prophylactic, and to attach blame

to the leaders of Arctic expeditions in which scurvy has occurred. The regulations as to the use of antiscorbutics are among the wisest of those of our mercantile marine, but it is possible that in certain rare cases the disease may—with our present knowledge at least—be unavoidable.

We spent an unpleasant night. A strong current had set us considerably to the southward, toward the Obi group, and from this and other causes we had some difficulty in making out our position. We did not like to turn in, but had we done so we should not have got much sleep, for hour after hour the melancholy tapping of the carpenter's hammer rang through the ship, only ceasing with the dawn. As the sun rose the mist cleared off the land, and the huge mass of Labua revealed itself on our starboard hand. Before noon we entered the straits, and took up our old anchorage off the village of Batchian.

In this part of the Moluccas what little bad weather is experienced appears usually to occur in the months of December and January. At six o'clock on the evening previous to our arrival, a sudden and violent squall from the S.W. had struck the village, unroofing the house of one of our Dutch friends and burying his wife in the ruins. Fortunately she escaped almost uninjured. We were told that squalls of this nature were most unusual, the northerly monsoon having set in steadily. Two days previously the sound of distant explosions, resembling those heard during the eruption of Krakatau on the 26th August, had been noticed. We had also heard them at Misol, and thought it probable that on reaching Singapore or Ternate we should get intelligence of some fresh volcanic eruption. We were, however, disappointed in our expectations, and the noises we heard must either have proceeded from some active volcano in the little-visited islands in the direction of Timor, or possibly from subterranean disturbances affecting a wide area.

We buried our poor comrade beneath the walls of the old Portuguese fort, and sailed two days later for Ternate, passing, as before,

through the narrow and intricate Herberg Straits. We had started late, and the passage of the southern portion resolved itself into a race against time. Before darkness overtook us we emerged into the stretch of open sea which intervenes between the two narrows, and there waited for the moon to rise. It was a magnificent night, or we should not have ventured upon the rather risky bit of navigation that lay before us, and towards 9 P.M. we again proceeded on our course through the northern portion of the straits. The scenery was not different in any way from that to be met with in a thousand places in this part of the world, but the flood of moonlight pouring upon the calm water and snowy coral beaches, the feathery outlines of the coco palms whose fronds hardly moved in the still night air, rendered it of almost fairy-like beauty, and the effect was still further heightened by the singular narrowness of the channel through which we were passing. We arrived at the entrance of the straits without accident, in spite of the predictions of our Batchian friends, and on the following day came to anchor in the harbour of Ternate.

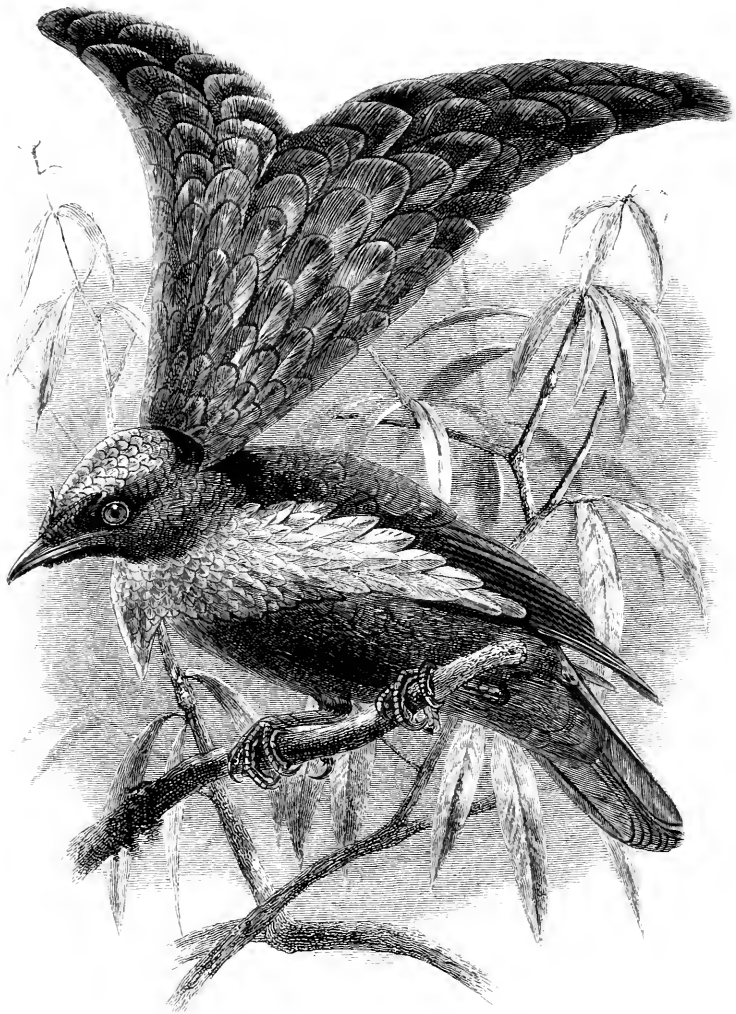
We found very different weather prevailing from that we had experienced on our former visit. Strong winds from the N. and W., with constant rain-squalls, continued during our stay, causing a choppy sea in the harbour and rendering landing a difficulty. This is the worst season of the year in Ternate, and the bad weather is expected to last during the greater part of December and January. Everything was damp and chilly, and the sun seldom broke through the masses of heavy cloud.

On the day following our arrival a trading schooner entered the harbour and anchored near us. She came from New Guinea, and from one of her crew, who shipped with us for the voyage to England, we learnt some details of her cruise. Leaving Ternate almost at the same time as the *Marehsa*, she had proceeded to the Willem Schouten Islands lying to the north of Jobi. Her crew, consisting of two Europeans and eight Malays, soon became attacked with beri-beri—a disease which, in spite of the frequency of its

occurrence in the East, still owns an unknown cause. It is usually of a very fatal character, and proved to be peculiarly so in this case, for the natives had died one by one, and when the vessel arrived in port there were only three persons alive on board,—the captain, one Malay, and our informant—the latter being the sole remaining individual of the ten in health. It was with the very greatest difficulty that they had been able to work the ship, and had they chanced to meet with adverse winds every soul on board would probably have perished.

Sailing from Ternate December 18th, we arrived at Kema in North Celebes on the following day. The Dutch gun-boat *Merapi* lay at anchor, and we were pleased to meet our friend Captain Ehmlé again. The port of Menado cannot be used at this season of the year, and all goods have therefore to be carried to and from that settlement over the twenty miles of indifferent road intervening. The weather, we learnt, had been the same here as at Ternate,—strong northerly and north-westerly winds with much rain,—and there were thus few inducements for us to stay, even if we had had time to do so. We accordingly got our live stock on board—a fine ox and a pig, for which we paid 40 and 2½ guilders respectively—and having eaten a farewell “rice-table” with Captain Ehmlé, weighed anchor and proceeded for Sulu, passing to the east of Limbé Island, with which my reader is already familiar as the scene of our Babirusa hunt.

Steering north-west across the little-traversed Celebes Sea, the *Marchesa* encountered a northerly swell and variable winds, but the weather was bright and sunny, and we took advantage of it to dry our New Guinea skins before finally soldering them up in tin-cases. Every available sunny spot was covered with trays, and the gorgeous plumage of the kingfishers, pigeons, and parrots—for it is to these that the bright colours of the birds of this region are chiefly confined—gave the decks the appearance of a flower-bed. The Paradise birds attract attention less by the brilliancy than by the extraordinary development of their plumes. From the Arfak



range we had obtained several species, which at a little distance look a uniform black. Two of these—*Lophorhina* and *Parotia*—are furnished with appendages which are, perhaps, as striking as any with which long ages of sexual selection have provided the birds of this group, but until the specimen is taken up in the hand they may pass unnoticed. In the former¹ an immense plume of feathers springs from the occipital region, and reaches to the end of the tail. It is of the deepest velvety black, shot in some lights with oily-green reflections, and with the outermost feathers slightly recurved towards the tip. The top of the head is covered with scale-like feathers of metallic green, and a shield of the same colour and nature, but of a still brighter shade, adorns the breast. The rest of the body is dull black. Any further ornament or colour would be out of place, and one feels that the beautiful creature fully deserves its appellation of the Superb Bird of Paradise.

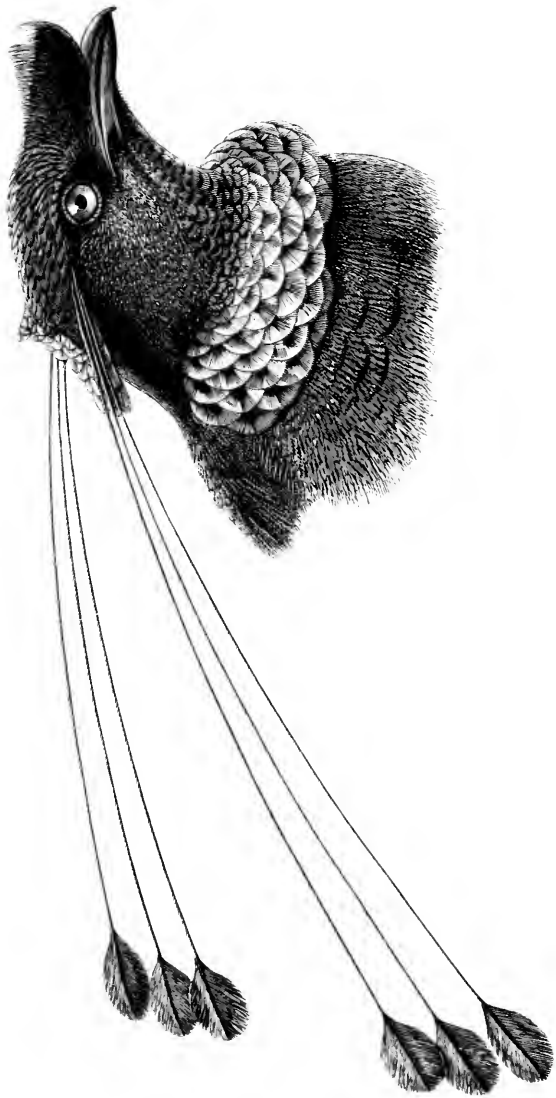
Almost more beautiful still is *Parotia sexpennis*, the Six-shafted Bird of Paradise, which Signor D'Albertis was the first European to observe in its native jungle. The curious plumes which give the bird its specific name lie so close to the neck in the dried skin as to be almost invisible. They consist of three slender filaments springing from each side of the head and terminated by a spatulate expansion. A bar of vivid steely green across the vertex, and a peculiar tuft of metallic silver at the base of the beak—a colour which, so far as I know, is unique in the bird-world—completes the head decoration. Like *Lophorhina*, the rest of the plumage is almost entirely black, except at the upper part of the breast, which is furnished with a collar of green and bronze feathers. The

¹ The impossibility of giving all the features of this curious bird in a single illustration has led to its representation in a position which is quite possibly incorrect. As far as could be gathered from the natives, the enormous crest as it appears displayed during the courtship of the female is spread more widely, in the shape of a fan opened out to its fullest extent, and the pectoral shield being expanded in a similar manner, the head of the bird forms the centre of an irregular circle of feathers of velvety black and emerald, which completely hides the rest of the body when viewed from in front.

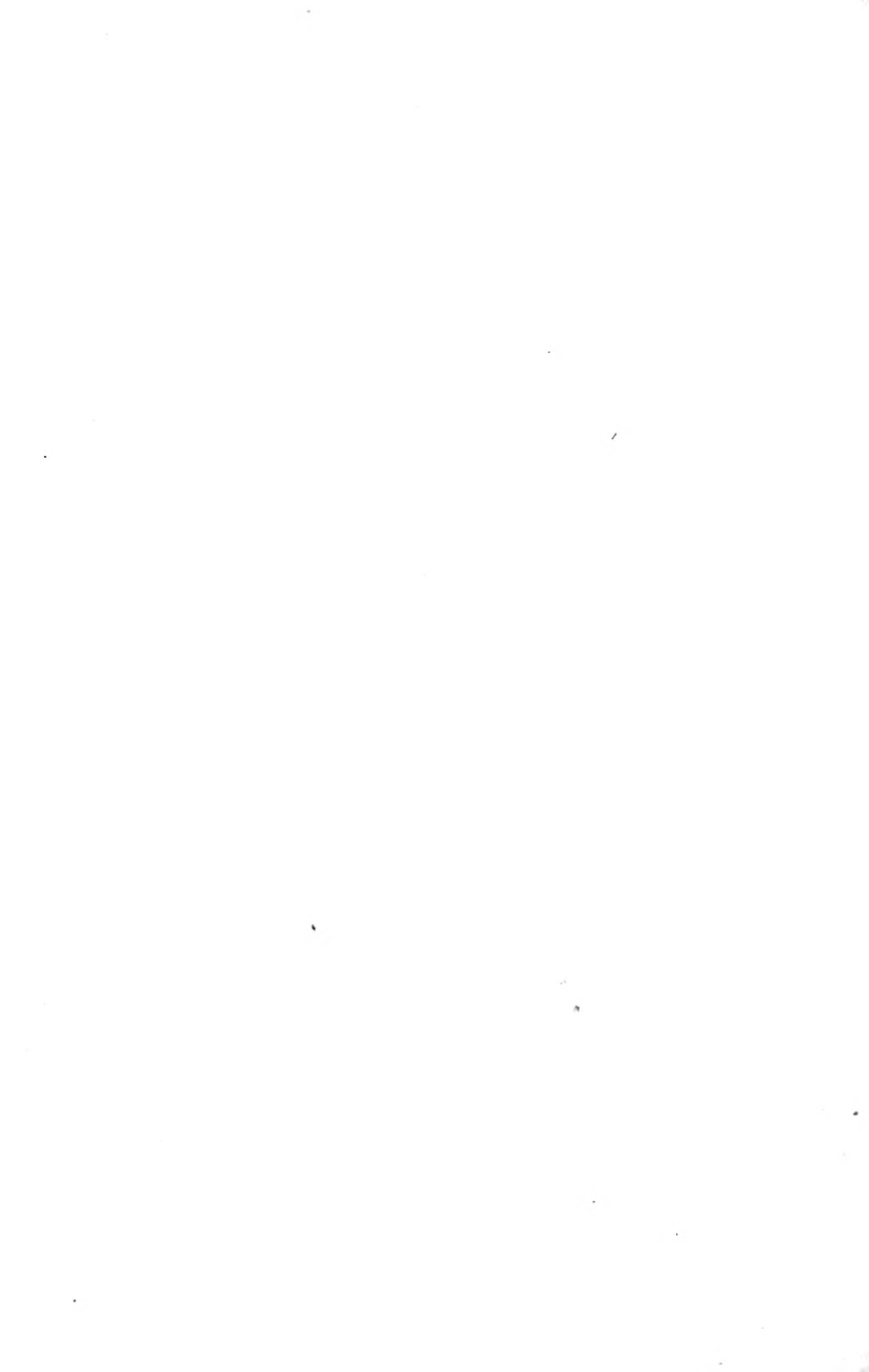
tuft of silvery feathers on the forehead can be either erected, as represented in the engraving, or depressed flat against the skull, where it forms a triangle of regular shape with the apex forward.

Nearing the Sulu Islands we experienced another instance of the uncertainties of navigation in these seas. The night was dark, and on making the land we found, after a short period of doubt as to our position, that a current had set us considerably to the westward, and we thus sighted Pata Island broad on our starboard hand instead of on the port bow, as we had calculated. The *Marchesa* was soon in familiar waters, and before daybreak on the morning of December 23rd we arrived off Jolo.

The little town had altered a good deal since our first visit. A new hospital and barracks were in course of erection; the creepers had quite covered the kiosk in the Plaza, where it had been our custom to smoke and listen to the band; and the bananas had shot up to form quite respectable avenues. The digging necessitated by the improvements and the constant confinement of the place had not been without their effect upon the inhabitants. Our old friend Don Julian Parrado looked worn and ill, and no less than five of the officers had joined the great majority during our absence. Three had died of fever, but the other two, we were informed, had met their deaths "accidentally." While sipping their chocolate at the little café represented in the woodcut on page 48, one of the fanatical Sulus—the *juramentados*, as they are termed by the Spanish—who had managed unperceived to make his way into the town with his parang, approached them from behind, and in an instant the head of one of them was rolling on the ground. A downward cut laid open the shoulder of his friend, and though the bayonets of half a dozen of the coloured soldiers who happened to be near were almost immediately buried in the Sulu's body, it was too late, for the wound proved almost immediately fatal. Calling at the house of one of our friends, we were shown the parang, still covered with the blood of the unfortunate victims. "*Está à la*



SIX-PLUMED BIRD OF PARADISE. (*Parotia seppennis*).



disposicion de usted,” said our host with a bow, but we declined his offer with thanks.

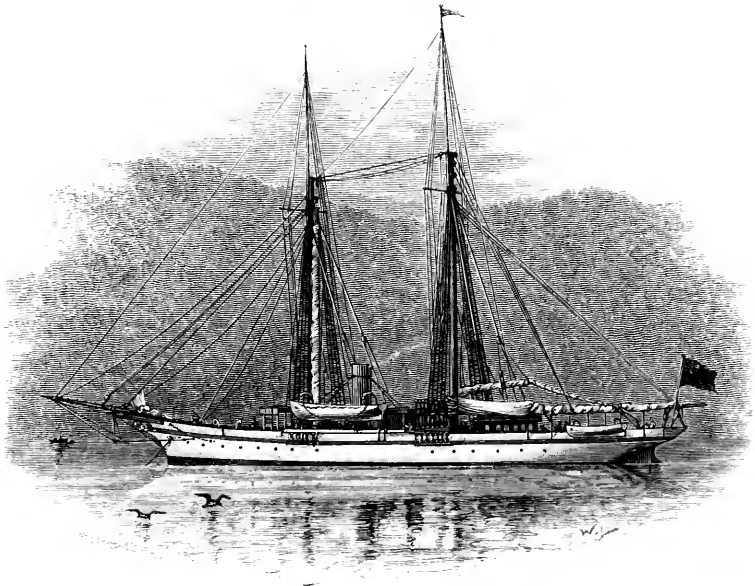
We spent our Christmas at Lukut Lapas. The woods and plantations were turned into temporary bogs and the paths into little watercourses, for it was the end of the wet season, and the rain descended in torrents. The fine weather was expected with the New Year. In Sulu there are two rainy seasons, occurring at the change of the monsoons. The first rains, which begin in April, are not nearly so heavy as those ushered in by the easterly monsoon in September or October.

The plantation had increased considerably since our first visit, and many Liberian coffee-trees had been planted. They were in a thriving condition, but the Arabian coffee was evidently destined to be a failure, as indeed was only to be expected. At the bungalow we missed our hostess's kindly face and greeting. Her life, which had been one of the strangest vicissitudes, the most stirring adventures by sea and land, was over, and she lay at rest beneath the shade of the great durian-trees behind the house.

Our parting with our Spanish friends was an amusing one. The Governor and his *aide-de-camp*, together with several other officers, rowed off to the ship to make their adieux, and we drank—with every wish for its fulfilment on our part—to our next meeting. But the ceremony was not to end there. From the end of the pier two huge canoes shot suddenly out—giant “dug-outs” a hundred feet or more in length, crowded with people bearing large glittering objects in their hands. It was the band, nearly sixty strong, which had been ordered by our friend Don Julian to play us out! The sea was a little rough for such craft, and it was ludicrous to watch the desperate efforts of the musicians to retain their equilibrium and execute a difficult passage at the same time, for the boats were rounded out smoothly and were unprovided with thwarts or seats of any kind. At length they reached the calm water to leeward of the yacht, and for the first time for many

months we had the pleasure of listening to some good music. It was not for long, however. Our anchor was soon a-weigh, and waving a final farewell to our friends we steamed slowly out of the harbour to the strains of our favourite *Malagueña*.

With the homeward voyage of the *Marchesa* I need not weary my readers. On the 3rd of January we arrived at Singapore, and two months later found ourselves in the Suez Canal. So cold did it seem to us after the damp heat of New Guinea and the Moluccas that we were glad enough to put on cloth clothes. They served to remind us that we had soon to resume other habits of civilisation. On Easter Monday, April 14th, 1884, we dropped anchor off Southampton, and the Cruise of the *Marchesa* was a thing of the past.



THE MARCHESA.

APPENDIX I.

LIST OF BIRDS COLLECTED IN THE SULU ARCHIPELAGO.¹

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| <ol style="list-style-type: none"> 1. <i>Cacatua hæmaturopygia</i> (Müll.) 2. <i>Tanygnathus luzoniensis</i> (Linn.) 3. " <i>burbridgei</i>, Sharpe 4. <i>Loriculus bonapartei</i>, Soudancé. 5. <i>Haliastur intermedius</i>, Gurney. 6. <i>Butastur indicus</i> (Gm.) 7. <i>Circus melanoleucus</i>, Forster. 8. <i>Iyngipicus ramsayi</i>, Hargitt. 9. <i>Eurystomus orientalis</i> (Linn.) 10. <i>Alcedo bengalensis</i>, Gm. 11. " <i>asiatica</i>, Swains. 12. <i>Pelargopsis gigantea</i>, Wald. 13. <i>Sauropatis chloris</i> (Bodd.) 14. <i>Macropteryx comatus</i> (Temm.) 15. <i>Centrococeyx viridis</i> (Scop.) 16. <i>Lanius cephalomelas</i>, Bp. 17. <i>Artamus leucorhynchus</i> (Horsf.) 18. <i>Artamides pollens</i> (Salvad.) 19. <i>Lalage dominica</i> (Müll.) 20. <i>Pericrocotus marchesæ</i>, Guillem. 21. <i>Chibia pectoralis</i> (Wall.) 22. <i>Rhipidura nigritorquis</i>, Vigors. 23. <i>Cyornis philippensis</i>, Sharpe. 24. <i>Hypothymis occipitalis</i>, Vigors. 25. <i>Hirundo javanica</i>, Sparrm. 26. <i>Oriolus chinensis</i>, Linn. | <ol style="list-style-type: none"> 27. <i>Pycnonotus goiavier</i> (Scop.) 28. <i>Macronus kettlewelli</i>, Guillem. 29. <i>Copsychus mindanensis</i> (Gm.) 30. <i>Gerygone flaveola</i>, Cab. 31. <i>Cisticola exilis</i> (Vig. et Horsf.) 32. <i>Budytes viridis</i> (Gm.) 33. <i>Parus elegans</i>, Less. 34. <i>Zosterops everetti</i>, Tweedd. 35. <i>Dicaeum hypoleucum</i>, Sharpe. 36. <i>Cinnyris jugularis</i> (Linn.) 37. " <i>juliae</i>, Tweedd. 38. <i>Anthothreptes malaccensis</i> (Scop.) 39. <i>Corvus philippinus</i>, Bp. 40. <i>Calornis panayensis</i> (Scop.) 41. <i>Sarcops calvus</i> (Linn.) 42. <i>Munia jagori</i>, Cab. 43. <i>Osmotreron vernans</i> (Linn.) 44. " <i>axillaris</i>, G. R. Gr. 45. <i>Ptilopus melanocephalus</i>, Forster. 46. " <i>formosus</i>, G. R. Gr. 47. <i>Phabotreron brevirostris</i>, Tweedd. 48. <i>Carpophaga ænea</i> (Linn.) 49. " <i>pickeringi</i>, Cass. 50. <i>Myristicivora bicolor</i> (Scop.) 51. <i>Ianthenasgriseigularis</i>, Wald. et Lay. 52. <i>Macropygia tenuirostris</i>, G. R. Gr. |
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¹ For a description of the collections made during the *Marchesa's* voyage, see series of papers by the author in the "Proc. Zoolog. Soc." for 1885.

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| 53. <i>Turtur dussumieri</i> , Temm. | 58. <i>Hypotaenidia striata</i> (Linn.) |
| 54. <i>Gallus bankiva</i> , Temm. | 59. <i>Rallina eurizonoides</i> (Lafres.) |
| 55. <i>Excalfactoria chinensis</i> (Linn.) | 60. <i>Ardetta sinensis</i> (Gm.) |
| 56. <i>Gallixes cinerea</i> (Gm.) | 61. <i>Demiegretta sacra</i> (Gm.) |
| 57. <i>Erythra phœnicura</i> (Forster). | 62. <i>Butorides javanica</i> (Horsf.) |

LIST OF BIRDS COLLECTED IN NORTHERN BORNEO.

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| 1. <i>Spilornis pallidus</i> , Wald. | 32. <i>Eurylæmus javanicus</i> , Horsf. |
| 2. <i>Microhierax latifrons</i> , Sharpe. | 33. " <i>ochromelas</i> , Raffl. |
| 3. <i>Loriculus galgulus</i> (Linn.) | 34. <i>Cymborhynchus macrorhynchus</i>
(Gm.) |
| 4. <i>Chotorea chrysopsis</i> (Goffin.) | 35. <i>Corydon sumatranus</i> (Raffl.) |
| 5. " <i>versicolor</i> (Raffl.) | 36. <i>Batrochostomus auritus</i> , Vig. |
| 6. " <i>mystacophanus</i> (Temm.) | 37. <i>Caprimulgus macrurus</i> , Horsf. |
| 7. <i>Xantholæma duvauceli</i> (Less.) | 38. <i>Collocalia linchi</i> , Horsf. et Moore. |
| 8. <i>Calorhamphus fuliginosus</i> (Temm.) | 39. <i>Macropteryx comatus</i> (Temm.) |
| 9. <i>Iyngipicus auritus</i> , Eyton. | 40. <i>Stoporalia thalassinoides</i> (Cab.) |
| 10. <i>Xylolopes validus</i> (Reinw.) | 41. <i>Hypothymis occipitalis</i> (Vig.) |
| 11. <i>Calolophus puniceus</i> (Horsf.) | 42. <i>Rhipidura javanica</i> (Sparrm.) |
| 12. " <i>mentalis</i> (Temm.) | 43. <i>Terpsiphone affinis</i> (Hay.) |
| 13. <i>Tiga javanensis</i> (Ljung.) | 44. <i>Philentoma velatum</i> (Temm.) |
| 14. <i>Meiglyptes tristis</i> (Horsf.) | 45. <i>Artamus leucorhynchus</i> (Linn.) |
| 15. " <i>tukki</i> (Less.) | 46. <i>Pericrocotus igneus</i> , Blyth. |
| 16. <i>Sasia abnormis</i> (Temm.) | 47. <i>Lalage terat</i> (Bodd.) |
| 17. <i>Coccytes coromandus</i> (Linn.) | 48. " <i>culminata</i> (Hay.) |
| 18. <i>Eudynamis malayana</i> , Cab. et Hein. | 49. <i>Irena criniger</i> , Sharpe. |
| 19. <i>Rhinortha chlorophæa</i> (Raffl.) | 50. <i>Chaptia malayensis</i> , Hay. |
| 20. <i>Rhopodytes sumatranus</i> (Raffl.) | 51. <i>Dissemurus brachyphorus</i> (Temm.) |
| 21. <i>Rhamphococcyx erythrogmathus</i>
(Hartl.) | 52. <i>Myiolestes obscurus</i> (Horsf.) |
| 22. <i>Centrococcyx eurycercus</i> (Hay.) | 53. <i>Pachycephala griseola</i> (Blyth.) |
| 23. <i>Hydrocissa albirostris</i> (Shaw). | 54. <i>Sitta frontalis</i> , Horsf. |
| 24. <i>Merops bicolor</i> , Bodd. | 55. <i>Dicaeum trigonostigma</i> (Scop.) |
| 25. <i>Nyctiornis amieta</i> (Temm.) | 56. <i>Æthopyga siparaja</i> (Raffl.) |
| 26. <i>Alcedo bengalensis</i> , Gm. | 57. <i>Cimnyris hasselti</i> (Temm.) |
| 27. <i>Pelargopsis leucocephala</i> (Gm.) | 58. <i>Chalcostetha insignis</i> (Jard.) |
| 28. <i>Ceyx dilwyni</i> , Sharpe. | 59. <i>Anthothreptes malaccensis</i> (Scop.) |
| 29. <i>Haleyon coromanda</i> (Lath.) | 60. " <i>hypogrammica</i> (S.
Müll.) |
| 30. " <i>concreta</i> (Temm.) | 61. " <i>phœnicotis</i> (Temm.) |
| 31. <i>Calyptomena viridis</i> , Raffl. | |

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| <p>62. <i>Arachnothera chrysogenys</i>,
Temm.</p> <p>63. „ <i>flaviventris</i> (Eyton).</p> <p>64. „ <i>modesta</i> (Eyton).</p> <p>65. „ <i>robusta</i>, Müll. et
Schleg.</p> <p>66. „ <i>longirostris</i> (Lath.)</p> <p>67. „ <i>crassirostris</i>
(Reichenb.)</p> <p>68. <i>Ægithina viridis</i> (Bp.)</p> <p>69. <i>Chloropsis zosterops</i>, Vig.</p> <p>70. „ <i>cyanopogon</i> (Temm.)</p> <p>71. <i>Pycnonotus plumosus</i>, Blyth.</p> <p>72. „ <i>simplex</i>, Less.</p> <p>73. <i>Rubigula webberi</i>, Hume.</p> <p>74. <i>Micropus melanocephalus</i> (Gm.)</p> <p>75. <i>Hemixus malaccensis</i> (Blyth).</p> <p>76. <i>Criniger gutturalis</i> (Müll.)</p> <p>77. „ <i>phæocephalus</i> (Hartl.)</p> <p>78. <i>Pomatorhinus bornensis</i>, Cab.</p> <p>79. <i>Stachyris maculata</i> (Temm.)</p> <p>80. „ <i>nigricollis</i> (Temm.)</p> <p>81. <i>Mixornis bicolor</i> (Blyth).</p> <p>82. „ <i>cagayanensis</i>, Guillem.</p> <p>83. <i>Drymocataphus capistratoides</i>
(Temm.)</p> <p>84. <i>Kenopia striata</i> (Blyth).</p> <p>85. <i>Erythrociola bicolor</i> (Less.)</p> <p>86. <i>Pitta muelleri</i> (Bp.)</p> | <p>87. <i>Pitta baudii</i>, Müll. et Schleg.</p> <p>88. „ <i>schwaneri</i>, Temm.</p> <p>89. <i>Gerygone flaveola</i>, Cab.</p> <p>90. <i>Orthotomus cineraceus</i>, Blyth.</p> <p>91. <i>Cittocincla stricklandi</i> (Mottl. et
Dillw.)</p> <p>92. <i>Copsychus amoenus</i> (Horsf.)</p> <p>93. <i>Turdus pallens</i>, Pall.</p> <p>94. <i>Henicurus leschenaulti</i>, Vieill.</p> <p>95. <i>Anthus gustavi</i>, Swinh.</p> <p>96. <i>Oriolus xanthonotus</i>, Horsf.</p> <p>97. <i>Platysmurus aterrimus</i> (Temm.)</p> <p>98. <i>Platylophus coronatus</i> (Raffl.)</p> <p>99. <i>Osmotreron vernans</i> (Linn.)</p> <p>100. „ <i>olax</i> (Temm.)</p> <p>101. <i>Myristicivora bicolor</i> (Scop.)</p> <p>102. <i>Chalcoophaps indica</i> (Linn.)</p> <p>103. <i>Argusianus grayi</i> (Elliot).</p> <p>104. <i>Euplocomus nobilis</i>, Selat.</p> <p>105. <i>Rollulus rouloul</i> (Scop.)</p> <p>106. <i>Excalfactoria chinensis</i> (Linn.)</p> <p>107. <i>Ægialitis peroni</i> (Temm.)</p> <p>108. <i>Strepsilas interpres</i> (Linn.)</p> <p>109. <i>Tringa albescens</i>, Temm.</p> <p>110. <i>Tringoides hypoleucus</i> (Linn.)</p> <p>111. <i>Totanus incanus</i> (Gm.)</p> <p>112. <i>Numenius uropygialis</i>, Gould.</p> <p>113. <i>Gallinago stenura</i> (Kuhl.)</p> <p>114. <i>Sula piscator</i> (Linn.)</p> |
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LIST OF BIRDS COLLECTED IN CAGAYAN SULU.

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| <p>1. <i>Tanygnathus luzoniensis</i> (Linn.)</p> <p>2. <i>Sauropatis chloris</i> (Bodd.)</p> <p>3. <i>Eudynamis malayana</i>, Cab.</p> <p>4. <i>Centrococcyx eurycercus</i> (Hay.)</p> <p>5. <i>Lalage terat</i> (Bodd.)</p> <p>6. <i>Chibia pectoralis</i> (Wall.)</p> <p>7. <i>Hirundo javanica</i>, Sparm.</p> <p>8. <i>Mixornis cagayanensis</i>, Guillem.</p> | <p>9. <i>Orthotomus cineraceus</i>, Blyth.</p> <p>10. <i>Anthothreptes malaccensis</i>
(Scop.)</p> <p>11. <i>Calornis panayensis</i> (Scop.)</p> <p>12. <i>Carpophaga pickeringi</i>, Cass.</p> <p>13. <i>Strepsilas interpres</i> (Linn.)</p> <p>14. <i>Tringoides hypoleucus</i> (Linn.)</p> <p>15. <i>Demiegretta sacra</i> (Gm.)</p> |
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LIST OF BIRDS COLLECTED IN SUMBAWA.

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| <ol style="list-style-type: none"> 1. <i>Cacatua sulphurea</i>, Vieill. 2. <i>Geoffroyus jukesi</i>, G. R. Gr. 3. <i>Trichoglossus forsteni</i>, Bp. 4. <i>Haliastur intermedius</i>, Gurney. 5. <i>Iyngipicus grandis</i>, Hargitt. 6. <i>Merops philippinus</i>, Linn. 7. " <i>ornatus</i>, Lath. 8. <i>Eurystomus orientalis</i> (Linn.) 9. <i>Alcedo bengalensis</i>, Gm. 10. <i>Sauropatis chloris</i> (Bodd.) 11. <i>Caprimulgus macrurus</i>, Horsf. 12. " <i>affinis</i>, Horsf. 13. <i>Centrococyx affinis</i>, Horsf. 14. <i>Lanius bentet</i>, Horsf. 15. <i>Pachycephala fulvotincta</i>, Wall. 16. <i>Artamus leucorhynchus</i> (Horsf.) 17. <i>Pratincola caprata</i>, Linn. 18. <i>Lalage timoriensis</i> (S. Müll.) 19. <i>Chibia bimaensis</i> (Bp.) | <ol style="list-style-type: none"> 20. <i>Hypothymis occipitalis</i>, Vig. 21. <i>Oriolus broderipi</i>, Bp. 22. <i>Parus cinereus</i>, Vieill. 23. <i>Cimmyris pectoralis</i> (Horsf.) 24. <i>Zosterops brunneicauda</i>, Salvad. 25. " <i>sumbavensis</i>, Guillem. 26. <i>Stigmatops ocularis</i> (Gould.) 27. " <i>sp.</i> 28. <i>Philemon timoriensis</i> (S. Müll.) 29. <i>Calornis minor</i> (Müll.) 30. <i>Amadina insularis</i>, Wall. 31. <i>Osmotreron vernans</i> (Linn.) 32. <i>Spilopelia tigrina</i> (Temm.) 33. <i>Streptopelia bitorquata</i> (Temm.) 34. <i>Geopelia maugei</i> (Temm.) 35. <i>Chalcophaps indica</i> (Linn.) 36. <i>Turnix powelli</i>, Guillem. 37. <i>Erythra leucomelana</i> (S. Müll.) 38. <i>Ardeola leucoptera</i> (Bodd.) |
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LIST OF BIRDS COLLECTED IN CELEBES.

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| <ol style="list-style-type: none"> 1. <i>Tanygnathus muelleri</i> (Müll. et Schleg.) 2. " <i>albirostris</i>, Wall. 3. <i>Prioniturus platurus</i> (Kuhl.) 4. " <i>flavicans</i>, Cass. 5. <i>Loriculus stigmatus</i> (Müll. et Schleg.) 6. " <i>exilis</i>, Schleg. 7. <i>Trichoglossus ornatus</i> (Linn.) 8. " <i>meyeri</i>, Wald. 9. <i>Spilornis rufpectus</i>, Gould. 10. <i>Astur griseiceps</i>, Schleg. 11. " <i>trinitatus</i>, Bp. 12. " <i>soloensis</i> (Horsf.) 13. " <i>trivirgatus</i>, Temm. | <ol style="list-style-type: none"> 14. <i>Accipiter rhodogaster</i> (Schleg.) 15. <i>Limnaetus lanceolatus</i>, Bp. 16. <i>Haliæetus leucogaster</i> (Gm.) 17. <i>Butastur indicus</i> (Gm.) 18. <i>Pernis celebensis</i>, Wald. 19. <i>Scops menadensis</i>, Q. et G. 20. <i>Ninox punctulata</i>, Q. et G. 21. <i>Strix rosenbergi</i>, Schleg. 22. <i>Mulleripicus fulvus</i> (Q. et G.) 23. <i>Iyngipicus temmincki</i> (Mall.) 24. <i>Merops ornatus</i>, Lath. 25. <i>Coracias temmincki</i> (Vieill.) 26. <i>Eurystomus orientalis</i> (Linn.) 27. <i>Alcedo bengalensis</i>, Gm. 28. " <i>moluccensis</i>, Blyth. |
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29. *Pelargopsis melanorhyncha* (Temm.)
 30. *Monachalcyon monachus* (Temm.)
 31. *Sauropatis chloris* (Bodd.)
 32. „ *sanctus* (Vig. et Horsf.)
 33. *Haleyon coromanda* (Lath.)
 34. „ *pileata*, Bodd.
 35. *Cittura cyanotis* (Temm.)
 36. *Ceycopsis fallax* (Schleg.)
 37. *Macropteryx wallacei* (Gould.)
 38. *Collocalia esculenta* (Linn.)
 39. *Lyncornis macropterus*, Bp.
 40. *Cranorrhinus cassidix* (Temm.)
 41. *Scythrops novæ-hollandiæ*, Lath.
 42. *Phœnicophaës calorhynchus* (Temm.)
 43. *Eudynamis melanorhyncha*, S. Müll.
 44. *Cacomantis sepulchralis*, S. Müll.
 45. „ *tymbonomus*, S. Müll.
 46. *Pyrrhocentor celebensis* (Q. et G.)
 47. *Centrococyx affinis* (Horsf.)
 48. *Cuculus canoroides*, Müll.
 49. *Oriolus celebensis* (Wald.)
 50. *Geocichla erythronota*, Sclat.
 51. *Turdinus celebensis* (Strickland.)
 52. *Pitta celebensis*, Forster.
 53. *Anthus gustavi*, Swinh.
 54. *Budytes viridis* (Gm.)
 55. *Hirundo javanica*, Sparrm.
 56. *Myialestes helianthea* (Wall.)
 57. *Hypothymis puella*, Wall.
 58. *Artamus monachus*, Temm.
 59. „ *leucorhynchus* (Linn.)
 60. *Graucalus leucopygius*, Bp.
 61. *Edolisoma morio* (S. Müll.)
 62. *Lalage leucopygialis*, Gray.
 63. *Chibia leucops* (Wall.)
 64. *Anthothreptes celebensis* (Shelley).
 65. *Cinnyris frenata* (S. Müll.)
 66. „ *grayi* (Wall.)
 67. *Æthopyga flavostriata* (Wall.)
 68. *Dicaeum celebicum*, S. Müll.
 69. *Prionochilus aureolimbatus*, Wall.
 70. *Zosterops intermedia*, Wall.
 71. *Munia molucca* (Linn.)
 72. *Corone enca*, (Horsf.)
 73. *Streptocitta torquata* (Temm.)
 74. *Basileornis celebensis*, Temm.
 75. *Acridotheres cinereus*, Müll.
 76. *Calornis neglecta*, Wald.
 77. *Scissirostrum dubium* (Lath.)
 78. *Osmotreron griseicauda* (G. R. Gr.)
 79. *Ptilopus formosus*, G. R. Gr.
 80. „ *melanocephalus*, Gm.
 81. *Carpophaga paulina*, Temm.
 82. „ *radiata*, Q. et G.
 83. *Myristicivora luctuosa* (Reinw.)
 84. „ *bicolor* (Scop.)
 85. *Macropygia albicapilla*, Temm.
 86. *Turacœna menadensis* (Q. et G.)
 87. *Spilopelia tigrina* (Temm.)
 88. *Chalcochaps indica* (Linn.)
 89. *Calenas nicobarica* (Linn.)
 90. *Megapodius gilberti*, G. R. Gr.
 91. *Megacephalon maleo*, Temm.
 92. *Charadrius fulvus*, Gm.
 93. *Ægialitis geoffroyi* (Wagl.)
 94. *Himantopus leucocephalus*, Gould.
 95. *Porphyrio indicus*, Horsf.
 96. *Hydrallector gallinaceus* (Temm.)
 97. *Gallinula frontata*, Wall.
 98. *Erythra phœnicura* (Forster).
 99. *Hypotaenidia celebensis* (Q. et Gr.)
 100. „ *philippensis* (Linn.)
 101. *Numenius uropygialis*, Gould.
 102. *Tringoides hypoleucus* (Linn.)
 103. *Totanus glareola* (Linn.)
 104. „ *calidris* (Linn.)
 105. *Ardeola leucoptera*, Bodd.
 106. *Ardetta sinensis* (Gm.)
 107. *Demiegretta sacra* (Gm.)
 108. *Butorides javanica* (Horsf.)

LIST OF BIRDS COLLECTED IN THE MOLUCCA ISLANDS.

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| <ol style="list-style-type: none"> 1. <i>Cunecuma leucogaster</i> (Gm.) 2. <i>Haliastur intermedius</i>, Gurney. 3. <i>Tinnunculus moluccensis</i>, Schleg. 4. <i>Cacatua alba</i> (Müll.) 5. <i>Tanygnathus megalorhynchus</i>
(Bodd.) 6. <i>Geoffroyus cyanicollis</i> (S. Müll.) 7. " <i>obiensis</i> (Finsch.) 8. <i>Eclectus roratus</i> (P. L. S. Müll.) 9. <i>Lorius domicella</i> (Linn.) 10. " <i>flavo-palliatu</i>s, Salvad. 11. <i>Eos riciniata</i> (Bechst.) 12. " <i>insularis</i>, Guillem. 13. <i>Coriphilus placens</i> (Temm.) 14. <i>Cuculus canoroides</i>, S. Müll. 15. <i>Nesocentor goliath</i> (Forster). 16. <i>Rhytidoceros plicatus</i> (Penn.) 17. <i>Merops ornatus</i>, Lath. 18. <i>Alcedo moluccensis</i>, Blyth. 19. <i>Aleyone pusilla</i> (Temm.) 20. <i>Ceyx lepida</i>, Temm. 21. <i>Tanysiptera margaretha</i>, Heine. 22. " <i>obiensis</i>, Salvad. 23. " <i>dea</i> (Linn.) 24. <i>Haleyon diops</i>, Temm. 25. <i>Sauropatis saurophaga</i> (Gould.) 26. " <i>chloris</i> (Bodd.) 27. " <i>sancta</i> (Vig. et Horsf.) 28. <i>Eurystomus orientalis</i> (Linn.) 29. " <i>azureus</i>, G. R. Gr. 30. <i>Macropteryx mystacea</i> (Less.) 31. <i>Hirundo gutturalis</i>, Scop. 32. <i>Monarcha inornatus</i> (Garn.) 33. " <i>chalybeocephalus</i> (Garn.) 34. <i>Sauloprocta melaleuca</i> (Q. et G.) | <ol style="list-style-type: none"> 35. <i>Rhipidura obiensis</i>, Salvad. 36. <i>Graucalus magnirostris</i>, Forster. 37. <i>Campephaga obiensis</i> (Salvad.) 38. <i>Lalage aurea</i> (Temm.) 39. <i>Dicruropsis atrocerulea</i> (G. R. Gr.) 40. " <i>sp.</i> 41. <i>Pachycephala mentalis</i>, Wall. 42. " <i>obiensis</i>, Salvad. 43. <i>Cinnyris auriceps</i> (G. R. Gr.) 44. " <i>frenatus</i> (S. Müll.) 45. <i>Melitograis giloloensis</i> (Temm.) 46. <i>Criniger chloris</i>, Finsch. 47. <i>Pitta maxima</i>, Forster. 48. " <i>rufiventris</i>, Heine. 49. <i>Anthus gustavi</i>, Swinh. 50. <i>Erythrura trichroa</i> (Kittl.) 51. <i>Calornis metallica</i> (Temm.) 52. " <i>obscura</i> (Forster). 53. <i>Corvus validissimus</i>, Schleg. 54. <i>Lycocorax obiensis</i>, Bernst. 55. <i>Semioptera wallacei</i> (G. R. Gr.) 56. <i>Ptilopus superbus</i> (Temm.) 57. " <i>prasinorrhous</i>, G. R. Gr. 58. " <i>monachus</i> (Reinw.) 59. " <i>ionogaster</i> (Reinw.) 60. <i>Carpophaga myristicivora</i> (Scop.) 61. " <i>basilica</i>, Sundl. 62. <i>Myristicivora bicolor</i> (Scop.) 63. <i>Reinwardtænas reinwardti</i>
(Temm.) 64. <i>Macropygia batchianensis</i>, Wall. 65. <i>Caloenas nicobarica</i> (Linn.) 66. <i>Megapodius freycineti</i>, Q. et G. 67. <i>Tringa albescens</i>, Temm. 68. <i>Numenius uropygialis</i>, Gould. |
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LIST OF BIRDS COLLECTED IN NEW GUINEA.

BATANTA ISLAND.

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| <ol style="list-style-type: none"> 1. <i>Astur torquatus</i> (Cuv.) 2. <i>Aprosmictus dorsalis</i> (Q. et G.) 3. <i>Geoffroyus pucherani</i>, Bp. 4. <i>Eolectes pectoralis</i> (P. L. S. Müll.) 5. <i>Trichoglossus cyanogrammus</i>, Wagl. 6. <i>Aleyone lessoni</i>, Cass. 7. " <i>pusilla</i> (Temm.) 8. <i>Tanysiptera galatea</i>, G. R. Gr. 9. <i>Sauropatis sancta</i> (Vig. et Horsf.) 10. <i>Sauromarptis gaudichaudi</i> (Q. et G.) 11. <i>Eurystomus orientalis</i> (L.) 12. <i>Macropteryx mystacea</i> (Less.) 13. <i>Arses batantæ</i>, Sharpe. 14. <i>Sauloprocta melaleuca</i> (Q. et G.) 15. <i>Chibia carbonaria</i> (S. Müll.) 16. <i>Cracticus cassicus</i> (Bodd.) | <ol style="list-style-type: none"> 17. <i>Colluricincla megarhyncha</i> (Q. et G.) 18. <i>Tropidorhynchus novæ guineæ</i>, Salv. 19. <i>Pitta novæ guineæ</i>, Müll. et Schleg. 20. " <i>mackloti</i>, Temm. 21. <i>Mino dumonti</i>, Less. 22. <i>Mimeta striatus</i> (Q. et G.) 23. <i>Paradisea rubra</i>, Lacép. 24. <i>Diphyllodes wilsoni</i> (Cass.) 25. <i>Ælurædus buccoides</i> (Temm.) 26. <i>Megaloprepia puella</i> (Less.) 27. <i>Carpophaga myristicivora</i> (Scop.) 28. " <i>rufiventris</i>, Salvad. 29. " <i>pinon</i> (Q. et G.) 30. <i>Reinwardtænas reinwardti</i> (Temm.) 31. <i>Ægialitis mongolica</i> (Pall.) |
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WAIGIOU ISLAND.

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| <ol style="list-style-type: none"> 1. <i>Haliastur girrenera</i> (Vieill.) 2. <i>Baza reinwardti</i> (Müll. et Schleg.) 3. <i>Microglossus aterrimus</i> (Gm.) 4. <i>Tanygnathus megalorhynchus</i> (Bodd.) 5. <i>Aprosmictus dorsalis</i> (Q. et G.) 6. <i>Geoffroyus pucherani</i>, Bp. 7. <i>Eolectes pectoralis</i> (P. L. S. Müll.) 8. <i>Lorius lory</i> (Linn.) 9. <i>Eos wallacei</i>, Finsch. 10. <i>Trichoglossus cyanogrammus</i>, Wagl. 11. <i>Coriphilus placens</i> (Temm.) 12. <i>Ouculus canoroïdes</i>, S. Müll. 13. <i>Eudynamis rufiventer</i> (Less.) 14. <i>Rhytidoceros plicatus</i> (Penn.) 15. <i>Aleyone pusilla</i> (Temm.) 16. <i>Ceyx solitaria</i>, Temm. | <ol style="list-style-type: none"> 17. <i>Tanysiptera galatea</i>, G. R. Gr. 18. <i>Sauropatis saurophaga</i> (Gould.) 19. " <i>sancta</i> (Vig. et Horsf.) 20. <i>Syma torotoro</i>, Less. 21. <i>Sauromarptis gaudichaudi</i> (Q. et G.) 22. <i>Melidora macrorrhina</i> (Less.) 23. <i>Podargus papuensis</i>, Q. et G. 24. " <i>ocellatus</i>, Q. et G. 25. <i>Macropteryx mystacea</i> (Less.) 26. <i>Peltops blainvillei</i> (Less. et Garn.) 27. <i>Monarcha guttulatus</i> (Garn.) 28. " <i>chalybeocephalus</i> (Garn.) 29. <i>Arses batantæ</i>, Sharpe. 30. <i>Sauloprocta melaleuca</i> (Q. et G.) 31. <i>Rhipidura setosa</i> (Q. et G.) 32. <i>Muscicapa griseosticta</i> (Swinh.) 33. <i>Pæcilodryas hypoleuca</i> (G. R. Gr.) |
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| <p>34. <i>Graucalus magnirostris</i>. Forsten.
 35. <i>Edoliisoma melan</i> (S. Müll.)
 36. <i>Artamus leucogaster</i> (Valenc.)
 37. <i>Chibia carbonaria</i> (S. Müll.)
 38. <i>Cracticus cassicus</i> (Bodd.)
 39. „ <i>quoyi</i> (Less.)
 40. <i>Rhectes leucorhynchus</i>, G. R. Gr.
 41. <i>Colluricincla affinis</i> (G. R. Gr.)
 42. <i>Cinnyris aspasie</i>, Less.
 43. „ <i>frenatus</i> (S. Müll.)
 44. <i>Dicaeum pectorale</i>, Müll et Schleg.
 45. <i>Melilestes megarhynchus</i> (G. R. Gr.)
 46. „ <i>novae guineae</i> (Less.)
 47. <i>Ptilotis analoga</i>, Rehb.
 48. „ <i>fusciventris</i> (Salvad.)
 49. <i>Tropidorhynchus novae guineae</i>,
 Salvad.
 50. <i>Pitta mackloti</i>, Temm.
 51. <i>Calobates melanope</i> (Pall.)
 52. <i>Mino dumonti</i>, Less.
 53. <i>Corvus orru</i>, Müll.
 54. <i>Manucodia atra</i> (Less.)</p> | <p>55. <i>Paradisea rubra</i>, Lacép.
 56. <i>Diphyllodes wilsoni</i> (Cass.)
 57. <i>Ptilopus pulchellus</i> (Temm.)
 58. „ <i>humeralis</i>, Wall.
 59. „ <i>pectoralis</i> (Wagl.)
 60. <i>Megaloprepia puella</i> (Less.)
 61. <i>Carpophaga myristicivora</i> (Scop.)
 62. „ <i>rufiventris</i>, Salvad.
 63. „ <i>pinon</i> (Q. et G.)
 64. <i>Reinwardtanas reinwardti</i> (Temm.)
 65. <i>Henicophaps albifrons</i>, G. R. Gr.
 66. <i>Goura coronata</i> (Linn.)
 67. <i>Calonans nicobarica</i> (Linn.)
 68. <i>Megapodius freycineti</i>, Q. et G.
 69. <i>Charadrius fulvus</i>, Gm.
 70. <i>Ægialitis geoffroyi</i> (Wagl.)
 71. <i>Tringa acuminata</i> (Horsf.)
 72. <i>Tringoides hypoleucus</i> (Linn.)
 73. <i>Totanus incanus</i> (Gm.)
 74. „ <i>glareola</i> (Linn.)
 75. <i>Tadorna radjah</i> (Garn.)
 76. <i>Microcarbo melanoleucus</i> (Vieill.)</p> |
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SALWATTI ISLAND.

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| <p>1. <i>Cacatua triton</i> (Temm.)
 2. <i>Microglossus aterrimus</i> (Gm.)
 3. <i>Tanygnathus megalorhynchus</i>
 (Bodd.)
 4. <i>Aprosinctus dorsalis</i> (Q. et G.)
 5. <i>Cyclopsittacus occidentalis</i>, Salvad.
 6. <i>Lorius lory</i> (Linn.)
 7. <i>Chalcopsittacus ater</i> (Scop.)
 8. <i>Trichoglossus cyanogrammus</i>, Wagl.
 9. <i>Nesocentor menebiki</i> (Garn.)
 10. <i>Ceyx solitaria</i>, Temm.
 11. <i>Syma torotoro</i>, Less.
 12. <i>Sauromarptis gaudichaudi</i> (Q.
 et G.)
 13. <i>Sauoprocta melaleuca</i> (Q. et G.)
 14. <i>Pœcilodryas hypoleuca</i> (G. R. Gr.)</p> | <p>15. <i>Graucalus papuensis</i> (Gm.)
 16. <i>Cracticus cassicus</i> (Bodd.)
 17. „ <i>quoyi</i> (Less.)
 18. <i>Rhectes uropygialis</i>, G. R. Gr.
 19. <i>Ptilotis chysotis</i>, Less.
 20. <i>Pitta novae guineae</i>, Müll. et Schleg.
 21. „ <i>mackloti</i>, Temm.
 22. <i>Calornis metallica</i> (Temm.)
 23. „ <i>cantoroides</i>, G. R. Gr.
 24. <i>Melanopyrrhus anais</i> (Less.)
 25. <i>Corvus orru</i>, Müll.
 26. <i>Seleucidus nigricans</i> (Shaw).
 27. <i>Diphyllodes magnifica</i> (Penn.)
 28. <i>Cicinnurus regius</i> (Linn.)
 29. <i>Æluredus buccoides</i> (Temm.)
 30. <i>Megaloprepia puella</i> (Less.)</p> |
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| 31. <i>Carpophaga rufiventris</i> , Salvad. | 34. <i>Talegallus cuvieri</i> , Less. |
| 32. <i>Phlogoenas rufigula</i> (Puch. et Jacq.) | 35. <i>Demiegretta sacra</i> (Gm.) |
| 33. <i>Calœnas nicobarica</i> (Linn.) | 36. <i>Nycticorax caledonicus</i> (Gm.) |

MISOL ISLAND.

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| 1. <i>Cacatua triton</i> (Temm.) | 25. <i>Cracticus quoyi</i> (Less.) |
| 2. <i>Nasiterna pygmaea</i> (Q. et G.) | 26. <i>Rhœtes uropygialis</i> , G. R. Gr. |
| 3. <i>Cyclopsittacus blythii</i> , Wall. | 27. <i>Cinnyris aspasiae</i> , Less. |
| 4. " <i>diopthalmus</i>
(Hombr. et Jacq.) | 28. " <i>frenatus</i> (S. Müll.) |
| 5. <i>Geoffroyus pucherani</i> , Bp. | 29. <i>Myzomela eques</i> (Less.) |
| 6. <i>Lorius lory</i> (Linn.) | 30. <i>Ptilotis sonoroides</i> , G. R. Gr. |
| 7. <i>Chalcopsittacus ater</i> (Scop.) | 31. <i>Pitta novæ guineæ</i> , Müll. et Schleg. |
| 8. <i>Trichoglossus cyanogrammus</i> ,
Wagl. | 32. " <i>mackloti</i> , Temm. |
| 9. <i>Coriphilus placens</i> (Temm.) | 33. <i>Pomatorhinus isidori</i> , Less. |
| 10. <i>Nesocentor menebiki</i> (Garn.) | 34. <i>Calornis metallica</i> (Temm.) |
| 11. <i>Sauropatis saurophaga</i> (Gould.) | 35. " <i>cantoroides</i> , G. R. Gr. |
| 12. <i>Sauromarptis gaudichaudi</i> (Q. et
G.) | 36. <i>Corvus orru</i> , Müll. |
| 13. <i>Eurystomus crassirostris</i> , Sclat. | 37. <i>Manucodia chalybeata</i> , Penn. |
| 14. <i>Podargus ocellatus</i> , Q. et G. | 38. " <i>atra</i> (Less.) |
| 15. <i>Collocalia esculenta</i> (Linn.) | 39. <i>Paradisea minor</i> , Shaw. |
| 16. <i>Peltops blainvillei</i> (Less. et Garn.) | 40. <i>Cicinnurus regius</i> (Linn.) |
| 17. <i>Monarcha chalybeocephalus</i> (Garn.) | 41. <i>Ptilopus superbus</i> (Temm.) |
| 18. " <i>melanonotus</i> , Sclat. | 42. " <i>pulchellus</i> (Temm.) |
| 19. <i>Muscicapa griseosticta</i> (Swinh.) | 43. " <i>pectoralis</i> (Wagl.) |
| 20. <i>Graucalus boyeri</i> (G. R. Gr.) | 44. <i>Megaloprepia puella</i> (Less.) |
| 21. " <i>melanops</i> (Lath.) | 45. <i>Carpophaga rufiventris</i> , Salvad. |
| 22. " <i>papuensis</i> (Gm.) | 46. " <i>pinon</i> (Q. et G.) |
| 23. <i>Edoliisoma schisticeps</i> (G. R. Gr.) | 47. <i>Goura coronata</i> (Linn.) |
| 24. <i>Chibia carbonaria</i> (S. Müll.) | 48. <i>Orthorhamphus magnirostris</i>
(Geoffr.) |
| | 49. <i>Tringoides hypoleucus</i> (Linn.) |
| | 50. <i>Microcarbo melanoleucus</i> (Vieill.) |

ARFAK RANGE AND MAINLAND.

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| 1. <i>Astur leucosoma</i> (Sharpe.) | 6. <i>Aprosmictus dorsalis</i> (Q. et G.) |
| 2. " <i>melanochlamys</i> (Salvad.) | 7. <i>Psittacella brehmi</i> (Rosenb.) |
| 3. <i>Cacatua triton</i> (Temm.) | 8. <i>Dasyptilus pesqueti</i> (Less.) |
| 4. <i>Microglossus aterrimus</i> (Gm.) | 9. <i>Lorius lory</i> (Linn.) |
| 5. <i>Nasiterna bruijnii</i> , Salvad. | 10. <i>Eos fuscata</i> , Blyth. |

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| <p>11. <i>Trichoglossus cyanogrammus</i>, Wagl.
 12. " <i>rosenbergi</i>, Schleg.
 (<i>captiv.</i>)
 13. <i>Neopsittacus nuschenbroeki</i>
 (Rosenb.)
 14. <i>Coriphilus wilhelminæ</i> (Meyer).
 15. <i>Oreopsittacus arfaki</i> (Meyer).
 16. <i>Charmosynopsis pulchella</i> (G. R.
 Gr.)
 17. <i>Charmosyna papuensis</i> (Gm.)
 18. " <i>josephinae</i> (Finsch.)
 19. <i>Chrysococyx meyeri</i> (Salvad.)
 20. <i>Nesocentor menebiki</i> (Garn.)
 21. <i>Tanysepta galatea</i>, G. R. Gr.
 22. <i>Sauropatis saurophaga</i> (Gould.)
 23. <i>Melidora macrorhina</i> (Less.)
 24. <i>Eurystomus orientalis</i>, Linn.
 (<i>var. pacificus</i>).
 25. <i>Podargus papuensis</i>, Q. et G.
 26. " <i>ocellatus</i>, Q. et G.
 27. <i>Egotheles albertisi</i>, Sclat.
 28. " <i>wallacei</i> (G. R. Gr.)
 29. <i>Peltops blainvillei</i> (Less. et Garn.)
 30. <i>Monarcha frater</i>, Sclat.
 31. " <i>melanonotus</i>, Sclat.
 32. <i>Sauloprocta melaleuca</i> (Q. et G.)
 33. <i>Monachella mulleriana</i>, Schleg.
 34. <i>Machærorhynchus albifrons</i>, G. R.
 Gr.
 35. " " <i>nigripectus</i>
 Schleg.
 36. <i>Malurus alboscapulatus</i>, Meyer.
 37. <i>Graucalus cæreogriseus</i> (G. R. Gr.)
 38. <i>Edolisoma montanum</i> (Meyer).
 39. <i>Lalage atrovirens</i> (G. R. Gr.)
 40. <i>Artamus maximus</i>, Meyer.
 41. <i>Chibia carbonaria</i> (S. Müll.)
 42. <i>Cracticus cassicus</i> (Bodd.)
 43. <i>Rhectes dichrous</i>, Bp.
 44. " <i>cerviniventris</i>, G. R. Gr.
 45. " <i>ferrugineus</i>, S. Müll.</p> | <p>46. <i>Pachycephala soror</i>, Sclat.
 47. " <i>schlegeli</i>, Rosenb.
 48. " <i>rufinucha</i>, Sclat.
 49. <i>Pachycephalopsis hattamensis</i>
 (Meyer).
 50. <i>Pachycare flavogrisea</i> (Meyer).
 51. <i>Climacteris placens</i>, Sclat.
 52. <i>Sitella papuensis</i> (Schleg.)
 53. <i>Cinnyris aspasie</i>, Less.
 54. <i>Dicaeum pectorale</i>, Müll. et Schleg.
 55. <i>Pristorhamphus versteri</i>, Finsch.
 56. <i>Oreocharis arfaki</i> (Meyer).
 57. <i>Myzomela rosenbergi</i>, Schleg.
 58. " <i>adolphinae</i>, Salvad.
 59. <i>Melipotes gymnops</i>, Sclat.
 60. <i>Melidectes torquatus</i>, Sclat.
 61. <i>Melirrhophetes leucostephes</i>,
 Meyer.
 62. <i>Ptilotis cinerea</i>, Sclat.
 63. <i>Euthyrynchus griseigularis</i>, Schleg.
 64. <i>Zosterops novæ guineæ</i>, Salvad.
 65. <i>Pitta novæ guineæ</i>, Müll. et Schleg.
 66. " <i>mackloti</i>, Temm.
 67. <i>Pomatorhinus isidori</i>, Less.
 68. <i>Eupetes cærulescens</i>, Temm.
 69. <i>Melanopyrrhus orientalis</i> (Schleg.)
 70. <i>Mino dumonti</i>, Less.
 71. <i>Corvus orru</i>, Müll.
 72. <i>Manucodia atra</i> (Less.)
 73. <i>Parotia sexpennis</i> (Bodd.)
 74. <i>Lophorhina superba</i> (Penn.)
 75. <i>Paradigalla carunculata</i>, Less.
 76. <i>Astrapia nigra</i> (Gm.)
 77. <i>Epimachus speciosus</i> (Bodd.)
 78. <i>Drepanornis albertisi</i>, Sclat.
 79. " <i>bruijni</i>, Oustal.
 80. <i>Craspedophora magnifica</i> (Vieill.)
 81. <i>Paradisea minor</i>, Shaw.
 82. <i>Diphylloides chrysoptera</i>, Gould.
 83. <i>Cicinnurus regius</i> (Linn.)
 84. <i>Xanthomelus aureus</i> (Linn.)</p> |
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| <p>85. <i>Eluredu</i> <i>buccoides</i> (Temm.)
 86. <i>Ptilopus ornatus</i>, Rosenb.
 87. „ <i>bellus</i>, Sclat.
 88. <i>Carpophaga rufiventris</i>, Salvad.
 89. „ <i>chalconota</i>, Salvad.
 90. <i>Gymnophaps albertisi</i>, Salvad.
 91. <i>Macropygia nigrirostris</i>, Salvad.
 92. <i>Phlogœnas rufigula</i> (Puch. et Jacq.)</p> | <p>93. <i>Eutrygon terrestris</i> (G. R. Gr.)
 94. <i>Otidiphaps nobilis</i>, Gould.
 95. <i>Goura coronata</i> (Linn.)
 96. <i>Megapodius duperreyi</i>, Less. et Garn.
 97. <i>Talegallus cuvieri</i>, Less.
 98. <i>Rallicula rubra</i>, Schleg.
 99. <i>Scolopax rosenbergi</i>, Schleg.
 100. <i>Ardetta sinensis</i> (Gm.)</p> |
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JOBI ISLAND.

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| <p>1. <i>Geoffroyus jobiensis</i> (Meyer).
 2. <i>Eudynamis rufiventer</i> (Less.)
 3. <i>Haleyon nigrocyanea</i>, Wall.
 4. <i>Eurystomus orientalis</i>, Linn. (var. <i>pacificus</i>).
 5. <i>Podargus ocellatus</i>, Q. et G.
 6. <i>Arses insularis</i> (Meyer).
 7. <i>Micreeca flavovirescens</i>, G. R. Gr.
 8. <i>Graucalus papuensis</i> (Gm.)
 9. <i>Edoliisoma melan</i> (S. Müll.)
 10. „ <i>incertum</i> (Meyer).
 11. <i>Rhectes jobiensis</i>, Meyer.</p> | <p>12. <i>Cinnyris jobiensis</i> (Meyer).
 13. „ <i>frenatus</i> (S. Müll.)
 14. <i>Gymnocorax senex</i> (Less.)
 15. <i>Manucodia jobiensis</i>, Salvad.
 16. <i>Paradisea minor</i>, Shaw.
 17. <i>Diphyllodes chrysoptera</i>, Gould.
 18. <i>Ciccinnurus regius</i> (Linn.)
 19. <i>Eluredu buccoides</i> (Temm.)
 20. <i>Ptilopus geminus</i>, Salvad.
 21. <i>Gymnophaps albertisi</i>, Salvad.
 22. <i>Goura victoriae</i> (Fraser).
 23. <i>Talegallus jobiensis</i>, Meyer.
 24. <i>Tadorna radjah</i> (Garn.)</p> |
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ARU ISLANDS.

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| <p>1. <i>Baza reinwardti</i> (Müll. et Schleg.)
 2. <i>Astur poliocephalus</i> (G. R. Gr.)
 3. <i>Cyclopsittacus aruensis</i> (Schleg.)
 4. <i>Eclectus pectoralis</i> (P. L. S. Müll.)
 5. <i>Chalcopsittacus scintillatus</i> (Temm.)
 6. <i>Trichoglossus nigrigularis</i>, G. R. Gr.
 7. <i>Cuculus canoroides</i>, S. Müll.
 8. <i>Sauromartus gaudichaudi</i> (Q. et G.)
 9. <i>Sauoprocta melaleuca</i> (Q. et G.)
 10. <i>Cracticus cassicus</i> (Bodd.)
 11. „ <i>quoyi</i> (Less.)
 12. <i>Rhectes aruensis</i>, Sharpe.
 13. <i>Cinnyris aspasiae</i>, Less.
 14. „ <i>frenatus</i> (S. Müll.)</p> | <p>15. <i>Myzomela nigrita</i>, G. R. Gr.
 16. „ <i>erythrocephala</i>, Gould.
 17. „ <i>obscura</i>, Gould.
 18. <i>Glyciphila modesta</i>, G. R. Gr.
 19. <i>Tropidorhynchus novae guineae</i>, Salvad.
 20. <i>Calornis metallica</i> (Temm.)
 21. <i>Mino dumonti</i>, Less.
 22. <i>Paradisea apoda</i>, Linn.
 23. <i>Ciccinnurus regius</i> (Linn.)
 24. <i>Ptilopus wallacei</i>, G. R. Gr.
 25. <i>Carpophaga zoeae</i> (Less.)
 26. „ <i>muelleri</i> (Temm.)
 27. „ <i>pinon</i> (Q. et G.)
 28. <i>Myristicivora spilorrhœa</i>, G. R. Gr.</p> |
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APPENDIX II.



LIST OF SHELLS COLLECTED DURING THE VOYAGE OF THE *MARCHESA*.

1. FORMOSA.

<i>Cypræa annulus</i> , L.	<i>Oliva tremulina</i> , Lam.
„ <i>arabica</i> , L.	<i>Strombus plicatus</i> , Lam.
„ <i>caput-serpentis</i> , L.	<i>Harpa conoidalis</i> , Lam.
„ <i>caurica</i> , L.	<i>Columbella flavida</i> , Sowb.
„ <i>cicercula</i> , L.	„ <i>tyleri</i> , Gray.
„ <i>errones</i> , L.	„ <i>versicolor</i> , Sowb.
„ <i>helvola</i> , L.	<i>Nassa picta</i> , Dunk.
„ <i>isabella</i> , L.	<i>Engina lineata</i> , Reeve.
„ <i>moneta</i> , L.	<i>Mitra ustulata</i> , Lam.
„ <i>neglecta</i> , L.	<i>Cerithium bornii</i> , Sowb.
„ <i>tigris</i> , L.	<i>Planaxis sulcata</i> , Born.
„ <i>vitellus</i> , L.	<i>Monodonta labeo</i> , L.

2. SUMBAWA.

<i>Cypræa annulus</i> , L.	<i>Engina mendicaria</i> , Lam.
„ <i>arabica</i> , L.	<i>Sistrum tuberculatum</i> , Blain.
„ <i>neglecta</i> , L.	<i>Latirus turritus</i> , Gmel.
„ <i>isabella</i> , L.	<i>Littorina scabra</i> , Müll.
<i>Strombus plicatus</i> , Lam.	<i>Bulla ampulla</i> , L.
„ <i>minimus</i> , L.	<i>Tellina virgata</i> , L.
<i>Terebellum subulatum</i> , Lam.	<i>Capsella minor</i> , Desh.
<i>Conus cinereus</i> , Hwass.	

3. NORTH CELEBES.

Natica ala-papilionis, Chem.	Tellina rugosa, Born.
Pirena aurita, Lam.	Cardium donaciforme, Schr.
Tympanotonus microptera, Kien.	Dione phasianella, Desh.

4. MOLUCCAS.¹

Cypræa argus, L.	Conus præfectus, Hwass.
„ mauritiana, L.	„ tulipa, L.
„ mappa, L.	Voluta vesperilio, L.
„ talpa, L.	Pleurotoma babylonica, Lam.
„ tigris, L.	Mitra adusta, Lam.
„ vitellus, L.	„ caffra, Lam.
Ovulum ovum, L.	„ episcopalis, Lam.
Pteroceras chiragra, L.	„ vulpecula, Lam.
Murex adustus, Lam.	Cerithium vertagus, L.
Harpa conoidalis, Lam.	Modiola philippinarum, Haul.
Oliva maura, Lam.	Turbo petholatus, L.
„ sanguinolenta, Lam.	Delphinula laciniata.
Triton cynocephalus, Lam.	Auricula auris-jude.
„ pilearis, Lam.	Pythia albivaricosa, Reeve.
„ tritonis, L.	Tridacna squamosa, Lam.
„ tuberosus, L.	Tellina foliacea, L.
Cassis vibex, L.	„ virgata, L.
„ glauca, L.	„ vulsella, L.
Fusus colus, L.	Cardium cardiosa, L.
Conus betulinus.	„ hemicardium, Lam.
„ generalis, L.	Tapes litteratus, Chem.
„ magnus, L.	„ tatrix, Chem.
„ marmoreus, L.	
„ millepunctatus, L.	Helix pileus, Müll.

5. WAIGIOU.

Cypræa vitellus, L.	Turbo versicolor, Gmel.
Oliva elegans, Lam.	Littorina scabra, Müll.
„ maura, Lam.	Asaphis deflorata, L.
Strombus isabella, Lam.	Psammobia violacea, Sowb.
Pteroceras chiragra, Lam.	Circe gibbia, Lam.
Conus figulinus, L.	
Dolium olearium, Lam.	Helix aulica, Pfr.
Voluta vesperilio, L.	„ multizona, Less.
Trochus niloticus, L.	„ circumdata, Fér.

¹ Some of these having been purchased, the locality cannot strictly be relied on.

APPENDIX III.

LIST OF RHOPALOCERA COLLECTED IN THE EASTERN ARCHIPELAGO.¹

NYMPHALIDÆ.

Danaïnae.

1. *Hestia blanchardii*, March. (Maros, Celebes).
2. „ *durvillei*, Bdv. (Waigiou).
3. „ *lynceus*, Drury (Borneo).
4. *Ideopsis daos*, Bdv. (Borneo).
5. „ *inuncta*, Butl. (Jobi).
6. *Danaïs sobrina*, Bdv. (Dorei).
7. „ *plexippus*, L. (Dorei).
8. „ *nubila*, Butl. (Waigiou).
9. „ *mytilene*, Feld. (Dorei).
10. „ *lotis*, Cr. (Borneo).
11. *Euplœa callithoë*, Bdv. var. *fucosa*.
Differs from the typical form in having a large transverse blue spot, widest at its upper end and extending nearly across the discoidal cell of the primaries; the discal series of spots beyond the cell are smaller, and both wings are without marginal spots. Expanse of wings, $4\frac{3}{4}$ in. ♂ (New Guinea).
12. *Euplœa mesocala*, Voll. ? (Waigiou).

A female specimen which I refer, with some doubt, to this fine species differs from Vollenhoven's figure in having the submarginal series of spots on both wings much smaller and the marginal spots almost obsolete; it also has a subovate ill-defined blue spot below the third median branch of primaries in place of the sharply-defined linear white mark given in the figure of *mesocala*. It is possible that this may be the female of *fucosa*, and I should have been inclined to regard it as such were the specimens not indicated as coming from different localities.

13. *Euplœa crameri*, Moore (Borneo).
14. „ *immaculata*, Butl. (New Guinea).
15. „ *anthracina*, Butl. (Amboina).
16. „ *pierretii*, Feld. (Waigiou).

¹ For the identification and description of these I am indebted to Mr. Oliver Janson.

17. *Euplœa confusa*, Butl. (Waigiou).
 18. „ *pumila*, Butl. (Waigiou).
 19. „ *doryca*, Butl. (New Guinea).
 20. „ *muleiber*, Cr. (Borneo).
 21. „ *lowii*, Butl. (Borneo).
 22. *Hamadryas nais*, Guér. (Jobi).
- Satyrinae.*
23. *Mycalesis mucia*, Hew. (Jobi).
 24. *Hypocysta hygea*, Hew. (Jobi).
- Elymniinae.*
25. *Elymnias nigrescens*, Butl. (Borneo).
- Morphinae.*
26. *Amathusia phidippus*, L. (Borneo).
 27. *Discophora cheops*, Feld. (Borneo).
 28. *Tenaris catops*, Westw. (Jobi).
 29. „ *dioptrica*, Voll. (Jobi).
 30. „ *fulvida*, Butl. (Mysol).
 31. „ *onesimus*, Butl. (Jobi).
 32. „ *automolus*, Kirsch. (Jobi).
 33. *Hyantis hodeva*, Hew. (Waigiou).
- Nymphulinae.*
34. *Cethosia hypsea*, Doublt. (Borneo).
 35. „ *chryssippe*, Fab. (Dorei).
36. *Terinos terpander*, Hew. (Borneo).
 37. *Cirrochroa bajadeta*, Moore (Borneo).
 38. „ *ducalis*, Wall. (Dorei).
 39. *Cynthia celebensis*, Butl. (Maros, Celebes).
 40. „ *insularis*, Salv. and Godm. (Dorei).
 41. *Messaras erymanthis*, Drury. (Borneo).
 42. „ *turneri*, Butl. (Jobi).
 43. *Junonia laomedia*, L. (Borneo).
 44. „ *ocyale*, Hb. (Amboina).
 45. *Precis ida*, Cr. (Borneo).
 46. *Rhinopalpa amelia*, Guér. (Dorei).
 47. *Hypolimnas iphigenia*, Cr. (Dorei).
 48. „ *alimena*, L. (Papua).
 49. *Limenitis proceris*, Cr. (Borneo).
 50. *Pandita sinoria*, Feld. (Borneo).
 51. *Neptis latifasciata*, Butl. (Aru).
 52. *Athyma idita*, Moore (Borneo).
 53. *Adolias laverna*, Butl. (Borneo).
 54. *Symphædra aeropus*, L. (Jobi).
 55. *Charaxes athamas*, Drury (Borneo).
 56. „ *demonax*, Feld. (Maros, Celebes).

LYCÆNIDÆ.

57. *Danis sebæ*, Bdv. (Waigiou).
 58. *Deudorix caroli*, n. sp. Upper side fuliginous brown; primaries with a large pale blue patch between the median nervure and inner margin, and extending from near the base to about one-fourth from the outer margin; secondaries with three fine tails, the central one longest, anal angle produced and black, a fine marginal line between the tails bluish white; fringes of both wings and tips of the tails white. Underside greyish brown; primaries ochreous-yellow at the base of the costa, the inner margin broadly white, a longitudinal stripe followed by an ovate spot in the cell, an angu-

lated discal series of five spots, of which the central one is largest and nearest to the outer margin, a slightly curved sub-marginal line and a fine marginal line white; secondaries with the costa at the base, a straight band across the wings at right angles with the body, a large spot near the anterior angle, an irregular interrupted sinuous line from the abdominal margin to the apex of the cell and a similar line beyond it to the spot at the anterior angle, white; the outer apical area nearly to the anterior angle broadly fawn-coloured, margined with greyish white, a fine white

line close to the outer margin and bordered inwardly with pale silvery blue above the tails; a large spot at the anal angle with an oblique linear mark above it and a round spot between the outer tails, black. Expanse of wings, 2 in. Allied to *timoleon*, Stoll. (Andai).

59. *Amblypodia hercules*, Hew.
(Jobi).
60. „ *nakula*, Feld.
(Borneo).
61. „ *meander*, Bdv.
(Waigiu).
62. „ *axiothea*, Hew.
(Waigiu).
63. „ *apidanus*, Cr.
(Borneo).

PAPILIONIDÆ.

Pierinae.

64. *Terias harina*, Horsf. (Waigiu).
65. „ *photophila*, Butl. (Aru).
66. *Pieris jael*, Wall. (Batchian).
67. *Appias zarinda*, Bdv. (Maros, Celebes).
68. *Delias dione*, Drury (Borneo).
69. „ *aruna*, Bdv. (New Guinea).
70. „ *hyparete*, L. (Borneo).
71. *Catopsilia crocale*, Cr. (Borneo).
72. „ *flava*, Butl. (Maros, Celebes).
73. *Dercas gobrias*, Hew. (Borneo).

Papilioninae.

74. *Ornithoptera pegasus*, Feld.
(Waigiu).
75. „ *aruana*, Feld. (Aru).

76. *Ornithoptera flavicollis*, Druce.
(Borneo).
77. *Papilio polydorus*, L. var. *α*.
Wallace (Aru).
78. „ *neptunus*, Guér. (Borneo).
79. „ *demolion*, Cr. (Borneo).
80. „ *indicatus*, Butl. (Aru).
81. „ *nephelus*, Bdv. (Borneo).
82. „ *ambrax*, Bdv. (Dorei).
83. „ *pandion*, Wall. (N. Guinea).
84. „ *euchenor*, Guér. (Aru).
85. „ *eutropius*, n. sp. Similar to *euchenor*, Guér., but with the three pale yellow apical spots, on primaries much larger, the lower one dilated and continued inwardly to the upper disco-cell-

ular nervule; there are also two small linear spots of the same colour between the first and second radial branches, and the discal band is somewhat narrower than in *euchenor*, the spots of which it is formed being shorter. Expanse of wings, 5 in. ♂ (Jobi).

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| 86. | Papilio autolyceus, Feld.
(Waigiou). |
| 87. | ,, antiphates, Cr. (Borneo). |
| 88. | ,, evemon, Bdv. (Borneo). |
| 89. | ,, telephus, Wall. (Maros, Celebes). |
| 90. | ,, maefarlaneci, Butl.
(Ternate). |
| 91. | ,, agamemnon, L. (Borneo). |

HESPERIDÆ.

92. *Chaetocneme thrax*, L. (Borneo).
93. *Plesioneura flavipes*, n. sp. Upper surface dark purple brown; the primaries crossed just beyond the middle by a broad oblique white band divided by the nervures into five spots, the first on the costa, and the fifth close to the anal angle, slightly ochreous and opaque; the three central spots sub-hyaline, the first of them, in the cell, slightly narrower than the two following.

Under surface of wings of a rather lighter colour than above, otherwise the same; legs, palpi, underside of the club and a small spot on the other joints of the antennæ tawny yellow. Expanse of wings, $2\frac{1}{2}$ in. Allied to *feisthamelii*, Bdv., and *renardi*, Obth., but larger, with the primaries more acute and without any white spots near the apex (New Guinea).

APPENDIX IV.

VOCABULARY OF THE SULU LANGUAGE.

<p>Anchor, <i>Baluji.</i></p> <p>And, <i>Eban.</i></p> <p>Animal, <i>Satua,</i></p> <p>Arms, <i>Sinjata.</i></p> <p>Ashes, <i>Abu.</i></p> <p>Aunt, <i>Inaun.</i></p> <p>Bad, <i>Mangi.</i></p> <p>Ball, <i>Ponglo.</i></p> <p>Bird, <i>Manuk.</i></p> <p>Birth, <i>Paganakan.</i></p> <p>Bitter, <i>Mapait.</i></p> <p>Black, <i>Itam.</i></p> <p>Blood, <i>Dugu.</i></p> <p>Boat, <i>Sakayan.¹</i></p> <p>Body, <i>Badan.</i></p> <p>Bone, <i>Bohuk.</i></p> <p>Book, <i>Kitab.</i></p> <p>Branch, <i>Sanga.</i></p> <p>Bride, <i>Pagantin babai.</i></p> <p>Bridegroom, <i>„ ussuk.</i></p> <p>Bridle, <i>Kakan.</i></p> <p>Brother (elder), <i>Magalang.</i></p> <p> „ (younger), <i>Taimangkud.</i></p> <p>Buffalo, <i>Karban.</i></p> <p>But, <i>Badmaian.</i></p> <p>Calm, <i>Lenau.</i></p> <p>Cattle, <i>Hairup.</i></p>	<p>Chair, <i>Sea.</i></p> <p>Child, <i>Anak or batta.</i></p> <p>Clean, <i>Malano.</i></p> <p>Close, <i>Daik.</i></p> <p>Coarse, <i>Miaslak.</i></p> <p>Corn (Indian), <i>Gandom.</i></p> <p>Council, <i>Baroa.</i></p> <p>Cow, <i>Sapi omagak.</i></p> <p>Current, <i>Sug.</i></p> <p>Daughter, <i>Anak babai.</i></p> <p>Day, <i>Adlau.</i></p> <p>Daybreak, <i>Subu-subu.</i></p> <p>Death, <i>Kamatian.</i></p> <p>Deep, <i>Maluum.</i></p> <p>Deer, <i>Usa.</i></p> <p>Dirty, <i>Mumi.</i></p> <p>Divorce, <i>Pagbugitan.</i></p> <p>Door, <i>Lawang.</i></p> <p>Ear, <i>Tainga.</i></p> <p>Earthquake, <i>Linuk.</i></p> <p>Ebb-tide, <i>Humas.</i></p> <p>Eclipse, <i>Laho.</i></p> <p>Egg, <i>Iglo.</i></p> <p>Enemy, <i>Bantak.</i></p> <p>Enmity, <i>Pagbantahan.</i></p> <p>Evening, <i>Hapon.</i></p> <p>Eye, <i>Mata.</i></p>
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¹ Bisayan, *sakayan*, to ride a horse.

Face,	<i>Beiko.</i>	Long,	<i>Mahava.</i>
Far,	<i>Maio</i> or <i>lao.</i>	Low,	<i>Habava.</i>
Father,	<i>Amma.</i>	Maid,	<i>Bujan.</i>
Father-in-law,	<i>Ungangan ussuk.</i>	Male,	<i>Ussuk.</i>
Female,	<i>Babai.</i>	Man,	<i>Tau.</i>
Finger,	<i>Gulamai.</i>	Marriage,	<i>Pagtiaunan.</i>
Fire,	<i>Kayu.</i>	Master,	<i>Tuan.</i>
Fish,	<i>Isda.</i>	Me,	<i>Kaku.</i>
Flood-tide,	<i>Taub.</i>	Medicine,	<i>Ubat.</i>
Floor,	<i>Lautei.</i>	Milk,	<i>Gatas.</i>
Flower,	<i>Sumping.</i>	Mistress,	<i>Dayang.</i>
Foot,	<i>Sigge.</i>	Monkey,	<i>Amok.</i>
Fruit,	<i>Bunga.</i>	Moon (or month),	<i>Bulan.</i>
Good,	<i>Maraian.</i>	Full moon,	<i>Damlak.</i>
Grandfather,	<i>Apo ussuk.</i>	New moon,	<i>Kasubangan.</i>
Grandmother,	<i>Apo babai.</i>	Morning,	<i>Mahinüat.</i>
Grass,	<i>Sagbut.</i>	Mother,	<i>Ina.</i>
Hair,	<i>Bohuk.</i>	Mother-in-law,	<i>Ungangan babai.</i>
Hand,	<i>Lima.</i>	Mouth,	<i>Simut.</i>
Handkerchief,	<i>Saputangan.</i>	My,	<i>Ku</i> (suffix).
Harvest,	<i>Paganian.</i>	Nearly,	<i>Daik-daik.</i>
He,	<i>Sia.</i>	Nephew,	<i>Anakun ussuk.</i>
High,	<i>Matias</i> or <i>häatas.</i>	Niece,	,, <i>babai.</i>
Him,	<i>Sia.</i>	Night,	<i>Döm.</i>
His,	<i>Nia.</i>	No,	<i>Walah</i> or <i>De.</i>
Horse,	<i>Kuda.</i>	Noon,	<i>Lohor.</i>
House,	<i>Bai.</i>	Nose,	<i>Hilong.</i>
However,	<i>Din-din.</i>	Oar,	<i>Dayong.</i>
Hunger,	<i>Gutom.</i>	Outrigger,	<i>Katik.</i>
I,	<i>Aku.</i>	Owner,	<i>Dag.</i>
Ink,	<i>Dawat.</i>	Ox,	<i>Sapi mandangan.</i>
Jacket,	<i>Baju.</i>	Padille,	<i>Boxei.</i>
Joists,	<i>Hanglat.</i>	Pen,	<i>Kalam.</i>
Kettle,	<i>Anglit.</i>	Picture,	<i>Pata.</i>
Knee,	<i>Tuhud.</i>	Pile,	<i>Hüag.</i>
Knife,	<i>Laring.</i>	Plank,	<i>Digbe.</i>
Kris,	<i>Kalis.</i>	Plough,	<i>Bagdayan.</i>
Kris (large),	<i>Espir.</i>	Ploughshare,	<i>Salap.</i>
Land,	<i>Lupa.</i>	Quick,	<i>Masumut.</i>
Leaf,	<i>Dahun.</i>	Rafters,	<i>Kasan.</i>
Lid,	<i>Saub.</i>	Rain,	<i>Ulan.</i>

Ripe,	<i>Hinog.</i>	Teeth,	<i>Ipun.</i>
Road,	<i>Daan.</i>	Therefore,	<i>Amuna.</i>
Root,	<i>Gamut.</i>	Thick,	<i>Madakmul.</i>
Rope,	<i>Lubit.</i>	Thin,	<i>Manahut.</i>
Rudder,	<i>Bausan.</i>	Thirst,	<i>Ohan.</i>
Saddle,	<i>Pakul.</i>	Tongue,	<i>Dila.</i>
Sail,	<i>Layang.</i>	Tree,	<i>Pohon kahui.</i>
Sand,	<i>Buhangin.</i>	Trousers,	<i>Soal.</i>
Sea,	<i>Dagat.</i>	Uncle,	<i>Ammaun.</i>
Ship,	<i>Kapal.</i>	Very,	<i>Tuud.</i>
Shallow,	<i>Habavau.</i>	View,	<i>Dagbus.</i>
Shoe,	<i>Tompa.</i>	War,	<i>Pagbunohan.</i>
Shot (bird),	<i>Hambul.</i>	Water,	<i>Tubing.</i>
Shoulder,	<i>Habaga.</i>	Wave,	<i>Alun.</i>
Sister (elder),	<i>Kaka.</i>	Weak,	<i>Maoke.</i>
Sky,	<i>Langit.</i>	Week,	<i>Angkapitu.</i>
Slave,	<i>Ipun</i>	Well (a),	<i>Kupung.</i>
Slow,	<i>Maluming.</i>	What,	<i>Unu.</i>
Son,	<i>Anak ussuk.</i>	When,	<i>Käun.</i>
Sour,	<i>Mäastom.</i>	Where,	<i>Hadiin.</i>
Spear,	<i>Bujak.</i>	Which,	<i>Unu.</i>
Spoon,	<i>Suduk.</i>	White,	<i>Puti.</i>
Square,	<i>Pasagit.</i>	Who,	<i>Siu.</i>
Stalk,	<i>Batan.</i>	Why,	<i>Meita, sebal.</i>
Star,	<i>Bitüun.</i>	Window,	<i>Pamanlavang.</i>
Stem (of tree),	<i>Pohon.</i>	Wise,	<i>Pandeh.</i>
Stirrup,	<i>Gigikan.</i>	Woman,	<i>Babai.</i>
Strong,	<i>Makamdus.</i>	Wood,	<i>Kahui.</i>
Stupid,	<i>Dupang.</i>	Work,	<i>Paghinangan.</i>
Sun,	<i>Suga.</i>	Year,	<i>Tahun.</i>
Sweet,	<i>Memo.</i>	Yes,	<i>Höon.</i>
Table,	<i>Lanesahan.</i>	Youth,	<i>Sabbul.</i>

VERBS.

To answer,	<i>Makasib.</i>	To climb,	<i>Makdag.</i>
ask,	<i>Makasuvu.</i>	die,	<i>Matai.</i>
beat,	<i>Maklagut.</i>	dive,	<i>Maklurup.</i>
beg,	<i>Makpangaiu.</i>	eat,	<i>Kumauu.</i>
buy,	<i>Magbi.</i>	fall,	<i>Makubuk.</i>
call,	<i>Maktawak.</i>	fight,	<i>Makbunoh.</i>

To fly,	<i>Maklumat.</i>	To ride,	<i>Makpanguda.</i>
get up,	<i>Makbangun.</i>	rob,	<i>Maktakan.</i>
give,	<i>Makdehel.</i>	run,	<i>Makdagan.</i>
go,	<i>Makpanau.</i>	saw,	<i>Bakal.</i>
hate,	<i>Makbinchi.</i>	sell,	<i>Hipagbi.</i>
have,	<i>Aun.</i>	sit,	<i>Maklinkut.</i>
lend,	<i>Makbois.</i>	sleep,	<i>Maktuk.</i>
live,	<i>Bohi.</i>	stand,	<i>Maktinduk.</i>
load,	<i>Makluan.</i>	steal,	<i>Manakau.</i>
lose,	<i>Nanyapus; malava.</i>	swim,	<i>Maklangui.</i>
love,	<i>Makasih.</i>	travel (by sea),	<i>Makbozei.</i>
owe,	<i>Makutang.</i>	try,	<i>Maksulei.</i>
pay,	<i>Makbaiad.</i>	win,	<i>Makapus.</i>
plough,	<i>Araro.</i>	wish,	<i>Mabu.</i>
read,	<i>Mabaia.</i>	work,	<i>Makhinang.</i>
refuse,	<i>Mahukau.</i>	write,	<i>Maksurat.</i>

TENSES.

I go,	<i>Makpanau aku.</i>	I work,	<i>Makhinang aku.</i>
I went,	<i>Makpanau na aku.</i>	I worked,	<i>Makhinang na aku.</i>
I have gone,	<i>Miapanau na aku.</i>	I have worked,	<i>Hiakinang na aku.</i>
I will go,	<i>Mamanau aku.</i>	I will work,	<i>Mamakhinang aku.</i>
I would go,	<i>Mamanau sa aku.</i>	I would work,	<i>Mamakhinangsa aku.</i>
Go!	<i>Manau da kau.</i>	Work!	<i>Hinang da kau.</i>

CARDINAL NUMBERS.

1.	<i>Isa.</i>	20.	<i>Kauhan.</i>
2.	<i>Dua.</i>	30.	<i>Katloan.</i>
3.	<i>To.</i>	40.	<i>Küaputan.</i>
4.	<i>Apat.</i>	50.	<i>Kaliman.</i>
5.	<i>Lima.</i>	60.	<i>Küanaman.</i>
6.	<i>Anam.</i>	70.	<i>Kapituan.</i>
7.	<i>Pitu.</i>	80.	<i>Kawaluan.</i>
8.	<i>Walü.</i>	90.	<i>Kasiaman.</i>
9.	<i>Siam.</i>	100.	<i>Ongkatus.</i>
10.	<i>Hangpu.</i>	1000.	<i>Ongibu.</i>
11.	<i>Hangpu tak isa.</i>	10,000.	<i>Salaksa.</i>

The Ordinal numbers are merely the Cardinal with the prefix *ka*:—*kaisa*, *kadua*, etc. etc.

A consideration of the above vocabulary would at first give the impression that the Sulu language is more nearly akin to Malay than it really is. Many of the words are, no doubt, pure Malay, and I learnt from Captain Schüick that there are also a considerable number of Javanese and Bugis words in use. That this might be expected is evident from the fact that the Spaniards on their first discovery of the Philippines, now three centuries and a half ago, found Malay a generally spoken language on the coasts, while the Bugis have been traders in these seas from prehistoric times.

In construction, however, the Sulu language differs considerably from the Malay, but resembles the Bisaya and Tagalog—the two languages most widely spoken in the Philippine Islands¹—and possibly others also of this group, but of this I have no means of judging. There are other verbal points of resemblance. Mr. Crawford, contrasting the Tagalog with Malay (“Malay Gr. and Dict.” vol. i. p. cvi.), calls attention to the frequency of *h* as an initial in the former language, while in the latter it is unknown in native words. The letter *v* also, non-existent in Malay, is not uncommon. The Sulu language has both these—*hōon*, *hainp*, *habawan*, *lavang*, etc.—and the aspirate is strong. The apposition of two rough consonants and the cacophonous terminal *g* are shown by Mr. Crawford to be characteristic of the Philippine languages, and impossible in the soft, flowing Malay, but they are frequent in Sulu, as in the words *dagbus*, *hipagbi*, *hinog*, *hūag*. As in Tagalog, auxiliary prefixes or separate particles are in use to express tense in the Sulu verbs, which are apparently chiefly formed from radicals by the prefixes *mak*, *ma*, or *nag*. Numbers of the Sulu words are Bisayan or Tagalog, and, on the whole, it would seem that Sulu is almost as distinctly Philippine in its language as it is in its flora and fauna, although its position has been the cause of the influx of a considerable number of foreign words.²

¹ According to Mr. Keane (“Australasia,” Stanford’s Compendium, p. 623), Tagalog is confined to Mindoro and certain provinces of Luzon, while the Bisayan is spoken over a wider area to the south: “in Panay, Bohol, Zebu, Leyte, Ticao, Romblon, and Samar exclusively, and in parts of the islands Mindanao and Negros.”

² In the vocabulary given above there are four words—*Jamesahan*, table; *sea*, chair or stool; *espir*, large kris; and *araro*, to plough—which have doubtless a Spanish origin.

APPENDIX V.

LANGUAGES OF WAIGIOU.

THE following Vocabularies, though short, are sufficient to show the dissimilarity existing between the ordinary Waigiou language and that spoken by the "Alfueros" or inland dwellers of the island. The "Coast Language," of which a few words are given, is the *lingua franca* of the maritime tribes of the mainland and islands of North-west New Guinea, just as Malay is in the western parts of the Indian Archipelago. It is a patois of the Nufoor with many introduced words :—

	WAIGIOU.	WAIGIOU "ALFUROS."	COAST LANGUAGE.
Arm,	<i>Kannem lis,</i>	<i>Kokan pon,</i>	<i>Bramin.</i>
Arrow,	<i>Tunuo,</i>	<i>Tanu,</i>	...
Banana,	<i>Tala,</i>	<i>Taal,</i>	<i>Imbief.</i>
Beetle,	...	<i>Kaminiat,</i>	...
Bird,	<i>Mini,</i>	<i>Mani,</i>	...
Black,	<i>Metem,</i>	<i>Matem,</i>	<i>Paisim.</i>
Blood,	<i>Lamos,</i>	<i>Lamo,</i>	...
Body,	<i>Tinlapo,</i>	<i>Bitino,</i>	...
Bow,	<i>Fan,</i>	<i>Fan,</i>	...
Breast,	<i>Sus,</i>	<i>Su,</i>	...
Brother,	<i>Timfuor,</i>	<i>No,</i>	...
Butterfly,	<i>Kalibiobon,</i>	...	...
Cassowary,	<i>Kalo,</i>	<i>Mani lau,</i>	<i>Manchuar.</i>
Child,	<i>Maganan,</i>	<i>Makai,</i>	...
Coconut,	<i>Noö,</i>	<i>Ka-ut,</i>	<i>Serai.</i>
Cold,	<i>Kabloti,</i>	<i>Masoi,</i>	...
Come,	<i>Miama,</i>	<i>Manin,</i>	...
Crocodile,	<i>Vif,</i>	<i>Lengoai,</i>	...
Daughter,	<i>Maganan pin,</i>	<i>Makai bin,</i>	...

	WAIGIOU.	WAIGIOU "ALFUROS."	COAST LANGUAGE.
Dog,	<i>Kable,</i>	<i>Ai,</i>	<i>Nafau.</i>
Ear,	<i>Tanuan,</i>	<i>Taintuo,</i>	<i>Kanamim.</i>
Egg,	<i>Tolor,</i>	<i>Talau,</i>	...
Eye,	<i>Tankabulo,</i>	<i>Tajin,</i>	<i>Gamor.</i>
Father,	<i>Nikmam</i> or <i>Pan,</i>	<i>Mam</i> or <i>Mauo,</i>	<i>Mam.</i>
Fingers,	<i>Nenkopo,</i>	<i>Kokantino,</i>	<i>Prampin.</i>
Fire,	<i>Lap,</i>	<i>Lup,</i>	<i>Foor.</i>
Fish,	<i>Iin,</i>	<i>Dān,</i>	<i>Ieu.</i>
Go,	<i>Jaag,</i>	<i>Njaou,</i>	...
Good,	<i>Fi.</i>	<i>Fi,</i>	<i>Ibie.</i>
<i>Goura,</i>	<i>Bibi,</i>	<i>Mani bopeor,</i>	...
Hair,	<i>Tapalaia,</i>	<i>Piar,</i>	<i>Namburaim.</i>
Head,	<i>Kahutu,</i>	<i>Kain galano,</i>	<i>Bukoia.</i>
Hot,	<i>Binis,</i>	<i>Mari,</i>	...
House,	<i>Ūm,</i>	<i>Nu,</i>	<i>Rum.</i>
Iron,	<i>Lete,</i>	<i>Late,</i>	...
Island,	<i>Ief,</i>	<i>Ie,</i>	<i>Meois.</i>
Land,	<i>Yagle,</i>	<i>Lil,</i>	...
Large,	<i>Pale,</i>	<i>Lal,</i>	<i>Iba.</i>
Leg,	<i>Kannem pap,</i>	<i>Kokan pap,</i>	<i>Wemin.</i>
Lightning,	<i>Maliaman,</i>	<i>Maliaman,</i>	...
Man,	<i>Matumulu,</i>	<i>Met,</i>	...
Moon,	<i>Payit,</i>	<i>Tun,</i>	<i>Paick.</i>
Mother,	<i>Shian,</i>	<i>Nen,</i>	...
Mountain,	<i>Iel,</i>	<i>Iil,</i>	...
Nose,	<i>Sagulun,</i>	<i>Sontulo,</i>	<i>Tunikoia.</i>
Paddle,	<i>Tap</i> or <i>Pos,</i>	<i>Taap,</i>	<i>Kaboris.</i>
Pig,	<i>Bo,</i>	<i>Kajau,</i>	<i>Ben.</i>
Prau,	<i>Wauy,</i>	<i>Wuan,</i>	<i>Wai.</i>
Rain,	<i>Gulim,</i>	<i>Mei,</i>	...
Red,	...	<i>Tamii,</i>	<i>Fanandiek.</i>
River,	<i>Wayer pale,¹</i>	<i>W'e lul,¹</i>	...
Roof,	<i>Laflif,</i>	<i>Kate,</i>	...
Sand,	<i>Dad,</i>	<i>Chau,</i>	...
Sea,	<i>Lul,</i>	<i>Lul,</i>	...
See !	<i>Tem,</i>	<i>Tem,</i>	...
Sister,	<i>Fnor-pin,</i>	<i>No-bin,</i>	...
Sky,	<i>Funā,</i>	<i>N'na,</i>	...

¹ Literally "large water."

	WAIGIOU.	WAIGIOU "ALFUROS."	COAST LANGUAGE.
Small,	<i>Palepo,</i>	<i>Men-men,</i>	<i>Ibawa.</i>
Snake,	<i>Kor,</i>	<i>Lenāt,</i>	...
Son,	<i>Maganan man,</i>	<i>Makai man,</i>	...
Spear,	<i>Tabiol,</i>	<i>Abe or Na,</i>	...
Star,	<i>Tuin,</i>	<i>Kato,</i>	...
Stone,	...	<i>Katū,</i>	...
Sun,	<i>Lasan,</i>	<i>Gamiul,</i>	<i>Reas.</i>
Tooth,	<i>Kaliñin,</i>	<i>Walīn-walīn,</i>	<i>Nakoia.</i>
Thunder,	<i>Lato,</i>	<i>Lalor,</i>	...
Toes,	<i>Kompap,</i>	<i>Kateyem pap,</i>	<i>Wimpin.</i>
Tongue,	<i>Galan,</i>	<i>Areno,</i>	<i>Ramā.</i>
Tree,	<i>Ga-kariō,</i>	<i>Aikapoyu,</i>	...
Village,	<i>Nu,</i>	<i>Kaleyu,</i>	...
Water,	<i>Wayer,</i>	<i>Uē or We,</i>	<i>Wayer.</i>
White,	<i>Bus,</i>	<i>Ambu,</i>	<i>Piuper.</i>
Wind,	<i>Moro,</i>	<i>Marō,</i>	...
Woman,	<i>Pin,</i>	<i>Bin,</i>	...
Yellow	...	<i>Mani,</i>	<i>Maniaiu</i>

APPENDIX VI.



LANGUAGES OF JOBI ISLAND.

FROM a native of Ansus who spoke a little Malay, and through others conversant with Nufoor—a language well known in Jobi, in which our friend Mr. Jens, the Dutch missionary, was a proficient—I was able to get together a tolerably large vocabulary of the language spoken by the Natawoi, an interior tribe of “Alfuros,” among whom one of the Ansus men had lived for some time. The greater part of this I was unfortunate enough to lose, and I am thus only able to give a much reduced list, together with a few words of the Ansus language. There are said to be seven tribes of Alfuros in Jobi, and of these the Natawoi and Roba speak the same language, as do also the Papuma and Arowaba. Those of the Marau, the Aiomi, and the Ariwawa are said to be distinct. There are thus five languages in the island exclusive of those of the coast dwellers, and all of them, we were told, are sufficiently dissimilar to be incomprehensible to persons of another tribe.

	NATAWOI ALFUROS OF JOBI.	ANSUS.
Arm,	<i>Waranduma,</i>	...
Armlet,	...	<i>Ta.</i>
Arrow,	<i>Attapai,</i>	...
Bad,	<i>Woraba,</i>	<i>Moiaba.</i>
Bird,	...	<i>Aia.</i>
Black,	<i>Rarie,</i>	<i>Radé.</i>
Blood,	<i>Ruuma,</i>	<i>Ria.</i>
Body,	<i>Netarre,</i>	...
Bow,	<i>Apaipai,</i>	...

	NATAWOI ALFUROS OF JOBI.	ANSUS.
Breast (female),	<i>Ncā,</i>	...
Brother,	<i>Ncēta,</i>	...
Cassowary,	<i>Woonkei,</i>	<i>Woorabai.</i>
Child,	<i>Aimioma,</i>	...
Cingulum pudicitiae (male),	} <i>Ararei,</i>	<i>Kaboi.</i>
Cingulum pudicitiae (female),			... }	Andau.
Cockatoo,	...	<i>Kara.</i>
Coconut,	<i>Ambo,</i>	<i>Angadi.</i>
Comb,	<i>Yu,</i>	...
Daughter,	<i>Karawi,</i>	...
Dog,	<i>Wona,</i>	<i>Wona.</i>
Ear,	<i>Tarakambri,</i>	...
Eye,	<i>Denkami,</i>	...
Father,	<i>Tumani,</i>	...
Fingers,	<i>Warakēia,</i>	...
Finger-nails,	<i>Warandī,</i>	...
Fire,	...	<i>Addia.</i>
Fish,	<i>Tia,</i>	<i>Dia.</i>
Foot,	<i>Aimbā,</i>	...
Good,	<i>Biorato,</i>	<i>Biento.</i>
<i>Goura,</i>	<i>Mambaru,</i>	<i>Mambaru.</i>
Hair,	<i>Ruandan,</i>	...
Hand,	<i>Waran kekeia,</i>	...
Head,	<i>Duanlō,</i>	...
House,	<i>Manupi,</i>	...
Island,	...	<i>Niotakutu.</i>
Land,	<i>Wē,</i>	...
Large,	<i>Babupati,</i>	<i>Baba.</i>
Leg,	<i>Awadā,</i>	...
Lightning,	<i>Bebéria,</i>	...
Man,	<i>Rowa,</i>	<i>Assua.</i>
Mat,	<i>Andau,</i>	...
Moon,	<i>Yembai,</i>	...
Mother,	<i>Iniyani,</i>	...
Mountain,	<i>Tawi,</i>	<i>Wi.</i>
Mouth,	<i>Uampitina,</i>	...
Neck,	<i>Rokaná,</i>	...

	NATAWOI ALFUROS OF JOBI.	ANSUS.
Necklace,	...	<i>Korombobi.</i>
Nose,	<i>Woompeyemo,</i>	...
Paddle,	<i>Bopai,</i>	...
<i>Paradisca papuana,</i>	<i>Anobatena,</i>	<i>Aiababa.</i>
Pig,	<i>Wonai,</i>	<i>Tapui.</i>
Prau,	<i>Waap,</i>	...
Rain,	<i>Maman,</i>	...
Reel,	<i>Ruuma,</i>	<i>Airomarai.</i>
Roof,	<i>Randau,</i>	...
Sea,	...	<i>Rawana.</i>
Shoulder-strap,	...	<i>Are.</i>
Sister,	<i>Darowabi,</i>	...
Sky,	<i>Rora,</i>	...
Small,	<i>Poi,</i>	<i>Amiamanta.</i>
Son,	<i>Poi,</i>	...
Spear,	<i>Wanduuba,</i>	...
Star,	<i>Piori,</i>	...
Stone,	<i>Pavandi,</i>	<i>Kami.</i>
Sun,	<i>Wopai,</i>	...
Teeth,	<i>Daremo,</i>	...
Thunder,	<i>Kaidu,</i>	...
Toes,	<i>Ain kea,</i>	...
Tongue,	<i>Orempa,</i>	...
Tree,	<i>Airu,</i>	<i>Airumā</i>
Water,	<i>Mare,</i>	<i>Maria.</i>
White,	...	<i>Biwra.</i>
Wind,	<i>W'ana,</i>	...
Woman,	<i>Pituini,</i>	...
Wristlet,	...	<i>Taburare.</i>

Mr. Jens informed me that during our stay in Jobi he recognised many words of the Ansus language as closely resembling Nufoor. The numeral systems of the two are, however, very different. Above ten in the last-named language the method of formation is quite regular. Thus, forty is *samfur di fiak* (10 by 4); eighty, *samfur di vaar* (10 by 8), and so on. The Ansus method of numeration, on the other hand, is very irregular, there being a root word for twenty, while the tens above that number are formed partly by multiplication and partly by addition, as may be seen from the following table:—

1.	<i>Koïri.</i>	11.	<i>Ura koïri.</i>
2.	<i>Kodu.</i>	20.	<i>Pere.</i>
3.	<i>Toru.</i>	30.	<i>Pere ura.</i>
4.	<i>Manua.</i>	40.	<i>Pia kodu.</i>
5.	<i>Rim.</i>	50.	<i>Pia kodu ura.</i>
6.	<i>Woná.</i>	60.	<i>Pia toru.</i>
7.	<i>Itu.</i>	70.	<i>Penitu.</i>
8.	<i>Indiatoru.</i>	80.	<i>Pendiatoru.</i>
9.	<i>Indiatan.</i>	90.	<i>Pendiatan.</i>
10.	<i>Ura.</i>	100.	<i>Pia uran.</i>

APPENDIX VII.

I.

TABLE OF THE TOTAL EXPORT OF THE CHIEF ARTICLES OF
PRODUCE FOR THE WHOLE OF THE NETHERLANDS INDIA
IN 1884 :

	KILOS.	VALUE IN GULDEN.
Cloves	14,637	14,637
Mace	284,916	427,374
Nutmegs	1,256,334	1,884,501
Dammar	4,613,613	3,220,529
Rattan	15,998,767	3,199,753
Gutta	1,670,152	3,340,304
Birds' nests	153,982	153,982
Tripang	583,996	583,996
Coconuts . . . . .	.....	1,762,775
Sugar	359,035,857 ¹	71,807,171
Pepper	5,700,934	2,530,214
Paradise birds . . . . .	.....	30,730
Coffee	41,055,459 ²	19,744,564
Rice	17,946,117 ³	1,466,833

¹ Of which Java and Madura together export 358,782,140 kilos.

² Of which Java and Madura together export 24,400,322 kilos.

³ Of which Java and Madura together export 10,505,952 kilos.

II.

TABLE OF THE AMOUNT (in KILOS except where otherwise specified) OF THE CHIEF EXPORTS OF NORTH AND SOUTH CELEBES, AMBOINA, AND TERNATE FOR THE YEAR 1884.¹

	CELEBES (South).	CELEBES (Minahasa).	AMBOINA.	TERNATE.
Tripang	480,940	1,339	1,440	10,546
Birds' nests . . . value in gulden	1,360	2,720	.....	.....
Mace	22,175	10,057	165,619	5,323
Dammar	2,022,418	78,640	2,103	128,580
Copal value in gulden	.....	137,300	... ..	.....
Gutta	98,977	.....	.....	.....
Cacao	34,249	33,525	3,200	5,466
Coconuts value in gulden	180,624	.....	.....	245
Coffee	6,182,887	101,644	.....	900
Cloves	6,510	.....	2,518	... ..
Nutmegs	181,940	30,014	635,491	26,205
Rattan	808,884	515,108	47,800	.....
Paradise birds . value in gulden	25,880	.....	50	4,750

¹ The official *Statistiek van de In en Uitvoerrechten in Nederlandsch-Indië* gives no information concerning Banda.

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