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*New Guinea: Narrative of an Exploring Expedition to the Louisiade
and D'Entrecasteaux Islands.*

By BASIL H. THOMSON, Esq.

(Read at the Evening Meeting, July 8th, 1889.)

Map, p. 580.

THE object of this paper is to give some account of an exploring expedition to the various islands of the Louisiade and D'Entrecasteaux Archipelagoes, which are now included in the possession of British New Guinea.

It is not within the scope of this paper to give an outline of the history of New Guinea during the last few years. It is enough to say that since the year 1884 the Protectorate was administered by a Commissioner, and that, owing to the undefined nature of his executive and judicial powers, and the probability that an influx of Europeans would result in hostilities with the natives, settlement by Europeans was discouraged. New Guinea was last year declared a British possession by Royal Letters Patent, and the flag finally hoisted at Port Moresby on September 4th.

During the Protectorate a number of persons had, either on their own account, or on behalf of some scientific body, made expeditions to the mainland, and had made large claims for concessions of land as a reward for their services in explorations, the nature and extent of which it is impossible to verify. A belief had, however, grown in Australia that New Guinea would prove rich in gold, and there was a danger that small parties of prospecting miners would, in visiting places hitherto untrodden by white men, provoke hostilities with the natives. Indeed, just before the hoisting of the flag, gold had actually been discovered in the island of Sudest, and hundreds of miners were flocking to an island which, though it was under the Government of British New Guinea, was as yet unprovided with a single policeman, or other representative of law and order. As miners who were disappointed in Sudest were sure to wander off to the other islands of the Louisiade Archipelago in

No. IX.—SEPT. 1889.]

2 N

search of gold, it was deemed advisable at once to make an official expedition, partly to ascertain the real capabilities of the islands, and also to reassure and explain the new state of things to natives, many of whom had never before seen a white man.

We left Port Moresby, the seat of Government, on September the 20th, and traversed the first seventy miles on horseback in order to visit the villages of the Motu, Saroa, and Loyalupu tribes. The coast villages of these tribes are usually built on piles in the shallow water between the coral reef and the shore, from which they are a quarter to half a mile distant. The original motive for this was doubtless to guard against surprise by enemies. The houses are much crowded together, and rock perceptibly in a strong wind, but as New Guinea is outside the hurricane belt they are more subject to destruction by fire than by storms. The piles are short lived, being attacked by marine borers, but when a house becomes rickety new piles are inserted beside the old ones without disturbing the building. In form they are oblong, thatched with grass, floored with rough planks, and devoid of even the mats in use among nearly all the Pacific Islanders. The interior is usually littered with nets, pots, and the utensils of daily life.

The first thirty miles of country consists of low hills covered with grass and sparsely timbered with dwarf eucalyptus. Between the hills and along the creek beds were belts of good alluvial soil, but the country suffers much from drought during the dry season. Except along the coast-line this district is very sparsely populated. Some forty miles from Port Moresby the character of the country changes into a bolder and more broken formation of limestone hills covered only with coarse grass, and with belts of large timber on the watercourses. Some ten miles inland, the Astrolabe range, densely timbered, rises like a wall to a height of 4000 feet.

This grass country swarms with wallaby of two species, the other quadrupeds being an opossum and a bandicoot, all of which are marsupial. Besides the numerous birds of the parrot and crow orders, there are great numbers of the *Megapodius tumulus* or scrub hen, whose great mound-nests, some of them more than 10 feet in height, furnish the natives with animal food during the egg season. I may mention that these mounds are not the work of a single bird but the result of the labour of a number, who lay there for several years in succession. The natives assert that the brush turkey, a larger species of megapodius, lays its eggs in the same mound as the scrub hen.

The coast villages of the first thirty miles are inhabited by the Motu tribe, a maritime people who came from the westward, and settled by permission on lands belonging to the Koitabu; some of the latter are to be found in every Motu village. They are typical Papuans, having the crisp, frizzy hair, prominent nose, and fine chin, so well described by Wallace in the case of the Ké Islanders. They are the

great navigators and traders of New Guinea. Once a year, about September, they sail westward some 200 miles to obtain sago in exchange for pottery. Their craft, composed of some eight or nine canoes lashed side by side, and propelled by two sails shaped like the claws of a crab, are so unwieldy as to be unmanageable against a head wind; and they have therefore to wait for the north-west monsoon before they can return. Each of these trading canoes (*lakatoi*) is capable of carrying four tons of sago. It is characteristic of the unprogressive conservatism of the Papuan, that though sago is procurable only a few miles distant, they, because their forefathers, owing to a state of war or other reason, had to sail 200 miles for sago, continue to undertake this dangerous annual voyage, and to neglect the nearer food supply from which the obstacle has been long since removed.

Their food consists principally of yams, taro, plantains, sago, and sugar-cane, to which fish, pork, and wallaby are occasionally added. In times of scarcity they are driven to eat forest nuts of various kinds, and even the fruit of a Cycad. The men are naked, save for a perineal band of fibre no thicker than a piece of twine. The women wear a grass petticoat from the waist to the knees, open at one side. Wives are acquired by purchase, though, owing probably to the influence of the Mission, mutual attachment is now sometimes considered. Polygamy is allowed. The population is healthy, fever in a mild form being apparently the only endemic disease, but perhaps one-quarter of the people suffer from the loathsome ailment, *Tinea desquamans*, a malignant ring-worm that is supposed to have been derived from the Line Islands, and to have reached New Guinea by way of Fiji, the Solomon Islands, and New Britain. Though it is disgusting in appearance, and disagreeable to the patient, it does not incapacitate him in any way, and therefore no effort is made to be rid of it. Except the pig and the dingo, the natives have no domestic animals. The dead are often buried beneath the houses in the inland villages. The people show much domestic affliction, and great grief at the loss of relatives or friends, but their sorrow, like that of children, is short-lived in proportion to its poignancy.

The Motu language, which is spoken by some 5000, and understood by perhaps four times that number, is from a Papuan root, but contains several Polynesian words. The absence of consonant terminations gives it a soft and fluent character. In syntax and idiom it is precisely similar to the other Melanesian languages, and it shares with the Polynesian dialects the complicated system of possessive pronouns. The language has been reduced to writing by the missionaries, who are now teaching it in all their schools. In the last thirty miles of our journey, however, we found in villages, not ten miles apart, variations in dialect so great as almost to amount to different languages.

The whole of this district has been for several years under the influ-

ence of the London Missionary Society, whose teachers reside at all the principal villages. They are natives of Tahiti, Rarotonga, and Niué, and have exchanged the comfort of semi-civilisation for a life of great hardship and even danger. We visited five of the stations. Some hymns were sung in good time and tune, music being a passion with the natives, but very few were able to read, and scarcely any to write. Moreover, the missionaries appear to have acquired little or no influence over the adult natives, and as a result they have no power to avert intertribal wars, which are continually taking place in a desultory fashion. The contrast between the success of the Mission here and in Tonga and Fiji is strikingly marked. In the latter, young and old embraced Christianity with enthusiasm; the teachers were supplied gratis with houses and food, and the Missionaries soon wielded the executive power in the land, a power which they are only just beginning to lose. In New Guinea, on the contrary, every day's labour given to the Mission, every yam eaten by the teacher, must be faithfully paid for; in fact, the success of the Mission in many places is in proportion to the amount of tobacco distributed. I do not ascribe this want of success to the Mission system, but to the character of the natives themselves. They are devoid of religious enthusiasm, and tolerate religious services partly from their love of music, and partly for the material gain they hope to derive from the Mission. Judging from the constantly recurring outrages and petty intertribal feuds in the districts longest under Mission influence, it is safe to predict that if these people are ever to be softened and civilised, it will not be by the spread of Christianity, but from the fear of punishment by the arm of the law. Their wars are due to one of three causes. When a tribe becomes so strong as to be a standing menace to its neighbours, the latter combine and destroy it, killing all the women, lest they breed avengers in the future; to take vengeance for some outrage or insult; or because the sudden death of some member of the tribe is ascribed to the witchcraft of an enemy, for no death is believed in New Guinea to result from natural causes. But all these reasons are really excuses for head-hunting. Until a man can wear the upper mandible of the hornbill imbedded in his hair, a distinction only allowed to those who have killed their man, he enjoys no consideration in the tribe. A youth of fifteen years old was pointed out to us thus decorated. His father had wounded and disarmed a man, and held him fast, while this young ruffian despatched him with a club. Another boy had just assumed the hornbill for having stolen unawares upon a defenceless woman and speared her in the back. A life may, however, be paid for, and in one case a hatchet, two pigs, and some spears were taken as payment for the life of a young man.

My excuse for having been thus diffuse about a country and people already known to geography, is that they are so nearly allied to the people I am about to describe that they afford a fair indication of what

we may expect from the people of the Louisiades and D'Entrecasteaux when they have been brought into contact with Europeans.

At Kerepunu we embarked in the Government schooner *Hygeia*, and after a voyage of ten days against head winds dropped anchor at Sudest Island on October 4th, having called at several small islands on the way. Sudest, the largest of the Louisiades, is 45 miles long and varies from 10 to 4 miles in breadth. It is of a slaty formation, with veins of crystalline quartz running through it in all directions. The eastern portion is mountainous, the highest point, Mount Rattlesnake, being about 3000 feet high. The higher parts are densely timbered, but the low hills near the sea are covered with grass, whose bright green offers a welcome contrast to the sombre tropical forest. We found some 400 miners already at work, and others were arriving almost daily from Cooktown. The gold, which was much waterworn, was found scattered along the creek beds, among the gravel and sand which had washed into the interstices of the slate. It was deposited so unevenly and capriciously that experienced miners had no advantage over novices, and the most diligent search had failed to discover the reefs from which the alluvial gold must have been washed down.

The island was very sparsely inhabited, and the natives have for years been the prey of the head-hunting parties of the more warlike Brooker Islanders. They are in all respects so like their neighbours of Rossel Island, that one description will serve for both.

On October 9th we sailed for Rossel in H.M.S. *Swinger*, having the *Hygeia* in tow. Twenty miners accompanied us to prospect for gold. The island is surrounded by a distant barrier reef of irregular form, terminating in a most dangerous point on the south-east end known as Rossel Spit. Being unsurveyed, it has been the scene of numerous wrecks. I quote from the 'Sailing Directions' an account of one of them:—"On the 30th September, 1858, the ship *St. Paul*, bound from Hong Kong to Sydney, with 327 Chinese passengers on board, was totally wrecked on this island, when all hands reached the shore. The captain and eight of the crew then left in a boat to obtain assistance, and on the French steamer *Styx* arriving at the spot from New Caledonia early in January 1859, it was found that the whole of the passengers and the remainder of the crew, with the exception of one Chinese, had been horribly massacred by the natives. The survivor stated that the natives feasted upon the bodies of their victims." It is not surprising that Rossel has since enjoyed a reputation for mystery and danger, to which, perhaps, its dangerous unsurveyed reefs and sombre forests have not a little contributed.

After communicating with the natives of an outlying island (called High Island), from whom we took a boy who had learned a little "pidgin" English on a Queensland plantation, we steamed into Dixon Bay, a deep indentation on the west side extending almost to the foot

of Mount Rossel. Here the *Swinger* left us, and returned to Australia. Upon our announcing our intention of crossing the island, our interpreter flatly refused to accompany us, saying that the people of the interior were cannibals, that they would kill us all, and that even if we escaped they were certain to come down and kill and eat him after our departure. He shortly afterwards slipped unobserved into a canoe, and we never saw him again. Nor were we more successful in engaging carriers. The natives of the small village opposite to which we were anchored were extremely suspicious, and could not be induced to accompany us eastward.

On October 12th we started, a party of seven, with five days' provisions, each man carrying some 25 lbs. besides his arms. We landed at the bottom of Dixon Bay, where we joined the party of twenty miners. Heavy rain came on, however, and continuing all day, necessarily impeded our journey through the forest, and towards evening we were obliged to descend 1000 feet to a deserted village for shelter and water. The following day was devoted to collecting in the swampy forest surrounding the village. Much of the timber is very fine, and we noticed several trees rich in gum, resin, and rubber, the latter exuding freely from a ficus closely allied to the fig-tree so common in Queensland (*Ficus Cunninghami*). Rossel proved a very rich field for the botanist, and was especially rich in orchids. Unfortunately, however, many of the specimens arrived in Melbourne too much damaged for classification, owing to the difficulty of properly drying them, and our being unprovided with spirits for botanical purposes.

On the following morning we ascended the main range of the island. Even at an elevation of 3000 feet we found a network of native tracks either following the crests of the ridges or branching off at right angles into the valleys. These numerous paths, out of all proportion to the population of the island, are probably made in hunting wild pigs which swarm in the forest. Steering by compass, we at length found a track leading in the right direction. Steadily descending, it widened into a road a chain wide. This road had been evidently cleared long ago, for the stumps of the trees cut down had decayed away, and the undergrowth was kept carefully weeded. Expecting that this led to some large and populous town, we were not a little surprised to find ourselves in a tiny village naturally fortified. The fires were still alight, and there was every indication that the inhabitants had just left. Below the village there was an extensive taro plantation on the banks of a stream, from which we helped ourselves, leaving tobacco in payment, and, as our hosts did not reappear, we passed the night in their village.

As this was a good example of the Rossel villages, it merits a few words of description. The houses were nine or ten in number, built in irregular form, some three or four yards apart; but two houses, perhaps those of the elders or chiefs, were built on higher ground, on which

were some rough stone seats which we afterwards learned were used as the village "forum." The houses, unlike those of the neighbouring islands, were shaped like an inverted boat, resting on a platform some five feet from the ground, and the roof of pandanus thatch allowing no door at either end, the interior was reached through two trap-doors in the floor. Each of the six posts supporting the platform was surmounted by a disc of wood 18 inches in diameter to prevent rats from climbing into the thatch. The interior of the houses was littered with earthen pots, baskets containing food, and the few tools with which a New Guinean is equipped to fight against nature. It is floored with the split stems of the slender "balaka" palm. The ground on which the village stands is kept scrupulously swept, and is floored with coarse gravel; and cooking, by means of earthenware pots supported on a triangle of stones, is carried on beneath the houses. Under the eaves of the largest dwelling-house are usually one or two skulls on a shelf, and a heap of human bones mixed with those of the dugong, turtle, and large fish are to be found piled up in some corner of the village. In every house we found bundles of spears suspended beneath the overhanging eaves, ready to be snatched up at an alarm. They were formed of the outer rind of a palm, and were generally without barbs. There were also a large quantity of adzes, the handles rudely fashioned and attached by sinnet to a blade formed from an iron chain-plate, bolt, or even a 5-inch nail. In one house we found iron utensils, evidently belonging to a ship, nearly new and with traces of having been used to cook taro in; and in a neighbouring village was a rude model of the hull of a ship—plunder from a German schooner wrecked there a few months previous to our visit. This, together with the bones of fish and other marine animals, served to show that these inland people have constant communication with the south-east coast.

Before starting next morning we paid a visit to a neighbouring village in which tobacco had been deposited by us overnight. Turning a corner among high grass, we came suddenly on eight or nine men unarmed, and carrying coco-nuts which were perhaps intended as a return gift for the tobacco. Startled by the sudden apparition of so strange a being as a white man, they all took to their heels regardless of our cries of "Gemba" (peace), and "Egu mamu nugo" (come here). They were shorter and darker in colour than the coast people, but they wore the same scanty dress.

After passing through several villages deserted at our approach, and extricating ourselves from what appeared to be interminable miles of sago and mangrove swamps, we ascended, towards evening, a ridge from which the whole of the south-east side of the island spread like a map at our feet. The fertile valleys between the spurs of Mount Rossel were still clothed with forest, and we saw little sign of cultivation to support the theory that the south-east side of an island is the most

populous. Rossel Spit, an acute angled projection running several miles out to sea, could be easily traced by the white line of foam as the great Pacific rollers broke upon it. A little to the eastward, inside the reef, was Adele Island, a low wooded islet on which the unfortunate passengers of the *St. Paul* are said, by a rather doubtful rumour, to have taken refuge, and remained half starved, while the natives carried them off at the rate of three a day until only one was left to tell the story. We could have chosen no better spot for our purpose than this which we had stumbled on by chance. On the evening of the 16th we regained the schooner by another route, and without adventure.

The miners had found "colours" of gold in one of the creeks, but not in sufficient quantity to justify a rush.

The natives of Rossel bear little resemblance to the pure bred Papuan. Their appearance suggests a hybrid between the Papuan and the natives of the Solomon Islands, the nearest of which is only 250 miles distant, and situated to windward of Rossel. They are a short but robust race of that sooty brown complexion that resembles black. The nostrils are wide, the nose flat, and the face markedly prognathous. They bore the cartilage of the nose, and enlarge enormously the lobe of the ear, but do not tattoo. Their food consist of sago, taro, via, plantains, pandanus, coco-nuts, papaw, sugar-cane, mangoes, arrowroot, and bread-fruit, with fish, pork, dugong, and turtle. The men's dress consists of a single pandanus leaf secured round the waist by a single cord of human hair. Though we saw no women, a number of grass petticoats of the kind in use in other islands, makes it probable that they are similarly clad. From the number of weapons and human bones in their village it is probable that they are constantly engaged in intertribal wars, and are addicted to cannibalism. The stone axe has fallen into disuse, its place being taken by blades of iron procured from wrecks, and fitted into the handles used for the stone axe. They have no domestic animals except the pig and the dingo dog. From a scanty vocabulary obtained from the interpreter, we gathered that the language bears no similiarity whatever to any New Guinea dialect with which we are acquainted, nor with the languages of Eastern Polynesia. The numerals, except 4 and 9, are from a different root; they count up to 10 and then repeat. There is a great predominance of the *a* sound and no *k*; and they have a curious intonation, half querulous, which makes the language very difficult to pronounce. It is the only known language in New Guinea which has the ellipted consonant sound as in the Tongan, thus: *uma'a* instead of *umāā*. It occurred between the vowel sounds of *i* and *a*.

On October 19th we landed on the island of Joannet. There is a semicircle of hills on the south-east side, some 1000 feet in height, but the rest of the island is flat, and covered with coarse grass with patches of forest. The formation is similar to that of Sudest, slate with veins of

quartz, but the miners found scarcely a trace of gold. In the middle of the island was a swamp, on which was situated the only village of the island. The natives had been punished two years previously for the massacre of two Englishmen and their crew, and had deserted Joannet. The few wretched inhabitants of this village, had probably lately returned, and had defended their dwellings by a row of spears set in the long grass at an angle of 45° , so as to pierce the legs of any one unaware of them.

On the 20th we reached the unexplored island of St. Aignan, of which the native name is Misima. This island is more than 100 square miles in area, being about 28 miles long, and varying in breadth from about eight or nine miles on the east end. The west end consists of a great mountain range named Lakia, about 3500 feet above the sea, composed of schistose slate. The eastern part of the island consists of very rugged hills, through which the streams have cut very deep and narrow gorges. They are composed of coral upheaved by volcanic action, and mixed with conglomerate formed from shingle, and with broken layers of schistose slate. Round the eastern coast there is a fringe of coral, upheaved more recently, rising to a height of more than 100 feet, through which the mountain torrents have cut their way right down to sea-level. There is no barrier reef round the island, so we were compelled to anchor on the lee side at a spot which would be quite unsafe in the north-west monsoon.

We found among the natives two types, the one evidently Papuan, and the other betraying strong Malay characteristics, such as the straight hair, and not prominent features. They were extremely vivacious and friendly, and very anxious to trade, bringing off to the schooner everything they thought we would buy; but unfortunately they have nothing that could form an article of commerce. We found several of the beautifully built trading canoes from distant islands, and from them they seemed to have procured iron for adzes in exchange for betel-nut and other native produce.

St. Aignan is thickly populated. There are about thirty villages, some of which are very large. Taking the not unusual average of five souls to each house, we estimated the population at not far short of 4000. They are industrious and skilful cultivators, and appear well fed. I noticed several instances of their strong domestic affection. It was remarkable also that neither men nor women showed any fear of us. We learned from a boy who had acquired "pidgin" English on a Queensland plantation something of their customs and religious belief, which amounts to little more than propitiatory offering to the spirits of their ancestors. They practise the usual form of Polynesian witchcraft. The usual price for a wife is one stone axe, shell earrings, and three pigs. The dead are buried beneath the houses, but the head is sometimes afterwards exhumed and placed in a stone cairn, but never suspended

outside the houses; the heads so displayed are those of enemies. They have no belief in a future state. They are head-hunters, but we could not ascertain that they are cannibals. Though there was no war while we were there, the different villages were independent, and apparently unfriendly. They are a healthy race, though they suffer much from the ringworm (*Tinea desquamans*). Leprosy does not apparently exist, and we saw no elephantiasis. It was found on comparing the vocabularies that the language of St. Aignan bears but little resemblance to those of the neighbouring islands. It is replete with words terminating in consonants, chiefly with *an* and *ak*. In counting they repeat the first five numerals, but have distinctive words for the decimal numbers. They have the same complicated declension of the pronouns which is common to the whole of Papua and Polynesia.

The prospecting miners found gold at three different places in the east end, but not in large quantities. During their search they came upon a curious cave, which we afterwards visited. We found that the limestone hills which compose the centre of the island were honey-combed with caves and densely timbered. We crossed the range and descended to a most romantic spot called by the natives Kaiaba. From one great wall of limestone sprang a stream which, after 200 yards of daylight, plunged into a great cave in the opposite cliff. The mouth was a perfect arch, 150 feet from floor to roof. At the far end the river thundered down into a black tunnel, through which it passed under the range, emerging into daylight after some three miles of darkness.

On October the 24th we reached East Island, a small inhabited island composed of altered coral situated in long. 152° 5' and lat. 10° 30'. The few inhabitants of the only village appear to be a colony from some other island, and probably do not remain here all the year. They were extremely shy.

On the following afternoon we anchored on the north-east point of Normanby Island, the most easterly of the D'Entrecasteaux Group. Like St. Aignan, it has no protecting reef. The island is a narrow L-shaped mountain range, with deeply furrowed sides and wide valleys excavated by water-wear. It is probably nowhere of greater breadth than 10 or 12 miles, and the area about 350 square miles. The highest parts of the island are perhaps 3500 feet above the sea-level. The south-eastern portion is composed of schistose slate varying much in hardness, interlaid with veins of white crystalline quartz, which is free from any compound of iron or other metal. Traces of gold were found in the creeks. Toward the north end of the island the formation is igneous, consisting mainly of limestone, but in some of the river-beds are large beds of basalt and boulders of siliceous stone. The mountains of Dawson Straits, however, differ much in formation from the rest of the island. The rock appeared to be a sort of porphyry, and furnished

indications of tin. It should repay a more thorough examination. The north-east point of the island was very populous, and the extensive cultivation could be traced by fires far up the range on the edge of the forest, which showed that clearing was still in operation. We found the natives' anxiety to trade so keen as to threaten a disturbance when they were refused. They have strong Papuan characteristics. The men frizz out the hair into a great black mop, and both men and women paint the face, but do not tattoo. They wear the usual dress.

On the 26th the Administrator and I penetrated some miles inland, passing through no less than thirty-one villages, and seeing many others perched on every available spur or ridge, and surrounded by its plantations. These villages were remarkable for their cleanliness. The houses were built in an irregular circle surrounding an open space in which was often a grave bordered with amaranths, crotons, or hibiscus. The houses were of a type new to us, the roof saddle-shaped with high-peaked gable-ends, thatched with pandanus leaves, and standing on posts six feet high. The cultivation is most remarkable, and bears witness of their activity and industry. The ground they plant in is in some instances upwards of 60° from the horizontal: yet the soil is very rich, a deep dark-brown mould resting on a clay bottom, the surface of the schistose formation below. To prevent the soil being washed away, the trunks of trees are pegged down in long lines sometimes only a yard apart, and their boundaries are marked by saplings laid lengthwise up the hill. Some of the gardens are 20 or 30 acres in extent. I am sorry that the limits of this paper will not permit me to give a more detailed description of this interesting people.

Normanby Island is the eastern limit of the wallaby, of which we found two varieties. It is also the eastern limit of a bird peculiar to the D'Entrecasteaux Group—the largest of the five species of *Manucodia*, which are still classed with the Birds of Paradise. It is about the size of a crow, of a metallic blue-black plumage. The feathers of the whole body and tail are crimped, and the plumes beneath the wings rudimentary. It feeds on insects, and though the strait which divides Normanby from the mainland is only ten miles wide, this bird, which is the commonest of all large birds in the D'Entrecasteaux, has never crossed to New Guinea. But its great peculiarity, one which it shares with the other members of its class, is that the windpipe after leaving the neck travels down to the vent between the skin and the body, and then returns and enters the thorax. Its length when extended is 18 inches. It is loosely attached to the body, and among the forty specimens we skinned there was considerably variety, the windpipe in one or two specimens curving beside the tail on to the back before turning. In a similar variety of the *Manucodia* the windpipe is coiled neatly on the breast before entering the thorax. This extraordinary development which should, one would suppose, render the bird more

vulnerable, is probably the cause of its peculiar note, a low tremolo whistle, of so penetrating a *timbre* that it can be heard for more than a mile.

We anchored at three other places in Normanby, and explored inland at two of them. War and the difference of dialect have so completely isolated the various tribes as to make them different peoples as regards everything but their physical characteristics. At a spot not ten miles from a tribe that would barter all they possessed for tobacco and pipes, were people so ignorant of their use that they put the tobacco into a bottle we had given them, poured water upon it and drank off the compound. With these same people we narrowly escaped from a collision. They were evidently so excited and frightened at their first introduction to white men as to be ready for anything.

Before leaving Normanby we established the fact that the small island named Harris Island is in reality a low flat of the main island.

On October 31st we anchored at the east end of Ferguson Island, the largest of the D'Entrecasteaux, being 30 miles long by 17 broad, and containing probably more than 500 square miles. There are three great mountain masses on the island: Mount Kilkerran, on the north-east corner, 6000 feet high; the Maybole range, on the north-west, which is probably 5000 feet above level; and a lower range in the south-west corner, which is apparently unnamed, and which we were unable to examine. The formation of the Kilkerran and Maybole ranges is the same, consisting principally of micaceous schist with veins of white quartz intersecting it. In the beds of the rivers were boulders of quartz, and of a slaty rock very rich in silica, and there were boulders of what seemed to be a kind of porphyry. The prospecting miners found no trace of alluvial gold in the northern or western parts of the island, and, from its formation, it is improbable that this metal will be found there.

The south-eastern part of Ferguson and the small outlying islands, Goulvain and Welle Islands, are of igneous formation, and we noticed two extinct volcanoes and some hot springs. This part is densely populated, owing probably to the fertility of the extensive flats of volcanic deposit. The people showed intense eagerness to trade, and on our landing we were mobbed by an immense crowd of both sexes clamouring for tobacco, which they preferred to all other European articles. They were friendly, but far too familiar to make a long stay advisable. Their dress, appearance, houses, and style of living were similar to those of the people on Normanby Island, whom I have already described, and from the degree of civilisation they had attained, as compared with their near neighbours, it may be concluded that they are in constant communication through the trading canoes with the natives of other islands. I noticed here a harmless lunatic dressed in a woman's petticoat, evidently annoying the people near him, but he was pointed

out to us with an air of good-humoured contempt. In most parts of the Pacific he would not have been allowed to live.

The style of cultivation here deserves a few words. A large yam plantation on a volcanic flat several hundred acres in extent was divided into blocks by neatly kept paths. The reeds up which the yam vines were to run, instead of being merely stuck into the ground as elsewhere, were inclined upwards from each yam hill, so that four reeds met and were fastened to a stake planted accurately in the centre between the four hills. This was done over the whole plantation with an accuracy and regularity which would have shamed an English gardener.

At this spot we found one man who had learned a little English in Queensland, and from him I made up a vocabulary. He knows nothing of the natives to the westward except that they were cannibals and spoke a different language. The dialect of East Ferguson was found to have much in common with that of East Cape on the mainland.

On the 2nd November we anchored in a small bay on the north side of the island. On landing we were surrounded by an armed crowd of natives, who were evidently in a state of the wildest excitement. They knew nothing about tobacco, beads, or the ordinary articles of trade, nor did they seem to care for anything we could give them. As their shouting and gesticulations threatened to end in a disturbance, a decided impression was produced by the discharge of a rifle. From the effect produced it was evident they knew nothing of firearms.

They were evidently a bush tribe—Ishmaels, who have no communication with their neighbours, receive no visits except from enemies, and hold their rough wild country at the point of the spear. Proceeding along the beach we came to a dry branch stuck upright in the sand. This was evidently their boundary, for they tried to dissuade us from passing it, making signs that we should be speared if we did. We soon saw a large crowd of armed natives ahead watching us from the cover of the trees. They were extremely suspicious, and it was only by depositing beads on the ground and retiring from them that we could induce them to approach. We eventually accompanied these people in spite of their efforts to dissuade us, to their village, an ill-built collection of huts perched on the steep side of the mountain, and would have proceeded further, had we not seen that they were preparing to oppose us by force, having probably concluded that persuasion would be utterly lost on a people sacrilegious enough to infringe the numerous taboos that had been laid across our path. We suffered from the want of interpreters, for, had they understood that we were on a friendly visit with no ulterior motive to their detriment, they would no doubt have welcomed us. These people were true Papuans, and there were no straight-haired people among them. The division of a narrow bay, perhaps a couple of miles wide, between two hostile tribes, who even plant their food at the

point of the spear in face of each other, illustrates well the social condition of this large and populous island.

On the 3rd we anchored at the foot of Mount Kilkerran. A remarkable feature of this group of islands was well illustrated here. Though Hughes Bay consisted of many miles of flat land yet we noticed that the sides of the mountain, consisting of great precipices and steep inclines, were dotted with villages up to a height of 3000 feet, half concealed in clumps of coco-nut palms. Many of the lower slopes were in actual cultivation, but the upper part was clothed with forest. The flat land is full of salt lakes, and large clumps of sago. As we proceeded slowly westward on the following day, a large crowd of natives were seen following us along the shore. When we went ashore a few miles to the westward we found them awaiting us armed and in a state of great excitement. They had evidently penetrated into an enemy's country in their curiosity to see us, and several times while they were with us a false alarm was raised and a rush made for their arms. We had here to submit to a curious ceremony. When all were seated a scented bark resembling sassafras, to which they appear to attach much value, was handed to us, and an old man having chewed some of it, spat it first over some of our party, and then over some of his own people, mumbling some words while doing so. After which ceremony trading proceeded in a friendly way. They appeared to care nothing for beads, tobacco, nor knives, but they were pleased with small strips of Turkey red, and when this was exhausted we gave them in exchange for clubs, yams, and combs, small squares of newspaper which were received with some awe, and probably regarded as talismans of great virtue.

Not two miles distant we came upon a tribe who showed all the apathy and repose of manner of North American Indians, and the contrast was so great that it was difficult to believe that they were of the same race as their noisy and restless neighbours.

After searching in vain for the hot springs marked on the chart as existing at Cape Labillardière, we anchored at the foot of Mount Maybole in Moresby Strait. We were now on the west of Ferguson in the strait, three miles wide, which separated it from the unexplored island of Goodenough, whose twin peaks, more than 7000 feet above sea-level, now towered above us. The natives were at first very shy, but it was our object to get on terms with them, for at this spot we had heard of a very rare species of bird of paradise. On our showing them a skin of the *Paradisea Raggiana* they at once pointed up to the forest on Mount Maybole, and on the 8th of November I went ashore with a party of four to spend the night at the top of the range. The natives being friendly we engaged carriers and ascended the mountain, and were fortunate enough to secure six specimens of this rare bird. The plumage is similar to that of the *Raggiana*, which is familiar to everybody, except that the plumes are of a deeper orange, and the shield on

the breast is grey instead of black. The birds of paradise used until recently to be classed with the crows. There are now thirty-seven known species. The males do not acquire their full plumage for four years, so that although so many are shot the young males and females will always be left untouched to perpetuate the species. Their habits have been too fully described by Wallace for me to touch upon them here, except to describe the method of shooting them. The birds begin to call at daylight and to collect upon the "dancing tree" until about 7.30 a.m. when they separate and they are not seen again until an hour before sunset, when they again begin to call. The call is unmistakable and can be heard for a great distance, Kaük-kaük-kök-kök-kök. It is easy to imitate, and the bird will approach within shot, flying from tree to tree in response to the imitated call.

On the 10th we moved to Seymour Bay, a wide mangrove-fringed bay on the west side of Ferguson. There was here a large extent of flat land and sago swamp, in which we found some saline lakes, and some hills giving off sulphur fumes strong enough to discolour the white paint on the vessel which was lying nearly two miles distant. Some of the hills appeared to be composed of alum and sublimed sulphur. There were also springs of boiling water and boiling mud, and in one instance boiling mud was spouted up from a chimney-like cavity in the hill-side. This part of the country was uninhabited, but the sides of the Maybole range were thickly populated. These people opposed the progress of some of our party, but happily without any actual collision. They were probably taken by surprise. It is not impossible that this flat land is continued across the island to Hughes Bay, as we could see no dividing range of hills, and that the igneous formation extends some distance inland.

On the 8th and 9th a portion of the south-east coast of Goodenough Island was inspected. A great range of mountains running north and south, and culminating in two peaks not less than 7000 feet high, forms the centre of the island. On the east side is a plain some seven or eight miles wide, nearly clear of forest. The formation is slaty schist containing much mica and quartz. On the east side are projections of igneous formation, and on the point nearest to the sulphur springs in Seymour Bay is a small crater, probably not very long extinct. On the north-east side we passed through several inland villages, one of which had no less than 109 houses. The people resembled the Ferguson Islanders in appearance, but their quiet and friendly demeanour created a most favourable impression after our experience of the noisy and excitable natives of Ferguson Island.

Their houses differed from anything we had hitherto seen. They are built on raised platforms with a curved roof, but they are very long and taper away from the end nearest the village square. The narrow end is closed in with wooden planks so as to form a sort of bedroom.

They are very long in proportion to their width and height, and have an appearance that is quite peculiar.

The villages in this part of the island appear to be on friendly terms with each other, but to preserve each its own independence. The people have no sea-going canoes, and are practically an inland or "bush" tribe. They seemed free from the common diseases of Melanesia—leprosy, elephantiasis, itch, and ophthalmia, but suffered much from ringworm.

"Colours" of gold were found in one of the creeks, but it is improbable that this metal will be found in payable quantity.

With Goodenough, the most westerly of the D'Entrecasteaux group, our expedition came to an end. We had with a small party examined a number of islands whose inhabitants, if they had ever seen Europeans before, had good reason for feeling hostility towards them, but the whole expedition had been accomplished without any collision with the natives. They are undoubtedly treacherous and untrustworthy, especially when their cupidity is excited, but, provided that travellers will observe ordinary caution and vigilance, respect native customs, and pay for everything they receive, or are obliged to take, I believe that very small parties can traverse the country with safety.

The practical miners who were with us established the belief that this part of the British possessions will never form a large gold-field, although the patches of alluvial gold in Sudest and St. Aignan can be profitably worked for a short time. We could not ascertain the actual spot whence the "greenstone," from which the stone adzes are made, is brought, but as the natives of Goodenough pointed westward, it is perhaps to be found in Huon Gulf. In New Zealand the greenstone is generally found associated with gold.

The following discussion ensued on the reading of the above paper:—

Captain W. J. L. WHARTON (Hydrographer to the Admiralty) expressed the pleasure he had felt in listening to a paper which gave so interesting an account of two groups of islands of which so little was previously known. The three larger islands, Normanby, Ferguson, and Goodenough, he believed had never before been visited, and absolutely nothing was known about them.

Captain FIELD, R.N., said he had just relinquished the command of the *Dart*, which had for the last two years been employed in the waters to the south of the Louisiade Archipelago. He was sorry that the Hydrographic Survey did not permit of much information being obtained with respect to the customs and manners of the natives, while the collections were necessarily limited to geological specimens. During the last year the *Dart* had five natives on board. They were very intelligent, and of the greatest assistance to him. They spoke very little English at first, but it was astonishing how quickly they picked up the language. Traders did not seem to have penetrated further than Coral Haven. In one part of the island the natives talked a little English, while in another they did not. He took the five natives on board at Brierley Island, and they were with him five months. They were great favourites with the crew. The effect of a man-of-war being in those waters was very good. The year before a murder had been committed in Jeannet Island, and

when the *Dart* first arrived it was extremely difficult to get into communication with the natives, and no interpreters could be obtained, but the second year there was no trouble at all in getting them; in fact, half the islanders might have been employed. The natives seem to be decreasing, very considerably in numbers, judging from the description given by Captain Owen Stanley, who made a running survey about forty years ago, and who spoke of large villages thickly populated. Those populations had disappeared. The whole of the Calvados chain was very sparsely inhabited. He had no difficulty with the natives, and used to employ them in carrying the survey instruments to the tops of hills, and clearing the tops. As they were always paid well and punctually they could be relied upon. There were no cases of treachery, though they had one or two chances. One night he had to go with five men some miles inland, and though there were about 200 natives around them no trouble was experienced. In the group there were apparently no chiefs. Each village had an old man who had a certain amount of influence, but it was merely personal. There were two types of houses, the saddle-shaped and the turtle-backed. The latter extended from Rossel a long way to the north and west, but in China Strait the houses were all of the saddle-backed shape. The Calvados chain was of a slaty formation, with veins of quartz thrown up, and the traders imagined some gold was to be found there, probably in the larger of the islands. It was very likely that Panawina Island would have traces of gold. On some of the smaller islands there was a good deal of grass land, and sheep did remarkably well there. He took twenty sheep with him each year, and landed them, and at the end of four or five months they were extremely good eating. The chief article of barter was tobacco, which was specially made for the island trade. The natives were also fond of beads. One of them particularly commissioned one of the crew, when the vessel was going to Queensland, to bring back a particular colour of beads, and they showed that they had taste. The climate was very good from July to December. At the end of October the trade-wind slackened off, and it began to get rather hot. In July, August, and September it blew very hard, and the sea was very unpleasant for boats. Still, that made the climate healthy, and directly the wind slackened it became rather unpleasantly warm. During two seasons amongst these islands there was only one mild case of fever on board the ship. The anchorages were very bad. The water was very deep, from 30 to 40 fathoms in the passages, and the tides ran about four knots an hour through them. In China Strait they ran six knots. On one reef there was an island four or five miles long and very narrow, of limestone formation, having a number of caves in it. It had probably been upheaved. It appeared to him that there were corals in it. Panmit Island had distinctly been raised. The lagoon was about 20 fathoms deep, gradually shallowing to one or two fathoms. The island rose to a sharp peak of 400 or 500 feet. It rested on a coral platform 60 feet high, which had evidently been upraised, and the cliffs were very steep. At the east end of St. Aignan there was a coral spit with two low islands at the end of it, but that was the only coral round the island. The hills there rose to 4000 or 5000 feet, the highest part being in the centre. The eastern part was much lower. The natives of these islands were generally at enmity with one another. When he wanted to land his interpreters at one spot, thinking they would be able to find their way to their own island, they said if he did so they would be certain to be eaten.

In answer to questions,

Mr. THOMSON said that Professor Flower had told him that the peculiar formation of the windpipe of the birds of paradise had already been described in scientific publications. No doubt the fact that in some parts the natives could only count to five was associated with the five digits of the hand, but when one of them counted

No. IX.—SEPT. 1889.]

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his fingers he turned them down. It did not seem to occur to the majority of them to use both hands.

The PRESIDENT thought they had all listened with very great interest to the excellent paper which Mr. Thomson had read. The region described was very unlike that which, at the previous meeting of the Society, Dr. Nansen had pictured to them. They smiled at the account which Mr. Thomson gave of his estimable friend who was very kind to Europeans but devoured Chinese; they heard with interest of the sombre woods of Rossel, redeemed to a certain extent by the orchids; they were pleased with the account of the successful and most careful agriculture of the islands of Normanby and Ferguson, and listened with curiosity to the account of the extraordinary political *morcellement* of the latter island, which was the antithesis of the tendency which had been going on during the last generation in Europe—a tendency to aggregation which led to the union of Germany and the union of Italy. Mr. Thomson was impartially interested in philology, ornithology, entomology, and geology—in fact in all the “ologies” except tautology. He was sure they would give their most thorough approval when he thanked Mr. Thomson for the excellent spirit in which his paper had been written, for all the valuable information he had given them, and for the wise remarks he had made about avoiding collision with the natives.

Mr. THOMSON thanked the meeting for the kind attention that had been given to his paper.

Expedition to the Cockscomb Mountains, British Honduras.

By J. BELLAMY.

HAVING been selected by Governor Goldsworthy of British Honduras to accompany his exploring party to the Cockscomb Mountains to survey and report on the geological and botanical features of that hitherto unexplored district, I left Mullins river on April 3rd, 1888, in my sailing boat, and joining Dr. Gabb at North Stann Creek, we proceeded together down the coast for the mouth of the South Stann Creek which we reached about 8 p.m., guided by camp fires of the Carib porters who had preceded us with baggage and provisions. We anchored outside the surf and paid out all our cable as it was blowing hard from the north-east, and found the landing both difficult and dangerous.

The camp at night presented an animated scene with the firelight playing on the groups of half-naked muscular Caribs in their graceful attitudes, and at 7.20 a.m. on the 4th of April we started on the journey up the South Stann Creek (or river), with Dr. Gabb and fifteen Caribs in five dorays, i. e. dug-out canoes. We found the river for some distance very narrow and tortuous, this being the case with many of the rivers on this coast, which, when they leave the bed-rock, seem to lose themselves in the sand, and at their mouths are distributed over a large delta of mangrove swamp.