edge of the bank and went into the scrub calling "Orokaiva." We took the cane and put some beads in its place. Three canoes visited us during the day, bringing sago, taro, and cocoanuts. We put up a small kitchen this afternoon. The river commenced rising again this morning, and at 4 p.m. was between 6 and 7 feet above its normal level; since then it has fallen about 8 inches. Only two small logs came down during the day. At 7·50 this evening there was a rather strong earthquake shock, which lasted for about half a minute.

Sunday, 20th October.—I had a rather anxious time last night. The river commenced rising again about 8 p.m., and continued rising until 2 a.m., when it was within 1 foot or 14 inches of the top of the bank. It then remained stationary for about an hour, and since then has been falling steadily and rapidly. At sunset this day it was down fully 6 feet. I had made preparations to shift all our stores on to the floor of my tent had the river risen another 6 inches, but, fortunately, it was not necessary to do so. We will start to-morrow to put up a small store with a floor at least 4 feet from the ground, so that we need not fear floods for the future. However, I have come to the conclusion that however good this point may be from a strategical point of view it will be quite untenable during the wet season. As soon, therefore, as we have made things safe for the time being, we will set about making a camp on higher ground. One native called this morning bringing taro and cocoanuts. The natives will not stop any longer than is necessary, hurrying away as soon as they receive payment for what they bring. Thus far I have not been able to get many words from them; they seem to be so suspicious of treachery on our part that it is difficult to make them feel at ease when with us.

Monday, 21st October.—We made a start with our store to-day. An old man is supplying us with cocoanut fronds for the roof; he has been plying his canoe back and fore all day between us and the village; he is to get a small knife when he brings enough for the roof. Strange to say, I had no difficulty whatever in arranging with him to bring the fronds, and he does not appear to be uncertain of receiving payment. I expected him to ask for his knife this evening when he brought his last load; but no, he signified he would go home and sleep, and come again in the morning. This same old man was our first, and has been since our most constant visitor; he is the man who wanted a tomahawk to buy a pig for us; he is generally accompanied by two boys about ten years of age. We also had a number of other visitors here to-day bring sago, taro, and cocoanuts. Sago they call "ambe"; cocoanuts, "mutari"; disc clubs, "bunduga"; and pineapple clubs, "gichi." The river is rising again this evening, and it is raining very heavily.

Tuesday, 22nd October.—The river continued rising last night, and at 10 o'clock was within a few inches of the top of the bank. Fortunately, our store was in a sufficiently advanced state to allow our storing the provisions and trade in it; this we at once did. At 10·30 the river came over the banks, and still continued to rise rapidly; by 11 p.m. the water was over the floor in the police tents. They put up a couple of flies over the boat, and shifted most of their gear into her; some of them camped in my tent. At midnight the water was just touching the bearers of the floor of my tent, or about 2 feet above the level of the bank. The water did not rise any higher than this, but remained stationary until 7 a.m., when it gradually subsided. It was 11 a.m. before we saw any land around us. After lunch we at once set about raising the floors of the police tents. We have now raised them to a height of between 5 and 6 feet. The flood seemed principally to be the result of an insufficient getaway at some point lower down, as at its very highest the current was very slow. We had some target practice this evening, and some fairly good shooting was done. I expected some of the mining party down to-day to report matters. It is possible that the terribly flooded state of the river may interfere with their arrangements.

Wednesday, 23rd October.—Two miners arrived here at 11 a.m. They reported all well. Simpson had returned from a trip toward the ranges, and had reported finding some excellent prospects. No natives had been near their "fort." It is the intention of the miners to leave a quantity of their stores in the fort, and the whole of them to push on inland and try and get over the first high ranges. They have requested me to have a look at the fort now and again to see that all is well. I will do this as well as I can, still I consider it a rather risky thing to leave a quantity of their stores behind unprotected. We have been working hard at our store, and it is now almost complete, only requiring a few more cocoanut fronds for the roof. The old man will bring them on the morrow.

The steam launch arrived this evening at 7 p.m.; she came up without any mishap.

I am very well pleased with the ten police who form my contingent; they have behaved themselves very well indeed, and have been most industrious and obedient.

Some natives were coming to call on us this evening, but when they saw the miners they turned back and would not come.

JOHN GREEN,
Government Agent, N.E.C.

APPENDIX E.

DESPATCH REPORTING EXPEDITION UNDERTAKEN TO EFFECT THE ASCENT OF THE MUSA RIVER.

No. 60.] S.S. "Merrie England," 31st October, 1895.

Sir,—I have the honour to report that on the 25th August I begun the ascent of the Musa River, some three dozen miles of which I was able to examine more than a year ago. The miners, six in number, that were waiting at the mouth of the Mambare for the arrival of stores from Samarai, and who could not return to the Upper Mambare without these, accompanied the party on the Musa to fill in the time they would otherwise have had to wait at the seaside.

I had a boat's crew of six constabulary, and five Taupota men as carriers. The smallest boat of the "Merrie England" was lent to the miners, and the ship's gig was also taken in tow up the river to accompany the steam launch back to the coast.

The sea was breaking on the bar at the west entrance of the Musa, but the boats got inside without any mishap. Some five or six miles from the sea we met three or four small canoes, the inmates of which were apparently coming down the river to fish and hunt. On catching sight of the launch they shot their canoes to the bank and started into the forest. All the inhabitants fled from the first two small and poor villages on the river, some score of miles from the sea; but a little further on we were able to communicate with two men who had probably met us last year and were brave enough to come

near us now. During the first ascent we found the river in flood, and running over its banks on all sides. It was now six or eight feet lower, so that had one not then seen all the alluvial flats submerged one would have probably regarded them now as well suited for cultivation by Europeans.

On the second day we passed in the forenoon the little villages of Giojiwari and Difoda, on the right bank. The inhabitants had all fled, and as it was desirable that the launch should return at once to the steamer we did not then lose time in trying to communicate with them, as we knew that this could be done in returning.

We were able to communicate with two or three men of the Euda tribe, who were friendly and not suspicious. They live in scattered groups of two or three houses. At midday we halted at two small houses on the right bank, where I was able to obtain position from solar observation. The owners had fled, so we left a small present for them and continued up stream. In the afternoon we came to the village of Baruga, on the right bank. It has some sixteen houses, most of which were not good, having permanently open ends. All were badly arranged so far as defence was concerned. Some half-score men remained there, but the women and children were hurried off into the scrub. They carried no arms, and were friendly. They were so poor that they could sell us only some sago, a little sugar-cane, and one or two jade adzes. They live chiefly on sago, but they grow bananas and some taro, the last of which they cook in conical plain pots of clay of the form of a laboratory crucible. They bury in the village, and plant over the graves such ornamental shrubs and flowers as they have, chiefly dracenas, crotons, and betel palms. We saw no canoes there, and it appeared that they used rafts or catamarans instead. They were ill-nourished, and most of them looked thin, anæmic, and are affected by ringworm and ulcers. It was clear that they were a broken and decaying tribe. On the return journey, after seeing the vigorous means of defence possessed by the stronger villages above them, I pointed out to the principal old man the absence of tree-houses and the weakness of the palisade. He gave me to understand they ran to the bush when threatened, where he seemed to indicate they had some shelter prepared. Their rafts are made of the form of an isosceles triangle, of small logs, sufficiently large to carry each two to four light men. They are the handiest and most manageable rafts we have seen anywhere. We travelled some two dozen miles during the day, and camped in latitude 9 degrees 20 minutes 16 seconds by observation. Up to this point no gravel was seen in the bed of the river. The stream was evidently very low, and on its banks the ground was extremely dry. It was noticed that the forest soil was peculiar in being almost free of sand. It consisted of very fine alluvium mixed with a certain amount of humus, forming, no doubt, very fertile plateaus; but whether they are at times submerged or not it would at present be impossible to say.

For the first half-dozen miles on the morning of the 27th we saw no trace of human occupation. A man was then noticed on the right bank, but he darted at once into the forest. Soon afterwards we passed the sites of old gardens, and then reached others in cultivation on the left bank, and in a short time we arrived at the important village of Gewaduru, on the left bank of the river. There are there altogether about two dozen dwelling-houses, all with open ends, small, nearly square, built on posts about 5 feet high, and thatched with sago leaves. Nearly all of them were situated inside of two palisades about 10 feet high, with intervals of several inches between the stakes. The palisade surrounded the group of houses on three sides, the river front being protected by the bank only, which was nearly or quite perpendicular, and 10 to 15 feet high. The special characteristic of this village, however, was its excellent tree-houses. A dozen of these, all on very high and unusually strong trees, were seen from the bank, placed where suitable trees could be found, some of them nearly half a mile from the dwelling-houses.

Only two or three of the tree-houses were accessible by ladders from inside the palisade. The ladders were all of the very useful and handsome kind described in my Despatch No. 19, of 30th April, paragraph 18. A mile further up the river one could see a house or two on the ground, with two or three tree-houses near to them, built on unusually lofty trees, which would seem to indicate that they chiefly apprehended the approach of invaders from that direction. Evidently these villagers were awaiting our arrival, for they speedily brought us a pig already killed and singed, and they hurried to offer us some bananas, taro, and sugar-cane. To my surprise they asked at once for "kilam" (axe), "buku" (tobacco), oto (tomahawk), and "boro-dimdim" (beads). It was at once supposed that they had learned these words from the people of Collingwood Bay. Their costume was like that of the Trafalgar and Collingwood Bay natives; but most of the younger men wore the hair like the men of fashion in Cloudy Bay, only much more elaborately prepared. It is made up in many cases into a dozen or more plaited tails, from 2½ to 3 feet long, and these are each neatly and carefully covered over by pandanus leaf wound spirally round it from end to end. The mass of tails, stiff and straight, is then collected into a bundle which hangs down the back, and the whole is enveloped in a piece of native cloth which covers all from the forehead to the lower end of the collected queues. The cloth is fastened on its lower aspect, and its outer surface is usually smeared over by gum resin or greasy matter, so that it must be practically impervious to water. None of them appeared bearing arms. They offered for sale some jade-stone adzes and some stone clubs. The women and children had been sent away before our arrival.

Half a mile above Gewaduru the launch took the bottom, and it was decided at once to not take her any further up the river, a decision that it was found afterwards had been taken at the right place. We accordingly camped on the right bank, and sent the launch down the river next morning to join the steamer.

On the 28th we continued our way up the river by boat, and, principally by dragging her with a rope, travelled nearly half a dozen miles. The natives came early to visit our camp, using for this purpose the first canoe we had seen in their possession. They were quite friendly, and did not appear to be suspicious of us. Some three or four men followed us up the river, keeping on the left bank. At one place they noticed the footprints of some men in the sand, and the ashes of a fire; they said these were the marks of the Dugari, and that this tribe would not fight.

The miners followed us in the steamer's dingy. We camped at a place called Saumoto, where there is the first rapid we had seen on the river. The bed of the stream was full of large trees, and would be quite impassable to a steam launch. It is in the territory of the Gudari people.

Next day we were met about a mile above our last camp by three men of Gewaduru, accompanied by the Baniyava (chief) of the Dugari. We reached his village about 11 in the forenoon. It stands on a little knoll on the left bank, and has some twelve or fifteen dwelling-houses. They are of the small square type seen elsewhere in this part of the country, but are peculiar in so far that they are built on a

large number of posts about 2½ inches thick and 8 to 12 feet high, so that there is ample room for the platform that is always built on one side about halfway between the floor of the house and the ground. They had three very good tree-houses in or close to the village, and a palisade like that at Gewaduru built round it except on the river side. The women and children had been sent away, and we were invited by the men to land. They sold us a small pig, and offered us in trade their jade adzes (which, I understood them to say, came from the Maneao Range), taro, sago, and small ornaments. They had a number of dogs, some black, others yellow. The chief seemed to assure me there were no natives on the river above that point.

In the afternoon we reached the nearest low hills that lie at the west end of the Didina Range. We had already traversed several difficult rapids, but we soon met with others after entering the hills. On the forenoon of the 30th we remained in one for half an hour, quite unable to move the boat up the stream, until we succeeded by an expedient in hauling her up. In the afternoon we came to a rapid at which we found it necessary to discharge the boat and to carry the luggage to a point above it, and this compelled us to camp there for the night. The miners decided to not go any further for the present, but to make some examination of the hills in that district. We saw no trace of natives on this day. Some of our natives became feverish, owing no doubt to wading in the river on the tow-rope. Next forenoon we reached a point beyond which it did not appear to me advisable to risk the boat, even if it had been possible for us to drag her up the powerful rapids. It was therefore decided that we should leave the boat there with most of our stores in charge of three of our small party. On all sides we were now surrounded completely by steep forest-clad hills, though the height of those nearest to us did not exceed some 1,500 feet.

It was very desirable that the river should be traced further than this point. In the first place, it still retained its original size; the miners found fine colours of gold at every place where there was a deposit of shingle; and from the top of Mount Victoria I had, in 1889, seen what appeared to me to be a large valley or plain, and there was a considerable probability that this river reached that country. It was clear that one could proceed only on foot. Our travelling party consisted of five constables, five Taupota boys as carriers, Mr. Green, and myself. A constable and two boys were left behind to look after the boat, camp, and stores.

The first day we passed what seemed to have been at one time the site of a village, about which were a dozen cocoanut trees, all of which were bearing well. Beyond this lay a hill covered by grass of the same kind as that on the Port Moresby hills. On the surface of the ground there was much quartz in small fragments, but there was no schist formation to be seen anywhere. By midday we found ourselves obliged to leave the river course and to ascend an extremely precipitous hill to get round a cliff more than 100 feet high that projected into the stream, which was there very deep and strong. This was only the first of a long succession of similar precipices that occurred here and there until the whole range was passed through. The first day we made almost six miles more than double the distance we were able to cover next day. Our journey was continued up country for six successive days in excellent weather. We had only one case of sickness on the march, and that not of a serious nature. Our route was rendered infinitely more difficult from the task we had undertaken of obtaining a traverse of the river. This necessitated our keeping so close to it that we should be able to make a travelling sketch of its entire course, which could only be done by keeping so near to it that we had constantly to scramble up and to grope our way down some very difficult precipices, and such steep hills that in wet weather they would be simply quite inaccessible. The hills on the east or Didina side of the river are, with very little exception, covered with trees, except where they are too precipitous to afford them a footing. They rise to nearly 3,000 feet; on the west side the hills are lower, and they present much less forest, many places being thinly covered by eucalyptus trees and by grass, presenting something of the appearance of a park. There are no native settlements in these hills; indeed, those on the east side are too rugged to provide even natives with planting land. Here and there one could see traces of former hunting and fishing parties, but even these marks were not at all common. Specimens of the rocks met with will be duly forwarded to Mr. Jack for examination. No slate formation was seen. The river presents a great many rapids in this part of its course, not a few of which are probably inaccessible to any ordinary boat, even if well furnished with stout men and dragging gear. On the sixth day out we were obliged to make a long detour to turn a precipitious cliff over 1,000 feet high, and which we expected to form the south end of the range. We, therefore, again turned our course to the river as soon as possible. Whilst lunch was being cooked, one of the party fired a shot at a bird, on which we heard distinctly the excited voices of natives between us and the river. When we arrived at the latter, we found four men sitting on the opposite bank, evidently waiting and watching for us. On our calling to them they replied, using some words we recognised as being in use at the villages of Gewaduru and Dugari, and they made signs to us to go further up the river to a place where they could obtain the means of crossing it to join us. About half-a-mile further up they met us, but already accompanied by about a score of men, while others were approaching in twos and threes. They were all unarmed, and had brought a little food for sale. After meeting them, we went about a mile further and formed a camp on a small ridge on dry ground and in a good defensive position.

On getting through to the south side of the chain of hills traversed by us, the Musa enters a great long and broad valley, which might almost be called a plain. Hardly has it entered on this when it divides into two nearly equal tributaries, the names of which are respectively the Moni and the Adaua. They are in appearance each as large as the Musa itself, a deception that arises from the fact that their current in the nearly level plain is much slower than that of the fast-running Musa. The water of the Moni was yellowish, that of Adaua was hardly discoloured. The Moni proceeds south-west for half-a-dozen miles and then strikes away towards west and north of west in the direction of Mount Victoria. The Adaua goes at first for a few miles east of south, when, as far as I could ascertain, it receives the Domara branch, and then turns eastward towards the great Goropu Range. The valley traversed by the Moni is fifteen to twenty miles broad. At a distance of twenty-five to thirty miles towards south and west we could see the blue outline of the central main range, and trace it up near to Mount Victoria, which, unfortunately, was always covered by clouds. On the north side this Moni valley has at first the Obei hills, and then the extensive Mount Parkes, so named by me when it was first seen from the top of the Owen Stanley Range. In the Moni valley are several low, long, rounded hills, some of them probably 1,000 feet high; all of them so thinly wooded that they present a greyish appearance. The greater portion of the rest of the valley is covered by grass and reeds. The village of Mongori, the chief native

settlement, as it would appear, in the district, is on the Moni, about half-a-dozen miles from its junction with the Adaua. The name of this tribe, which apparently would philologically mean the village of Moni, is often given to the Musa river by the people of Guda and Gewaduru. The smoke of villages and of land-clearing could be seen at many places in the valley, right on to the spurs of the central main range.

In the valley of the Adaua the first hills are two very remarkable ones, lying towards the south-east some ten or twelve miles from the junction. Boroboro, the more easterly of the two, rises almost perpendicularly out of the plain, and seems to be 1,000 to 1,200 feet high; it appeared to be nearly level on the top, and to be one to two miles across, but of an oval shape. In the perpendicular side were traces of horizontal striation. Two or three miles south-west of Boroboro rises Goidami, which much resembles Boroboro, but is larger and higher. They have no forest on them. The natives were understood to say that the Adaua comes through between these very remarkable hills. Due south lay the mountain of Ujaura, closing in the valley of the Adaua on the south, at a distance of fifteen or twenty miles from the junction. This mountain is 5,000 or 6,000 feet high, and is generally forest-clad. To the south-east of the Adaua a high central range could be traced to a distance of thirty or forty miles. The east end of the Adaua valley was cut off from view by projecting spurs of the Tevara and Didina hill ranges. The width of the Adaua valley is apparently about a dozen miles. The east end must be met by the great Goropu Range, just as the Owen Stanley Range closes in the west end of the Moni valley.

Although the Didina-Tevara Range, which lies between Mount Goropu and the Musa, and the Obei hill, which are situated between Mount Parkes and the Musa, seem to be uninhabited, the valleys of the Moni, Domara, and Adaua are in the possession of a considerable population of very interesting people. Among the first natives to visit us after our arrival, an event which clearly was expected, was the so-called chief of Adaua. He is always styled officially "Adaua-Bani" (chief of Adaua). He is a tall man of about sixty, with a benevolent, contemplative face, and of a quiet, dignified bearing. On the forenoon of Sunday, the one day we spent in camp, the chiefs of Domara and of Mongori visited us. The former is a large man, and is obese, a very unusal condition amongst Papuans. His face is pitted as if pock-marked, but this has apparently been caused by some other disease. No other person was seen similarly marked. He was remarkably good-natured, and wished to be both friendly and hospitable. The Bani of Mongori was a man of more nervous temperament, energetic, and, amongst his own people, authoritative. It was clear that these inland chiefs really enjoy some of the respect and authority of their position. They tried to betray neither such surprise or emotion as would compromise an attitude of reserved dignity. A second Adaua chief was, on tasting sugar, greatly perplexed how to maintain befitting deportment and at the same time to give expression to his astonishment. First, he bit the end of his left thumb and clucked like a fowl; then he spread out his palms, put his thumbs together, laid both hands flat on the shoulder of the friend sitting near to him, and pushed him away, while his face was radiant with a smile of pleasure and surprise. I saw only one woman.

These men are in size somewhat above the average Papuan, and with fairly well-formed legs. They are a shade darker in colour than the Port Moresby average native, and nearly of the same tinge as the people of Cloudy Bay. The nose is longer and stronger than at Port Moresby, but the face, although evidencing greater power, is of the same type, though with an approach towards the features of the men of Toaripi. They do not tattoo. A number of young men wore the hair done up in long queues similar to the style common in Cloudy Bay. In many cases it seemed to be quite neglected, uncombed, and unplaited. The chiefs and elderly men are fond of wearing a piece of native cloth on the head, a use to which each of the three great chiefs at once put the bit of red cloth given to them. All wear a girdle, and a perineal band of native cloth. We saw no spears, and it is almost certain they do not know the bow and arrow. At Gudari there were shields five feet long, like those of Orangerie Bay. A few had a stone club, of the ordinary disc kind, made of a dark stone like basalt. They use stone adzes made of jade, of the revolving kind that can be used at any angle. They wore earrings formed of a ring cut out of a cocoanut-shell by traverse section, or made of the seeds of *Coix lacrymæ*. They have necklaces of dogs' teeth and of small white cowries; finger-rings of the skins of wallaby and cuscus, or cut in one piece out of the shell of the cocoanut or of other nuts. They eat lime and betel-nut, but they do not seem to possess much of the latter. The lime and betel gear they carry in a net-bag on the arm. One or two chiefs had lime spatulas of ebony, but they said these had come from a distant country. The son of the chief of Domara wore a string of glass beads in the septum of the nose, and these they said, had come from the south coast. They make and use clay pots. They brought us two small pigs of the ordinary kind, taro, bananas, potato yams, long thin yams, and sugar-cane, the latter of several different varieties, but affected by borer. Tobacco they do not know, but they are very desirous of learning to smoke. They are, perhaps, the politest Papuans we have met. I was invariably addressed as "Mambu" or "Toma," words which appear to correspond to friend. "Ero" is a word that was constantly used by the natives before approaching us, and which seemed to have the meaning of peace and salutation. If one struck one's foot against a stone on the path, one of these men would say "Ero" in an apologetic tone. Every now and then it was startling to hear them use a word or a whole phrase that one had been accustomed to in Fiji or at Port Moresby, but sometimes here the word or phrase had a totally different signification. The method of enumeration apparently is on the same system as at Orokolo, at the mouth of the Purari River. They begin with the little finger of the right hand, use the fingers of that side, then proceed by the wrist, elbow, shoulder, ear, and eye of that side, thence to the left eye and to the left shoulder and down the left arm and hand to the little finger. Many of them in counting become greatly confused on reaching the face. Only a few carry it on to the other parts of the body to finish with the toes. This system of enumeration is found at all the lower villages on the Musa, and was known to the natives of Trafalgar. Their language is clearly one belonging to the common Papuan stock, but differing much in vocabulary from any we have hitherto become acquainted with. It is nearly related to the dialects spoken from Collingwood Bay to the Mambare River.

It was manifestly impossible for us to examine the great valley and extensive mountain chains surrounding it. To do this will be the most interesting work of the kind ever undertaken in the Possession. It is at too great a distance from the sea and of far too difficult access to be of any use as an ordinary agricultural district; but lying as it does in the very heart of the country, and at the foot of the greatest mountains in the colony, it will present a fine field for the prospector, of large extent and very varied. Traces of fine gold were found by the miners in the gravel of the Musa at Gewaduru,

and at places above that. The metal in all probability comes from the interior, for there does not seem to be ordinary gold-bearing strata in the Didina-Tevara Hills. It will apparently be easy to travel for many miles on the Moni and Adaua, in boat or canoe. It did not seem to be the case that canoes are common there, but the natives use rafts instead. The best plan would probably be to organise a strong party to ascend the river next June, to form a central camp near the junction of the Adaua and Moni, at which half a dozen men would remain to look after stores, while half a score of men went to examine the Moni watershed, and a similar number gave their attention to the Adaua and Domara. They should be provided with all necessaries for a stay of about three months. If possible, this will be carried out next dry season. As far as could be judged from such a hurried visit the country is healthy. The natives of the valley suffer much from the usual ringworm. Several have large swellings in the groin, and sometimes in the scrotum. These are not due to elephantiasis; ulcers and other maladies were not observed.

On the Monday forenoon the Domara chief was, as we learned on Sunday evening, to return to our camp with food for us. Several men offered to accompany us back to Gudari. Most of them advised us to go down the river on rafts. Their counsel was not adopted. In the first place it was very desirable to find a better road over the hills than the extremely difficult one we had come by; and in the second place, as the party was so small and we were unacquainted with the river, it was not deemed advisable to trust all our arms and ammunition to the many accidents incidental to the use of rafts on our fast rivers. We left our camp on the Adaua at 7 in the morning, before the arrival of any native visitors, who would of necessity have caused us much delay. At that hour the whole valley of the Adaua and Moni was covered by a dense white fog, through which we could see nothing. We were fortunate in finding a way back that was so great an improvement on the outward journey that we had lunch on the same day we started back in the camp at which we slept two nights before we reached the junction of the Adaua and Mongori. We found that we could by exertion travel in two days from the junction of the Moni and Adaua to the place where we had left our boat on the Musa. There we found all well, and that no natives had visited the camp in our absence.

On the 12th September we started down the river in the boat, which had an extremely narrow escape of being dashed to pieces in the first rapid on a concealed rock. We found the diggers a few miles lower down. They had not discovered any trace of gold in the Didina Range. At midday we reached the village of the Dugari, where we remained and had lunch. There were forty or fifty men in the village, but no women or children. They did not carry arms, and were quite friendly, but greatly more excitable and noisy than the people of the valley. As the prospectors wished to examine the east end of the Didina Range, it was decided that we should remain two days at the camp at Saumoto Rapid, where I thought it might be possible to learn something of the language from visitors from the villages of Gewaduru and Gudari. The first day of our stay there we were visited by a very old man, apparently the father of the Bani of Gudari, who was accompanied by about twenty men. They called him "Kapusi" and treated him much more tenderly than is the lot of old people elsewhere in this country. One man, after selling a taro, was found abstracting it with the object of selling it a second time, one of the vulgar manipulations of Papuan dishonesty. Next day the Bani himself was among the visitors. He wished so make me a present of two very small taro, for which I was to present him with a new tomahawk. He seemed to be much disappointed that I refused to enter into the transaction. Soon after this Gudari company had left us two men arrived from Gewaduru, anxious to know when we would go on to their place. Whilst they were with us another company arrived on the opposite bank, from Gudari, and shouted to us to send the boat for them. The Gewaduru men said the new arrivals were bad, and that I should not let them cross. I replied that they were friends as they were from Gudari. They then said they were from Mongori, to which I replied that Mongori also was very good and friendly. When, however, they met, the Gewaduru men professed to be extremely glad to meet the others. It was clear that under ordinary circumstances they are not on good terms. On the 16th September we camped near to Gewaduru village, the men of which came at once to our camp and were friendly and hospitable. In the afternoon I went to the village with them. I was invited to sit on a small square-roofed platform in front of a group of houses. There were no women or children in the village. No one had arms in his hand or near to him. They brought us a little food, but vegetables did not seem to be very abundant with them. There is but very little sago on this part of the river, and their yams are very small and the bananas are very inferior. When about to leave I found that a man of the village had stolen one of the rowlocks. I asked for it, and it was at once brought back and delivered up. After sunset there was a loud and warm debate among the men of the village as to whether the women and children should return to the houses to sleep. It ended in their coming back. Apparently they had made up their minds that we meant them no harm. One circumstance that must have tended to give them confidence in the party was the fact that we unconsciously put up our camp within a few yards of their yam garden. They used to come to our camp, go into the garden, which was not ten yards away, and bring a few yams each for sale. Of course none of our people took a single root from their garden. The chief, although very friendly, would not accompany us down the river to the next tribe. There were people waiting to receive us at all the villages below. They were uniformly friendly. The first village below Gewaduru is called Baruga. It was clear that at Baruga the villagers apprehended no harm from us, as nearly all of their men had gone down the river to hunt and make sago.

At Enda or Endari—for the termination "ri" may or may not be added to these names—we found about thirty or forty very fine, strong men. It was noticed that each man at work in his garden had his spear disposed so as to be easily within reach of his hand in a moment. At Endari there is the largest cocoanut plantation on the river, consisting of about a score of trees. This scarcity is not because the trees will not thrive, for the largest nuts I have seen in the colony are those grown on this river above our furthest boat camp. It is doubtless one of the results of eternal intertribal warfare. The lowest dwellers on the river bank at Giojiwari and Difoda were remarkably kind and hospitable people, eager to do a little trading. They were also weak in strength and numbers.

On the 18th we selected a camp on the right bank of the river at the point that seemed most convenient for trying to find an approach towards the mysterious Mount Victory. The miners had gone on down stream to the sea, so that we had here parted company definitely. Next day the constables and Mr. Green went out from camp in several directions, and from their reports it would seem to be only a question of hard walking to reach the spurs of the mountain from where we were encamped. At about 7 o'clock on that evening, it being then very dark, we heard quite distinctly the sound of paddles propelling a single canoe up the river towards us. Some of the carriers were in our boat fishing

alongside the bank, and those in the canoe must have seen the lantern these had in the boat. The noise of the paddles ceased, and we heard nothing further. This did not cause any surprise, especially as at a place further down the river we met four or five small canoes equipped for hunting and fishing as we were ascending the stream. But the time, the travelling in deep darkness, and the fact that I had already found by experience that it is the usual custom of a great Papuan expedition to send one scouting canoe ahead, made the occurrence notable, and a double guard was kept all night in our camp. To the great surprise of the men on duty next morning, there suddenly began to appear in sight with the first dim, grey dawn of the day the leading war canoes of a powerful native armada. They came on up the river out of the semi-darkness with swift and steady strokes of the paddle, with a silence and regularity that was almost spectral. So great was the astonishment of our people at the sudden and stealthy appearance of the gaudy and ghostly host that half the fleet had passed us before they thought of calling me. When I reached the bank the foremost canoes were already disappearing swiftly round the first bend of the river out of sight, and there were not more than a dozen gliding up the river to pass us. The river was about 80 to 100 yards wide, and they were going up close to the bank opposite to us. In one large canoe near the middle of the flotilla were two big men, each standing erect in the hull of a fine war canoe, one at each end of the square platform. They were in complete martial panoply, covered by paint and plumes, and each, as he remained in an attitude as stiff and silent as a pillar of stone, held his right hand on a great tall war spear, which he held erect, the lower end resting on the bottom of the canoe. These two spears were nearly covered with white feathers from end to end. Every other person in sight paddled as regularly, as industriously, and as silently as if he had been a piece of machinery; all faces were turned steadily up the river. It appeared that hardly an eye was diverted in our direction. One single voice said to us once, in a low hollow tone, "Orokaiva." Nothing could be more mysterious and impressive than the sudden appearance at such an hour of this great force of men, evidently so eagerly intent on some high purpose of their own that they had neither a moment of time, a word, nor a look to devote to two solitary white men and a boat's crew of Papuans. We counted twenty-eight war canoes, containing on an average about ten men. Most of these canoes were new. There were besides this a few small ones. There were no women, no children, and no dogs. Every man was decorated as if for war; each canoe had a supply of arms, shields, spears, stone clubs, and stone adzes. There could be but little doubt that it was a great war party invading the river. When I saw them first it was already far too late to attempt to stop them, as quite half had then got above us. Then I was afraid to send them back down the river, lest they should surprise and overwhelm the miners, as to the exact whereabouts of whom I was then ignorant. To follow them in a boat was hopeless, as their canoes could go up stream at two or three times our speed. The "Merrie England" was expected next day at the mouth of the river. It was therefore decided to proceed thither at once, and to follow the invaders with the steam launch at the earliest possible moment. By noon we reached the mouth of the river, and fortunately found the steamer already there.

The Commandant and a detachment of nearly a score of constabulary had been sent for to visit the Mambare. With these we were ready to start up the river next morning. Such good use was made of time that we sighted the nearest of the invaders by 1 o'clock on the afternoon of the same day. The river was there so crooked that we could not see more than a third of their party at one time. They were all on the right bank with their canoes drawn close in shore. They had probably heard our approach and made some arrangement for our arrival. Behind them the ground was covered by low thick pandanus bushes, or by tall dense reeds. When we came within sight of them, many of them stood on the bank, which was 5 or 6 feet high, with shields, spears, and stone clubs in their hands. Numbers began to shout to us, "Orokaiva" and "Wera," and to make friendly demonstrations. As we kept towards the other side of the river and said nothing, while the constabulary got their arms ready, not a few of them gradually disappeared into the "bush." On the platform of the first canoe we passed, but partially concealed by a mat, there lay the dead body of a full-grown native man. As it was not yet absolutely clear what was the nature of this expedition, which, after all, might be proceeding to some great feast up the river, although we had seen no preparations there for anything of the kind, or might be a great hunting expedition at which a man had died or been killed by accident, we continued our way up the river, while I carefully examined with the glass each canoe we passsed. Before we reached the highest canoe I had seen four dead human bodies on them, and, what was more decisive, parts of dead bodies. It was clear they had already surprised and massacred at least one community on the river. As this became apparent it was also easy to see that the most pressing and important consideration was to save the other tribes on the lower Musa, and that the only certain way to do this was to get above the invaders in order to drive them down the river. The style of canoe, the shield, the dress and ornaments of the warriors seemed to show that they were from Collingwood Bay. This opinion was confirmed by some of them calling out "Wera, wera," and by a man saying they were from Makimaki. They were evidently desirous of peace, and prepared to be friendly. They certainly knew perfectly well who we were, as I had already several times visited all the coast villages in Collingwood Bay and round Trafalgar, and had been at least twice at Makimaki with the steam launch. I was in hope that by getting quite above them and forcing them down the river, we should not only completely clear the district of them, but that they would fight stoutly when all were forced together. They manned their canoes in a moment and fled at top speed down the river, getting a clear start of us. About a mile down a dozen canoes were drawn into the left bank and made fast there, their occupants taking to the bank in groups, but retiring into the forest behind as we approached. Had it been possible to do so, we would have sent all the canoes intact down the river, but this could not be done as the outrigger is at a great distance from the canoe, and the canoes were very long. In this way the canoes constantly became impeded and entangled by the numerous snags in the river. Had we left them thus, the invaders, as soon as we were gone, would have resumed their canoes and continued their devastations. There was, therefore, only one course open to us—as we could not capture the natives by openly chasing them in the bush, we had to destroy what canoes we could not carry off. As there were only well-armed men on the high banks, which were covered by scrub, reeds, and trees, the work of destruction had to be performed with all the precautions necessary to prevent a surprise from such a horde of savages now being reduced to a state of desperation. With much severe labour on the part of the constabulary, the first division of canoes was cut up so as to be useless: and we continued our way down the river in pursuit of the others. The Commandant, with half of the constabulary, remained in the upper part of the river to see that the

canoes left there were all thoroughly disabled, whilst I went down stream at full speed with the launch, towing the second boat, to overtake and cut off the other canoes. At our camp at the foot of Mount Victory they had drawn into a creek half a score of canoes, three or four of which seemed to be captures they had made up the river. We tied them altogether, end to end, and drew them out of the creek by the steam launch, and took them down the river. A mile or two further on we found seven fine war canoes tied up to the right bank, the occupants of which had taken to the bush. This last division, we found, completed the total number of the war canoes that had passed us as they ascended the river. These we sent adrift down the stream, and, passing them with the launch, we camped about half a dozen miles from the mouth of the river, so that we could intercept anything coming down stream. From what was found in the canoes it would appear that the marauders had already captured probably some ten or twelve people. There were, on as many separate canoes, four adult undivided dead bodies; on another there was the body of a little girl of seven or eight, still tied by the hands and feet to the pole on which her tender little body had been carried to camp. Some of the others had similar lashings still on their limbs, and one was bound on to a strong flat board laid under the back, and which had been used as a vehicle of transport. On the platforms of all the canoes were pots of clay, stone adzes, stone clubs, spears, mats, betel and lime gear, pig nets, and some of the new plane irons we had given to the people of Endari only two days previously. But in the midst of these miscellaneous articles, on a canoe platform, one could see here and there a human foot projecting from the mass, or it might be a hand and arm, on which there still remained the rings of shell and other materials that were worn as ornaments during life.

A nearer examination would then show that the member was detached, that it had been clumsily and unskilfully hacked from the body by an unexperienced hand, and that it was already half-cooked, probably in order to keep it longer sweet. On the platforms of the canoes were also little neatly made-up parcels and packets of human flesh, deftly enveloped in leaves and tied with bark. On some of the platforms were large and small uncovered pieces, some cooked and ready for the table, others apparently the remains left over from an interrupted meal. One of these was a large portion of the back of a child half-cooked, and corresponding exactly to what is known to the cook as a "saddle." In the holds of some of the canoes were coils of human intestine, sorted as one folds a fishing line, with a stick through the coil supporting it by resting on the edges of the canoe, so as to let the coil fall into the hold, but without the lower end reaching the bilge water in the canoe. When we approached them first the invaders made no attempt whatever to conceal the dead bodies, or the parts of them that were lying about. When they abandoned the canoes they left the unbroken ones and the whole limbs; but they carried off many smaller portions, to which they clung with such tenacity that when a party of them were encountered by the police next day they still bore with them some of these small parcels of human flesh, one of them dropping the breast of a woman only at the last moment when he was on the point of being captured, and had to put forth all his strength in order to escape. Everything on the first division of canoes went to the bottom of the river. From the canoes that got away down stream the occupants were able to remove the greater portion of their property; but pots, drums, nets, adzes, &c., could be found along the paths by which they had fled. There was little probability of our ever being able to get near those that had landed on the right bank of the river, but all those (nearly half) that had hurriedly and unwisely taken to the left bank, thus putting the river between themselves and home, were in some difficulty, as to cross the river by swimming is very dangerous on account of the great number of crocodiles in it. A detachment of the constabulary was sent up the river with the steam launch on the following morning under the orders of Mr. Moreton. They met and had a short conflict with a strong band of the fugitives, two of whom were shot dead on the spot. A third one they brought into camp in the boat. A bullet from a snider carbine had hit him on the right thigh, smashing the bone into a quantity of small fragrants. He was taken on board the "Merrie England" on the 22nd September, where his terrible wound was attended to by Mr. Symonds, the purser, until the 25th October.

A speedy visit to the Mambare River was so urgently necessary that it was quite impossible to give any further attention then to these Musa invaders. It was decided to restore the wounded man to his tribe. This was done on the 25th October. Under his directions we entered the harbour of Porlock Bay, and ascended the creek that opens into its upper end, for about a mile; we then turned to the left and found that his tribe, the Mapuya, live on Mount Trafalgar. Some of his countrymen were on watch on the heights, and at first all retired and kept out of sight, but after some trouble we got into communication with them, and finally induced some of them to come and take over the wounded man. They were very desirous of establishing peace and friendship, although, no doubt, those we met had been participants in the raid on the Musa. They manifested wonderful self-possession, and seemed not to entertain any suspicion of treachery on our part after they once approached us. No attempt was made to arrest any of them, in consideration of the circumstances under which they met us. No very precise information could be obtained from the wounded man as to who were in that expedition, but it was totally clear that it comprised the Trafalgar tribes, and at least part of Makimaki, in Collingwood Bay. On the 26th October a hurried visit was therefore made to Collingwood Bay. It was found that certain natives of Maisina have built half a dozen houses on the island of Sinapa, in Phillip's Harbour, probably induced to do so as being convenient for trading with any vessel calling there. They were not afraid or mistrustful, and were, of course, quite friendly. We left one boat with the magistrate and commandant at Maisina while I proceeded in the other boat to Makimaki. They found the Maisina people friendly, and not nearly so boisterous, presuming, and unruly as formerly was the case. They did not carry arms. At Makimaki, a great part of the men on seeing our approach seated themselves quietly on the sandy beach to wait for us. None of them had arms near them. We could hold only very limited colloquial communication with these people. The chief denied clearly and distinctly that they had been up the Musa, but he seemed embarrassed and disturbed by the question. It was also noticed that stone clubs were not, as used to be the case, offered for sale, and they did not seem to be rich in stone adzes. Several of them were in mourning, and they were making some new canoes, considerations that in the aggregate would seem to point to their participation in the late expedition. It will be necessary to arrest and punish the leaders in that raid; but this will require that one live in Collingwood Bay and on Trafalgar for two or three weeks first, in order to learn who they were. This had to be deferred for the present.

I have, &c.,

WM. MACGREGOR.

His Excellency Sir Henry W. Norman, G.C.B., G.C.M.G., C.I.E., Brisbane.