

M^{rs} Latimer Greene
with the writer's compliments &
best wishes.

Sacramento

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NOTES

FROM

THE SARAWAK GAZETTE

BY

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Curator of the Sarawak Museum.

1907-1915.

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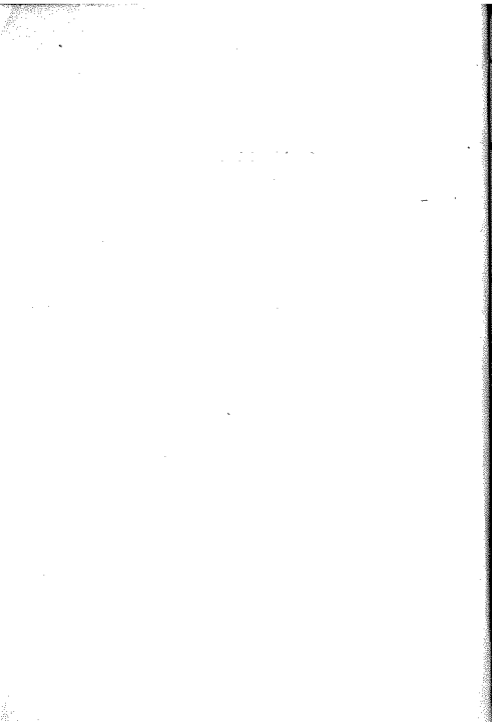
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EXPOSITIONS.

I. Mount Penrissen.

[Published January 6th, 1910.]

The following account is an attempt to set forth in brief a history of all the ascents made of Mt. Penrissen, a lofty mountain at the source of the Sarawak river, some 60 miles from the sea as the crow flies. The mountain is easily seen from Kuching, showing well above its neighbours. To the immediate north lies Mt. Mesuah separated from the Penrissen group by one deep valley. Penrissen itself resolves into three separate peaks, Mts. Seruru and Prang, running north and south, and the table-topped Penrissen running south-west to Prang with little more than 100 feet difference between their respective heights.

The mountain is particularly easy to ascend and the distance from Kuching is by no means formidable. By travelling quickly it would be possible to reach the summit in 24 hours from Kuching. To do this the traveller should follow the Penrissen road to Segu, take boat from there to Pangkalan Ampat, and then walk to Sennah and thence a 7 hours' comfortable walk should bring him to the summit.

From a naturalist's point of view it presents many points of interest. Some mammals (chiefly small rodents) seem to be common to Kinabalu and Penrissen, and several species of insects found on Kinabalu also occur on Penrissen. A few insects have been found to be peculiar to Penrissen: and another feature is the perhaps rather unexpected absence of many Matang and Santubong species. A prolonged stay on

the mountain would doubtless produce many interesting novelties even now, in spite of the large collections already made by Messrs. Shelford, Cox, Everett and Dr. Haviland, since even in a four days' trip there last month a few were found.

Beccari describes the group thus:—"The Penner-rissen group is an isolated elevation which is not connected with any extensive mountain range, and lies between the territory of Sarawak and that of Sambas and Pontianak. From its northern slopes flow the waters of the eastern arm of the Sarawak river, and those of the Sadong; while from the southern slopes rise the Sambas, Landak, and Sikayan rivers, the latter, as I have said before, an affluent of the Kapuas."

The first mention of Mt. Penrissen appears in Low's "Sarawak" published in 1848. In this he says (p. 295):—"The southern branch of the Sarawak river has its sources in the Gunong Penerissen: the highest land in this part of the island. Penerissen, or Besuah,* as it is sometimes called, is a table-topped mountain, about 4,700 feet in height, situated between sixty and seventy miles from the coast in a direct line. One of the tributary streams of the great Sangow River..... flows past its southern base."

And it seems probable that Mr. Low was the first white man to ascend the mountain (1845—1847).

Sir Spenser St. John in his "Life in the Forests of the Far East" speaks of "Penrissen, one of the highest mountains in Sarawak..... It is estimated at above 5,000 feet above the level of the sea."

The first account of an attempted ascent of Penrissen is published in the *Sarawak Gazette* for January 1886.

In that number is published the fourth instalment of "A tour among the Dayaks of Sarawak." The first chapter deals with the start of an expedition in which Mr. Chalmers, a missionary, and the author were the only Europeans; the object being a tour of the villages

* *Besuah* is almost certainly a mistake for *Mesuah*, which is not another name for *Penrissen* but a separate peak to the North.

on the left-hand branch of the Upper Sarawak river. Accordingly a start was made on May 6th 1858 from Belidah Fort, and after passing several nights at the villages on the river, they eventually arrived at Sennah on the 19th; and on the 22nd a start was made for the mountain from Tebia. "From one of the houses in the village," this author relates, "there was a fine view of Penrissen, the great mountain which Mr. Low ascended, and which it was my ambition now to reach. There it frowned, with its table-top half enveloped in clouds, some three miles off. The view from Tebiak was certainly imposing, the village itself being situated on a pretty high peak surrounded by higher ranges." The author dwells on the excuses put forward by the Dayaks, such as "Sennah was nearer;" "We should have to be in the jungle five nights;" "The rocks were tremendously steep;" "It was very cold on the top;" "Nobody knew the road;" "There was none;" etc., etc. They finally reached a summit in the afternoon, only to find that it was not Penrissen which they had ascended at all, but its neighbour, Mt. Mesuah. In discussing the height, he says, "we had no barometer, but I think we could not have been less than 5,500 feet above the level of the sea. Penrissen is about 6,000 feet high." No further attempt was made to reach the higher mountain by these two travellers.

The next ascent, if Mr. Shelford's statement is accurate, would be that made by Dr. O. Beccari in 1866. In the *Sarawak Gazette* of July 1899, Mr. Shelford in his account of a trip to Penrissen writes: "On the following day (Saturday, May 13th) Mr. Cox..... reached a magnificent plateau of considerable extentwithout doubt the situation occupied by Signor Beccari who once visited this mountain." In Dr. Beccari's book "In Bornean Forests," however, he distinctly records his failure to ascend Penrissen; but he indicates his intention of visiting the mountain thus: ".....but I remained, awaiting the Sennah Dayaks, whom I had sent for to fetch my luggage, and to guide me to Mount Penrissen of which I wished to attempt

the ascent." He stayed in the village of Tappo Kakas, from which point he wished to make the ascent. The account of his failure to do so is given thus: "It was my intention to start from this place, which has an elevation of about 1,150 feet, for the summit of Gunong Pennerrissen, or as I have also heard it pronounced, Mengrissen. This has been considered one of the highest mountains in Sarawak, but it is certainly inferior to Gunong Poe†. Seen from a distance, Mt. Pennerrissen does not seem to have any striking summit, nor to tower much above its neighbours.

"The Dayaks of Tappo Kakas, for some special motive of their own, showed no wish to guide me up the mountain. On the contrary, they did their best to dissuade me from attempting the ascent, and declared that unheard of difficulties would beset me on my road to the summit. Most certainly from the village in which I was the way to Mt. Pennerrissen was neither short nor easy, as I could see for myself. Besides I had brought with me only a small quantity of provisions. So making a virtue of necessity I contented myself with the ascent of Gunong Wa, an easy undertaking from Tappo Kakas."

He went up on November 19th returning to Pangkalan Ampat on November 21st, to Sennah on the 23rd and to Kuching on the 25th.

This I think must certainly disprove an ascent made by Beccari during that visit to Upper Sarawak, and I am unable to trace any other mention of his journey in that neighbourhood again; I was also unable to hear any mention of his name from the Sennah or Tebia Dayaks among those of Europeans who had climbed Pennerrissen during their time. And the old Orang Kaya of Sennah told me he remembered Tuan Low's ascent when he was a little boy, i.e. over sixty years ago.

This brings us to the first published account of the ascent; this time made by Mr. Oliver St. John with a certain Mr. C. in February 1880. An excellent descrip-

†Beccari makes the height of Mt. Poe to be 5,520 feet.

tion of the trip appears in the *Sarawak Gazette* for February 28th 1880, from which we get the first authentic record of the height of the summit. They started from Sennah on February 5th about 8 a.m. and finding the path by no means difficult arrived a little after 2 p.m. at their first camping place, 3,200 feet. Next day they started for the summit, arriving at 11 p.m. on "a narrow neck of land, sloping down steeply on either side, which we were told was the foot of the last peak." A little way below this ridge is a large overhanging rock, under which they camped for the night, and today it is known as Tuan St. John's resting place. As the remaining part of the climb is the only really difficult part I give St. John's description of it and the summit:—"After a short rest we left our camp (4,000 feet) accompanied by one guide to try the peak. By this time it had become very clear to us that the compiler of the map we had consulted had drawn considerably on his imagination in putting down the mountain at 6,000 feet, but from what we could see, we concluded that the last climb might be some 700 to 800 feet. It was undoubtedly steep enough, and made up for previous deficiencies in that way, and in one or two places it was nervous work, but we persevered and in a very short space of time we gained a level space. Our guide then informed us that we were on the extreme top. We could not credit it, but on examination found that it was true. The top of Penrissen is a plateau of no less than 50 to 60 acres, with comparatively large trees on it, surrounded by a dense growth of scrub, rattans, etc. There was a sort of water course trickling through it. The elevation was found to be 4,450 feet or almost exactly 4,000 feet above Sennah village. A finer situation for a sanatorium could not be wished." And as Mr. St. John justly remarks, the ascent from Sennah is remarkably easy and gradual, with the exception of the last cliff which should be easily overcome by a system of ladders. He gives the temperature at 1 o'clock (4,000 feet) as 68°, falling to 62° in the night. They descended next morning "and arrived at Sennah fairly tired, about 3 o'clock."

In June 1882, Mr. St. John made a second ascent, accompanied on this occasion by Mr. O. F. Ricketts and Mr. Safe. Mr. St. John again gives us an account of the trip in the *Sarawak Gazette* of July 1882. In this account he notes that his Dayak guides chose a different path to that taken in 1880, apparently rather steeper. Their first camping place was at an altitude of 2,400 feet; this they left early next morning, passing St. John's old camping-place, and arriving in a dip of the mountain (3,700 feet). This was evidently between Mts. Seruru and Prang, as he goes on to describe "a sheer climb of 400 feet immediately above to get out of this dip in the ridge," and then "another dip with the peak immediately in front." The former camping-place under the big over-hanging rock was again utilized and in the afternoon they explored the summit. After staying the night on the mountain, they returned to Sennah the next afternoon.

During the next ten years, three more Europeans seem to have made the ascent, of whom a Mr. Henderson, at one time in charge of the Matang Estate, was probably the first. He is still remembered among the Sennah Dayaks as Tuan Matang, and they assert that he never reached the peak. The next European was Dr. G. D. Haviland, who lived for some little time at Pangkalan Ampat from where he used to make many botanical excursions. About 1890 he went up to the top of Penrissen but does not seem to have stayed on the mountain any length of time or made any large collections there. The last of these three was Mr. A. H. Everett who went up in July 1892 and made some interesting collections of mammals there, finding many forms common to Mt. Kinabalu. He too, according to the Dayaks, did not reach the summit.

Penrissen then appears to have been left in peace till 1899, when Mr. R. Shelford and Mr. E. A. Cox made the ascent. An interesting account of this trip appears in the *Sarawak Gazette* for July, 1899, and another more detailed account from a naturalist's point of view appears in the *Journal of the Straits Branch, Royal Asiatic*

ic Society (January 1900), both accounts from the pen of Mr. Shelford. This was essentially a collecting expedition and during the three weeks spent on the mountain, a remarkably fine collection of birds, beasts, and insects accrued, resulting in many new and interesting species. The botanical collection was small, although found by Mr. H. N. Ridley to contain some interesting forms.

They left Sennah on May 11th camping for the night at Batu Tinong—"a huge over-hanging boulder of sandstone conglomerate,"—altitude 2,400 feet. Next day they arrived at the accustomed resting place, where all the previous Europeans appear to have stopped for a night, at an altitude of 3,400 feet (3,200 feet according to St. John). Here Mr. Shelford spent a week collecting assiduously, while Mr. Cox had reached the summit, which he made out to be 4,800 feet, returning thence to a lower place for camp. On the 18th Mr. Cox moved on to Mt. Prang, 4,000 feet, Mr. Shelford joining him there two days later. A week later they returned to their old camping place and "on May 30th we left at 7-45, Mr. Cox arriving at Sennah at 3-30, myself at 4-30; from Sennah we proceeded straight to Pangkalan Ampat, leaving for Kuching on June 4th."

Ten years later (Nov. 20th, 1909) there might have been seen yet another little party assembled at Sennah, worrying the old Orang Kaya about recalcitrant coolies, just as Messrs. Shelford and Cox had worried him in '99, Messrs. St. John, Safe and Ricketts in '83, and perhaps the others too in the years before. This time the party was composed of three Europeans—Mr. H. B. Crocker, Mr. H. P. Adams and myself—under the guidance of an elderly but none the less active Dayak, Beracha by name, from Pangkalan Ampat, who had made the ascent with Mr. St. John. The would-be early start resulted in getting off at 7-30 a.m.; and fording the river, luckily quite shallow for the time of year, we were soon on the upward climb. Having climbed two steep hills, only to descend again, we found ourselves at the foot of Penrissen proper about

to a.m.; and following a little used track through some very large bamboos, succeeded by rather thin jungle, relieved here and there by a stately *tapang* towering above its forest companions, we arrived at the first plateau, (3,100 feet)‡ at 1-15 p.m. In spite of the advice offered in Mr. Shelford's account of a far better place a little further up, we yielded to our Dayaks' wishes and stayed the night there. All the other Europeans had spent the night there and the next water-course was a long up, they said; and accordingly a *lancho* was quickly built. Next day Mr. Adams and I started out to "explore" the summit; a quarter of an hour bringing us sure enough to a far better position for a *lancho*, (whither we moved camp two days later): the water-supply being better and the plateau of greater extent, from which a good view could be obtained. Another quarter of an hour brought us to the divide between Mts. Seruru and Prang and half an hour later found us under the large over-hanging rock at the foot of the peak itself. I went up with the Dayaks that day and made the summit to be 3,800 feet only; however, Messrs. Adams and Crocker made the ascent two days later and found it to be 4,000 feet; a difference which may be partly accounted for by the different times and atmospheric conditions of the two days acting on the aneroid. After four pleasant days spent in collecting all kinds of insects, plants, etc., we made an easy descent in just the four hours from camp (3,300 feet) to Sennah and thence back to Kuching, arriving early on Nov. 26th and, to quote Mr. St. John once more, "having had a very enjoyable trip."

In the foregoing account it will be noticed that the various heights given for the summit of Mt. Penrissen vary from 6,000 feet to 3,800 feet. Not unnaturally therefore one may ask, what is the actual height? We may begin by dismissing any thought of 5,000 feet or over and content ourselves with a consideration of the lower figures here recorded.

‡ 3,400 feet by Mr. Shelford, and 3,200 feet by Mr. St. John.

Mr. St. John makes Sennah to be 440 feet above sea-level, which, considering the comparatively short distance from the sea and the scarcity of anything approaching a waterfall of more than 2 feet at a time, seems to be an over estimate, and the height of 330 feet recorded by Mr. Crocker's aneroid is probably nearer. Taking this latter height as a basis, our record of 3,250 feet for the first camp falls half way between Mr. St. John's 3,090 feet (i.e. having deducted 110 feet to reduce his record to this basis) and Mr. Shelford's record of 3,400 feet. Continuing on this basis Mr. John's height of 4,000 feet for the foot of the peak itself becomes 3,890 feet, which is very nearly in accord with Mr. Crocker's estimate of 3,910 feet, though a long way short of Mr. Shelford's record of 4,500 feet. Then in reference to the peak itself we get very wide differences. Mr. St. John estimated it at 700 to 800 feet, but found it to be 450 feet. Mr. Shelford records it as 300 feet while Mr. Crocker and I made it each a little more than 200 feet; and in this, Mr. Adams joins with us in thinking that this estimate is more acceptable than the higher figures. Accepting this latter figure in favour of the higher estimates we thus arrive at a height of 4,090 feet to 4,110 feet.

Against this conclusion it is only fair to add that altitudes taken by aneroids only cannot be relied upon to within 50 feet, especially if the peculiarities of the aneroid in question have not been studied accurately. So that in recording the height of Penrissen as 4,100 feet, I am quite prepared for a correction of 50 feet either way.

The altitudes of other Sarawak mountains in the neighbourhood may perhaps be of interest for purposes of comparison :—

Mount Poe	5,520 feet	(Beccari).
Mount Penrissen	4,100 ..	(see above).
Mount Matang	3,130 ..	(Haviland).
Mount Santubong	2,970 ..	(Haviland).

II. An Expedition to Batu Lawi.

[Published August 1st, 1911.]

RAJAH,—I have the honour to report my return from a collecting expedition in the Limbang district.

1.—The object of this expedition was to make natural history collections in the upper waters of the Limbang River, especially in the vicinity of Mt. Batu Lawi—a lofty mountain never before visited by a white man.

2.—Owing to the difficulties that have to be encountered in going up the rapids of the Limbang River but very few Europeans have been able to penetrate into the interior far enough to be able even to see Batu Lawi. Sir Spenser St. John was the first European to make a lengthy journey up this river and he managed to get within 2 days' walk of Batu Lawi before having to turn northward again to the Adang villages. His great journey was undertaken in 1858 (August 25th to October 19th), of which he gives a graphic account in his interesting book, "Life in the Forests of the Far East." In 1895 Mr. Ricketts visited the Adang country, from the mountains of which Batu Lawi can be seen some 4 days' journey to the south; Mr. Ward tells me he has seen it from the hills bordering the Madihit; and Mr. Douglas has seen it from the Kalabit country. The natives themselves speak of it with great awe, and some of the Kalabits I met went so far as to object to people even pointing at it for fear of incurring the wrath of this great mountain.*

3.—With Your Highness' approval I left Kuching May 2nd, on the s. s. *Gladys*, accompanied by the Dayak

*"I have constantly borne in mind the whisper I overheard, that only certain privileged individuals are allowed to get a sight of this famous hill." (*Spenser St. John* in "Life in the Forests of the Far East," 2nd Ed. 1863, Vol. II. p. 109.)

collectors and duly arrived at the Government Station of Limbang three days after. Mr. Ermen, the officer then in charge of the station, kindly provided me with 12 Dayaks from Panderuan to assist in the up-river journey and I left the day after (May 7th) in the Government steamer *Alice Lorraine*, going as far as Bidang—four hours' journey. Leaving Bidang early next morning we arrived at Ukong in the afternoon and stayed the night in a Chinese shop. The four shops here have been erected quite recently and as there are no others further up-river these few Chinese do a thriving trade with the neighbouring Bisayas, Tabuns and Muruts. Five hours' paddling next day brought us to the house of Tama Belulok, chief of the Tabuns. As he was one of the leading chiefs of the district and I had known him before as a reliable and trustworthy man, I arranged with him to see me through the more difficult journey up to the Madihit and if possible on to Batu Lawi. At his house we met a large boat-load of Tabuns and Dayaks under Tama Seluling on their way down river to meet Your Highness at Limbang. However, I explained to them that they were some four days too late and so they returned to their houses at the Kuala Madalam, whither I followed next day. We spent a day there preparing two boats for the rapids up-river, while Tama Belulok and his son found men to replace the Bisayas who had brought me thus far.

Leaving early on May 12th, we reached a Murut house about mid-day, where they tried hard to persuade me to stop as there was a Dayak-Murut wedding to be celebrated that evening. However, knowing how quickly the Limbang river becomes impassable after any rain, I was determined to take full advantage of the then low water to push on as quickly as possible. This was the last Murut house before coming to the Adang country so the following three nights we spent in *lanchos* at Kuala Semarpit, Kuala Salindong and Kuala Delong; the fourth day's paddling bringing us to the Kuala Madihit. There we left the Limbang, glad to have accomplished the first and most un-

certain part of our journey so quickly ; for the river had been just right for going up and we were lucky enough not to waste any days waiting for freshes—a great and welcome contrast to my former attempt in 1910, when, after taking 17 days from the Madalam to reach Kuala Tuan (accomplished this time in 2½ days), I had to turn back owing to the impossibility of proceeding further against the rising flood. Dayaks and Muruts are frequently stopped for a month at a time by these freshes on their way up-river, while several lives have been lost in trying to shoot the rapids when the river was swollen.

Entered the Madihit about mid-day on May 15th, and after a short hour's paddling we reached a Kalabit house, where we were met by the young chief, Tama Kuling—head of all the Kalabits in the Madihit, they told me. Tama Kuling is the son of the famous Kalabit chief, Saribu, who was drowned last year on his way down-river, his boat capsizing in a dangerous rapid just below Kuala Tuan, on the Limbang River. They were preparing a great feast at this house in honour of his re-burial, for the custom of these people, like that of other tribes in this region, is to bury the body temporarily for 6 to 12 months in a jar (or wooden coffin sometimes), and then to disinter the bones for final burial in a smaller jar, which is usually placed some 10 feet above ground in the hollowed out trunk of a tree (the remainder of the tree being cut off just above it). All the natives from the neighbouring villages had been invited and the house was full of many already arrived : they showed me no less than *thirty-five* large jars (*tajau*)† of newly made *arrack* prepared for this particular feast !

Leaving our boats here, we borrowed three small canoes and proceeded up the Madihit (May 17th), arriving next day at a small Kalabit house on the right bank, the men tired out after having to haul the boats up rapids nearly all the way. As the river had now

† An average jar measures 2 ft. 9 in. in height and some 5 ft. in circumference.

become impracticable for boats, we commenced our long overland walk for Batu Lawi. Crossing the Madihit (May 19th), a long day's walk over the hills on the left bank brought us to our last Kalabit house, perched on the top of a cleared hill, alt. 2,100 feet, from which we enjoyed a magnificent view of the surrounding country; the great Molu Range immediately facing us to the west and not more than 5 miles away; far away to the south, a long range of mountains, called the Tekuyong Mts. by the natives (possibly the Pemabo Range?); to the north-east the Raya Hills and behind them again could be seen part of the Adang Mountains in the far distance; and lastly, E. S. E. of us, they pointed out a small peak just showing above a long range of mountains, which they said was Batu Lawi—the object of our expedition.

I arranged for new luggage bearers with the chief of this house—one Penribut by name, who, with spear in hand, made a picturesque figure in his black goat-skin war-coat, covered with black and white hornbill feathers behind, and a large round shell in front—and, after 2 days' stay in his house in order to get rice, we started out on May 22nd. A short day's walk brought us to the Madihit again and having crossed it we camped for the night on the right bank.

Starting early next morning, after an interesting argument with Penribut, who was very anxious to waste the whole day there on account of a bad omen, we spent a tedious day going up hill most of the time in an east-south-easterly direction, eventually making a *lancho* late in the afternoon, alt. 3,100 ft. Off early next morning, accomplishing a long day's walk in the same direction, the last three hours in pouring rain. The Kalabits say this mountain is called Mt. Turan; our *lancho* for the night—alt. 3,900 ft. We experienced difficulty in finding water at this altitude and had to make use of any we could get from roots of trees. Next day we climbed still higher, eventually reaching a long ridge running south on to Mt. Derian (alt. 5,100 ft.), which is the source of the Madihit; we camped a little

way down the hill (alt. 4,800 ft.) by the side of a rivulet called the River Kri; Batu Lawi appeared quite close bearing due East.

Penribut tells me he does not know the way any further, so we spend a day collecting, while a small party of Kalabits and Dayaks go off to look for a path.

In the dense jungle here the sun hardly penetrates and the temperature at mid-day in the shade was only 66° F., and while raining two hours later, it registered 62° only; rain as usual in the afternoon and very cold at night. Next day (May 27th) we started off down the mountain in a south-easterly direction, following the River Kri down all day to its junction with another small river—also the river Kri, according to the Kalabits, (alt. 2,850 ft.): a hard day's journey crossing and re-crossing the river over huge boulders or along fallen trees, with an occasional short cut over a steep hill.

Next morning having climbed the hill in front of our camp, we descended again the other side to meet the Limbang River again (alt. 2,630 ft.): this was running too swiftly to allow us to ford it, so we spent some time felling trees to bridge it. A rough scramble up a 1,000 ft. and down an equally precipitous track the other side, across a small stream (alt. 2,700 ft.) called the Palabar, whose source is in Batu Lawi; then a long and tedious climb mostly through pathless jungle to an altitude of 4,400 ft. where we camped for the night; mention may be made here of an interesting hornet's nest met with in our path, which some ten of us had cause to remember for two or three days after! None of the natives knew the name of this mountain, but from St. John's map I think it must be Mt. Selinguid. I climbed to the top that afternoon (4,850 ft.) in pouring rain, and just caught a glimpse of Batu Lawi immediately opposite across a narrow valley. As our food was running short I decided to leave the Dayaks behind to collect, while I pushed on to Batu Lawi next day with 13 men. Passed a strenuous morning, cutting our way down the side of Selinguid through a mass of tangled roots, moss-covered shrubs, and over immense limestone blocks;

and crossing the Palabar again, a regular mountain torrent here (alt. 3,740 ft.), we found ourselves at last at the foot of Batu Lawi.

After climbing for a short time over ground similar to that of Selinguid, the jungle became thinner, and making better progress, we reached a good spot for a *lancho* on a narrow ridge (alt. 4,900 ft.); noticed traces of rhinoceros on the way up. Rain as usual all the evening and temperature down to 65° at 4 p. m. Started out early next morning (May 30th) in driving mist to try and get further up the mountain, but the rocks and roots became so slippery and treacherous, that we had to turn back after some three hours' scramble, having reached a narrow ledge about 10 a. m. alt. 5,660 ft., temp. 69° in the shade. The clouds lifted for a moment and we could see the lofty limestone column towering above us—I calculated it to be another 660 feet higher at most; the lower peak to the right is not so high or nearly so steep and in good weather could no doubt be climbed; but the higher peak rises sheer up and for the last two or three hundred feet is practically destitute of all vegetation.

Somewhat disappointed at not being able to climb further, but nevertheless sensible of a certain amount of satisfaction at having accomplished something never before done by a European, I gave the order to return, and we reached our old camp on Mt. Selinguid just after dark, thoroughly tired out. The collectors had done well in our absence, having shot some interesting birds and caught many insects new to me. Stayed there another day collecting, while I went to the top of Selinguid again to take some observations and to photograph Batu Lawi.

Divided up the rice again, as some of the Dayaks had finished theirs already while others had very little left, and started on the return journey in the early morning (June 1st). Walking on the average 10 hours a day for the next three days we reached Penribut's house again, all pretty tired out; many of the natives

having had a bad time with sore feet, while the Dayaks felt the shortage of food considerably.

Having rested a day in Penribut's house we commenced the second part of the return journey on June 5th—the Dayaks, Muruts and collectors taking our former path to join the Madihit and so on down the Limbang, while I took some Kalabits with me in a southerly direction with the object of reaching the Seridan River and thence across country behind the Molu Range into the Baram district. A long day's walk brought us to a fine Kalabit house on the Seridan River and after an hour's paddling down river, we reached another Kalabit house—that of Balang Katou, the chief of this part, who was just starting down-river with some 40 men to pay the annual tax to Government. I joined their party and next day we all proceeded down-river, soon entering the Mago, which runs in a south-westerly direction, eventually joining the Tutau. The more direct route to Claudetown from the mouth of the Mago is to follow the Tutau down to its junction with the Baram River, but as this means going through a long and dangerous gorge in the Molu Range, the natives nearly always prefer the longer route of going *up* the Tutau for one day to Kuala Mutan and then a long day's walk across country to a small stream called the Sidam. Some Brunei traders were living in a hut on the banks of this stream, waiting for sufficient water to float a large quantity of gutta which they were bringing down to Claudetown to sell. As the water was not sufficient to allow us to use a boat we walked on another day and a half as far as the Malana River, where we were fortunate enough to fall in with a few Kayans coming up river to fish. Having squeezed our small party into their boats we paddled on down river and arrived late in the afternoon at their house on the Apoh River. Here we were cordially received by Buoy Won—a fine broad-chested Kayan—who apologized profusely for being unable to receive us properly as his house was *pantang* during the time of clearing jungle for this year's paddy farms. We

accordingly arranged with one Belulok, the chief of the Long Watts, whose house was a little way down river, to provide a crew to take us down the Apoh and into the Tutau as far as Batu Bla ; and with the assistance of a small fresh in the river we accomplished this in 18 hours, arriving in the early hours of the following morning (June 14th). The men of this village were nearly all away up-river, so we had to obtain assistance from some Bukits and Long Kiputs further down-river to complete the journey to Claudetown, at which station we arrived next morning (June 15th) about 2.30 a.m., having been just 40 days on the journey from the fort at Limbang—and glad to meet with Europeans once more.

One of the pleasantest and at the same time most instructive feature of the expedition was the invariable welcome and courteous hospitality always offered to us at every house ; and reflecting on the diversity of tribes we met (*viz.* Bruneis, Bisayas, Dayaks, Tabuns, Adangs, Kalabits, Penans, Kayans, Long Watts, Long Kiputs and Bukits—not to mention a few Chinese traders), it speaks much for the widespread nature of the good feeling among the natives of those districts towards the white man's rule in Sarawak. To enter a little-known country with a large following of a hundred odd natives is one way of accomplishing such a journey in safety and without difficulty, but to wander about, a perfect stranger without money or introductions, sometimes with less than half a dozen men, as I did for a month and more among strange people in a more or less unexplored country, *that* I think may be regarded as a true test as to their general regard for a white man coming from Sarawak.

Thanks to a pleasant irregularity in sailing—apparently characteristic now-a-days of the Sarawak coasting steamers—I was able to spend four weeks at Claudetown enjoying the kindly hospitality of the Acting Resident, Mr. H. S. B. Johnson. He informed me that the last steamer had arrived on June 1st and that consequently they were expecting another about June 17th ; however, it was *July 12th* before one actual-

ly arrived, the station thus having been no less than 6 weeks without communication with the outside world.

The steamer left again on July 14th, and we reached Kuching safely yesterday afternoon (July 17th).

4.—The general health of the expedition was not good. Fever, bad colds, stomach disorders and coughs being treated almost daily. In the walk over the mountains to Batu Lawi the natives in their scanty clothing felt the cold considerably in spite of fires kept up all night; this, together with the continual wet weather, I think was largely responsible for so many bad colds.

My own health was fortunately excellent during the whole time.

5.—Until the collections are properly prepared and worked out I am unable to give a definite report as to their value, but I expect a few of the birds will prove of interest, also several ferns and many other plants, besides a large number of insects, many of which are pretty certain to be new.

These collections were necessarily somewhat small owing to the large amount of time spent on the actual journey, and it was regrettable that lack of food and means of carrying more supplies prevented us from spending a longer time in that interesting region. However, in spite of the somewhat disappointing paucity of the collections made, the expedition proved of great interest in providing much material for interesting ethnological and geographical notes on a practically unknown district of Sarawak. These notes I hope to arrange and publish in the next number of the *Sarawak Museum Journal*.

6.—Seeing the mountainous and distinctive character of that district I am sure that a more protracted stay would produce natural history collections of great interest and value. Further, a visit to the Pa Bawan and Pa Brian tribes, who live to the south-east of Batu Lawi, and who are noted for their irrigation works, herds of goats, salt springs, etc., would provide much material for interesting anthropological notes. And I hope Your Highness will allow me to undertake another expedition to that country at some future date.

III. A Collecting Expedition to Mt. Kinabalu.

[Published November 1st and 17th, 1913.]

The first European to ascend this great mountain was Hugh Low, well-known to readers of Sarawak history as the author of the earliest book on this country.¹ He left Labuan on February 21st, 1851 and reached the village of Kiau on March 6th. Kiau is a Dusun village on the lower slopes of Kinabalu standing at an altitude of about 2,850 ft. above the sea level (the same height as the summit of Santubong). It is interesting to note Low's remark to the effect that the men of Kiau then numbered upwards of 2,000 fighting men, whereas now I was told about 100 only pay to Government the annual tax of one dollar, which is levied on every adult male.

On March 11th he reached the summit, or rather one portion—not the highest—of the great granite crown which extends some two miles over huge sloping terraces. On this sloping plateau rise jagged peaks of weird fantastic shapes and Low tells us that he reached a position between the bases of two of them. "I could not," he writes, "remain long admiring the majestic scene around me, for the frightfully dangerous position we had passed in the ascent, made me quite alive to the rapid lifting of the clouds from the valleys which I knew would conceal everything from our view, and caused me, immediately after having finished a bottle of excellent Madeira to Her Majesty's health and that of my far distant friends, and deposited the bottle upside down with a paper in it in a conspicuous place, to read off the barometer and hastily begin my descent."²

¹ Sarawak: its Inhabitants and Productions. 1848.

² Journal of the Indian Archipelago and Eastern Asia. 1852. Vol. VI. pp. 1-17.

That was over 60 years ago and since then several ascents have been made, the earlier travellers experiencing some difficulties with the natives who had (and still have) a good eye to the main chance whenever a well-stocked European turned up. Spenser St. John¹ made the next ascent, in April 1858, and again three months later accompanied by Low.

Then came Burbidge,² a botanist sent out by Messrs. Veitch & Son of Chelsea; he went up in 1877. He was responsible for the discovery of a large number of new plants, though to Hugh Low belongs the credit of first collecting the magnificent pitcher-plants (*Nepenthes lowii*, *rajah* and *villosa*) for which the mountain is justly famous.

I can find no mention of any other ascents after this until the British North Borneo Company took over the country, when more peaceful relations were established with the natives in the interior and consequently access to the mountain became easier. In March, 1887, a Government officer, Mr. R. M. Little, formally made a treaty with the people of Kiau and a day or two after he ascended Kinabalu. His men retrieved the papers deposited by Low and St. John; but beyond a note to the effect that Mr. Little "felt vexed" at this, we read no mention of the replacing of these historic documents.

Just at this time a young Englishman, Mr. John Whitehead, made a long stay on the mountain for the purpose of collecting birds.

He spent eight weeks on the lower spurs of the mountain in the early part of 1887 and then a period of six months from December 1887 to May 1888. In this last expedition he reached the summit and spent a month at an altitude of 8,000 feet. The results of his collections were no less than six mammals and forty-two birds new to science, besides a few snakes, butterflies and other insects.

¹ *Life in the Forests of the Far East.* Vol. I. Chapters. VIII--X.

² His book, "The Gardens of the Sun," gives a full account of his experiences and collections on Kinabalu.

Four years later, Dr. G. D. Haviland, Curator of the Sarawak Museum, accompanied by his cousin, spent six weeks there (March--April, 1862). The results of his collections were chiefly botanical, and he was responsible for the discovery of over an hundred and fifty plants new to science. They were described in the Transactions of the Linnæan Society by Dr. Stapf in 1893 (Ser. 2, Vol. IV, pp. 63-263).

Since then, the professional collector, Waterstradt, has made three long visits to the mountain for the purpose of collecting insects; the discovery of many new species is due to him.

More recently travellers have made brief visits to the summit, but without any particular results. Of these we should mention that of Mr. F. W. Foxworthy of Manila, who has visited Sarawak and climbed Mt. Poi; he went up in 1910. The same year Miss Gibbs, a botanist, made the ascent. She has the honour of being the only lady to have made this journey.

Lastly we must mention the visit of Capt. F. C. Learmonth, R. N. of H. M. S. *Merlin*, also in 1910. He and a party of four others camped on the summit (12,500 feet) for five days and made a careful survey of this region, noting the heights of all the different pinnacles.

All these ascents have been made from Kiau, the village at the foot of the mountain (2,800 ft.) and the route followed in every case has been the course of the Kadamaian, which leads one up to the southern end of the mountain. No other means of ascent seems possible, owing to the sheer precipices everywhere else.

The height has been given as 13,698 feet by Sir E. Belcher who surveyed that part of the coast in 1844. Those who have climbed to the summit make it 13,520 feet (Whitehead) and 13,455 feet (Learmonth).

For the derivation of the name Kinabalu two or three suggestions have been made. One is that it is *Kina Balu* or *Chinese Widow*, owing to the white appearance of the summit and the fact that long ago a large number of Chinese visited the mountain or

lived near it ; another story is that the Chinese tried to obtain the treasure from the summit, but the dragon on guard killed so many that the mountain was called Chinese Widow, on account of the number of Chinese ladies who lost their husbands in this quest.

Kina Bahru or *New China*, corrupted by Chinese to *Kina Balu*, owing to their inability to pronounce the 'r'; this again in reference to a former colony of Chinese in this region.

And lastly, *Nabalu*, the Dusun word, meaning *Resting place of the Dead*. This last appears the more likely derivation, as the Dusuns all believe that after death their souls go to the top of this mountain and they speak of it by this name, accentuating the middle syllable.

JOURNEY.

We left Kuching at 9 a. m. on August 8th in the p. s. *Adeh*, a party of nine in all (seven native collectors, Chinese cook and myself). After the usual stops at Kedurong and Miri, we arrived in Brooketon early on Monday morning, the 11th ; on Wednesday, the *L'Aubaine* took us over to Labuan where we were joined by two more collectors, Kadayans from Sarawak, and the next day the German mail from Singapore, the s. s. *Chow Fa*, arrived, sailing again in the evening with our party on board bound for Jesselton.

At dawn next day, the 15th, the s. s. *Chow Fa* drew alongside the wharf at Jesselton, and collectors and baggage were all safely transported by train up to the town, a distance of some three-quarters of a mile. The Resident of the West Coast, Mr. E. H. Barraut, to whom I presented my letters of introduction, informed me that I should have to proceed up the coast to Usukan Bay, about 40 miles north of Jesselton, where the District Officer had already been advised of my projected expedition, besides having received instructions to render me every assistance on my arrival there. By kind permission of His Excellency the Governor I was given passage on the Government yacht *Lotus* as

far as Usukan Bay, which we reached at 6 a.m. on Sunday the 17th, having left Jesselton three hours before. Here we were met by Mr. P. Skene Keith, the Assistant District Officer, with a number of buffaloes on which were placed our baggage, also the cook; the Dayaks and Kadayans preferred to walk, while ponies were provided for Mr. Skene Keith and myself. Our way lay across a wide plain of open country traversed by an excellent bridle-path. The open country with bare hills bordering the plain gives a very different view to the dense jungles of Sarawak. The reddish sandstone soil seemed too poor to support anything but a sparsely-growing *lalang*. I thought at first that the hills must have been cleared of jungle at one time, but an intelligent Badjau informed me that it was not the case; nothing would grow on those bare hill slopes.

The actual plain of the Tampassuk is very different, as there we saw large fields of freshly sown paddy, and others just ploughed ready for the seed. The soil there, no doubt brought down from the rich jungles of the mountains of the interior, is evidently much richer, as the natives use the same patch year after year. The people of this part are Badjaus, for the most part Mohammedan, and perhaps most nearly correspond to the coast Malays of Sarawak. I was told that a few Illanuns—once the dreaded pirates of this coast—still live in this district but that they are fast dying out.

Some three hours' ride brought us to Kota Belud, a pretty little station on a hill overlooking the Tampassuk river. Mr. Skene Keith is the Acting District Officer here and our party stayed the night, enjoying his kind hospitality.

To the south, about twenty-five miles away, we had a magnificent view of the whole length of Kinabalu, towering up like some cyclopean castle on guard over the interior of Borneo. The main portion or "keep" is on the west and rises to some 13,400 feet, with fantastic shaped pinnacles or "battlements" above; to the east and north-east runs the rest of the mountains some 2 miles of rugged peaks about 11,000

feet high. The whole of this portion I believe is still unexplored. Detached from the western end of the mountain stands the *anak* of Kinabalu, a little hillock of some 6,000 feet. This particular view of the mountain appears on some of the British North Borneo Government treasury notes. Some 10 miles to the north of us lay Pandasan, the stronghold of the stubborn Illanun pirates burnt by Sir Thomas Cochrane's squadron 67 years ago. A small village now prospers peacefully there under the British North Borneo Company's rule.

Next day we sent on the baggage and collectors to Ginambor, again using the Badjau's buffaloes for transport. The following day they continued to Kabaiau, which Mr. Skene Keith and I reached in one day, riding ponies most of the way from Kota Belud. From this point the plains gave way to hills and our path wound in and out some height above the Tampassuk. About midday on the following day we reached Koung rest-house, which lies in a grassy meadow beside the Tampassuk; the Dusun village is a little further up on the right bank. Next day we toiled on up the hill to Kiau, 2,840 feet, a large Dusun village of small houses scattered on the hill-side. Here we had arranged to obtain coolies for the actual ascent—the last stage of our journey. Some wild raspberries were growing near the houses and we found them very refreshing. A Dusun told me they bore fruit about once every three months; the fruit was slightly different in taste to the ordinary English raspberry and bright scarlet in colour. Delicious bananas and cocoanuts (*piasau*) also grew in plenty, the former being sold to us at 3 or 4 large ones for a cent, and later the price fell to six or seven for a cent. As necessities the Dusuns grow tobacco, for sale at the markets in the plains, and *kladis*, to augment their crops of paddy. The very steep hill sides seem favourable for the cultivation of this vegetable, though not for paddy, which I suppose would get washed away more easily by the rain. Neat little flat-roofed farm-

houses, made of bamboo, were dotted about these *kladi* fields. The roof of split bamboo, though practically flat, is made watertight by the simple plan of splitting each length of bamboo in two, and then laying them side by side convexly and concavely alternately, the edges of a convexly placed bamboo resting in the concavely placed bamboos on each side of it.

We spent two nights at Kiau, comfortably housed in a little Government rest-house similar to those at Koung and Kabaïou. Sumpot, the chief, insisted on our staying the extra night to enable him to offer up prayers (*mengaji*) for fine weather and general success of our expedition. He had made the ascent before with Europeans and produced a *surat* signed by Dr. G. D. Haviland, the first Curator of the Sarawak Museum, who made the ascent with his cousin in March 1892, Sumpot acting as guide on that occasion.

The collectors lost little time in sampling the fauna of Kiau, which stands on one of the spurs of Kinabalu, and they soon brought in some birds and insects new to the Museum collection. The natives of Kiau, seeing what we wanted, began to bring in all sorts of good insects, for which I paid them in cents, boxes of matches, or wads of gambier. Mr. Skene Keith added to our popularity by dispensing beads, needles and cotton to the ladies of the village.

Hardly any of these Dusuns could speak Malay, but one of my Dayaks made himself understood in Bisaya, which is of interest seeing that the latest work on the natives of Borneo states that the Dusuns are allied to Muruts, a race very distinct from Bisayas. Efforts to converse in Murut were of no avail, though one of the Dayaks knew that language well and another slightly. The cook tried them in Chinese, but met with no luck.

There was no lack of coolies to carry our baggage, as the established pay for the journey is \$3 a man to the top and back. As they earn but six cents for a day's work weeding a paddy field, the chance of earning as much as three dollars in a few days was eagerly welcomed. We left early on the morning of the 23rd,

descending the hill-side to the Tampassuk river, here called the Kadamaian by the Dusuns, the former name being used by the Badjaus. The Dusuns, by the way, are called Ida'an by the Badjaus.

For an hour our path lay through farm land by the side of the river, after that, up the river itself for about three hours; clambering over great boulders, crossing and recrossing the stream, sometimes waist high. Having reached an altitude of 2,700 ft. above the sea, we left the Kadamaian and followed a steep path on the left bank for an hour up another two thousand feet. Here we camped for the night under a large overhanging rock known as Lobong. Next day we had a weary climb of about seven hours in a northerly direction, our general course the previous day being east-north-east; we had therefore rounded the western side of the mountain and were now actually on the southern slopes. On this second day's ascent, the high jungle soon gave way to rotan and climbing bamboo thicket; then to more stunted moss-covered trees and shrubs; at 7,000 ft. the large pitcher-plants (*Nepenthes*) were found in quantity; first a curious flagon-shaped species, *Nepenthes lowii*, then higher up another large red-pitched species, *N. villosa*. Thick clouds enveloped us and a cold wind added to the general discomfort of the natives, who found the steep, overgrown path pretty trying. We camped that night in a small cave (known as Pakka cave) by the side of the Kadamaian, now a small stream, altitude 9,950 ft., temperature 44°—48° Fahr. in the shade.

Next morning there was no great rush for the bathroom and after an early breakfast we started for the summit with about a dozen natives, the rest preferring to shiver over fires rather than walk about, which was really their only chance of getting warm. After half-an-hour's walk through low jungle, rhododendrons and heaths for the most part, we came to an open spot where the Dusun in charge of the religious department intimated that we must stop for a few minutes, while he uttered a prayer. After that we had to fire off two

salutes, for the benefit of the *antus*, who, they said, were always well-pleased to hear the noise of fire-arms.

In front of us rose a great sloping mass of granite, reaching to the summit, 3,000 ft. above us. Owing to the clearness of the atmosphere, it appeared quite close; however, a few days later I saw a man half way up, and the tiny speck that represented him gave one a true idea of the size and distance of this great granite mass, which otherwise fails to impress one at this place.

We noticed an increasing difficulty in walking; and as we began that last ascent up the granite slope, the discomfort became more and more marked. Neither Mr. Skene Keith nor I had reached such an altitude before, so the sensations caused by the thinness of the air were all new to us. First we felt a great disinclination and weariness in moving, then we had to stop every few yards panting for breath; once ready to move again we felt full of energy, which lasted, however, about ten yards and then we had to stop again. Nearer the top we began to feel sick; some of the natives with us felt the same and had to turn back before reaching the summit.

The actual summit is reached after mounting some 2,000 ft. of fairly steep granite slope. Here one gazes upon one of the most remarkable scenes in all Borneo. A huge plateau of immense granite slabs slopes upwards for some two miles towards the north-west, fringed by weird shaped pinnacles, marking the former height of this immense granite crown. The highest of these is Low's Peak, 13,455 ft. with others named by the 'Merlin' party as Victoria Peak 13,450 ft., King Edward Peak 13,405 ft., King George Peak, 13,346 ft. etc., etc. St. John's Peak (so-named by St. John himself, by the way, contrary to all exploring etiquette!) is given, as 13,440 ft.

Our guide took us to Low's Peak, the highest, which was composed of large granite blocks, ending in a heap of comparatively small granite stones on the top, very like a cairn due to human agency. However, there seems no doubt that this great granite mass is gradually

wearing away, huge slabs of granite becoming detached and slowly sliding down southwards towards the steep part and thence hurrying to destruction into the depths below.

We stayed here for about an hour admiring the scenery and taking bearings on the different pinnacles. To the north we could see Kudat Bay and all the west coast down to Jesselton, but it was not clear enough to make out Labuan and the country further south, though we had glimpses of great mountains to the south and south-east, as well as the coast on the east. The thermometer in the sun registered 62° Fahr.

With a due sense of the fitness of the occasion Mr. Skene Keith produced a bottle of champagne, which we drank to the health of the mountain and our good selves, assisted by some half a dozen Dusuns, who soon fell asleep, three Dayaks and two Kadayans. Others we saw straggling away in the distance like little black dots on some great snow field, the glare of the sun on the grey-white granite and the clearness of the atmosphere combining to give an Alpine effect. Many were overcome with mountain sickness and failed to reach the top of the great sloping plateau; others went in search of the sacred water of Kinabalu, which is found in a little pool just below Low's Peak; others after Kinabalu "diamonds"—quartz crystals from crevices in the granite.

Under the stones on this peak we found two bottles, containing altogether ten notes relating to five recent ascents. They were:—

- (i) Miss L. S. Gibbs and D. P. Maxwell of the B. N. B. Service, dated February 20th, 1910. (Two notes).
- (ii) F. W. Foxworthy of Manila, dated March 19th 1910 (one note "deposited in a Sierra Club cylinder;" we found it with others in a bottle on which the remains of a "C & E. Morton" label were still visible).
- (iii) Members of the *Merlin* party (Capt. F. C. Learmonth, R. N., Lieut. J. R. Harvey, R. N.,

H. W. L. Bunbury, D. O., B. N. B. Service, J. Scott Brown, Cinematographer, and R. W. Clarke of the British Borneo Exploration Co.). Five notes dated June 18th, 19th and 20th, 1910.

(iv) Dr. R. R. Pilz, Consulting Geologist to the British Borneo Exploration Co. One note dated July 27th, 1910.

(v) Albert Grubauer of Munich, dated June 29th, 1911 (one note).

We carefully replaced them after having added two more to the roll of honour. Our Dayak followers made a job of it by adding some coins for luck (*mintu sedeka*) and utilizing the now empty champagne bottle for *surats* of their own. The old Dusun in charge of the *mengaji* department intimated that this was the correct moment to waste two more cartridges on *Antu a/c*; so, fully conscious of the importance of my position, I balanced myself gingerly on the highest point of Malaya and fired the *Antu* salute according to the proscribed form.*

The descent to our cave occupied the best part of three hours; the steeper granite slopes proving far more unpleasant to negotiate on the return journey than on the ascent, though leather shoes held well on the rough granite surface. Any other kind of smoother rock would have made it impossible for us to stand up, and as it was we had to rely frequently on the supporting arm of a Dusun over the worst places. Luckily the fine weather held up for us and we reached camp about 3.30 p. m. an hour or two before the rain. The danger of the descent is that one is so exhausted on arrival at the summit or else so lost in admiration of the view (according to the honesty of the recorder) that the descent is apt to be postponed till too late; no attention is paid to the gathering afternoon clouds, which quickly overspread the summit, develop into rain and then start innumerable rivulets racing down the granite

* Gun pointed upwards, facing north.

slopes across the path, so that the return journey of the traveller is then by no means pleasant.

Spenser St. John tells us of his experiences of this on his second exploration of the summit, and we felt duly appreciative of the *mengaji* efforts which had brought us the fine weather.

Early next day (the 26th.) Mr. Skene Keith* started on his return journey to Kota Belud accompanied by the three police, his boy and the Dusun coolies. He reached Kiau the same afternoon.

After his departure, we made a small *lancho* outside the cave thinking it would be warmer there; and it was slightly, though rather more draughty than in the cave. The temperature in the shade here ranged between 43° and 48° Fahr., and no doubt went lower at night and in the early hours of the morning. St. John has recorded the bushes as white with hoar-frost in the early morning here, and Mr. Maxwell of the B. N. B. Service gives the temperature as 40°—50°; he found ice on the summit. Snow has not yet been recorded.

I made the ascent once more in order to explore Low's gully, which we had left on the right while proceeding to Low's Peak. To get to it one has to ascend the same 2,000 ft. of granite slope and then bear to the north instead of the north-west. One soon enters a narrow gully, and clambering over immense granite blocks or through stunted rhododendron bushes—this is practically the only part of the summit which has any vegetation—one eventually reaches a great wall of granite. Climbing up this (altitude about 13,000 ft.), I looked over sheer down into unfathomable depths; to the right and left were more enormous overhanging cliffs going sheer down for several thousand feet. This was the spot first reached by Low in 1851 and regarded by him as the summit. The two crags standing on guard on either side of this gully he assumed to be un-

*He died in July 1914 from wounds received in an affray with Dusun outlaws. Dying in the service of his country at his early age (under 26 I imagine) should call forth our sincerest feelings of regret. A nicer host and travelling companion it would have been difficult to find.

climbable and they certainly looked it, but he did not explore the other pinnacles to the north-west; a work which was left for Spenser St. John to do seven years later.

We spent five days at the Pakka camp, but the cold and continual blanket of clouds did not encourage collecting. The faces of my Dayaks were swollen with cold and lips chapped. I found fresh traces of pigs a little way above our camp, but beyond this hardly any animal life. Two species of small birds were common and a few small beetles were found lurking under bark or moss, but no butterflies, and hardly any other insects were seen. One particularly raw day, a Dusun tried to reach us from Kiau, but succumbed to the cold. We found him dead in the path next day about an hour below our camp. In descending to Kamborangah, our next camp nearly 3,000 feet below, one of the Dayaks was overcome by the cold and could not have reached camp without assistance, another was too benumbed to move and spent the whole night shivering under a *kadjang* that he had with him. It is difficult to realize the paralyzing effect of wind and rain on natives at this altitude; one must see it before one can understand the danger and risk of exposing them to such conditions.

At Kamborangah, 7,200 ft., it was little better, and after five days' vain hoping for some warmth, we decided to move on lower down. Even during the few hours of fine weather the absence of all noise, so typical of an Eastern jungle, was remarkable. We descended to Lobong (4,500 ft.), and camped once more under the large over-hanging rock which had sheltered us on the way up. We at once noticed the welcome change to warmer temperature. Next day, Sept. 4th, I sent off five collectors to Kinokok, another spur of the mountain to the north of Kiau. This camp was not particularly suitable for collecting as the mountain-sides were too steep for us to climb except in one or two restricted places. The collectors brought in some good things here; amongst others a beautiful

green jay first discovered by Whitehead on Kinabalu. After a week here, we moved 2,000 ft. lower down to the banks of the Kadamaian, camping in a wild spot at the entrance of the Minitindok gorge. We chose the foot of a sloping cliff as a suitable spot to shelter us; but this proved unwise, as rocks came hurtling down from above, plunging into the stream in front of us. We heard later that four Dusuns had been killed by falling rocks in this very place.

Former writers on Kinabalu mention a mythical lake which has been variously placed on the summit, half way up, at the foot of the mountain to the south, south-east or to the east, and eventually given up as non-existent. Looking at the Minitindok gorge I could not help wondering whether the key to the mystery lay here. This gorge is about 200 feet high and barely 50 feet wide; the sides even now are gradually falling in. Now if this narrow gorge were filled up,—and its appearance suggests that the Kadamaian has only broken through at no great distant date—a fine lake would be formed, enclosed by the two southern spurs of Kinabalu which divide above the Pakka camp. Some of the Dusuns knew vaguely of a legendary lake, but no definite information was forthcoming.

Insects were plentiful here and we caught all manner of beautiful butterflies, dragonflies, gorgeous beetles; in fact about as much as the most ardent 'bug-hunter' could wish for; and I was loath to leave the place, but those falling rocks were not to be despised. Accordingly, after five days here, we camped a little further down, at the mouth of the Kalupis stream, for a week; and thence on to Kiau on September 22nd, exactly a month from the date we left this village for the ascent.

The Kinokok party of collectors had returned two days before, having done extremely well. They secured two rare species of Trogons one *Pyrotrogon whiteheadi*, which I was particularly keen to get, some Broadbills, Orioles, a black squirrel, etc., etc. But unfortunately no ground birds such as pheasants, partridges and ground-

thrushes which I much hoped for, as several species have been obtained here and nowhere else. However, they found a large number of Dusun traps in the jungle and I suppose these are mainly responsible for the scarcity of these birds.

Our cartridges were nearly finished and my cook was suffering from some affection of the eyes, so on the 24th. I despatched him with five collectors to Kota Belud *en-route* for Sarawak. They arrived on October 13th.

The day after they left Kiau I went off for three days to the north-western spur of the mountain known as the Marei Parei spur. We climbed to the top of the spur behind Kiau village, alt. 3,250 ft., and then descended sharply to a fertile valley watered by two streams, the Kinokok and Dahobang; our path lay across some *kladi* and paddy fields and then up another big spur of the mountain, a steep climb of some 2,000 ft. Crossing the top of this ridge we came to the upper waters of the Kinataki stream, another tributary of the Kadamaian. We camped here for three days making excursions below the camp to some magnificent old jungle and above to a curious open grassy spot called Marei Parei, which is very like the summit of Mt. Poi (Marumput). Here we found the enormous pitcher plant, *Nepenthes rajah*, growing on the ground and another species with very long reddish pitchers hanging from the trees and shrubs. A pretty white orchid, rather like a narcissus, was growing in some profusion on the ground.

This would make a fine place for a sanatorium; it is over 5,000 ft. high; excellent water and quite a large area of comparatively flat land to accommodate several houses. The views were magnificent, especially that of the rocky precipices of Kinabalu immediately above one. About an hour and a half further on there is another mountain stream called the Gilambun; one day we followed a small track to this stream, which came down on our right as a typical mountain torrent and then, forming a splendid waterfall, disappeared over a precipice into the depths be-

low on our left. We could look right over it from a large boulder firmly planted on the very edge.

We returned to Kiau on the 28th and spent the following three days collecting there. The natives were particularly adept at catching insects and I purchased a large number of interesting specimens for a few cents, wads of gambier, boxes of matches, needles or reels of cotton; such articles being much in demand. I also obtained various objects of interest for our ethnological collection, such as basket-work, bark-coats, Dusun-made cloth, brass armlets and rings, a wooden shield, traps for rats, birds, etc. Mr. Skene Keith had left a Dusun policeman at Kiau for my use and he proved most useful as an interpreter; very few of the Kiau natives being able to speak Malay. I found them easy and pleasant to get on with; and in their turn they seemed to find in us an unceasing interest, judging from the number who crowded our quarters from morning to night. I took measurements of about 80 with a view to finding out how much the measurement of their span exceeded that of their height. The average height of the men worked out at 5 ft. 0½ in., their span at 5 ft. 3½ inches; of the women at 4 ft. 7¾ inches, their span at 4 ft. 8½ inches. I also measured a few children and found the difference not so marked. No objections were raised to this operation and the whole thing was treated as rather a good joke.

We left on Thursday morning, October 2nd, descending to Koung in two hours, wading the Kadamaian three times waist-high. I had decided to take the path due west to the coast instead of following the Kadamaian north to Kota Belud, as we should thus avoid most of the sea journey to Jesselton. From Koung we followed the bridle-path for a short way, and then struck up a steep native path for about an hour reaching a few native houses, where we stayed the night. The next day we had a seven hours' walk to the village of Klowat, still following a small native path, not bad going, but rather hilly. The following day we walked

for five hours to another small Dusun village called Kappak.

These picturesque Dusun villages consisted of a few small houses only. There appeared to be no long houses, which, according to the Kiau natives, they have never made. Floors of neatly split bamboo gave a tidy appearance, but as they harboured innumerable bugs, which lost no time in welcoming strangers, we did not admire them long. The general plan of the houses is the same as that of most tribes in Sarawak, namely, the dividing partition running down the length of the house, living rooms—usually not more than three or four—on one side, common *ruai*, (enclosed verandah) on the other.

The next day we descended to the lowlands and out of the jungle across the Sungei Damit rubber estate and so into Tuaran a little after midday. Tuaran is about three miles from the coast; the District Officer, Mr. Rutter, is stationed here and he kindly put me up that night and the next. Thanks to him all arrangements were made for the next part of my journey from there on to Jesselton.

He took me over to see a local market (*tamu*), where two or three hundred natives had gathered from neighbouring villages to trade. They start early in the morning and finish by 10 o'clock a.m. It was an interesting sight, this large orderly crowd of men and women quietly trading together. Two or three Chinamen on the outskirts in booths, the rest, Badjaus from the coast and Dusuns from the interior and neighbourhood of Tuaran. Fish and fruit seemed to predominate, but the Dusuns from the interior brought tobacco for sale, which seemed to be much in demand.

I left Tuaran on October 7th, walking three miles to Mengkabong, a Badjau village built over the water near the coast, then by boat for two hours to Gantisan where we had to disembark, cross a small hill and embark in other boats, which took us across Gaya Bay to Jesselton. We arrived there at 3.30 that afternoon, a

little party of four Dayaks and six Dusuns; the latter, with the exception of one, had never been to the coast before and they were immensely struck with "kampong Jesselton", and especially with the German mail-steamer *Marudu*, which they thoroughly explored under the guidance of the Chief Officer.

At 6 that evening we left for Labuan, arriving next morning a little after nine. The Sarawak Agent informed me that the local steamer had left Brooketon for Kuching early that morning, so I proceeded on to Singapore, arriving there Sunday afternoon, October 12th.

H. H. The Rajah was in Singapore *en-route* for England, so I was able to report myself to him that evening and had the honour of seeing His Highness off by the French mail next day.

On Tuesday we left Singapore, duly arriving in Sarawak on Thursday, October 16th, after an absence of ten weeks exactly.

As Whitehead aptly remarks, "Our success is greatly due to the assistance of others," and I must not close this account without expressing our deep obligation to the British North Borneo Government, not only for permission to make the expedition, but for the steps those in authority took to ensure its complete success. Neither can I omit to mention my own personal appreciation of the assistance and hospitality received wherever I went. Such will always form one of the pleasantest recollections of a most successful and enjoyable expedition.

IV. A Collecting trip to the headwaters of the Sadong River.

[Published June 16th, 1914.]

The route followed was the course of the Sadong river from its mouth to the source of one of its southern tributaries, the Suhuh, which rises in Mt. Merinjak on the Dutch border. A stay of eleven days was made on this mountain, and for the return journey a path was followed over the southern end of Mt. Sepedang to the village of Sennah which lies at the foot of Mt. Penrissen. Branches of the Sarawak river rise in both these mountains. The main Sadong river (locally known as the Kayan) rises on the southern side of Mt. Sepedang, and I believe a branch also drains the south-eastern slopes of Mt. Penrissen. From Sennah we followed the Sarawak river down to Kuching. As far as Ledah Tanah this took 14 hours' actual paddling; there we were lucky enough to catch the Borneo Company's launch and so complete the journey in another two hours.

My original plan was to make collections in two places, first, due south of Tabekang in the Sadong district proper, and secondly, near the sources of the Sarawak river, in order to see how far the mountain fauna of the Sarawak basin extended to the east, and whether there was any appreciable gap between it and the forms obtained on Mt. Klingkang further to the north-east.

The first plan had to be abandoned, as there is practically no old jungle remaining on the hills near Tabekang. For the second, Mt. Merinjak offered a good collecting ground, being covered with virgin jungle from foot to summit. The water-courses laid bare sandstone and conglomerate. Steep spurs lead up to

a large undulating plateau, altitude 1,600 ft. On this a smaller triangular plateau rises to another 600 ft. or more, forming the crown of the mountain, 2,200—2,500 ft. above the sea-level. Collections made here show a close relationship to the fauna of Mt. Penrissen, which rises a few miles to the north-west. The collections of the late Mr. Shelford on that mountain showed a distinct relationship to the fauna of Mt. Kinabalu, and our collections on Mt. Merinjak further confirmed this. It was interesting to find that Kinabalu species, found at 4--5,000 ft. on that mountain, had adapted themselves to the much lower altitudes of Mt. Merinjak. Birds and mammals were certainly scarce and wild, no doubt due to the frequent visits of the Temong Dayaks, who shoot pretty well everything for the pot, with the following exceptions, which are rather interesting: *rusa* (sambhur deer), *tengiling* (scaly ant-eater), *landak* (porcupine) and one or two species of hornbill. In addition to their more ordinary articles of diet such as pig and monkey, they also eat snakes, frogs and crocodiles.

As mentioned above, Mt. Merinjak appeared to be the last remaining stretch of old jungle in the whole district of the *ulu* Sadong and Sarawak, with the exception of a few isolated limestone crags (similar to Bau mountain), which are almost too steep to climb and quite useless for farming purposes. Mt. Merinjak on the other hand presents several easy slopes and small plateaux suitable for paddy farming and it can only be a matter of time before the neighbouring Dayaks start farming on it. I asked one Dayak why they had not done so already and he said they thought it a pity to spoil their only hunting ground and source of *rotans* and other jungle produce. However, one fears that Dayak sentiment is not always lasting; on the other hand a Government Order making this a forest reserve would be a permanent benefit.

From the summit of Mt. Merinjak a magnificent view was obtained over Dutch Borneo stretching miles away to the south, and another to the east over a long

undulating plain following the course of the Sadong river east to Tabekang and then across still further east to the foot of the Klingkang range. If it is ever intended to take the railway from Kuching up north, this would form an excellent route for it. On the northern side of this plain between the Sarawak and Sadong rivers are several big hills which drain into the Samarahan river. From our view on Mt. Merinjak it would appear very difficult to find a way through those hills from the Kuching side and into the Sadong valley. If it is possible to follow the Sarawak river south to Mt. Brang and thence across the short distance to the northern side of Mt. Sepedang (which is really an eastern extension of the Penrissen mass), a splendid broad plain stretches east without obstruction to the foot of the Klingkang range; this plain is bordered on the south by the hills of the Dutch border, on the north by the range of hills in which the Samarahan rises. Bridges over small tributaries of the Sadong would be necessary and one over the Sadong itself a few miles above Tabekang, where, however, it is not broad.

The expedition offered a special interest to us, as the route followed was practically identical with that followed 60 years ago by A. R. Wallace, the great naturalist, who visited Sarawak 1854-6. After nine months spent at Sadong he returned this way to Sarawak at the end of 1855. A whole chapter is devoted to this journey in his celebrated book "The Malay Archipelago." We were able to trace all the names given by him, although some of the villages had moved and changed their names since his day. We were unable to find anyone who remembered his visit; but the Orang Kaya of Temong, however, remembered Sir James Brooke's visit to that village, and he also remembered going to Sennah to participate in the rejoicings over two Chinese heads just taken in the insurrection of 1857!!

At Temong we were told that 350 Landak Dayaks had fled from the Dutch about a year ago and taken refuge in this village for a month and a half. At the

village of Begu we met a small party of six who said they had been to Kuching to ask permission to become Sarawak subjects. They said the whole Landak tribe, 15,000 people, wanted to come under the Sarawak flag, as they were unable to endure the taxes imposed by the Dutch Government.

As is usual among the Land-Dayaks, we were hospitably received at every village; the head-men proved obliging and efficient in arranging our transport between the villages. Hardly any skin disease was observed, though goitre was common in two or three villages at the source of the Sadong. On the Sarawak side a few cases of yaws (presumably) were noticed among the children.

At Sennah they do a good business in *parangs* which are made there for all the neighbouring villages. Mats, baskets and nets were made in most of the villages; we were also struck by the fine boards used for the long central partition which divides the living rooms off from the common verandah. On Mt. Merinjak a quantity of *bilian* and other fine-looking timber trees remain, and no doubt many of their posts and boards are obtained there.

The paths on the whole were good, but the number of slender bamboo bridges, now spanning a raging torrent, now bordering some awful precipice, were rather trying to European nerves. The handrails, when provided were safer to look at than trust to for support.

The health of the members of the expedition was excellent throughout.

NATURE NOTES.

V. A Crocodile on Satang Island.

[Published February 16th, 1911.]

One day at the end of last month I spent a few hours on the little island of Satang, some three miles out from Santubong, and was energetic enough to climb up the steep side to the summit of the island. Walking along the ridge on the top under the welcome shade of the trees I was startled at seeing a crocodile rush across my path and disappear down the side of the island. It passed within a few yards of me and a Dayak just behind me, so we could easily distinguish the characteristic head, tail and colouring of the crocodile, which was some 5 feet in length. On mentioning it to some of the Malay inhabitants of the islands on the shore, I was greeted with cries of "*Biawak*, Tuan. There are no crocodiles on Satang." However, when the Dayak corroborated my story they showed less signs of incredulity; and we both assured them it was certainly *not* the *Biawak* (Monitor Lizard).

The occurrence of crocodiles on small islands off the coast should not be unusual; but meeting it on the very top of the island—perhaps some 400 ft. above the sea-level—was rather curious. Mr. Ridley records in "*Nature*" (1890, p. 457) the occurrence of a crocodile in the Cocos Islands and remarks that Java—the nearest land—is 700 miles distant! He suggests that floating rafts of débris—such as are often met with in these seas—may have assisted it on its lengthy journey.

VI. A Museum Murret.

[Published March 16th, 1911.]

"And *do* tell me, what is the difference between a Crocodile and an Alligator?"

Well, here's the answer in a few plain words together with a general remark or two on Crocodiles, which your friends will expect you to know, seeing that you have lived in the Crocodile-haunted country of Borneo.

In the Crocodile the fourth tooth of the lower jaw fits into a notch in the upper jaw. In the Alligator this tooth fits into a pit. That is the easiest distinction for the non-scientist to notice. Scientists of course have tabulated further important structural differences, such as can be found in the arrangement of the scaling, the bones of the skull etc., etc., but generally speaking it will suffice to notice that in the Crocodile the teeth more or less inter-lock and in the Alligator the teeth of the upper jaw overlap the lower jaw; that in the Crocodile there are from 4 to 6 rows of keeled bony plates along the back, in the Alligator from 6 to 8; that true Alligators do not run to more than 15 feet in length, while there is a record of an enormous Crocodile 33 feet long; and that the hind-legs of Crocodiles have a jagged fringe, which is absent in Alligators.

The difference in Geographical Distribution is important and at the same time easy to remember.

A. (i)—*Alligators* are only found (a) in the Southern States of North America and (b) in China—this last is a small species, up to 6 feet in length only.

(ii)—*Caimans*, which are closely related to Alligators, are found in Central and South America only.

B.—*Crocodiles* are much more widely distributed, being found in Central America, the north of South

America, Africa, India and Burma, right through Malaya to the north coast of Australia.

In Sarawak only one species is known (*C. porosus*), which has a wide distribution, being found from the East of India through Burma, Southern China, Malay Peninsula and Archipelago to the north coast of Australia. The Indian species, commonly called "The Mugger" (*C. palustris*), has been noted as occurring in the Malay Archipelago, but I am unable to find any authentic record of its appearance in Borneo. Natives in Sarawak have reported another species, which may prove to be "The Mugger," but this distinction may have arisen from the colouring only, as up-river Crocodiles are generally lighter and more mottled in appearance than their darker brethren of the lower waters; anyhow its occurrence here has yet to be verified. It is easily distinguished from the Bornean Crocodile by its shorter snout, and adult specimens have five teeth in the præmaxillary bone, while the adult of the Bornean species has but four. One of the largest Crocodiles taken in Sarawak, if not the largest, was reported last year by Mr. C. Ermen; this was killed in the Trusan River and measured 24 feet. (Vide *Sarawak Gazette*, September 1st 1910).

Crocodiles belong to an Order or Sub-class of Reptilia called *Crocodylia*, in which are included also the Alligators, Caimans and Gavials.

These last—the Gavials—are the long-nosed Crocodiles (Malay: *buia senjulong*) of which there are only two species (i) the Gharial, occurring in some Indian rivers, and (ii) the Gavial, *Tomistoma schlegeli*, which is confined to the Malay Peninsula, Sumatra and Borneo. In Sarawak this kind occurs in the Sadong river commonly; in the other rivers but rarely, if at all. (recorded from Kuching river, Mukah and North Borneo.) They are fish-eaters and harmless to men. The Gavials—and Crocodiles too—are now on the wane, though we are told that in Tertiary times several species existed, and that fossil remains of one 50 feet in length have been discovered in the Pliocene deposits

of the Sivalik hills in India. Their distribution too was much wider, ranging together with Crocodiles and Alligators over India, America and Europe. But that was in Pliocene and Pleistocene days, and now—well, now it is A. D. 1911, so let us be thankful for one small mercy, although it is at the expense of our less fortunate fellow-creature—the decadent Crocodile.

VII. Musical Sand.

[Published September 16th, 1911.]

It may be of some interest to your readers to know of the occurrence of Musical Sand in Sarawak. This curious sound-producing sand is found in a small cove just below the new light-house on Po Point, but I believe it is not known on the neighbouring shores of Muaratebas, Serai, Buntal or Santubong. The noise produced by treading on this sand varies according to the lightness or heaviness of the step taken, and seems to be composed rather of a combination of high and low sounds than of one definite note.

In writing of Musical Sands in England, Mr. C. Carus-Wilson (*Nature*, Vol. 86, p. 518) says: ".....the pitch of the notes emitted from musical sands depends (a) upon the size of the grain, (b) the area of the plunger's striking surface and (c) the form and composition of the vessel used."

It seems that only very fine sand, such as that accumulated below the calcareous sandstone cliff at Po Point, can emit these curious sounds, and it would be interesting to note if a like phenomenon has been observed elsewhere in Sarawak.

BIOGRAPHIES.

VIII. Dr. Alfred Russel Wallace, O.M., F.R.S.

[Published November 17th, 1913.]

The last Singapore papers contained the news of the death of A. R. Wallace, the great naturalist, scientist and philosopher, which took place on November 8th. Alfred Russel Wallace was born on January 8th, 1823, at Usk in Monmouthshire. His early years were spent in the work of land-surveying, an occupation he followed for seven years with his brother. After none too much success in earning a living as schoolmaster for a time, or by surveying, he made friends with H. W. Bates, a naturalist, and together they sailed for South America in 1848. Their idea was to explore the little known region of the Amazon and earn a living by the sale of natural history specimens which they collected there. After four years of this, he returned to England and wrote a book on his travels; but his taste for natural history soon led him to look about for fresh regions to explore, and learning that the Malay Archipelago offered about the richest and at the same time the least-known field for this work, he set sail again in 1854. After spending some time in Malacca and Singapore, he went over to Sarawak as the guest of Sir James Brooke, arriving here in November 1854, just fifty-nine years ago.

He spent some fourteen months in this country, making expeditions to Santubong, Serambu and Sadong (Simunjan). At the latter place he stayed nine months and in his "Life" (written in 1905) he speaks of it as "the best locality for beetles I found during my twelve years' tropical collecting". The coal mines were being opened there at that time by a

Mr. Coulson, mining engineer. On leaving Sarawak he travelled through the islands of the Malay Archipelago as far as New Guinea; his journeys in this part of the world lasting eight years, during which time he formed enormous collections of natural history specimens, especially of insects, of which hundreds were described as new species. His "Malay Archipelago" tells us of his experiences; probably no other book of travel and adventure has been more widely read than this, and many are the naturalists to-day who owe their first awakened interest in tropical nature to its pages.

Wallace's name, however, is destined to be handed down to posterity not so much on account of his travels, but because of his association with Charles Darwin in formulating the theory of Natural Selection. Although the idea of Evolution or mutability of species, by which different forms of life were evolved from previously existing simpler forms, was not a new one, the old belief in the separate creation and immutability of each species was practically universal. In 1858, Darwin and Wallace published a short article before the Linnean Society in London explaining the ways and means of evolution by their theory of Natural Selection. In 1859 this was followed by the production of Darwin's work, "The Origin of Species", which entirely revolutionized the world of thought. Although other theories—some feasible, many not,—complementing or partly correcting the theory of Darwin and Wallace have been propounded from time to time, the whole basis of the present work and thought of science is due to their researches.

It is interesting for us in Sarawak to remember that an earlier essay, on the formation of new species, foreshadowing the more important one of 1858, was prepared by Wallace during his stay in Sarawak and actually written by him at Santubong in February 1855.

He returned in 1862 and busied himself working out his collections and writing books on his travels, of

which the better known are "Island Life", "Tropical Nature", "Darwinism", and "Geographical Distribution of Animals", besides the "Malay Archipelago" already mentioned. His interests, however, were by no means confined to Natural History, as he wrote many articles on Spiritualism and socialistic questions, of which Land Nationalization may be mentioned as one that interested him for many years. One of his last works, entitled "The World of Life", appeared as recently as 1910.

The writer of this note had the privilege of meeting him just a year ago in his quiet home at Broadstone in Dorsetshire. He expressed keen interest in Sarawak and mentioned having travelled home in the same boat with "the young Rajah" in 1862. He was also glad to hear that the *maias* (*Orang utan*) is still to be found at Sadong, not yet driven out by the marches of civilization.

Sarawak should be proud to remember her connection with A. R. Wallace, the distinguished scientist, whose long and eventful life has now drawn to a close.

IX. Seventieth anniversary of the first visit of H.H. the Rajah to Sarawak.

[Published August 1st, 1914.]

"Thursday 25th July, 1844.—Sailed from Singapore, having dispatched the *Phlegethon* the previous night with orders to rendezvous at the entrance to the Morotaba, which we entered in the evening of the 29th; and anchoring the ship inside the river, I went on in the steamer to within four miles of Sarawak, when I pulled up in my gig."

Thus Capt. the Hon. Harry Keppel in his account of the visit of H.M.S. *Dido* to Borneo, published in 1846. The above marks an important page in the history of Sarawak, as on board the *Dido* was Charles Johnson, midshipman, viewing the shores of Sarawak then for the first time.

How at that early date he took part in the battles of his uncle's country, how later he left the Navy to enter the Sarawak Service and how later still he became Rajah of Sarawak on the death of his uncle Sir James Brooke, are now well-known facts of history. Such need no recalling here, and our privilege today (July 29th, 1914) is to offer respectful congratulations to His Highness the Rajah on this the seventieth anniversary of his first arrival in Sarawak.

We occasionally read of someone completing a long period of years in some sedentary occupation in England, thereby earning the congratulations of friends and admirers. More rarely do we hear of a man in the East completing a long term of service in his adopted country—Sir Robert Hart with 50 years in China stands out as one of a distinguished few. But to look back over *seventy* years of life in the East must fall to the lot of but very few Europeans indeed. As is well-

known, the Rajah's life in the East has been by no means one of peace and quiet, and fate has suggested several times that a 70 year record is not obtained by everyone. In support of this it is interesting to quote Keppel's narrative again; a few pages further on, where he deals with an attack on the pirates' stronghold at Patusen in the Batang Lupar. He writes of the assault thus:—"They never once checked in their advance; but the moment they touched the shore the crews rushed up, entering the forts at the embrasures, while the pirates fled by the rear.

"In this sharp and short affair we had but one man killed, poor John Ellis, a fine young man, and captain of the main-top in the *Dido*. He was cut in two by a cannon-shot while in the act of ramming home a cartridge in the bow-gun of the *Jolly Bachelor*. Standing close to poor Ellis at the fatal moment was a fine promising young middy, Charles Johnson, a nephew of Mr. Brooke's, who fortunately escaped unhurt."

A similar incident occurred a year later during the attack on Sherip Usman in Marudu Bay; a lieutenant Gibbard was killed, the present Rajah being near him when he fell; and we may be sure that these were not the only narrow escapes the Rajah had during his ten years in the Navy (January 1842 to June 1852), for most of this time was spent in the troubled waters of the China station.

His next ten years were even more strenuous, being spent in Sarawak without a break, and for the most part in an unceasing struggle with the Sea-Dayaks, with a brief interval to assist Sir James Brooke in quelling the Chinese insurrection of 1857.

In 1863 the first Rajah returned to England for the last time, handing over the Government to his nephew, Charles Brooke, who has held it ever since. His succession to the title of Rajah by no means meant an easier life, for in addition to the cares of Government, the Rajah continued to direct expeditions against rebellious tribes in person. In 1877, on one of these expeditions, he was as nearly as possible drowned

through the capsizing of a small steamer in the Rejang, and down to 1903, when he conducted his last expedition, his life was not free from risks.

The whole European history of Sarawak does not extend beyond 75 years, so that the rise of the state from a pirate-ridden dependency of Brunei to its present condition of security and prosperity is practically contemporaneous with the Rajah's life in the East.

Hugh Low, writing in 1847, describes Kuching as containing about 8,000 inhabitants at that time, "this great and increasing population having flocked from the misgoverned towns along the coast to a settlement where their persons were inviolate and their property secure." Low continues thus, "the Chinese occupy a *kampung* on the bank of the river, opposite to the residences of the Europeans, which occupy hills on the left bank. The fort is a six-gun battery, commanding the reach immediately below the Chinese houses: it is garrisoned by twenty-five Malays under the command of a native officer formerly in the Ceylon rifle regiment. Their business is very light, their principal duty being to hail and report every boat which passes the fort during the twenty-four hours."

At this period the boundaries of Sarawak were formed by Cape Datu on the west and the mouth of the Sadong river on the East.

It is a big jump from these small beginnings to the Sarawak of 1914, with area of 50,000 square miles, estimated population of half a million, and annual revenue of a million and a half dollars. Besides the further signs of a western influence, such as the establishment of a trained force of Rangers, a Police force, the settlement of Missions and important trading companies to develop the resources of the land, we have a very different town in Kuching today. Several wharves hide the mud banks of the river and help relieve a small fleet of coasting steamers and schooners of cargoes of up-country produce; several streets are devoted to the shops of busy Chinese; European houses have sprung up all round the town on the right bank; spa-

cious Government Offices, Hospitals, Clubs and a Museum testify further to the progressive history of the town, not to mention an ice machine and an incipient railway—all innovations since 1844!

Although successive generations of men have helped to bring about these changes, it has fallen to the lot of one man to see them all, and for fifty years to direct them all personally.

Such in brief is the unique record of H. H. the Rajah, to whom we, as Englishmen, may feel legitimate pride in offering our heartiest congratulations on this the seventieth anniversary of his arrival in Sarawak.

REVIEWS.

A. "My Life in Sarawak."

BY THE RANEE OF SARAWAK.

[Published March 16th, 1914.]

The Ranee is to be congratulated on the production of a book which will appeal alike to those who know Sarawak and to those who do not. The clear simple outlines of Sarawak history, the charming recollections of her life among the people in Kuching and on visits to outstations, all told with the author's own delightful vivacity, will give a better idea of Sarawak than volumes of dry statistics or detailed history. And needless to say the author appreciates the unique position of the country to the full. Sarawak, the one country in the world ruled by white men for the sole benefit of the natives; that is the first thing one ever hears about this small Eastern State; and in the Ranee's book every page adds further evidence in support of this dictum, and more too, for we learn from the native side how much this policy is appreciated. It is indeed no mere empty saying. Sarawak was handed over to the first Rajah for that purpose; the first Rajah accepted the trust on those conditions and nobly carried out his task; his successor, the present Rajah, has in no way deviated from this policy.

Those who know Sarawak, particularly those who have served their time and left the country, will find many a typical scene described which will recall old friendly faces, old familiar places. "The happiest time of my life" writes the Ranee as she recalls an incident on an up-country trip; and again referring to her last visit to Sarawak as "one of the happiest periods in

my life", the author will not be alone in crediting Sarawak with happiest hours.

We have further reason to welcome the Ranee's book as it tells us something about Sarawak in the 'seventies' and 'nineties', periods which are rather blank in the literature of the country. The stirring times of the early days of Sarawak moved several people to set down their experiences, and many an interesting hour have we spent with books by Keppel, Mundy, Marryat, St. John, Low, Belcher, Helms, MacDougall, Wallace or Beccari, with those interesting Journals of Sir James Brooke, and with the "Ten years" of the present Rajah. But all these deal with the first 20 or 30 years of the Brooke rule and then follows a blank, except for an occasional chapter in some traveller's book like that of Hornaday who tells us a little of Sarawak life in 1877.

The success of nearly all these books is due to the small incidents of every-day life, simply, yet graphically told; these form the mosaic of Sarawak life, and the Ranee has fully availed herself of her unique position in Sarawak to obtain for us many a little sketch of native life which only comes out in exchange for womanly tact and sympathy. We remember several such paragraphs in Mrs. MacDougall's "Letters from Sarawak", in Mrs. Cator's little book on North Borneo, in Mrs. Forbes' "Insulinde"; Ida Pfeiffer, who visited Sarawak in 1852, and Marianne North, "a tall European lady", of whom the Ranee writes, "She was not young then, but I thought she looked delightful", and again "Miss North's arrival in Sarawak is a great and happy landmark in my life"; all these give us sympathetic little insights into native life, described with a delicate feminine touch. One must regret that few, if any, of the European ladies of Sarawak today take more than a very passing interest in the people of their adopted country. "Animals and plants and races of men are perishing rapidly day by day", wrote a great naturalist, "and will soon be, like the Dodo, things of the past. The history of these things once gone can never be recovered, but must remain forever a gap in the knowledge of mankind. The loss will be most

deeply felt in the province of anthropology, a science which is of higher importance to us than any other, as treating of the developmental history of our own species". The Raneë sets us a fine example of what can be done in the way of collecting notes on the customs and beliefs of a people whose confidence she gained.

We find comfort in the thought that in many ways, however, things do not move in Sarawak with Western celerity. Crinolines for instance may have gone out in England (temporarily perhaps), but among the Land-Dayaks we see them now, the Raneë noted them 20 years ago, and then we read of Low's description of them made 50 years before that. And we may be pretty sure the crinoline dance was not new then.

The Raneë calls attention to another interesting subject to unravel, namely the mystery of Santubong.

Gold ornaments, beads and a curious stone figure have been found at the foot of this mountain, suggestive of a bye-gone population of some importance. If, as is believed by many, these are Hindu relics, we should expect to find more remains of a substantial nature, perhaps ruins of temples as in Java. Do the jungle-clad slopes of Santubong still contain some key to the hidden mysteries of the past? We may recommend this interesting speculation to the attention of future visitors to Santubong.

Everyone who knows Sarawak will endorse the author's warm praise of the Roman Catholic Mission. She writes, "The Roman Catholic methods of teaching these native children are excellent. It would take too long to describe them in full, but the blameless lives of these men and women, who have cast away all thoughts of comfort in the world and elected to throw in their lots for ever amongst the aborigines, cannot fail to impress the people amongst whom they live. Spiritually and materially their beneficent influence is felt throughout the land, and when we are gathered to our ancestors and the tales of these rivers are told, I believe it will be known that one of the principal factors in the spiritual advancement of Sarawak is

largely due to the work of Roman Catholic missionaries."*

The book raises many subjects of interest which we are tempted to consider in review, but space forbids. As critics we would notice one or two little oversights, which will no doubt be put right in future editions, *e.g.* *orang outang* for *orang utan* (p. 214), *philaenopsis* for *phalaenopsis* (p. 119), the "Cricket or six o'clock fly" (p. 168) is the Cicada, *kriang pukul anam* of the Malays. In the historical portion we miss any reference to the present Rajah's first arrival in the country as a midshipman under Sir Harry Keppel; such would be particularly appropriate now, as in a few months' time we should celebrate the seventieth anniversary of his first visit to Sarawak.

On the credit side of a very readable book we shall recall with pleasure many happy little touches, such as the fire-flies on the mangrove trees likened to "Christmas trees magnificently illuminated"; of casuarinas, "the grove of talking trees on the sandy shores"; of Matang, "the dark purple mass seemed palpitating with mystery, standing out as it did against a background of crimson and rose and yellow", and again of mountains, as seen from the sea, "hanging baseless between earth and sky", an apt description of an early morning scene along the Sarawak coast. Then, too, we like the evil Dayaks who "made unpleasant remarks about their enemies' mothers, and inquired whether the men themselves belonged to the female sex, as their efforts were so feeble"; and the small Malay village, "its houses built on stilts"; and lastly, this will appeal to many, and with reason:—"the charm of the people, the wonderful beauty of the country, the spaciousness, and the absence of anything like conventionality, all enchanted me." Will anyone disagree?

Our final impression is of one fine unswerving Loyalty. White Rulers loyal to their trust, Natives loyal to their Ruler, Officers loyal to their Rajah, and lastly, but by no means least in her loyalty, the Ranee loyal to the Country of her heart.

* This paragraph was not published in the *Sarawak Gazette* as the Censor ordered it to be cut out.

RAINFALL NOTES.

XI. The Kuching Rainfall for 1910.

[Published January 16th, 1911.]

The records of the Museum rain-gauge for the year show a total of 174.21 inches. The wettest month during the year was February and on the 3rd of that month the record for 24 hours fell, no less than 10.09 inches. There are only three other records of more than 10 inches in 24 hours throughout the last 35 years. Rain was recorded on 262 days.

A comparison with the statistics published by Mr. Hewitt (*Sarawak Gazette* 1906, pp. 27—31) may be of some interest. The year 1882 is noted as the wettest on record with a total of 225.95 inches, and 1888 is the driest with a total of 102.46. Mr. Hewitt notes the yearly average in Kuching as 160 inches approximately, so that 1910 is some 14 inches above the average, while 1908 and 1909 were each 26 inches below the average.

Comparing the monthly totals of 1910 with the average for each month the only point to notice is the low record of 7.34 inches for March, which is 7 inches below the average. There was almost a drought from June 20th to July 13th, when 1.35 inches only were registered.

A glance at Mr. Hewitt's tables shows that we seem to get roughly a wet period of 4 or 5 years followed by a dry period of 6 or 7 years. Thus we can notice two wet cycles, (1) 1878—1882 in which the average was 184.02; (11) 1898—1901 with an average of 176.78; these were followed by 2 dry cycles (1) 1884—1891 with an average of 148.13, in spite of 1886 which was rather out of place with a total of 173.37. Then from 1902—1909

we get an average of 133 inches approximately. It therefore seems that 1910 is the beginning of another wet period of four or five years.† Unfortunately there are two or three gaps in the series of records, so the above generalizations must not be taken too seriously. They are only intended to suggest that these statistics do point to certain alternations of periods in the rainfall of this country and in course of time when records for a longer period are available, it should be possible to gain a more accurate idea of the law of rainfall in Sarawak.

Perhaps more valuable results would be obtained by recording the amount of rain during each monsoon; and a table showing the degrees of rain, above or below the average, each monsoon would probably yield more enlightening statistics than yearly summaries.

For Sarawak readers the following figures of the Singapore Rainfall* (1869—1884) may be of interest:—the highest record for the year was 123.24 for 1870 and the lowest 58.37 for 1877; the average for that period working out at 92.27 inches; nearly 70 inches less than our yearly average.

† In fulfilment (or perhaps refutation) of my prophecy, the rainfall for the four succeeding years was:—135.96 inches for 1911, 156.70 inches for 1912, 220.17 inches for 1913 and 110.06 for 1914.

The average for the first three years is thus 170.94 inches (wet period figures), but for the whole four years only 155.72 inches which is neither typically wet or dry.

J. C. M.

* Journal of the Straits Branch, Royal Asiatic Society, 1885 p. 65.

XII. Notes on Kuching Rainfall.

[Published January 16th, 1912.]

The total rain for 1911 in Kuching as registered by the Museum rain-gauge was 135.96 inches, against a total of 174.21 inches for 1910. The total for 1911 was some 14 inches below the average just as that for 1910 was 14 inches above the average. Except for a wet January, February and December (totalling 69.34 inches) the year was exceptionally dry and the following figures illustrating this are perhaps worthy of remark:—the rain for March was 3.97 inches, of which 3.43 fell on two days (12th and 18th); there were 23 days without rain in that month; from June 26th to August 16th 5.31 inches were recorded, of which 3.54 fell on July 22nd, thus leaving 1.77 inches spread over a period of 51 days, of which 38 days were without any record of rain; from June 1st to August 31st there were 63 days without rain. During the year there were 155 days without rain against 103 days noted in 1910. The most recorded in any 24 hours was 5.85 on February 8th against a record of 10.09 inches on February 3rd 1910.

XIII. Kuching Rainfall for 1913.

[Published January 16th, 1914.]

The past year very nearly created a local record for the highest amount of rain recorded in twelve months.

In the *Sarawak Gazette* for February 2nd 1906 (p. 28) we are told that the rainfall records for the town date from 1876 and that since that date they have been kept more or less regularly ever since, although there are one or two periods for which, unfortunately, no records are available. From the existing records, however, we obtain the following figures which may be of interest for comparison with the figures of last year's rainfall.

The average annual rainfall is 160 inches, the maximum known is 225.95 inches (1882), the minimum 102.46 inches (1888). The past year runs the maximum close with a total of 220.17 inches. Next to that comes 1881 with a total of 186.02 inches and 1899 with 182.39.

Turning to monthly records we find January shows the highest average, namely 27 inches, followed by February and December with 20 inches each, July with 6½ averaging out as the driest month. In the past year we had 37 inches in January, 42 in February, 28 in December. The first three months alone thus produced just over 100 inches.

For daily records the past year showed nothing out of the way, the highest being 7.41 inches for 24 hours, against the maximum of 15.3 inches registered for February 8th 1876.

If there is anything in the alternation of wet and dry periods as suggested in the *Sarawak Gazette* for January 16th 1911 (p. 9), we may expect another wet year for 1914 followed by a dry period of 6 or 7 years. The wet cycles seem to last 4 or 5 years. Two of them (1878—1882 and 1898—1901) averaged 184 and 176 inches; the last four years show an average of 176 inches. The dry years average 130—140 inches.

XIV. Kuching Rainfall.

[Published October 1st, 1914.]

We have experienced another very dry month, the rainfall for September as recorded in Kuching being only 2.19 inches. The following figures may prove of interest—

Total rainfall to 30th Sept. 1914	83 inches.
Corresponding period in 1913	161 "
Days without rain to 30th Sept. 1914	134 days
" " " " " " 1913	85 "

Excluding two records of 1.07" which fell on August 31st and September 15th, the rainfall for August and September this year amounts to only 1.96", distributed over 10 days; 49 days in these two months were without rain, the longest dry period being from August 7th to 30th inclusive, which was followed by a wet day August 31st, and then another dry spell followed from September 1st to 11th inclusive.

The average rainfall for August and September during the last 5 years is 21 inches (10½ inches each month).

The lowest figures hitherto recorded for August and September since 1893 are 3.64 inches for August (1899) and 5.41 inches for September (1906), so that the figures for 1914,—*viz.* 1.91 for August and 2.19 for September—constitute a local record.