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SELECTIONS

FROM THE

Records of the Government of India,

FOREIGN DEPARTMENT.

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No. L.

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REPORT

ON THE

SETTLEMENT OF THE SIAM AND TENASSERIM  
BOUNDARY,

BY

LIEUTENANT A. H. BAGGE, R.E.

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Published by Authority.

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## SETTLEMENT OF THE BOUNDARY BETWEEN SIAM AND TENASSERIM.

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From CAPTAIN C. P. HILDEBRAND, Officiating Secretary to Chief Commissioner of British Burmah, to the Secretary to the Government of India, Foreign Department,—No. 19, dated Rangoon, the 5th February 1866.

I HAVE the honour, by direction of the Chief Commissioner, to forward, for the purpose of being laid before His Excellency the Viceroy and Governor General in Council, the undermentioned papers, containing a Report of the first Season's operations for the settlement of the boundary with Siam and a brief notice of Lieutenant Bagge's proceedings up to the 8th January 1866 :—

Letter from Lieutenant Arthur H. Bagge, R. E., No. 67, dated the 25th December 1865, and enclosure.

Letter from Lieutenant Arthur H. Bagge, R. E., No. 2, dated the 8th January 1866.

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From LIEUTENANT ARTHUR H. BAGGE, R. E., Her Britannic Majesty's Commissioner, Siam and Tenasserim Boundary Settlement, to LIEUTENANT-COLONEL D. BROWN, Commissioner of Tenasserim,—No. 67, dated Camp "Kannee," Attaran River, the 25th December 1865.

I HAVE the honour to acknowledge the receipt of your docket, No. 636, dated 11th December 1865, forwarding copy of letter, No. T.-1042, from the Secretary to the Chief Commissioner, on which I am requested, by orders from the Secretary of State, to furnish a full Report of the operations conducted by Mr. O'Riley and myself, last season, on the settlement of the boundary between Siam and Tenasserim.

2. I did not anticipate that the Report would be called for until the demarcation of the whole of the boundary, *i. e.*, from the source of the Thoungyeen River to that of the Pakchan, had been completed,

when it would have been my duty to furnish an exact description of each and every mark on the boundary, together with reliable maps.

3. In the Report I have now the honour to submit I have endeavoured, in the short time before my departure for my second season's work, to describe our last season's operations and their result, and have appended thereto a list of the "marks" with their intermediate distances, together with a sketch map showing the topography of the two countries contiguous with the boundary line.

4. But in submitting this Report, it would be unworthy of me not to make mention of the good old man who has passed away in the middle of his labours.

5. Unselfish and kind-hearted, he possessed an amount of perseverance and energy unequalled by men of his age and physical capacity. Being thoroughly acquainted with the political nature of the duty he was chosen to perform, he exhibited, on his discussions with the Siamese Commissioners, that firmness and patience, tact and discrimination, which rendered him so fitted for his post.

6. His death has been a source of regret to all, but to me, perhaps, more so, for I, his companion, far junior in years, was obliged to leave him through sickness, because he was intent upon returning to the Three Pagodas and continuing the work; and had I been with him, I feel that I, under Providence, with care and watchfulness, might have averted his death in this wild desolate country, where he breathed his last.

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*Docket No. 50 of 1866.*

TRUE copy, with Report in original, forwarded to the Secretary to the Chief Commissioner of British Burmah, with reference to his letter, No. T-1042, dated 7th December 1865. The sketch map has not yet been received; it shall be forwarded as soon as it comes to hand.

MOULMEIN, }  
The 20th Jan. 1866. }

(Sd.) D. BROWN, *Lieut.-Col.*,  
*Offg. Commr., Tenasserim Division,*  
*British Burmah.*

## Report on the Siam and Tenasserim Boundary,—1st Season.

ADHERE to the principle of the watershed line for the basis of the boundary, only departing from it where strong grounds exist in favour of some relaxation of this principle; for instance, where a rigid adherence

*Government instructions.*

Letter, No. 500, of 14th November, from Secretary to Government, to the Chief Commissioner.

to the watershed might involve sacrifices or concessions on the part of the Court of Siam, that it could with difficulty bring itself to admit; or, again, when its assertion was accompanied by anything like encroachment on established rights of sovereignty, or was inequitable to the Siamese Government.

On undisputed British right to any locality being admitted by the Siamese Commissioners, prevent any undue influence being used to induce the people to quit their holdings and retire within the Siamese boundary

*Supplementary.*

Colonel Fytche, Commissioner, Tenasserim Division, letter, No. 164, dated 18th December.

by explaining to them the nature of our Government and the tenure upon which land is held. Also, if necessary, offer them exemption from taxation for any period the circumstances would appear to demand, keeping in mind that in such wild and distant parts of our territory, far away from the regular supervision of the local authorities, the object to be gained is more that of establishing British influence than to serve any fiscal purpose.

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NARRATIVE.

ON the 26th November 1864 Colonel Fytche, Commissioner of the Tenasserim Division, informed Mr.

Commencement.

O'Riley that he would send an express to Bangkok on the 28th, addressed to His Majesty the King of Siam and to Her Britannic Majesty's Consul, requesting that arrangements might be made without delay to appoint and despatch the Siamese Commissioners to the frontier to meet us, fixing the Three Pagodas as our place of rendezvous, which he considered would take place on the 15th January 1865.

This was received by His Majesty the King of Siam on the 27th December 1864, *vide* letter dated 28th of that month from Chao Phaya

Sri Suri Wong-si, "the Pra Kalahom," or Prime Minister of the Court of Siam, who says that the Royal Commissioners will take their departure on the 29th. But His Majesty the King in a subsequent letter of the same date, addressed to Colonel Fytche, mentions that, owing to the unusual decrease in the floods of the "Rajpuei" and "Kanchanpuri" Rivers, the Commissioners would have some difficulty in reaching the Three Pagodas by the appointed date, *viz.*, the 15th January. Our departure was therefore postponed for a few days.

Mr. O'Riley, Her Britannic Majesty's Special Commissioner, left Moulmein on the 20th January with the baggage and supplies, going up the Attaran River as far as "Kannee," our Police frontier station, where elephants had been already collected.

Under instructions from Colonel Fytche, I waited till the arrival of the King's messenger, and left Moulmein four days later, but I arrived at "Kannee" on the 28th, the day after Mr. O'Riley, for he had been detained at the rapids and shoals till the spring tides helped him on.

We left "Kannee" on the 30th January, taking the shortest route to the Three Pagodas, but, as usual, there's some screw loose on the first start: the elephant-pads were quite unsuited to them, so they tossed off their baggage as fast as it was put on. Mr. O'Riley and myself had gone on to our intended halting ground. Late in the evening two elephants came up; the rest were anywhere. We slept in the forest that night on two elephant-pads; our servants and followers slept somewhere on the path in detached parties, where the elephants had last thrown off their loads. A salutary lesson this, "when you are in Karen's land do as the Karens do." They made their own howdahs next day with the green cane in the forest, and we never had any more trouble. On reaching the Maygathat River we found that the Siamese Commissioners had already arrived and encamped on the left bank of the Attaran, a short way above us. They had been there since the 31st January, three days before we came up. But for our mishaps on the march and the overgrown state of the forest track we might have reached the Maygathat on the same day. In the evening Colonel Brown, the Deputy Commissioner, Tenasserim Division, and Captain Hamilton, Superintendent of the Police, arrived. The Siamese Commissioners signified their intention of conferring with us the following

morning, so our party were busily engaged in constructing a shed in the centre of our camp for their reception. By the next morning everything was ready. Handsome rugs were laid down in that part of the shed allotted to His Majesty's Royal Commissioners, and a guard of honour was drawn up to receive them as they entered our camp. On their approach we advanced to meet them, greeting them with the respect and civility due to Officers of their rank, and conducted them to our "jungle Council Hall," over which the British flag floated in the breeze.

u a a m e i a t  
The Royal Commissioners were—

1. Hlweng-na-dit. | 2. Pinya-keng. | 3. Pya-thee-tha-not.

The Chief Commissioner, Hlweng-na-dit, was a young man, of 30 years of age, who spoke English a little. He told us that he accompanied an Embassy to England some nine years ago. His father was the former Prime Minister in the Court of Siam.

The *second* Commissioner, Pinya-keng, was a Chief of the Talaings, and a very good specimen of his race. He took a prominent part in the discussions.

The *third*, Pya-thee-tha-not, was a Chief of the Karens.

As the Commissioner who had been deputed by the Court of Siam to confer with Lieutenant-Colonel Brown and Captain Hamilton on criminal matters relating chiefly to dacoities occurring in our territory, the perpetrators of which were in the habit of escaping beyond the border, had not accompanied them, the boundary subject alone was discussed. They were prepared for it, for they produced a sketch on a parabeit, delineating in a fanciful manner what they considered the boundary line should be. They had undoubtedly endeavoured to follow out the principles enunciated by the Court of Siam, and but little argument was necessary, inasmuch as a mutual understanding existed between the two Governments. Towards the end of the interview the Chief of the Siamese Commissioners informed us that he had no intention of accompanying us in our troubles, for he had been charged by the King with a very important duty of a sacred character relating to the Shoay-da-gon Pagoda in Rangoon, that he had brought with him a number of Buddhist Priests, and

was bound to go there and carry out the instructions given him by His Majesty the King of Siam. Mr. O'Riley represented that the credentials they bore from their King distinctly set forth that they would settle the affairs of the boundary, and that Her Majesty's Government had appointed us to meet them for that express purpose. The Pagoda duty was, however, of such importance, that they asserted that it must be done first; but being finally impressed with some appreciation of the service we had been called upon to perform, they agreed to leave one of the Commissioners, "Pya-thee-tha-not," with us, who, they stated, was empowered to discuss and settle all boundary questions that might arise during their absence, arranging to meet us again at Mya-waddee in the beginning of April, when they would discuss the merits of the boundary line we were about to lay down. As there was no alternative, Mr. O'Riley agreed to their proposal, and business being ended, they took their departure. The carpets upon which they sat were presented to them in token of the friendly spirit in which we had come to meet them, and which Her Majesty's Government intended to maintain. Throughout the interview they evinced great cordiality and friendship, and appeared quite pleased at their reception.

The preliminaries being ended, the most practical, and therefore important, part was to come. A profound ignorance of the watershed for the first 50 miles northward prevailed in both camps, entailing a great deal of discussion as to how we were to begin: various maps and sketches were made out, but they gave us no positive information.

Those who from inexperience are in the habit of laying down a number of caterpillar-like detached hills can hardly be made to understand that there must be in reality some general form or system in the various chains, and that there is some line or other which, though it be in some places far below the subsidiary spurs, yet, in connecting the higher hills, forms the watershed or backbone of the country.

Our guides had traversed the mountains, but they had been so confused by the apparently unconnected heights that they could afford us but little help in ascertaining the direction of the watershed to the north. Our investigation led us to determine upon following the

same route as Major Tickell had some years before, until we could reach some affluent of the Houndraw, for by doing so we should cross the watershed twice at least, and it appeared to be the nearest track to the conceived boundary.

On the 7th February the whole party marched for the Three Pagodas, which we reached by mid-day, but were obliged to march on three miles further to the bank of the Hsekay-wan River, a tributary of the Thoung-kalay, for the springs and tanks near the Three Pagodas were nearly dry, and we were some 150 men in the two camps.

On careful examination I discovered that the watershed was about one mile north-east of the Three Pagodas; but as they were acknowledged boundary marks, I left Mr. O'Riley's camp on the Hsekay-wan Khyong, and pitched mine at the Three Pagodas to determine their position.

The track through the forest was overgrown and impassable, but the Siamese Commissioner was good enough to send his party on to clear the way. By the 10th we were able to move on, and encamped that night on the small cultivated valley of Kronôo.

This valley is about half mile broad and one and a half miles long, and is cultivated by some 20 Talaing Karens. The head-man, who looked very old and worn, brought us some yams, and received in return beads, white and red, also some two-anna pieces, which he appeared to prize, for he went through all kinds of genuflexions and prostrations before Mr. O'Riley. This small population seemed quite contented and happy. The valley is bounded by spurs, which do not exceed 400 feet in height.

On the morning of the 11th February we left the valley and crossed the spur, which bounded it on the east, descending into the Thoung-kalay River, a principal feeder of the "Teik-ma-kyit." The Thoung-kalay is about 50 feet broad, and the average height of the bank above its bed is 10 feet. Instead of following the Thoung-kalay, which bends off towards the south-east, we went up the Tharawah valley, keeping along the spurs which bounded it on the west,

encamped on a small stream in the valley, a short distance beyond Eng-ding-toung, a high and well-known hill, 1,900 feet above the sea.

The next day, the 12th, we ascended the hill, and I took observations for position. We had cause to be thankful for this hill, for from the summit we were enabled, after some care and patience, to delineate the whole system of hills with which we were surrounded.

What had before appeared a confused mass of elevations and depressions, revealed itself in well-defined spurs, whose serried and jagged crests assorted themselves in regular and similar directions in obedience to the ordinary laws of upheaval. From this hill, too, we had a fine view of the Tharawah valley, which lay like a beautiful green carpet beneath us; but we could see no signs of cultivation; both hills and valleys were covered with one immense dense forest. Here and there, near the river bank, one could distinguish with the telescope clusters of plantain leaves mingling with the forest trees, which marked sites of old Karen settlements. Not that the valley was ever so populated that these spots were villages at one and the same time, but rather that they marked the migration of the Karens from one spot to the other according to their usual custom, for they never occupy a place for more than two years. This does not arise from poverty of soil after cultivation, but from other causes bearing upon their superstitious rites. If any influential man dies in a village, the whole village is deserted. Again, should certain questions regarding the advisability of remaining in the place prove unfavourable in their auguries with fowls' bones, they leave it and go off to another. Some of these tests of luck with fowls' bones, which are innumerable, are amusing. They kill a chicken and remove the flesh from the wings; then, when the wing bones are well cleaned, they insert a piece of wood about the size of lucifer match into the small space between the front and back bones of each; they put the bones side by side, the ends being even. If the sticks they have inserted are opposite to each other straight across the bones, it is favourable, and therefore they are bound to remain in the spot they occupy; but if it be otherwise, and a line joining the sticks cut the bones at a slant, it is unfavourable, and off they go. They use fowls' bones in many other questions relating to domestic life, but they always use the bones of a chicken, and not those of an old bird. If you send for the head Karen, your messenger has to wait till he has



examined the bones ; and if they augur ill, he would rather die than follow him.

They have another method of trying their luck. A man sits down and marks a number of straight lines on a board with a piece of charcoal : the man is sometimes blindfolded, and is supposed by the bystanders to be in utter ignorance of the number of strokes he has made with the charcoal. When a sufficient number of strokes have been made to confound all counting, he stops and asks the charcoal if it can catch the sun ; the answer is obtained thus : the man begins to wipe every second stroke out, and when he reaches the end, he goes to the beginning again, and repeats the process, removing two strokes together, till at length none or one only remains. If the number of strokes happen to be a multiple of two, which will naturally obtain when nothing remains, the charcoal is supposed to say, "I can catch the sun." There is no meaning in this beyond that the charcoal has told a lie, for the Karens say, since no one of us can catch the sun, how can you, "Mr. Charcoal, catch hold of it?" But you say you can ; you are deceitful, and the wood from which you were made is bad ; so we must leave the place.

These are some of the many peculiarities of these Talaing Karens on the border. It is very difficult to get any information out of them, for they get so frightened, that they almost forget what they actually do know, and they vary so much in their style of speaking, that a Karen as interpreter is only of use among his special class.

The next day, the 13th February, we resumed our march, keeping along the Tharawah valley till we came to an affluent, named the "Krata khyoung," a small, insignificant stream about ten feet wide ; but as it skirts and nearly surrounds a high hill, which is a point in the boundary between the Siamese Districts of Pra-thoo-wan and Ceesa-wot, it should be noticed. Having crossed the Krata, we ascended the hill, which we found to be 1,000 feet above the valley. The summit and slopes of the hill were so covered with dense jungle and large trees, that we could see nothing from the top, which was a great disappointment, as the ascent had been very laborious. The descent brought us again into the Krata valley, which contains a plain about two miles wide. Here we found some old houses and a few Karens. The appearance of the valley, which was covered with overgrown cotton

and tobacco plants, mingled with lowish jungle, as well as that of the ruined sheds in the outskirts of the village, bore signs of extensive cultivation in some previous time. The main watershed is but one mile north of the village, so that this is about the nearest village on the Siamese side of the border in this part of the boundary. The Yomas are so low here that you would never fancy you were so near them: they appeared to be about 400 feet higher than the Krata valley, and not more than 1,500 feet above the sea. But, though low, the shed is sufficiently clear, for after leaving the small feeders of the Krata and ascending the Poma, you can distinctly see that there is some main division of drainage at this spot. But instead of being a rough and broken ridge of limestone rock, as it has hitherto appeared, the ground sloped off gently to the west, the surface being disturbed by slight rounded knolls, covered with long grass and ferns. This, though, was the only open space we could see; the rest of the Yoma was covered with dense forest, but it had entirely lost the character it possessed in the limestone formations.

The first stream we met after crossing the Yoma was the "Lontee-koung," an affluent of the Maygathat River. It sweeps the base of a high hill over which our route lay: near the top of the hill there is a narrow gorge, in the middle of which there is a small heap of stones in imitation of a Pagoda. This rocky defile is extremely narrow and difficult, but after leaving this hill the route goes along gentle and undulating spurs with a scanty forest in a north-east direction, till you come upon the eastern bank of the Maygathat. Here the river is 60 feet broad, running deep and clear through a gorge between two high limestone rocks. These Mr. O'Riley considered excellent boundary marks, and called them the boundary brothers.

There are several limestone rocks rising out of the valley at intervals of half a mile: the principal one is called Hseng-doung; another Hleing-wa-may.

Near our camp there were traces of past occupation, and they say that this was the very spot which was recognized among the two nations as the ancient boundary.

On February 14th Captain Hamilton and myself, together with a number of Karens, ascended Hseng-doung : from its summit, which is about 600 feet above the valley, we could see far down along the Maygathat, and could trace the main range as far as Yathay Toung, a high conical hill, at that point where the Yoma changes its direction and stretches north-west towards the great Moolayit. This is the only accessible rock of the many we saw about us.

On the 15th February Mr. O'Riley had a cairn of boulders put up near the eastern bank of the Maygathat, thus marking the limit to British right and interest on that river. The information obtained with reference to the old Burmese entrenchment of Lenka on this river was exceedingly vague and doubtful. Mr. O'Riley considered it to have been much higher up the river, but I do not think that he was certain of the fact; indeed, subsequent enquiry has led me to believe that our camp was the actual Burmese outpost. The boundary being settled thus far, our next work was to continue up to the Houndraw River. The Tayloo was its nearest affluent, and so on the 16th we resumed our march in that direction, but in consequence of the most direct track being shut up by huge fallen masses of rock, we had to follow the Maygathat for some three or four miles to the east before we could cross the watershed which divided the Maygathat and Houndraw, which is generally termed the Pantoo-nan-kyan.

We encamped on the evening of the 16th on the Tayloo Khyoung, and halted one day for the purpose of taking observation from a hill in the neighbourhood. The next day we moved on, following the Tayloo, and only left it to ascend a very high and well-known hill, called Thoung-bon Toung. The Tayloo valley is bounded by the Pantoo-nan-kyan on the south-west and a broken line of limestone rocks to the north-east; it is a wide, extensive valley, covered with long grass and a few stunted trees. We encamped close by the Hton-ban Toung (one of the boundary marks) near an affluent of the Tayloo, as we found that we should not be able to reach our destination on the Thayboo River that day, and there was no water to be had further on.

On the 18th February we reached the Thayboo, where we found the Siamese Commissioner and his party; they had pushed on and reached the river the day before. Here we remained three days.

On the 20th Mr. O'Riley, Captain Hamilton, and myself ascended the Thoung-bon Toung, a high mountain in the neighbourhood of our camp. The ascent was very difficult, for the hill side was so steep and slippery, that Mr. O'Riley had to be pulled up by a long rope. The Siamese Commissioner could not accompany us, but he sent his Assistant. From the summit of this mountain, which is composed of hard sandstone rock rising to a height of 3,472 feet above sea, we had magnificent view of the hills and plains. To the north, far below us, lay the valley of the Houndraw River, and in the distance towered the giant peaks of Moolayit and Moolayat. Directly facing us, on the other side of the Houndraw valley, the dark granitic masses of the Moogadak range (the main watershed of the country) could be traced, trending south-east as far as Yathay Toung, one of the principal centres of upheaval; and beyond it we saw an endless succession of spurs stretching east into the distant plains of Siam. From the south-east round to the west hills and plains lay like a map before us; indeed, from this point of observation we gathered more information on the arterial drainage system of the country we had left behind than we had ever expected to obtain. The Thoung-bon Toung is a part of the Pantoo-nan-kyan, which ridge, stretching out into the plains of Tenasserim in a north-westerly direction, forms the watershed between Houndraw and Attaran Rivers.

This isolated mountain is about 1,200 feet higher than the spur to which it belongs, which appears to be the limiting line to the limestone formations that surround the valley of the great Maygathat. Looking down south-east, this spur, which appeared to us when marching in the Tayloo valley to be a continuous unbroken line with but little width, now revealed itself to be an undulating plateau of large area covered with dense forest jungle. More than satisfied with our good fortune, we descended to our camp. The next day we were obliged to halt, for, though we were all in good training, Thoung-bon had been too much for us.

We settled the boundary line as far as we could, ending with Hton-ban, the high limestone rock in the Tayloo valley close to our camp, on the 17th. The next thing to be done was to reach the Houndraw itself, and, settling our boundary on that river, to connect the mark with

Hton-ban. On the 22nd we marched to the village of Hsalangyan, descending *en-route* abruptly into three distinct levels of table-land, which drains itself into the Thalyso and Weng-ka-deng streams to the north-west and into the Tayloq to the south-east.

The whole of this appears to have been cultivated in days gone by, especially the last level, on which Hsalangyan stands; but the village itself is deserted now, and the valley is choked up with overgrown plants and long grass. The next morning we reached the Houndraw, and pitched our camp near the mouth of the Taylay.

On the 24th February we erected cairns on both banks of the Houndraw near our camp, and determined the line thus far, connecting the spot with Hton-ban by a chain of three prominent limestone rocks, respectively called "Khon-dan," "Hlein-gwa-boo," and "Hsa-lang-yan." The Houndraw River is not more than 150 feet wide at this spot, and does not appear to carry any great depth of water in the rainy season; but below this the river enlarges rapidly, being fed by a number of large streams which drain the southern face of the "Moogadak" range. To continue the demarcation of the boundary from the Houndraw northwards was no easy matter; we thought that the best thing we could do was to go to Moolayit, the highest mountain in the hills to our north, which were covered with dense impenetrable forests, and thence determine by observation those points we selected for boundary marks. We were in the Siamese District of "Pra-may-kloung," and therefore hoped that they could show us some direct track up to Moolayit; but we were disappointed; there was only one track through the forest, and that led to the village of Pra-may-kloungon, the Mayklong River, beyond the watershed in the Siamese Territory. The Siamese Commissioner's party had run out of provisions, so Mr. O'Riley considered that our best plan would be to march down the Houndraw to Meetan, and, collecting supplies there, proceed by another route up to Moolayit. Captain Hamilton, the Superintendent of Police, left us, as he had to return to Moulmein as quickly as possible. Leaving our boundary cairns on the Houndraw on the morning of the 25th February, we reached Mectan on the 27th. The route lay along the right bank of the river: the first two marches were tedious and uninteresting; nothing to be seen but a dense forest with a choking

undergrowth. Now and again we touched the river bank, and were thus enabled to judge of its character. The bed of the river appears to be broken by a succession of falls; between these falls the water is of considerable depth, while the surface is apparently quite still and motionless. The most peculiar of the large streams which pour their contents into this truly beautiful river is the Hteeman; its mouths form a miniature delta; each outlet is a waterfall, and between them there is a regular network of little brooks encircling the forest trees and gurgling into wells and pools at their roots. Even at this season of the year there was a considerable discharge from this river, which, as the watershed was not far off, suggests the probability of great lateral drainage. The track which leads to Pra-may-kloung from our boundary mark on the Houndraw enters the Hteeman near its source, and thence following the bed crosses the watershed, on the eastern side of which it meets the head waters of one of the affluents of the Maysan or Maisar. Among the other streams we crossed on our march to Meetan the Maynandah and Meegwee are the most deserving of notice. There is another track across the watershed into Pra-may-kloung at the source of the Maynandah, also a branch track, which leads to the head waters of the Thoungyeen River, almost in a direct line, leaving the main watershed to the west.

The Meegwee was the former limit to our possessions in the valley of the Houndraw. The Siamese Commissioner and his party encamped on their side of the stream, while we passed on to Meetan, our Police frontier station.

The last march into Meetan was more pleasant than the two first had been, for, instead of thick malarious jungle, which almost stifled us, the forest was clear and open. As we approached the Siamese outpost of Meegwee we came across a large cultivated plain, not an unwelcome sight after so much jungle and forest. A short distance off the plain to the west is the village of "Thean-kway," and the people on our side of the border say that it is one of the principal retreats of the dacoits. Want of supplies forced us to halt at Meetan till the 5th March. The Siamese Commissioner sent for Pra-may-kloung, the head-man of their district, with a view of obtaining supplies through him; but Pra-may-kloung, fearing that he might be carried

away captive to Bangkok to answer for all his misdeeds, pleaded sickness.

On the 6th March, as the Siamese Commissioner did not make his appearance, we marched off *en-route* for Moolayit, reaching the Kyeat Khyoung that day, and then had to wait till the 11th, for the Siamese Commissioner could not follow us till Pra-may-kloung provided his party with the requisite supplies. Tired of waiting, our party were quite glad to hear, on the night of the 10th, that the Siamese at last came up, and had brought Pra-may-kloung with them. We were rather surprised to find this harbourer of dacoits in the person of an old, decrepid, worn-out-looking man, expecting at least to see a powerful and active Shan with a cruel severity about his countenance, instead of which there he sat huddled up with the rest, a wretched-looking Talaing Karen with white hair and a half-starved face. It is extremely probable that he would have been murdered long ago if he had not administered to the wants of the dacoits, for he is only a Chief in name, and has no actual power nor means wherewith to exercise it.

Mr. O'Riley endeavoured to dissuade the Siamese Commissioner from accompanying us, as he expected that the ascent up to Moolayit would prove too much for the old Chief; but he would not listen to such a thing, for at the very summit of Moolayit there is a Pagoda, and it is considered no small thing to have prayed at that Pagoda. He said in reply, "If I could only crawl, I would try to get up to the top and pray for my King," and the old gentleman seemed to gather fresh strength and spirits at the prospect that was before him.

On the 11th, taking with us the fewest possible things we could, and sending the rest round to the Maygala River by the Taok spur route, we made our first march up the Kyeat spur towards Moolayit, encamping at the "Hteewa-pa-htan" Sakhon, so called after a stream of that name, which flows close by.

The Sakhon is a small flat open space under the brow of the main spur, which is thickly wooded. There are a great many tigers about here. On the march we came across a Karen's turban, which lay bespotted with blood and a good deal torn. The Karens told us, after consultation, that the unfortunate owner had been carried off by a tiger,

and that it must have taken place the day before. We found the Sakhan protected by a *chevaux de frise* of pointed bamboos, and everybody who could squeeze into it for the night did so. Mr. O'Riley was suffering from inflammation of the ear, and the pain increased so much that we were obliged to halt at this Sakhan till he recovered. I have never seen a case of earache in which there was such intense suffering. The Native Doctor and the medicine chest had been sent round by the lower route with the heavy baggage, and if I had not had my private medicine chest with me with a small supply of laudanum, the result, I fear, would have been more distressing. As an instance of apathy among Burmese, I may mention that Mr. O'Riley's servants, who were all Burmese, never thought of helping their master when he was in pain; some slept and others squatted about smoking and jabbering.

On the 15th, as Mr. O'Riley had somewhat recovered, we marched on, and encamped at the Htee-thee-than-kalee stream, so called from a stream of that name near it. The first march up the spur was over a red sandy soil containing a quantity of laterite; but at the very commencement of the second we met with large masses of granite, and the track along the ridge of the spur glistened with the bright scales of mica, while the small particles of quartz crushed audibly under our feet; the pathway was lined with beautiful ferns, in never-ending variety of size and form, from the silvery *Notholaena* to the gigantic *Poly-podium*.

The deep green valleys below and the ever-changing beauty of the mountain ranges around as the clouds swept by and concealed the sunlight, the freshness of the air, and the joyful singing of the forest birds,—to see and enjoy such is worth many a hard day's march, and we thought so too.

But the treat was yet to come; our destination still towered above us, a conical hill, looking very cold and grey, suggestive, too, of an immense Pagoda.

We met an old Pongyee and a number of young scholars coming down from Moolayit. He had taken them to the sacred spot, and had there instilled into their minds a greater reverence for Gaudama and his laws, or, in a word, their visit had made them "complacent" as their books term it. We had some trouble in getting on the next morning



(17th), for the Karen mahouts tried to shirk the ascent; some said their elephants were done up, others that there was no food for them, and that the elephants would die of starvation and exhaustion; but they gave in at last, and we continued our journey. This third march up the spur is unquestionably the most toilsome, the ups and downs being more frequent; and before you reach the encamping ground (called Sakhangyee) at the base of the cone the ascent is very steep: both men and elephants were quite tired out after this last struggle.

The Siamese had gone up before us, and were already beating gongs and singing psalms by the Pagoda on the summit. But we were too fatigued with our past exertions to go up that evening, and signified to the Siamese Commissioner our intention of ascending on the morrow. It was so cold during the night that we covered ourselves with every available blanket and covering in our possession: at 3 A. M. the temperature was only as low as 50°, but there was a strong breeze, which made it feel uncomfortably cold. The next morning we ascended the cone, taking the Mountain Barometers. The Siamese Commissioner and his party were there, all gaily dressed, gathering round the Pagoda and depositing their various offerings; our followers, too, had come out in their Sunday best in turbans and putsos of innumerable colours. It was a great transfiguration; the scene of dust and dirt and weariness of the previous day had changed to one of brightness, joy, and gaiety. The top of Moolayit is a gigantic mass of granite rock in the shape of a frustrum of a cone, rising out of the spur to a height of 500 feet above the general level. It is only accessible on the northern side; the west and south sides are sheer precipices: the flat surface upon which we stood measured 100 feet from east to west, and 50 feet from north to south. Upon it there are two Pagodas: the larger of the two is old and dilapidated; the base is the frustrum of a square pyramid, the sides being about 20 feet and height 4½ feet: it is constructed with rectangular blocks of granite not exceeding two feet in length without cement. On the top of this there is a circular-shaped mass of loose tapering brick-work some 10 feet high, which is all that remains of this old Pagoda. The history of its construction as well as that on Moolayit is not uninteresting, inasmuch as it gives us a meaning to the names of these two hills, which are

undoubtedly the highest peaks in the chain of mountains from Toung-ngoo southwards.

In the year Tha-ga-yit 111, when Gaudama was preaching in this part of the country, *i. e.*, Martaban, in the city of "Thoo-wa-na-bomee," now called "Tha-hton-myo," two Yathasys, or Dervishes, named "Narada" and "Kappa," asked Gaudama to give them each a hair from his sacred head, and Gaudama, as usual, consented. Narada, assisted by a Shan friend of his, Woh-nay, took his relic up to Moolayit, and upon it erected the present old Pagoda, calling it Mwot-la-a, which Talaing expression being translated into English, "asked for it, got it, placed on top of the Hill Pagoda." The other, Yathay Kappa, assisted by Kalapoo, a Chief of the Lawas, took his hair up to Moolayit and built a Pagoda too, calling "Mwot-la-ee," which being interpreted is "Firmly established Pagoda." When both Pagodas had been completed Narada and Kappa determined to pass the remainder of their days on the sites of their respective devotional labours, and they agreed to burn fires every night, betokening to each other their existence. If one of them saw that the other's fire was extinguished, it was to be a sign of death. Kappa's lamp of religion went out first, and his lamp of life too, and here the tale ends. The Talaing tradition leaves Narada on the top of Mwot-la-a still. The story of mountain tops and Dervishes burning lights with a similar object is old and much used, and, therefore, familiar to all who have read somewhat of Buddhist literature.

The western Pagoda on Moolayit is comparatively new; it was built 14 years ago by the united exertions of the people in the neighbourhood, the chief actors being Moung O, present Myooke of Kankareit, and the Talaing Pongyee at Asoon, a village on the Houndraw River. The Pagoda rests on a circular platform about  $2\frac{1}{2}$  feet high and 10 feet diameter, constructed with loose and irregular blocks of granite; its base is of red sandstone in the shape of an octagon, and was put together before it was brought up: the workmanship is very good, the joints between each of the blocks being scarcely visible; the architecture of the base is similar to that of other carefully-built Pagodas: the blocks recede from the bottom to the centre by regular steps, and protrude again in a similar manner

one over the other up to the top. At each angle of the octagon a "Khyeng-thay," as usual, guards the sacred edifice. The superstructure is brickwork, also octagonal, with recesses in each face; the side of the octagon is not more than two feet, and preserves these dimensions till it reaches the height of five feet, after which the octagonal sides gradually diminish till they almost blend with the round tapering spire which supports the Htee and crowns the building. The upper portion of the brickwork is ornamented with small pieces of stained glass and tinsel, which glitter in the sunlight and produce a brilliant effect: the total height of the Pagoda above the granite platform is about 16 feet. On this occasion it was decorated with small flags, while the platform and base were covered with old mirrors, small cups, and other offerings. The following are the circumstances connected with its construction:—In the year Tha-ga-yit 1213, *i. e.*, 14 years ago, MOUNG-SAN-DOO, a native of Moulmein, came to Amarapooa and there purchased the red sandstone base of the Pagoda, together with the Khyeng-thays, for the sum of Rupees 150. He brought it to Moulmein and sold it to his brother, MOUNG BWENG, a man well known for his liberality in religious endowments. MOUNG BWENG conveyed it in boats up the Houndraw River as far as the Kyeat Khyoung, where it was carried by 32 elephants up to the top of Moolayit, or rather Mwot-la-a. The Talaing Pongyee of Asoon decorated it with glass, tinsel, &c. Our object on ascending had been to obtain a view of the country, but we were cruelly disappointed; the season was too far advanced: a misty vapour covered the plains and hid the distant hills; the sun was obscured the whole day, and the clouds that enveloped us now and again discharged a drizzly rain. The mean reading of the Thermometer was 75° and that of the Barometer 23°760 inches: towards 3 o'clock the veil of mist gradually thinned, and we were then enabled to observe some of the principal features in the system of hills about us; in the evening we returned to camp, hoping for a brighter morrow. The encamping ground on Moolayit is very picturesque; the spur here is broad and open; the gently undulating surface, broken only here and there by masses of granite rock, is covered with short grass and wild Rhododendrons; the forest-clothed hills below contain the head waters of the great Maygala, and the mighty space beyond those of the lordly Thoung-yeng. Moolayit being 6,300 feet

above the sea, would, perhaps, answer well as a sanitarium for Burmah: the temperature is almost even throughout the 24 hours; there is abundance of space and material for building; water is close and plentiful: the route up would require but few alterations; in the steeper parts the gradients want easing. The distance from the end of the spur to the summit is 13 miles, and four miles off the mouth of the Kyeat Khyoung, on the east bank of the Houndraw River; there would, therefore, be only 17 miles of land travelling, as the Houndraw is navigable by small boats as far as the Kyeat Khyoung at all seasons. The country, however, is so little populated, that the establishment of a sanitarium would be attended with a great many difficulties at the outset. We were anxious to get on, for we anticipated some difficulties in settling the boundary from Moolayit northward, and the working season was already far advanced; so on the 18th we left Moolayit and followed a branch track along the ridge of the Maygala spur, which divides the waters of the Thoung-yeng and Houndraw. Leaving the ridge we descended into the valley of the Koo-khyoung, an affluent of the Maygala, and encamped by the stream. On our ascent up to Moolayit we had left some of our baggage behind, expecting that the elephants would return for them; but the Karen mahouts were tired out, and the elephants too, so we were forced to halt in this little valley till a fresh set of elephants brought on the baggage. It was a close, feverish spot, and therefore anything but suited to a camp; but we were simply helpless; we could not go back, and could not go on. Here I began to feel the effect of our jungle life, and I got worse every day, for my old enemy, the Arracan fever, made his appearance: further, as the days were passing so quickly, and we had still so much to do, this halt disheartened us. On the night of the 21st our things came up, and the next morning we started off, leaving a great portion of the baggage behind, as the elephants could not carry their usual loads. We marched along the spur which divides the waters of the Koo-khyoung and Maygala, ultimately descending into the valley at the junction of those streams; it was a very pleasant march, for soon after we left the Koo-khyoung valley we entered the pine forests of the Maygala. Some of the trees were straight and tall, perhaps 40 feet to the lowest branch, but none exceeded four feet in girth, while a great many were ill-formed with low branches. Travelling in

a pine forest is a great treat ; there is no stifling undergrowth ; the forest is broad and open, and the pine-scented breeze sweeps up and over the hill, refreshing every nerve. We met with fir trees at an elevation of 1,500 feet above the sea, and this appears to be one of the highest parts of the forest ; they grow in the valley of the Maygala and its tributaries, and appear to be confined to that part of the country only : the average height of the best forest above the sea is 1,100 feet.

The bed of the Maygala River, where the Koo-khyoung falls into it, is well worth seeing ; gigantic boulders of granite and sandstone rock thrown up in confused heaps, with other debris, and unbedded trunks of forest trees, almost blocked up the waterway through which the torrent rushed headlong, tearing up the banks and carrying with it everything that could not resist its violence. It was a scene of mighty destruction, and we spent a long time examining the various rocks in the river bed ; in them we read the composition of the hills we had crossed ; their hidden depths were at our feet. We wished to encamp here, but as the Siamese had gone further on Mr. O'Riley thought it best to proceed ; we followed the Maygala till we reached the mouth of the Ta-ok Khyoung, and as the night was drawing near we encamped by the river bank. The next morning we heard that the Siamese were making forced marches into Myawaddee, as their provisions were running short. Following them was out of the question, as our work lay in the opposite direction, so Mr. O'Riley was determined upon carrying out the work without them. He knew that going to Myawaddee to higgler and haggle with them was the surest way to leave the most important part of our work unfinished, and would entail unprofitable delay. Nevertheless, we could not go on at once, for a portion of our baggage was two marches behind ; but on the 25th it came up, and we recommenced our travels. We had left the firs, and were now in the region of teak. We kept along the bed of the Maygala till we reached its mouth, near which there is a branch track to Myawaddee, and then followed the Thoung-yeng, encamping on the left bank some two and a half miles higher up. It had long been evident to us that our camp was too large for rapid motion, but once started it was difficult to correct the error, as there was no line on the point of march to

which we should return. But as our present duty was to survey and explore the head waters of the Thoung-yeng, and on its completion we should have to return along that river, we chose the spot on which we were encamped for our head-quarters. Here we left everything but the bare necessaries of life, and started on the 27th March for the purpose of examining the hitherto unknown sources of the Thoung-yeng and defining the watershed connecting them with Moolayit.

We followed the most direct track, that along the Onkok Khyoung, as there was a prominent hill on the watershed at the source of this stream called "Nyoung-beng Toung." At night we encamped near the junction of the "Hoothair" with the Onkok. The surface of the country we passed through was a succession of small rounded elevations and depressions, covered with Engbeng, Htouk Kyan, and other trees peculiar to laterite soil; it was here and there broken by masses of limestone rock, and this is the general character of the watershed in this part of the boundary. The next day we marched on and found ourselves almost on the watershed, without encountering any actual ridge, as we had expected, for there was a break in the ridge that had appeared to connect the source of the Thoung-yeng with Moolayit. To the north and to the south it rose out of this table-land of laterite, leaving a gap 10 miles wide. Finding this we struck northwards for the main feeder and acknowledged source of the Thoung-yeng, called the Walee Khyoung, as there the hills being high would offer good points of observation.

The night of the 28th we spent on the banks of the Kanairlay, an affluent of the Walee: a very miserable night it was, too, for the place swarmed with small bees; they crept up our clothes, made attacks on our ears and noses, and finally drove us hungry and ill-tempered from our dinner to our mosquito curtains. Observation, night or day, was simply an impossibility in such a place, so the next morning we were off before dawn, and reached the Walee by 8 o'clock, encamped in a shady spot below on the right bank. From the high ground above the camp you may see a sugar-loaf-shaped limestone rock about 300 feet high; it is called "Walee Toung;" it is not more than half mile to the north of the bank, and is remarkable for its shape and position. From its summit we derived much valuable information connected with

the Siamese side of the Thoung-yeng and the main watershed from the source of the Walee southwards. Mr. O'Riley considered that we had derived sufficient knowledge of the watershed to warrant our returning to our head-quarter camp on the Thoung-yeng, and thence, following up the Siamese Commissioner, who had separated from us, march into Myawaddee.

So we made all possible haste, marching along the main track on the Siamese side of the Thoung-yeng, and arrived at the Siamese encampment, about one mile above the old city of Myawaddee, by the 2nd of April.

Colonel Brown and Captain Hamilton had arrived, also "Pra Sei Samadi," the Governor of the Shan Frontier District of Yaheing. The Siamese Commissioners, who had left us when we started work in the beginning of February, joined us on the 5th, and we laid the result of our labours before them, together with an explanatory sketch map of the boundary settled by us. They deferred concurrence in our proposal till they had laid the whole matter before His Majesty the King of Siam.

Mr. O'Riley was anxious to return to continue work from the Three Pagodas southwards, but I was too unwell to be of any further service, and following the advice of  
 Termination. Colonel Brown and Mr. O'Riley, I gave up work for the season, and went back to Moulmein with Colonel Brown.

*The result of our labours may be thus described.*

From the "Phaya-thon-soo Toung," a high limestone rock, 800 feet above the level of the Three Pagodas, and distant one mile north-east, being the point of junction with the Yoma of the long line of mural limestone, varying from 500 to 1,000 feet above the plain which stretches from the Three Pagodas in a north-west direction, flanking the Attaran as far as the "Gongyee Khyoung," and admits the otherwise intercepted drainage in the gorges of the Maygathat and Maytagyit Rivers.

From this remarkable hill, "Phaya-thon-soo Toung," the boundary line runs along the limestone ridge which divides the waters of Siam and Tenasserim in a north-east direction as

A.  
Length = 6.32 miles.

far as "Krono Toung," a hill easily recognized by its resemblance to a dromedary's back when viewed from the east or west.

Thence preserving the same direction along the Yoma for 3.74 miles as far as the bend, where the rivers

B.  
and "Koo-yay" take their rise. From this point in a south-east direction, still along the watershed, six miles

C.  
as far as the common source of the "Krata" and "Phaleesa Rivers," which is about one mile south-east of the spot where we crossed the Yoma.

Now the boundary line leaves the watershed to the east, for the main range trends far away, 19½

D.  
miles south-east, into Siam and divides the districts of Pra-thoo-wan and Ceesa-wot.

Yathay Toung, a high conical hill, is the limit to this peculiar deviation from the general rule as applicable to Burmah. Both in the Arracan and Pegu Mountains, particularly in the former, the Yoma, instead of being an unbroken line, has a zig-zag varying from four to ten miles in length; at each bend the main spurs are thrown out, and, consequently, the bends are the sources of the main streams.

Further, the contained angle of the zig-zag varies from 140° to 170°.

Here, at "Yathay Toung," the contained angle is about 60°, and in this acute angle an immense spur is thrown out in a north-west direction, forming the watershed between the Maygathat and Houndraw Rivers.

The "Yoma" itself comes up again in a north-north-west direction, and is familiarly known as the "Moogadok Toung Dan," or Moogadok range.

In its eastern flank the "Htakeing," and the "Maisor," confluent of the "Meekaloung," take their rise.



Let us return to the boundary line. We thought that a line nearly north would preserve as much as possible the existing state of things,

D. were such a line easily and clearly definable, and possess that stability and permanency which was the aim of the respective Governments. With this view we cut across the spurs north-east into the Maygathat, to that spot where the river passes through two high limestone rocks now

E. called the "Boundary Brothers;" cairns of boulders also mark the boundary, and the spot is further known by its proximity to "Hseng-doung," the hill mentioned in my narrative.

From these cairns on the Maygathat River the boundary line is carried nearly due north for  $34\frac{1}{2}$  miles as far as Moogadok Toung, where it again reaches the main watershed of the country. By adopting this line for our boundary, instead of following the watershed which I have described as trending south-south-east into Siam, the British Government have given up an area which may be estimated at 296 square miles; but the reasons for so doing are in accordance with the instructions received with reference to the demarcation of the boundary, inasmuch as the Siamese have always considered it a portion of their territory. Between the cairns on the Maygathat River and the "Moogadok Toung" the intervening marks are—

F.	No.	1.—Peing-tha-noo Toung in	7th	mile.
G.	"	2.—Hton-ban Toung in	8th	"
H.	"	3.—Khon-dan Toung in	14th	"
I.	"	4.—Hleing-wa-boo Toung in	17th	"
K.	"	5.—Hsa-lan-gyan Toung in	18th	"
L.	"	6.—Cairns on the Houndraw		
		River near the mouth		
		of the Talay	21st	"
M.	"	7.—Hteeman Toung	26th	"
N.	"	8.—Phankalan Toung	29th	"

The first of these marks is a rounded eminence, rising out of the high table-land of the "Pantoonan" range.

The four succeeding marks are isolated limestone rocks, about 200 feet higher than the valley of the Houndraw. Hton-ban, the

highest of the four, is conspicuous on account of the extreme whiteness of its southern face, which is a sheer precipice. The rock is bounded from north to east by the Taylo River, and from north to west by the Peing-tha-noo, its affluent.

Nos. 3, 4, 5 are nearly in a line and about two miles apart; they originally formed an uninterrupted range, but their lower levels have long since disappeared in the depths of the alluvial valley.

The cairns on the Houndraw near the mouth of the Taylay are built with the boulders out of the river bed, 100 yards above the mouth of the "Taylay Khyoung." The remaining marks, the "Hteeman" and "Phankalan," are hills near the extremities of spurs which emanate from the main range, and are so called from the streams which drain those spurs.

From "Moogadok Toung," a point on the Yoma, 5,000 feet above the sea, to the source of Thoung-yeng, the natural boundary suffers no alteration; it runs in a northerly direction 9·8 miles, and bends off in a curve, first north-east, north-north-east, north, north-north-west, to the rise of the "Walee" or Ganlee River, the true source of the Thoung-yeng.

At this bend the Meegwee, an affluent of the Houndraw, and the Maisor, a confluent of the Meekalong, take their rise, and a much-frequented track crosses the Yoma, leading from the district of Maykalong into that of Thoung-yeng down the Maygala River; from this bend emanate the ramifications around Moolayit and the long range of hills called the "Dana," which divide the waters of the Thoung-yeng from those of the Houndraw. A short way beyond the bend the Yoma rises to a great height, and the highest point is called Moolayit: the route from Siam into British Territory passes along its southern face. There is a gap of some 10 miles in the curve joining Moolayit with the rise of the Thoung-yeng, where the chain of hills merge into a high table-land covered with teak forest, but the watershed is well known, and the various streams are laid down in the map; the Siamese possessing the territory which drains

itself into the Meekalong, and the British that which contains the head waters of the Thoung-yeng.

(Sd.) ARTHUR H. BAGGE, *Lieut.*, R. E.,  
*H. B. M.'s Commr., Tenasserim*  
*and Siam Boundary Settlr.*

*Boundary marks, with their intermediate distances.*

*Miles.*

	A.	Phaya-thon-zoo Toung.
6·32	B.	Krondo Toung.
3·74	C.	Common source of the Htee-ko-tha, Htee-mayoung, and Koo-yay.
6·00	D.	Common source of the Krata and Pha-lee-sa.
3·20	E.	Cairns on the Maygathat River.
6·40	F.	Peing-tha-noo Toung.
1·60	G.	Hton-ban Toung.
5·60	H.	Khon-dan Toung.
2·50	I.	Hleing-wa-boo Toung.
1·80	K.	Hsa-lan-gyan Toung.
3·12	L.	Cairns on the Houndraw River.
4·88	M.	Hteeman Toung.
3·10	N.	Phankalan Toung.
5·40	O.	Moogadok Toung.
9·80	P.	Bend in Yomas.
3·26	Q.	Moolayit Toung.
32·00	R.	Source of the Walee Khyoung or Thoung-yeng River.
98·72		Total miles.

That, is, from the Three Pagodas to the source of the Thoung-yeng River is nearly 100 miles (along the boundary).

(Sd.) ARTHUR H. BAGGE, *Lieut.*, R. E.,  
*H. B. M.'s Commr., Tenasserim*  
*and Siam Boundary Settlr.*

From LIEUTENANT ARTHUR H. BAGGE, R. E., Her Britannic Majesty's Commissioner, Siam and Tenasserim Boundary Settlement, to LIEUTENANT-COLONEL D. BROWN, Commissioner of the Tenasserim Division,—No. 2, dated Camp "Three Pagodas," the 8th January 1866.

I HAVE the honour to report my proceedings up to this date.

2. I arrived at "Kanee" on the 24th December last, and hoped that I should be able to march at once for the Three Pagodas, but there I found only (6) six elephants instead of (30) thirty. In the evening of the same day, however, six more arrived from the Houndraw side.

3. The instructions given by the Deputy Commissioner to the Myookes were, I believe, to this effect: that 16 elephants were to be supplied from the Gyeing Attaran Myo and 14 from the Houndraw Myo.

4. The Houndraw Myooke's substitute informed me that he couldn't get more than the six he had brought; so I ordered the Gyeing Attaran Myooke, "Moung Kyeat," to do his utmost to supply the 18 elephants that were wanting.

5. In this manner, by the 31st December, I had altogether 26 elephants. On the 1st January I left "Kanee," being forced to abandon the extra tents and nearly all my private supplies.

6. I arrived at this place (Three Pagodas) on the 3rd instant, receiving *en-route* a letter from the Chief of the Siamese Boundary Commissioner, "Pinya-keng," in which he requested me to wait for him at the "Three Pagodas," as he would be delayed a short time in collecting elephants and supplies.

7. The Siamese Commissioners arrived on the 6th instant.

8. Yesterday (7th) morning we met and consulted what our best plan of operations would be, and finally agreed to march along the eastern side of the watershed in Siamese Territory till we reached the "May-nan-way" River, in the latitudes of Tavoy, and then cross over to "Myit-ta-myo." This route is the best, not only because it is a much-used track, but also because it will enable me to fix all recognized boundary marks on the watershed, and likewise give us a great deal of

information on the drainage system of the Siamese Territory contiguous with the boundary.

9. I will despatch a messenger to-morrow to Hseng-byoo Toung informing Captain Street of the resolution we have formed. He can, without any difficulty, come down the "Bee-lok" Khyoung and meet us *en-route*.

10. Towards the close of my interview with the Siamese Commissioners, "Pinya-keng" said that he had no instructions from His Majesty the King of Siam to accompany me further than Myit-ta-myo, and that his intention was to go by sea to Moulmein.

11. I told him that such a proceeding was out of the question, and that, if he wanted orders from His Majesty, I would send a letter to Her Britannic Majesty's Consul at "Bangkok," and request him to be good enough to obtain the necessary orders and send them with all haste: at this he appeared quite pleased, and agreed to accompany me the whole way as far as the "Pakchan."

12. We leave this place to-morrow morning, and shall probably arrive at "Myit-ta" by the 1st February next.

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Memorandum from the Officiating Commissioner, Tenasserim Division, to the Officiating Secretary to the Chief Commissioner, British Burmah,—No. 649, dated Moulmein, the 20th January 1866.

THE undersigned has the honour to forward, for the Chief Commissioner's information, a letter,\* No. 2, dated Camp Three Pagodas, 8th January

\* In original.

1866, from Lieutenant A. H. Bagge, Commissioner, Siam and Tenasserim Boundary Settlement, to his address.

(Sd.) D. BROWN, *Lieut.-Col.*,  
*Offg. Commr., Tenasserim Division.*

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## SECOND SEASON'S OPERATIONS.

From CAPTAIN C. P. HILDEBRAND, Officiating Secretary to Chief Commissioner, British Burmah, to the Secretary to the Government of India, Foreign Department, with the Governor General,—No. 73, dated Rangoon, the 4th May 1866.

I HAVE the honour, in continuation of this Office No. 19, of 5th February last, to forward, for the information of His Excellency the Viceroy and Governor General in Council, a Report of the second season's operations for the settlement of the Siamese and Tenasserim Boundary. This Report extends from the 9th January to the 24th February last, and is accompanied by letters as marginally noted.

Letter, No. 181, of 9th April 1866, from Lieutenant-Colonel D. Brown, Officiating Commissioner of Tenasserim.

Letter, No. 4, of 5th April 1866, from Lieutenant A. H. Bagge, R. E.

Letter dated 22nd February 1866, from Her Britannic Majesty's Consulate, Bangkok, to Lieutenant Bagge.

The Chief Commissioner desires me to observe that he is quite satisfied with the manner in which Lieutenant Bagge has conducted the season's operations, and that he does not attribute any blame to him for not having finished the settlement this year, the delay in which is solely attributable to the dilatoriness of the Siamese Commissioners and the obstacles thrown in Lieutenant Bagge's way by them.

*9th January 1866.*—To the Thounkalay River, 6½ miles. Track pretty clear through bamboo forest. Half the way the ground is somewhat level; the remainder is difficult, being a quick series of elevations and depressions separated by deep gullies; soil reddish sand and laterite.

The Thounkalay, which is a tributary of the Teik-pa-kyit River, is here about 100 feet broad, with a pebbly bottom.

Average depth of water four feet, running swiftly down towards the village of Wenka.

The water is sufficiently saturated with lime to produce numerous beautiful travertin encrustations which line its banks.

10th *January* 1866.—To village of Wenka, 8½ miles. Through tree forest, chiefly pyengzado; here and there a few teak with a thick undergrowth of bamboos; ground hilly at first, but on approaching Wenka it is almost level, and the forest thins while the bamboos give place to long grass.

Wenka is on the western bank of the Teik-pa-kyit River; it contains 13 houses, six of which are inhabited by Shans and seven by Taleing Karens. The river is very broad here, 500 feet from bank to bank, but this is said to be local, and that lower down it is much narrower. The stream is rapid, but shallow, not more than five feet in the deepest part. As Pinya-keng, the Chief of the Siamese Commanders, could not leave the Three Pagodas on the morning of the 9th with my party, for he had some arrangements to make about sending on to Moulmein the Buddhist Priests that had come up with him, he promised to stay and follow me on the 10th, and this evening he came into camp, having made one march of it. The Siamese elephants are lightly laden, whereas ours had as much as they could carry; besides which we have to survey the route.

11th *January* 1866.—At "Wenka" to take observations for position; wrote to Captain Street informing him of our intended movements, and to Mr. Knox, the British Consul at "Bangkok," requesting him to be good enough to procure letters of authority to enable "Pinya-keng" to continue the demarcation of the boundary below latitude of "Tavoy," as well as to assist us, as we moved southwards in Siamese Territory. It appears that the people on this side of the border pay no taxes of any kind whatever; that 16 years ago some of them had crossed into our territory owing to the taxation which before that time had prevailed. His Majesty the King exempted all his border subjects from taxation, but imposed on them the duty of supplying his officials with food, &c., and otherwise assisting them, when they required it, during their visits to the border. This was done with a view to prevent emigration, but the people say that after all it comes to the same thing in the end, for these "Mengs" come rather often, and they have to feed their retinue and provide elephants without receiving any compensation. In these out-of-the-way districts everybody who receives a salary is called a "Shan-meng." These salaries are on a

sliding scale, from Rupees 4 to Rupees 250 a *year*, or from the guide to the "Myo-sa," or Governor of the District.

There is a main track to Bangkok a little north of Wenka. The journey is generally performed in 13 days; boats going down the Teik-pa-kyit River can't do it in less than 12 days, for they say it is a succession of rapids and still water reaches.

12th January 1866.—To the "Htee-ton-than" Keng, 6½ miles. From "Wenka" the track follows the Teik-pa-kyit River on the eastern bank for three miles, and then crosses the stream. The forest is very thickly wooded and almost choked with a dense undergrowth of small shrubs and trees. The ground is level enough till you reach the neighbourhood of the Htee-ton-than Keng, where you cross the Ten-ka-lat Toung and its accompanying ramifications. The soil here is of a dark muddy colour, evidently the detritus of the slaty shales which crop out about "Ten-ka-lat."

In the evening we ascended one of the many peaks which rise out of the highland about Ten-ka-lat and took some valuable bearings: from this hill you have a beautiful view of "Manee-phon," a conspicuous cone-shaped mountain in the great range which commencing from "Yathay Keng" in the Yomas stretches far down into the plains of Siam, dividing the drainage of the "Camboorie" and "Thee-that-wot" Rivers.

The "Htee-ton-than" Keng is a wretched little stream, and anything but a desirable spot for a camp; but with elephants heavily laden it was impossible to reach the next stream before nightfall, and in these wilds it is wise to be thankful and try to be satisfied with what you get. The atmosphere has been uncomfortably hot the last two days, the sky being covered at times with "rain-clouds," whose "nimbus" shapes seem to warn us that we shall get that most unwelcome visitor "rain" before long. There is certainly a great change in the electrical condition of the atmosphere.

13th January 1866.—To the "Kalon-grai" River, 8 miles. Through thick bamboo forests: reached the village of "Sa-kie-lon-mok" after an hour's march; ground generally level; track somewhat closed by half-cullen bamboos, impeding progress. The numerous boulders scattered



about on either side of the path show that we are in a wide valley, subject to submergence during the rainy season.

The village of "Sa-kie-lon-mok" consists of but one house, inhabited by half-a-dozen Taleing Karens, who cultivate a small rich plot close by. The old man, who appeared to be almost a great-grandfather, assured me that the soil was sufficiently fertile to yield 600 baskets (equal to 350 of our baskets) in the seven acres of paddy. This is equal to the produce from the best lands in "Beloo-gyun" I believe.

"Sa-kie-lon-mok" is close to a high well-known limestone rock called "Toung-pra-that." I picked up some fragments of the rock in the village, and asked the old man if he made any use of it; he said it made very good lime, and Karens were in the habit of coming to the spot to take it away, and that it was much prized by the people in this part of the country. It is a compact crystalline rock of a darkish blue colour, containing webs of innumerable veins of pure white carbonate of lime.

My followers attempted to ransack the place in search of vegetables, but I prevented this, which seemed to delight the old Karen; but I fancy it wont be of much use, as the Siamese are coming up behind us, and they are sure to make a clean sweep.

14th January 1866.—To "Bo-oung,"  $7\frac{3}{4}$  miles. Very similar to yesterday's route; dense bamboo forest.

It began to rain, like "Moulmein only rains," at about 9 o'clock last night, and kept on raining till daybreak. It was a miserable night for us all. My tent was of little use after the first two hours, for it leaked like a sieve. Our provisions were all soaking wet, and when the day dawned the sight was both ridiculous and pitiful. However, we could not stop to dry anything there, for the forest of bamboos and trees thwarted all efforts of the now welcome sun to throw its genial warmth on the ground below; so on we marched, but everybody looked downcast, and there was a silence about the camp which strangely contrasted with the bustle and jabbering of the previous days. Now it so turns out that it exactly rained in the right place, for the exercise in the morning did everybody good, and no place but "Bo-oung" could have suited us as a "drying yard" so well.

There was a large village here in former times, but, except some small ruined Pagodas and jack-fruit trees, there are no signs of previous habitation.

15th January 1866.—Halted at “Bo-oung” to dry the provisions, clothes, &c.

The Siamese Commissioners arrived last night. The track up to Hseng-pyoo-tang is close by this place; so I sent a letter off to Captain Street telling him that I was already south of the Beelouk route, and that, if he came down it, he would miss me; and I suggested meeting him at Myet-ta. “Bo-oung,” or, as it should be called, “Ben-ong,” being Taleing, is a curious-looking place. The traveller marching along the forest track suddenly finds his road cut off by a large circular sheet of water about 400 yards in diameter, in the centre of which a huge limestone rock rising to a height of 300 feet bears on its summit a small yet pretty well-preserved Pagoda. In this tank, at the base of the “mother rock,” there are three smaller rocks, each bearing its Pagoda. The Taleings, who have a great reverence for the spot, make out that the tank is artificial, but it is clearly a natural drainage basin.

The numerous battles fought in former years between the Siamese and Taleings have provided ample food for local traditions, and there are few places which have not some story of battles fought and battles won where the village stands.

The Taleing lady “Ben-ong,” who founded and gave her name to this our encamping ground, was a complete Joan of Arc in the fighting line: her husband, the Taleing Chief, died in battle, and his troops fled back and told his wife, “Ben-ong,” of his death and their defeat. She abused them for their cowardice, and succeeded in making them follow her to the “battle field:” and now comes the picture. Burning with a sense of shame and disgrace, and desirous of wiping out for ever the stain on their honour, the brave Taleings, believing “Ben-ong” to be something supernatural, “rushed on against their vainly resisting foe and extinguished them.”

The Siamese Commissioners went up to-day and did homage to Budha, the summit of the rocky island: a bridge of floating bamboos connects it with the bank.

16th January 1866.—To “Ka-sa-ma,” nine miles. As we are travelling in a broad valley the route hardly changes its character; nothing to be seen but an eternal forest of bamboos. About a mile and a half from “Ben-ong” you reach the Beelouk Keng, and follow it for three miles; then you cross it, and one mile south-east brings you to the Ka-sa-ma Keng, which you cross and follow till you reach the village.

The “Beelouk” and the “Ka-sa-ma” Rivers are famous for their gold washings: the gold is found in their numerous little tributaries, but it is said to be scarcer now than in former years.

The “Karens” themselves have nothing to do with the gold washing. Numbers of people are sent up from Camboorie and Rajpoorie with this sole object; they are each expected to pay in Rupees 12 to their Governor if they do not bring back  $\frac{3}{4}$  tickel weight of gold. This occupies generally two months in the year.

On my arrival at “Ka-sa-ma” I was astonished at finding Captain Street there; he had arrived in the morning, having crossed the hills at the “Nat-yay-doung” Pass. His arrival has been most opportune, for his information has prevented me from making the fatal mistake of going over to My-et-ta. The Tenasserim River, though affording a capital “trunk line” for conveying heavy baggage, is so cut off from the main range by impassable hills, that it could never afford us the means of laying down the boundary with any accuracy.

We therefore sent for the Siamese Commissioners and made them understand the nature of our position.

Pinya-keng said there was no such difficulty in getting down south on the Siamese side of the border, and that when he got his letter of authority he would supply us with elephants and everything we required. I wrote another letter this afternoon to Mr. Kuox pressing him to send out the document the Siamese Commissioners required: so far all is bright and bids fair, but these people are not like Englishmen, and there may be a screw loose in the end instead of the beginning.

17th January 1866.—Halted at “Ka-sa-ma;” we and the Siamese Commissioners ascended a limestone rock in the neighbourhood with a view of fixing certain known points on the Yoma, or main watershed.

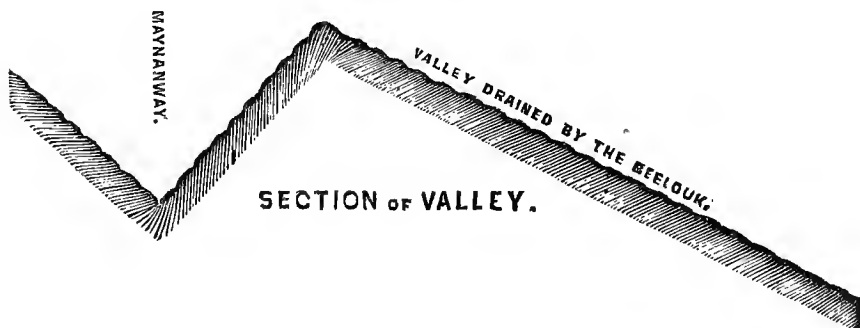
“Pooto,” the name of this hill, is about 1,400 feet above sea level; it is by no means the highest hill in the neighbourhood, but the summits of the others are inaccessible.

Captain Street “pointed out Noa-lebo,” the high mountain south of Tavoy, supposed to be 7,000 feet above the sea. This was a valuable azimuth, as it will serve to correct any errors in our route Traversi when combined with accurate latitude observations at or near “Noa-lebo” itself.

18th January 1866.—To village of “Ka-yeen,” 11 miles. We missed the tract and went off to the west, but came upon a small Karen village, and getting guides we cut across the hills to “Ka-yeen:” some of our elephants had gone beyond “Ka-yeen,” as they had followed the direct route, and the Mahouts fancied we had gone on: so we had to sleep that night on elephants’ pads, and be thankful it was not worse.

19th January 1866.—To confluence of the Hteeman and May-nan-way River, at foot of Nal-yaz Doung Pass; distance  $13\frac{3}{4}$  miles.

This and, indeed, the whole of the route from “Sa-kie-lon-mok” may be described as lying in a broad valley drained by the affluents of the “Beelouk Keng.” This valley is covered with one immense bamboo forest. The soil is generally composed of boulders imbedded in a reddish sand, here and there varied by nodules of laterite. The ascent along this valley is very gradual, the surface being but little disturbed. Just before you reach the May-nan-way River the valley is 1,100 feet above the sea, but the descent into the May-nan-way is very sudden, and presents a curious topographical feature.



Out of this valley to the east rises a chain of limestone rocks, some of which are as much as 1,200 feet higher than the valley itself and almost perpendicular.

*20th January 1866.*—To the May-nan-way River, across the Hteeman Doung,  $6\frac{1}{2}$  miles. The ascent up the Hteeman Doung is rather steep, and in one or two places rather difficult for elephants; but on nearing the summit the pass is level, and continues so till you are near the May-nan-way again, where the descent is very steep and gives you an idea of future struggles, especially when you are bound to come back again.

After we reached the May-nan-way we kept along it for three miles, halting early in the day, for both men and elephants were somewhat tired with our long march yesterday. We left all the heavy baggage behind, taking only what we might require for five or six days. I was obliged to leave a great many of my followers behind, for I found six men laid up with fever this morning, and others had sore feet with other miseries about them. I do not anticipate anything serious from the fever, for I believe it to be the result of fatigue, and a few days' rest while we are absent will put them right. I have left the Native Doctor at our head-quarter camp in case anything should turn out serious. "May-nan-way" should be spelt "Mai-nan-way," for our interpreter informs us that the name implies "small mother water," in other words "small river."

*21st January 1866.*—To foot of "Nal-yaz Doung,"  $5\frac{1}{2}$  miles. Along the bed of the "May-nan-way" the greater part of the way; now and then following the stream on the banks.

This pass is called the "Nat-yay Doung" Pass, but the hill at the summit of the pass, which is the true watershed, and consequently the boundary, is called "Tan-Doung." The people say that their ancestors crossed by another route close by over another hill which they called "Nat-yay Doung:" hence the retention of the name. We intend leaving the greater part of our baggage behind at this place and go up as light as possible, for we shall have to take our water with us.

*22nd January 1866.*—To summit of "Tan" Doung,  $1\frac{1}{4}$  miles. Rather steep at the first start, but on the whole a far easier ascent than the

generality of passes across the Pegu or the Arracan Yomas. We walked up in an hour and a half.

A short distance from the summit on the western side a little water is to be had from a spring in the hill side south of the pass, but I doubt whether any could be got or not in the hot weather from the impermeable nature of the rock, of which the hills in the neighbourhood consist, causing the water to flow off as it reaches the surface, instead of allowing it to sink and gradually filtrate through a more permeable medium. We found a tree close to the summit with the Burmese ☉ engraved upon it, and one of the Karens with Captain Street says that my Surveyor, Moug Pho, cut it out; so he has connected this spot with Tavoy, which will be of great service, for it will give us the breadth of Tenasserim at this latitude and furnish relative longitudes of Tavoy and this place, besides giving a complete route survey of the "Tan" Doung Pass.

The "Yoma" here is very narrow, the widest level surface being under 50 feet; it is well marked therefore: but some of the hills on the adjacent spurs are far higher than Tan-Doung. We have selected the highest spot on the Yoma, about 100 yards from the pass to the south, and have constructed a "look-out" on the top of one of the tallest trees as a post of observation, for the mountains are covered with a dense forest of trees and the tall bamboos, and it would take a long time to clear away the trees so as to get a clear view of the surrounding countries from the ground. The Siamese Commissioners are with us, and their followers are already collecting fragments of rock wherewith to erect a "Phaya."

23rd January 1866.—This morning I ascended the "look-out" and took bearings to all known and remarkable hills, and obtained a very satisfactory knowledge of the general topography of the country.

At mid-day the Siamese and ourselves put up our respective boundary marks. The Siamese nailed a plank to a post and stuck it in the ground, and further supported it by a large heap of stones. On the plank they wrote the following words in Siamese and Taleing:—

"The year Thek-ka-yit 1227, month of Tabodway, 7th day of waxing moon, we, "Biamay-keng" and "Hluang-son Hton-porce-rap,"

have set up this heap of stones, as also this post, and have made a boundary mark like a Pagoda.

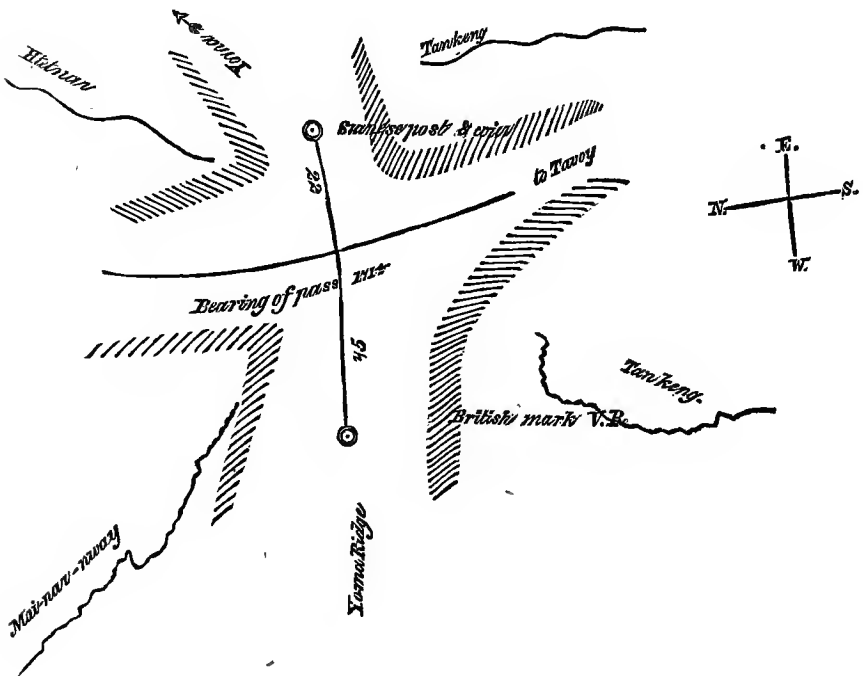
“The Siamese and English Nobles are present.”

This is some 22 feet to the east of the pass. Our mark

was 

V. R. 1866.
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 chisselled deep into a tree 45 feet west of the pass; the letters V. R. are ten inches long, and the side of the square on which these letters are chisselled is about two feet; it is about nine feet from the ground. The Karens call the tree ဝဲမုၤ ; the Burmese, မြန်မာ



This illustrates the relative position of the Siamese and British marks on the pass. During the day till late at night I was occupied in taking observations, so that we might be able to get away in the morning. The Yoma at the Hat-gay-doung Pass is 2,500 feet above the sea.

24th and 25th January.—Back to head-quarter camp at the junction of the “Hteeman” and “Mai-nan-nway.”

From the summit of the pass to the base of

the hill ... ..	Distance	1½ miles.
Along the bed of the Mai-nan-nway River...	Do.	9 do.
Crossing the Hteeman Doung ... ..	Do.	3 do.

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Length of Pass, Siamese side, distance 13½ miles.

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From Moug Pho's survey on the Tavoy side it appears that the foot of the hill is  $3\frac{3}{4}$  miles from the summit, so that the length of the pass from side to side is  $16\frac{1}{2}$  miles nearly. The pass is very much steeper on the Tavoy side than on the Siam side of the watershed, but I think it is much easier than the passes into Arracan from Pegu.

My elephant men have been grumbling latterly; they say that their elephants are tired out, and some have got sore-backs, &c.; so it is quite time to get others. The Siamese Commissioners say they will supply us with elephants when we reach “Weng-mok,” a short distance north of “Camboorie;” so we intend marching straight for “Phoung-seat,” or “Da-Yeik” as it is sometimes called, an old village on the Camboorie River. The Siamese Commissioner has sent orders to have rafts constructed, and he says we can part with our elephants there; in fact, he says there is *no* road whatever from Da-Yeik southwards: but Captain Street and myself have been thinking over the matter, and have come to the conclusion that there *must* be a road of some kind, and that to part with our elephants and place ourselves on rafts at the mercy of these Siamese is the last thing we should think of. Further, the Siamese Commissioner has more than once asked me to go down to Bangkok, and see His Majesty and get letters of power and authority, which seems to me to indicate a kind of doubt on his part about getting the documents without my going to Bangkok with him: and that certainly is the very last thing I should do. How going to Bangkok in the very middle of the working season is to further the settlement of the boundary is only known to “Pinya-keng.”

26th and 27th of January 1866.—To Da-Yeik, 18 miles, following the Mai-nan-nway River, crossing and re-crossing it several times.



The ground is generally pretty level with a few ups and downs in the middle distance; the forest consists chiefly of bamboos. Two miles and a half from "Hteeman Sakhana" you come upon a small Karen village and a good deal of cotton cultivation: we were surprised at the size of the plants and the pods, as well as the pure beautifully white appearance of the cotton itself; it certainly surpassed anything I had ever seen in Northern India or Pegu.

The Karens told us that merchants came up from Bangkok and bought it every year.

We passed through many an old *toungya en-route*; but as the Karens here adhere to the custom of changing their land every year, it is likely that this one settlement has in course of time produced them all.

Da-Yeik is inhabited by Taleings; it is a small village of some (8) eight houses on the eastern branch of the "Teik-pa-kyit" River. Numerous cocoanut trees on the forest close by indicate that it was once a much larger place than it is now.

On our arrival at "Da-Yeik" we were received by the Governor of the Paghlat Districts with great courtesy; he conducted us to a large shed he had had built up for our reception, and offered us birds' nest soup, &c.

He told he had nothing to do with the Camboorie District; that he had been up to "Bo-oung" to worship at the Pagoda on the Island. He was on his way back to Paghlat, a district south of Camboorie, and that he had waited at "Da-Yeik" to meet us as well as Prinza-key, the Siamese Boundary Commissioner, who, he says, is his younger brother.

A "pooay" is to be given to-night in our honour.

28th January 1866.—Halt at Da-Yeik, preparing rafts, &c. This place is either Da-Yeik, or "Ten-Yeik," or "Phoung-seat." The first of the three names is the most common.

Yesterday evening the elephant-drivers came up in a body and asked leave to go back, as they had brought us a long way, and the Siamese would give us elephants when we reached "Weng-mok." Captain Street and myself had a long talk about the matter, and we came to

the conclusion that our safest plan was to keep our elephants till we actually got others, although they wanted to make out that there was no road to "Weng-mok." We told the elephant-drivers that we couldn't possibly let them go till we got to "Weng-mok" and saw those which the Siamese said they would give us. I spoke very kindly to my own men, and told them to be patient and wait a few days longer and I would reward them. They left us apparently quite satisfied with our reason for not letting them go away, and we fancied it would be all right; but this morning before dawn 14 out of 30 went off as hard as they could go: and this is partly due to the Siamese Commissioner, "Prinza-key," because he allowed the three elephants I hired from him to go away without asking me. Had he refused, I dare say the others would not have gone off. It is more than likely that these elephant-owners will come to me for payment some future day, but both Captain Street and myself consider that it would only be a just punishment for them not to pay them at all, because they asked to go away, and we explained our unpleasant position to them. Such a punishment will, perhaps, prevent their behaving like this in future. The "Paghlat Myo-sa" left "Da-Yeik" this morning in his "royal barge," his band playing him down the river.

Towards mid-day we managed to find out that there *was* a road, but that it was not very clear for the first few miles. "Pinya-keng" came up to our camp and wanted to know what we intended doing. We said our heavy things would go down by rafts, but we intended following the land route, *however* bad it might be. He appeared a good deal "put out" at this, for he never dreamt that after all that had been said we should think of such a thing. But what was his surprise and astonishment at being told that *he* ought to accompany us, as it was his territory, and without him we might get into difficulties. He had made up his mind to go down easily and sleepingly in a boat, but he is a very sensible man, and a few minutes' talking persuaded him to give up his former idea and accompany us. The "Teik-pa-kyit" River here is about 100 yards broad, with little or no current; the "Mai-nan-nway" enters it through a rocky gorge opposite the village of "Da-Yeik."

The "Teik-pa-kyit" River is a succession of still-water basins and rapids from "Wenka" as far as its junction with the "Thee-tha-wot"

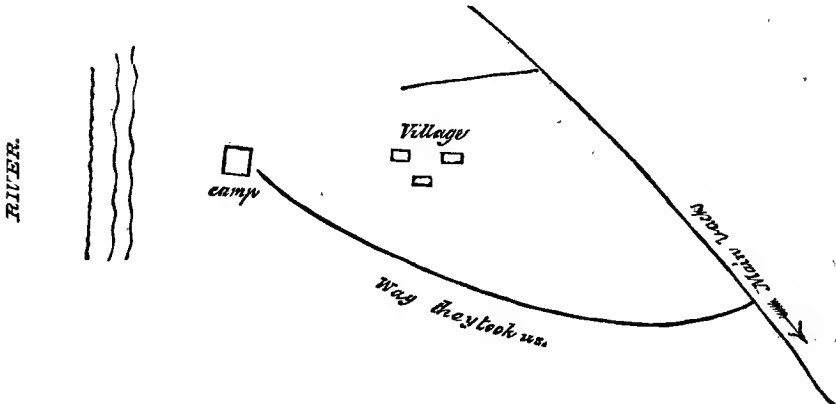
near "Camboorie." These rapids are more dangerous as the water supply sinks, for the obstructing rocks and ridges approach and rise above the surface of the stream. This naturally obtains where the water is saturated with "lime." The original small obstruction increases by successive deposits, which harden under the influence of the atmosphere when the water level has sunk, and year by year this continues till the erosive action of the "pent-up stream" rushing through the gorge prevents further encroachment, and maintains in some degree a balance between "production and destruction." Da-Yeik" is a "keng" or "outpost." A few men are posted here to apprehend criminals or others who may be trying to get out of the country.

These men reside in the village, and the only advantage they have over others is that they are exempt from capitation tax; they pay other taxes in common with the rest of the Taleings: inland it amounts to six annas for 1,600 square yards, which is roughly Rupees 1-2 per acre. But their "capitation tax" is different to ours: every poor man has his own peculiar lord and master, who requires three months' labour in the year at his hands, or an equivalent sum in money. These bondmen have the name of their Chief tattooed on the right or left wrist, according to the position and rank of the "Meng." They are generally marked early in life, about sixteen, but some manage to keep away at the marking time, and so protract their freedom till nearly 30. As each man is marked his name goes down into the general list, and from that hour they must either work or pay up. There is, however, a gradation in the working scale: though the majority have to work one-fourth of the year, there are many who, from their somewhat superior position, are only required to give up a month and a half in the year.

29th January 1866.—6½ miles. To head water of the "Krong-geng-yon" through dense tree jungle; the first three miles on level ground, and then an ascent into a high table-land, which is apparently the case of the limestone ridge which divides the waters of Teik-pa-kyit and Thee-tha-wot Rivers.

Captain Street and myself were just starting off this morning when the Siamese Commissioner's Interpreter came running up to us, exclaiming, "You can't go on; it's no use: there is no road; the forest is so

thick"—all this in quick breathless succession and in an excited manner. We smiled and went on. For the first 200 yards there was no track whatever, and we had to cut our way, and we began to think it didn't look as nice as we could have wished, when suddenly at the end of the 200 yards we came into a capital well-beaten path.



It is true that we found a few obstructions in the shape of fallen bamboos, but on the whole it was a very good path. We halted here at half-past 12, as they told us that, if we went on, we couldn't reach water till nightfall. These people had already begun their "Asiatic tricks," but so long as we are independent of them in "carriage" they won't gain much by deceiving us.

In the forest we met with some Tavoy boxwood and cinnamon trees.

30th January 1866.—To the Don-ka-lay Keng,  $9\frac{1}{2}$  miles. Through the tree forest with undergrowth of bamboos: towards the end of the march the trees thinned considerably, giving place to bamboos and highish grass. The bamboos here were in flower; some had seeded and died. We have been gradually ascending into high table-land. The reading of the Barometer shows this to be about 1,200 feet above the sea; to the south-west towards the Teik-pa-kyit River a chaos of ridges and rounded hills line the horizon. The grass round about is trodden down here and there by wild animals, and we met with the footprints of the bison and rhinoceros.

Yesterday the Siamese told us not to go on, as we couldn't reach water till nightfall, and yet  $3\frac{1}{2}$  miles from camp we came upon a nice,

flowing stream, which is really the main "Kengyon" keng; yesterday's halting-place being at the rise of one of its feeders. About 1½ miles from camp we came into an "Eing," or drainage basin, much frequented by wild cattle. This stream where we are encamped is anything but the nicest spot for a camp, as the little water there is held up by a succession of natural bunds formed by the mineral saturated water; but they tell us we must halt, for there's no water further on.

31st January 1866.—To the head waters of the "Kron-kra," 7½ miles. The first four miles through a forest of high trees and undergrowth of bamboos; ground generally level. Two miles from camp we came upon the Karen village of "Thee-moo," consisting of some six houses: for a mile and half beyond it the track goes through a belt of teak forest. Although the trees were of large girth, but few of them could be called fine trees, for they were mostly crooked, and the main trunks were shorter than those about the Thoungyoung River. Two miles beyond the village you come into a valley, and then you imagine you are leaving the high flat lands you have been travelling on and descending into the valleys to the south-east; but suddenly the route turns to the north-west up what seemed to be a ridge of limestone rock, but on reaching the summit you find yourself on a higher level plain covered with Engbouns and Htonk-kyans without any shade and a burning hot soil. This belt of forest continues till you first come upon water; it cannot be called a stream, even if it covers a large swampy area clothed with long "kaing" grass. The limestone ridge has disappeared, and you find yourself in a high plateau, so level that the water seems to hesitate which way it had better take. Here they made us halt, for there was no water further on, they said.

This morning but two miles from yesterday's camp on the "Donka-lay" we crossed the "Thee-moo" Keng, a nice, flowing stream. This is a second time that the Siamese have deceived us about water. We have pitched our camp in about the worst and most unhealthy place one could find, and Captain Street and myself had a consultation about it, and were fixed to accept what was told us as true, lest it should be the old story of the wolf, and thirst came upon us at last; we had lost sight of the Siamese Commissioner, "Pinya-keng," the very first day, but we found him to-day at the village of "Thee-moo:" the village was

crowded with Pongyees and Karens from other parts of the district. The tired-out, dirty look of the Karens and a rough-looking structure bearing upon a third story a box containing the precious bones (dust) of a departed Pongyee testified to what had taken place yesterday. No sooner did we get to the village than the Karens brought out the remains of their repast, and all our Burmese ate every conceivable trash that was put before them to their hearts' content. "Pinya-keng" knew perfectly well the whereabouts of this village, for he seems to have made for it to get in time for the "Pongyee-byan," but we knew nothing about it; and although the "Pongyee-byan" was nothing to us, we should have enjoyed a halt by a nice, refreshing stream of water instead of a series of stagnant pools. Since our arrival at Da-Yeik there has been a great change in the behaviour of the Commissioners; they tried to prevent our taking this "land route," and it appears to us to spring from a disinclination to permit us to survey in their territory. They fancied that once we got into rafts and flowing water there would be an end of surveying, as "who could possibly measure a distance on water?" They little know that by reason of the constancy of rate in a chronometer at rest relative longitudes are easily found, and that carefully-executed "time and compass" surveys of a river checked by latitude observations afford far better data than the rough route survey we are fixed to make. There is one thing certain: we have got our own elephants, and we are determined upon sticking to them till we actually see those the Siamese say they will give us when we get to "Weng-mok."

1st February 1866.—To the "Lon-thon" Keng, distant 16 miles. For  $7\frac{1}{2}$  miles through a nice, shady forest, as far as the village of "Ta-ta-go," on the east branch of the "Teik-pa-kyit," after crossing the river through one of those hot Engbounng tracts up to the 15th mile. Here we came upon a small Shan settlement; the people were employed in cutting down the "sappan trees" for the Bangkok market.

This is our first happy encampment since we left Da-Yeik. Both elephants and men were quite exhausted with the long march from Ta-ta-go: even at this time of the year the heat was dreadful. The burning sun above combined with the refracted heat from the rocky soil reminded me of the days of the famine in the North-West in 1861,

when the bare sandy plains looked like a furnace as the heated air in converted rays sought the colder strata above. Three and a quarter miles from our camp in the swamp yesterday we came upon a beautiful stream of water, called the "Kron-tha;" but we were not astonished, for the past had taught us what we might expect. But as we sat down by the little river, waiting for the elephants that were behind, we thought about it, and tried to make out why the Siamese took us into the very worst places they could pick out. Our camp was a large one, and everybody knows that with such a camp and elephants a healthy, well-drained spot with a flowing stream has a very beneficial effect upon the health of all. At Da-Yeik we left two men sick to go on the rafts, one of whom was nearly dying from fever, and that is a great deal more than enough for us with our limited means of transports. But, irrespective of this, it is nothing more nor less than trifling with us, for we have come to do our work like Englishmen, and not make a great deal out of nothing.

This morning when we arrived at "Ta-ta-go" we found "Pinya-keng" there, and our rafts too. The Siamese Commissioner had not given enough men to man the rafts, and the consequence was that in the long still-water reaches they could hardly get on at all; so I sent four of my tent lascars to help them on the rest of the way to "Weng-mok." "Pinya-keng" was in great spirits; he said that he had received a letter from the Prime Minister giving him all the power that was necessary to help us along in the southern districts; that all our wishes were to be attended to: so we hope that now we shall get on all right and finish the work quickly. To-day for the first time by the "Kron-tha" River we came across the "sappan tree," which the Burmese call "Tean-myet" and the Siamese "Phuang;" but when the tree is cut down the Siamese call it "Ta-Phuang," or "Ta-fuang," which looks very like the origin of "sappang."

*2nd February 1866.*—To the "May-ka-ban" Keng, distant five miles. Along a "cast track" on level country through an open forest of small trees and bamboos.

Our long march yesterday forced us to halt here, though the stream, if it can be called one, was still and almost stagnant. Between this and "Weng-mok," which is about 10 miles off, there is no water to be had.

\* 3rd February 1866.—To village of “Wenguide,”  $9\frac{1}{2}$  miles. Cast track all the way through a nice, open forest and short grass. The trees were principally Htonk-kyans and those common to a hard rocky kind of soil.

Yesterday we had signs of stormy weather, and a few “heat-drops” fell towards evening, but *en-route* to-day we found that, although we had escaped, the country about “Weng-mok” had received some heavy showers during the night. On our arrival here this afternoon we were welcomed by the “Camboorie Governor” and conducted to a large open shed, and requested to sit down on the “bamboo platform” that had been made for us. After a few minutes’ indifferent conversation we asked the “Camboorie Myo-sa” when we should get the elephants, and how long should we have to wait at “Weng-mok” till he could supply us with what we required. He replied—“I can give you boats and carts, but I can’t give you elephants.” Then Captain Street said to me—“In the majority of cases of elephant-stealing before my Court the owners said their elephants had been taken to Camboorie, for there were numbers in that district.” Then we asked the Camboorie “Myo-sa” why he couldn’t give us elephants, as there were so many in his district, and we couldn’t get up hills with boats or carts. The only reply we could get out of him was, “cannot get elephants.” “Pinya-keng,” the Boundary Commissioner, was absent, which was a pity, for this appears to be quite contrary to the contents of his “letter of authority.” We could say nothing more till he chose to come; so we rose up and left for our tents, telling the “Camboorie Governor” to be good enough to reflect upon the matter, and that we could consult with him again to-morrow morning. The “Paghlat Myo-sa” is here too, and as he possesses considerable influence, he may possibly put things right. We have received an invitation to attend another “pooy.” These people seem to live a life of amusement. I wish we could see the elephants instead of the pooy.

4th February 1866.—“Weng-mok.” This morning we had a long consultation in the shed; the *Paghlat* and Camboorie “Myo-sas” and the two Boundary Commissioners were present, also the Deputy Governor of Prahcoowan. We did all we could to induce the Camboorie Governor to be sensible and let us have a few elephants, just sufficient to get



up into the hills from the rivers and cart tracks; but the old man was immovable, and he appeared quite pleased at our saying "If you will not give us the means of laying down the boundary on your side, we shall be forced to go into our own territory, and then there are no roads of any kind southwards, and we shall have great difficulty in laying down the boundary at all." Captain Street and myself talked for some time over the matter, and came to the conclusion that, as matters stood, it would be far the best plan to go to "Amya" on the Tenasserim River, and, keeping that as a "base line," make inroads into the hills and fix the watershed at every pass, for there could be no doubt of the disinclinations on the part of the Siamese to let us go down any further. But here another difficulty was in our way: how were we to get to "Amya" across the mountain ranges? Our heavy baggage was on the rafts; we hadn't the means of taking that away; so we said to the "Camboorie Myo-sa"—"We have made up our minds to go to Amya, but our baggage is on the rafts coming down the river, and we can't carry it at all; will you kindly help us to get it over the mountains into Amya?" To this he actually replied—"I will give you carts up to the foot of the hills, and leave your baggage there." We tried to convince him of the necessity of helping us now at any rate, but he displayed such a childish spirit that it was useless asking him to do anything more. I turned to "Pinya-keng," the Boundary Commissioner, and said—"Your letter appears to be of little use here; how is it that after you promised all along to get us elephants at "Weng-mok" you are unable to fulfil that promise, especially when you have in your possession a letter satisfying every request you have made?" He said "I can't help it; he (pointing to the Camboorie "Myo-sa") won't do anything, and I have been much degraded." The Paghlat "Myo-sa," from whom we expected to get so much assistance, appeared to be equally powerless; he spoke frequently to the Camboorie Governor during our interview, and more particularly when the latter said that "he would leave our baggage at the foot of the hills." When we saw it was useless remaining and prolonging such an unsatisfactory interview we took our leave. This afternoon the Boundary Commissioner and Camboorie Governor have been quarrelling, I imagine, for we could hear them from our tents speaking angrily to one another. This

refusal to help us in the work will prove, I feel sure, a great blow to the success of the year's expedition. I had set my heart on completing the demarcation of the boundary this season, and the watershed is close to the plains on this side, whereas it is separated from the Tenasserim River by a multitude of interlacing spurs, clothed with a dense, impenetrable forest; so that, instead of getting down as far as the "Pakchan," we shall most likely only reach Mergui by the time the rains set in. To-day I was asked for the hundredth time when I intended leaving off the work; that the intention of the Siamese Government had been to line out the boundary as far as Tavoy this year and no further. I gave them the same answer I had always given—"When the rainy season comes I shall leave off;" and "Pinya-keng" said, "Whenever you go I will go and stay out as long as you do, but please be quick and go to Mountanis, for I have got business there and want to see Rangoon as well."

Last year the two chief Boundary Commissioners went to Rangoon and left the work, and these want to do the same. Really, the boundary business appears to be a kind of "half-way-house" to Moulmein and Rangoon; with them the clouds have been gathering up from the south-east all day, obscuring the sunlight, and the atmosphere has been feeling very uncomfortable.

*5th February 1866.*—Weng-mok. It rained heavily all last night, but fortunately we had houses in which we could put our provisions. "Weng-mok" consists of eight houses on the west bank of the Teik-pakyit (or Camboorie) River, inhabited by a mixed population of Shans, Taleings, and Lawas. Here, as in "Da-Yeik," the houses are differently shaped to what we had hitherto seen; the roofs are built upon gables, which are exact equilateral triangles, which, of course, gives a pitch of 60 degrees towards the ridge: this is increased with a slight upward curve, which gives it a picturesque appearance. I thought at first that this construction could only have arisen from excessive rainfall, but they say that, although it rains frequently and out of season, the showers are by no means so heavy as those to the west of the mountains, and that the peculiarity of forms in the roofs is adhered to as being more graceful than the flatter "pent-roof" on our side. Captain Street says he intends

leaving this place to-morrow, but I am forced to stay, for since we have been here the sky has shown neither sun nor stars, and I cannot leave till I have fixed its position.

*6th February* 1866.—Captain Street left for Tavoy this morning; it was still raining when he went, and kept on all day.

*7th February* 1866.—Towards mid-day the “clouded sky” began to break up, and I fortunately managed an alteration of the sun, which enabled me to calculate the lines of transit of some principal stars to-night, and if the clouds pass off, I shall get through my work to-night and go off in the early morning. All the heavy baggage went off in carts to-day; it is to be taken as far as the foot of the hills.

“Pinya-keng” says that he has sent for some elephants, but only one has come as yet, and even if one or two more come, they won’t be enough to carry his *own* things, so they won’t assist me much. But Captain Street has been kind enough to leave three of his elephants with me, so that we get to the foot of the hill; we shall get all the baggage over to “Amya” in three trips.

*8th February* 1866.—To the Kran-pa-du Keng, distant 11 miles. For the first six miles through an open forest and short grass similarly to our route on the 3rd, when we entered “Weng-mok.” Then the cart-track leads you into a thick forest of small trees, chiefly “sappan.” In the ninth mile we reached the village of Yaybyoo. A short way beyond the ground begins to undulate, and you perceive that you are leaving the plains.

The Karens at “Yaybyoo” occupy themselves in cutting “sappan” wood; the trees are all small, not exceeding six inches in diameter. At “Weng-mok” we saw two Chinamen; they had come up from Bangkok to buy the “sappan wood.” The cutters strip off the bark and external shell of the tree, which is white, leaving the red heart exposed to the sun in stacks. They get Rupees 40 for the hundred trees; middle girth 11 inches. In former years sappan wood was much cheaper: the forests are being gradually worked out.

*9th February* 1866.—To the “Theng-gan Lakhan,”  $2\frac{2}{3}$  miles. Along the “Koonpadee” Keng easy marching; ascent very gradual. The “Theng-gan Lakhan” is only  $1\frac{1}{4}$  miles from the “Yoma,” or main

watershed. I originally intended crossing over to the "Amya-keng" and encamping there, but the guides say that it is three miles to good drinking water, so I determined upon staying here and fixing the boundary first. There is little or no water in the bed of the stream at the surface, but we dug a deep tank, and in two or three hours the tank was filled by water percolating through the sand from the higher levels. This "Lakhan" is 1,100 feet above the sea. The Siamese Commissioners have stayed behind to look after the heavy baggage that was so politely deposited at the foot of the hills. On leaving "Weng-mok" I asked the Camboorie Myo-sa to be good enough to give me some men to carry a sick lascar, who had been on the point of death ever since he arrived, and whose body was so wasted away with fever, that he could hardly speak. The "Camboorie Myo-sa" said he couldn't get any men to carry him; I was then obliged to put nearly all my surveying instruments on the elephants and make my own men carry him. They brought him as far as this place, and when he got here I put him on an elephant with the Native Doctor to look after him, and sent them off to "Amya." The lascar would have died some time back had he not been well attended; for the last week he had been fed on "port wine and arrow-root" and Crosse and Blackwell's chicken soup. He is getting stronger now, and can talk a little. I hope he won't die, though I must say I think he has tried very hard to do so. Death in camp is a very disagreeable thing; the natives get downhearted and dispirited, and fancy they are going to die too. Sent the elephants back to the last camp to bring in as much of our baggage as they can.

*10th February 1866.*—Theng-gan. The Siamese Commissioners came into camp to-day; we agreed to go up and fix the boundary to-morrow morning. I sent my Surveyor and Chinamen to select a good high hill near the pass, and build a small "look-out" on the top of a tree, so as to get a clear view of the country and the principal well-known peaks and hills.

*11th February 1866.*—Yesterday evening my Surveyor, Mounng Nan, came back and said that the whole day had been taken up, first one hill, then another; that he had at last selected one, but it was so

late, that they had not time to make the "look-out," so I sent them up again to-day, deferring the settlement of the boundary till to-morrow.

12th February 1866.—Across the Yoma,  $5\frac{1}{2}$  miles. Up the side of the hill in two rather steep ascents, broken by a nearly level path; distance to the top  $1\frac{1}{4}$  miles. Then you descend very gradually along the bed of the Amya-keng, but the journey as far as "Lakhan Gyee,"  $2\frac{1}{4}$  miles from the Yoma, is very disagreeable: you must follow the bed of the stream, which is filled with rocks and boulders, and leeches too.

This morning Pinya-keng and myself ascended the post of observation selected by Moug Nan, but not without some hesitation, for he seemed to dislike the look of the platform 50 feet above him. He said he knew nothing of the hills about this part of the country, and called out to his men below, who, he said, knew something about them, to come up; but they said they were frightened, and had never been up to such a place in their lives. I confess I was rather amused at the frightened manner in which the Siamese Commissioner clutched the branches when a gust of wind came. But as I could get nothing out of the Siamese, I called up Moug Nan and the Akhwon-non of Tavoy, whom Captain Street had kindly left with me, as he seemed to know more about the country than anybody else, and we got a few important bearings, but the mist, which comes over the country at this time of the year and day by day increases till the rains, prevented us seeing all we wanted. This hill is 2,300 feet above the sea and 2,500 feet south of the pass, and is on the "main watershed." There are wild elephants in these hills; one of their paths leads up to the point of observation from the pass.

Towards mid-day we descended to the pass to mark the boundary.

I chose a fine large tree 37 feet north of the pass, and cut out a tablet about two feet square and engraved therein the

letters

V. R.
1860.
A. M. B.

The Siamese Commissioner chose a smaller tree in

the same line with our mark and the ridge on the same side of the

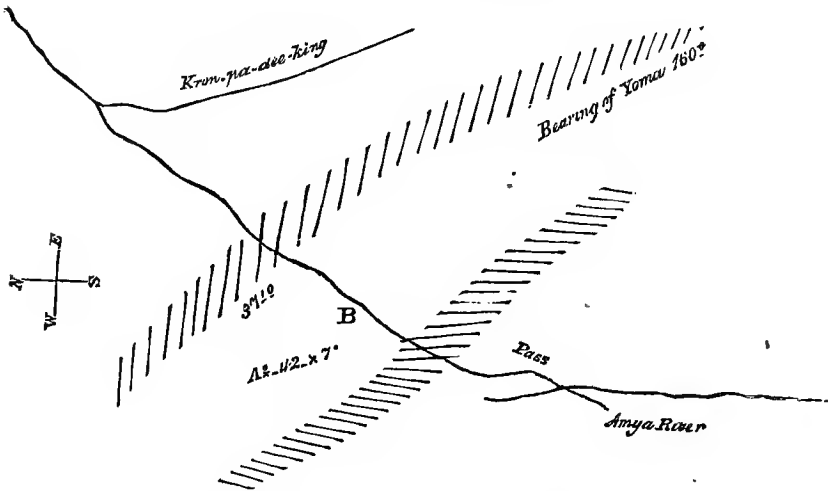
pass seven feet from it, and wrote on it in Taleing

Boundary mark. 1227. "Pinya-keng."
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Our

tree is a "Myouk Ngobeng" and theirs a "Pyeng-ma-byoo."

### SKETCH OF BOUNDARY.



A. The British mark. B. The Siamese do.

On my way down the "Amya" keng I met Mr. Burn, Captain Burn's brother; he was marching as fast as possible with a view of reaching Bangkok before Donald McLeod had left. He lost his guns and provisions and almost everything he had in the Tenasserim River at one of the rapids.

13th February 1866.—To village of Amya, four miles, following the Amya-keng for  $2\frac{1}{2}$  miles; easy marching along the banks.

The remaining distance on level ground through a bamboo forest.

The difference between the vegetation on the east and west sides of the watersheds is quite remarkable.

On the east a belt of small Engbouns and Htonk-kyans growing in a hard impervious soil lines the base of the mountains.

Everything seems hot, dry, and withered; the streams contain little or no water, and that lies in the hollows of the rocks already tinged by decaying leaves. But on the west the country is clothed with a beautiful green forest; the streams run bright and clear, and

the birds singing in the branches tell you that here at least there is some life. This afternoon the Siamese Commissioner, "Pinya-keng," sent to say that he was taken ill; so I went up immediately with the Native Doctor to see what was the matter. We found he had got fever, but it does not appear to be at all severe. I ordered the Native Doctor to attend to him regularly and administer the usual remedies. This evening the second Commissioner came to my tent and said that "Pinya-keng" had told him to say that, if he was not well in two days, he would return to "Weng-mok." This is very like being determined to get ill and get away. He might have waited till he really did get worse and then say he must go. It is difficult to say what will happen. I think that "Pinya-keng" is really unwell, but these people will do their utmost to get away. They consider they have done quite enough for one year, and besides they have been invariably at every interview asking me when I intend leaving off work. I shall go and see "Pinya-keng" again to-night before I go to bed.

*14th February 1866.*—Last night I found that Pinya-keng had refused to take the medicine the Native Doctor had prepared for him; but I persuaded him after some time to take it. He had no fever this morning, but he says he can't eat anything and feels very ill.

*15th February 1866.*—All last night I could hear "Pinya-keng" groaning: the Native Doctor was constantly with him.

This morning I made him take an emetic, which did him some good, but he was worse than ever towards evening. I went up and sat by his bed and made the Native Doctor put a mustard plaster on the abdomen, as he complained of heat and irritation in the stomach. I left the Interpreter and the Akhon-won with him to see that he did not take off his plaster immediately it got hot, but it was of no use, for I had hardly left him before he took it off. He does nothing but lament and groan, and won't do what he is told to do. But this morning early the second Commissioner came to my tent and communicated a piece of information which I was now well prepared for. He said Pinya-keng has desired me to tell you that he is too sick to continue the work, and intends leaving to-morrow. To this I replied, "that it was most unfortunate, and I was very sorry to hear that he intended going away; but that he (the second Commissioner) was quite well, so that he could come

with me and settle the boundary as far as we could before the rains." He laughed at this idea of mine, saying, "Why, I never intended going down any further. Before we left "Weng-mok" the Chief Commissioner, Piuya-keng, gave me leave to go back directly we reached Amya. I am a sick, weakly man, and directly I try to climb a hill the blood rushes to my head and I get giddy." Then I replied—"But you have been appointed by His Majesty the King to assist "Pinya-keng" in laying down the boundary between the two countries: it is clearly your duty in the absence of the Chief Commissioner to continue the work; I am confident His Majesty will not approve of your going off, because Pinya-keng is ill and is forced to go." He thought for a little while and then said curtly—"I can't go: I know nothing about the business, and Pinya-keng knows all about it." All this was not very promising; but I tried again, saying, "the business is not a difficult one to understand; the watershed is the boundary: all you have to do is to come with me, satisfy yourself that the marks that are put up are either on the watershed or in such places as they will not interfere with existing rights of territory, and should you dislike settling that boundary where there is occasion for discussion, you can leave it an open question to be settled hereafter by the two Governments." But this would not do either. He replied—"I can't take the responsibility: I have no power when Pinya-keng is away." After this I said no more, seeing the futility of attempting to put a sense of duty into a brain that had never known it. Before he left my tent he asked me to be good enough to write a letter to Mr. Knox, the British Consul at Bangkok, explaining the cause of "Pinya-keng's" departure. It is a mystery to me how these Commissioners can behave as they do. Last year two out of three went away and could hardly be persuaded to leave one of their number, and this year after a short month's work they wanted to give up and go to Bangkok by the round-about way of Moulmein and Rangoon.

The Siamese have asked for supplies and elephants to take them across the frontier as far as "Weng-mok." Luckily all our elephants had not left, and I managed to persuade six of the drivers with a promise of Rupees 4 a day to take the Siamese over. I gave them all the supplies they wanted, so that they can't say that we on our side didn't help them to the utmost of our power.



This morning I sent away the guard and all those men I didn't actually require *en-route* through "Myet-ta" and "Yay" to Moulmein. I expect to meet Mr. Shepherd, the Deputy Commissioner of Mergui, at "Oung-tha-wa-sa" in a week's time, and we will lay down the boundary together.

16th February 1866.—The Siamese Commissioners left at 7-30 this morning. Before their departure the second Commissioner came to my tent and gave me three letters, one to Colonel Phayre, the Chief Commissioner, another to Colonel Brown, Commissioner, Tenasserim Division, the third to E. Fowle, Esq., Siamese Consul, Rangoon: these I shall send into Tavoy before I leave "Amya"

17th February 1866.—We have been busy all day making rafts: those made by the Karens were unsuited to our requirements, and were so roughly put together that the first rapid would break them up. In order that the working party might get down quickly to the passes and let the rafts follow, the Myooke sent up to "Myet-ta" for six boats; they ought to be here the day after to-morrow, and then we can get away. As it is, there has been so much time lost by a change of places from one side to another, to say nothing of the distance of the watershed from this river, the Tenasserim, that I feel it will be next to impossible to get down further south than Mergui this year. On the Siamese side of the boundary we might have been 50 miles south of this and finished the whole work this season.

18th February 1866.—"To-day I sent off my Surveyor, Moug Pho, to Wavene, as far as "Kyouk-tow" on the "Bean-keng;" thence he will survey that river as far as "Myet-ta," from which place he will come down the Tenasserim and survey the whole river as far as Mergui."

19th February 1866.—The boats came in this morning from "Myet-ta," and we are going off to-morrow morning.

20th February 1866.—Left the village of Amya at 9 A. M. and encamped at night on a bank above the "Salan Falls;" descended six rapids.

21st February 1866.—Leaving before sunrise we reached the "Sa-may Falls" in the evening; came down several rapids.

22nd February 1866.—Descended the Sa-may Falls in the morning

and the Thon-doung Falls at mid-day; encamped at night on the west bank of the river. Between the Sa-may and Thon-doung Falls there are three rapids.

23<sup>rd</sup> February 1866.—Towards evening we came down the Thon-pa-non Falls, and encamped on a sand bank about two miles above “May-pia.”

24<sup>th</sup> February 1866.—Reached “May-pia” by 7-30 A. M. I sent the Akhon-won off to Oong-tha-wara with a letter for Mr. Shepherd telling him the plans I have formed.

By latitudinal measurement the distance between “Amya” and “May-pia” is 30 miles; the general width of the river is 150 yards; the direction of the stream regular, deviating in turn from west to east of south. The bends are long, more especially in the still-water reaches; between “Amya” and “May-pia” there are (4) four large rapids, or falls, and (16) sixteen smaller ones. The aggregate fall in the river is 130 feet, which equals 43 feet in the mile. This with such a large body of water would naturally give an enormous velocity, and lead to the conclusion that the river’s journey must be a quick one; such is not, however, the case: the whole of this fall of 130 feet is absorbed in the rapids. Below them the water is apparently motionless, and these still-water basins form ( $\frac{4}{5}$ ) four-fifths of the whole length.

The four great rapids are dangerous owing to the velocity of the stream and the numerous sunken rocks; we were obliged to remove all the instruments and other valuables and carry them down by land. At the Sa-may Falls the Myooke’s boat sank and our raft came to pieces.

At the smaller rapids the water is shallow, and the bed of the river is covered with boulders of great size, so that there is no danger; they are rather welcome inasmuch as they carry you down a long way into the still-water.

On the 23<sup>rd</sup> I was obliged to send back the Tavoy Myooke, as he was laid up with fever.

I intend marching up this "May-pia" River to the watershed and fixing it and marking the boundary.

(Sd.) ARTHUR H. BAGGE, *Lieut., R. E.,*  
*H. B. M.'s Commr., Siam*  
*and Tenasserim Boundary Commission.*

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FROM LIEUTENANT-COLONEL D. BROWN, Officiating Commissioner, Tenasserim Division, British Burmah, to CAPTAIN C. P. HILDEBRAND, Officiating Secretary to Chief Commissioner, British Burmah, Rangoon,—No. 181, dated Moulmein, the 9th April 1866.

IN forwarding to you a copy of Lieutenant Bagge's letter, No. 4, of the 5th instant, announcing the close of his operations for the settlement of the boundary during this season, I have the honour to state, for the information of the Chief Commissioner, that I am of opinion that, under the circumstances stated by Lieutenant Bagge, he acted wisely in returning at the time he did.

2. It is very much to be regretted that the Camboorie Myo-sa acted with such perversity and positively refused to give elephants, which no doubt were at his command. For his conduct this man has been, by order of the King of Siam, dismissed from office.

3. When with the Siamese Commissioners last year I remarked their great apathy as to the boundary southwards; their only concern was regarding the boundary on the Thoungyeen. When they saw that there was no intention of our claiming anything to the eastward of that river, they appeared perfectly satisfied, and told the late Mr. O'Riley to fix the boundary as he liked. Lieutenant Bagge has evidently met with the same apathetic feeling this season. The Commissioners at first refused to go further than the latitude of Tavoy; then they agreed to go down to the Pakchan; but ultimately gained their object by throwing difficulties in the way of Lieutenant Bagge: they left him to the eastward of Tavoy. From the refusal to give him elephants, Lieutenant Bagge had to change his route, cross over to the westward of the hills, and come down the Tenasserim River to Mergui.

4. I am satisfied that the work of fixing the boundary on our side southwards from the Amya Pass, where Lieutenant Bagge left off this year, would be one of the greatest difficulty. The country southwards is covered with dense jungle; there are few inhabitants near the hills; there are no tracks running parallel to them: these would have to be cut, and I doubt if elephants could be obtained for hire; they would have to be purchased. After consulting with Lieutenant Bagge I came to the conclusion that the boundary must be fixed from the Siamese side: there the country is peopled, though thinly, and there are tracks running parallel to the hills.

5. I propose that for next season's work Lieutenant Bagge's plans should be as follows:—He should about the beginning of November next send his heavy baggage and his followers by a native junk to the Pakchan River, our southern boundary. Lieutenant Bagge should himself proceed by the Straits Steamer of the middle of November on to Singapore, thence to Bangkok; there with the British Consul he could arrange all preliminaries and meet his establishment on the Pakchan about the middle of December; he would then proceed northwards, fixing the boundary as he came along from the Pakchan up to the Amya Pass, where he left off this year. The distance is about 200 miles; this he ought to get over in about two months.

6. I anticipate no difficulty as regards the arrangements at Bangkok: the British Consul has assured me that he will give every assistance as to carriage, &c. I will write to him and tell him of the plan I have proposed for next season's operations. His reply shall be sent for information of the Chief Commissioner as soon as it is received.

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FROM LIEUTENANT A. H. BAGGE, R. E., Her Britannic Majesty's Commissioner, Siam and Tenasserim Boundary Commission, to LIEUTENANT-COLONEL D. BROWN, Officiating Commissioner, Tenasserim Division, British Burmah,—No. 4, dated Moulmein, the 5th April 1866.

I HAVE the honour to report my arrival at Moulmein by the Steamer *Salween* yesterday, the 4th instant.

My early arrival necessitates explanation, and in connection with it a brief narrative of those events which have been the cause of the non-completion of the Boundary Settlement this season.

In letter, No. 2, of the 8th January 1866, to your address, I reported the fact that the Siamese Commissioner, "Pinya-keng," had received instructions from his Government to go with me as far as the latitude of Tavoy; that his power was limited to the district between the Three Pagodas and Tavoy; and that, in the absence of a letter of authority, he had no influence whatever beyond that line. He went on to say that he intended returning to Moulmein when he had done the work allotted to him. I explained the puerility of such a proceeding to him, inasmuch as we should reach Tavoy by the 1st February with the working season still before us. Further, I offered to write to Mr. Knox, the British Consul at Bangkok, and request him to get the requisite letter of authority. The Siamese Commissioner appeared pleased at this, and consented to accompany me as far as the Pakchan River, our southern boundary. At Wenka on the 10th I sent a despatch to the British Consul.

Being ignorant of the country south of Tavoy, I could not come to any conclusion as to the route that would answer best as a base of operations, but it being evident that the first 100 miles south of the Three Pagodas was impassable on the western flank of the watershed, we were forced to march down in Siamese Territory.

On the 17th January I met Captain Street, the Deputy Commissioner of Tavoy, and we marched on together. To be brief, I will only say that for the first 80 miles everything appeared most satisfactory. The Siamese Commissioner gave us every assistance, told us the names of all the remarkable hills both on and beyond the main watershed, pointed out the sources of the main streams, and willingly and eagerly gave all the information we required. Under these circumstances, we naturally got on quickly with the work, and from the professions of the Siamese Commissioners we were led to suppose and hope that by the middle of March we should reach "Kia" and thus complete the demarcation of the boundary. It is true that he frequently alluded to his limited local power, and expressed a desire to leave off when we reached the latitude of Tavoy; but we did not pay much attention to this, inasmuch as two despatches had been sent to Bangkok with a view of preventing his leaving the work.

On the 27th January we reached "Da-yeik," a largish village on the "Teik-pa-kyit," or Camboorie, River, in latitude  $14^{\circ} 25' 37''$ . Here we were met by the Governor of the Paghlat District, &c. (the district south of Camboorie), and brother of the Siamese Boundary Commissioner, "Pinya-keng." Though we were treated with the greatest of cordiality and respect by the Paghlat Myo-sa, inasmuch as to make us more certain of doing our work rapidly and efficiently, yet when I look back to the day we met him and know that from that day our difficulties began, I cannot but think he was, perhaps, the first to object to our further progress on the Siamese Territory. This objection consisted of this: persistent denial of the existence of any route beyond "Da-yeik;" false information along the route found out and taken; pretended ignorance of the country; and, worse than all, a shameful desertion of our camp. I am justified in using this expression, for the Siamese Commissioner was acquainted with the different spots suitable for camping grounds; but he left us to the care of two or three Siamese, who day after day made us shorten our marches and pitch in places where the water was, when not stagnant, hardly adequate to our wants, and only an hour's march from nice, flowing streams. Had we parted with all our elephants and taken to rafts on the Paghlat Myo-sa, and the Siamese Commissioner advised and pressed, we should not have had any difficulty in reaching "Weng-mok," but we should have left ourselves completely in their power; and as they both on their part opened again the subject of giving up work, we should have been without the means of moving without their consent and co-operation. Captain Street and myself had a long consultation on this subject, when we found they had begun to deceive us. Though the Siamese Commissioner told us frequently that we could get elephants at "Weng-mok," still we clung to independence. The Siamese Commissioner sent away some of his elephants at "Da-yeik," and the consequence was half of mine followed. We were crippled, but not powerless, for the heavy baggage was sent down to "Weng-mok" in rafts, and we with the few things we could carry took the land route. Future events show how right we were in adopting this course, for on our arrival at "Weng-mok," a village some 12 miles from Camboorie, we were received by the Governor of that district, and he refused to give us

elephants—refused, inasmuch as he stated that there were no elephants in his district, whereas it was generally known that there were a great many. He offered us boats and carts, *not* coolies, as well; and what could we do with boats and carts without coolies when we had to ascend the main range? For three days we attempted to persuade him to help us laying the whole matter before him; that owing to the absence of all communication with the watershed on the west we could not lay down the boundary without almost insurmountable difficulties from that side; and that by his refusal to assist us he was in reality stopping the work. All our arguments had no effect on him; on the contrary, he appeared so determined not to help us through the difficulty, that he actually said, when we begged him to convey our baggage across the hills to Amya on the Tenasserim River, “I will take all your baggage up to the foot of the hills and leave it there.”

The Siamese Commissioner has already received his letter of authority from the Prime Minister, but, strange to say, there was no mention whatever in it of helping us with elephants; and, further, the letter was very cautiously written, giving a great deal, yet taking away what it gave. In these difficulties there were two courses to pursue: the first to go to Bangkok and represent the impossibility of continuing work without elephants; the second, to go into our own territory and meet the hardships, whatever they might be, settling the boundary from the west. Against the first, it was clear that they did not wish us to survey any longer in their territory, and also that they considered enough work had been done for that year. That these were no sudden conjectures or ideas without reasonable foundation the fact will show, for at the Three Pagodas, when I met the Siamese Commissioners, they were averse to my going into Siam at all, one of the party arguing that, if we surveyed in their country, its honour or its prestige would be gone. Hearing this speech I said that the two Governments were great friends, and that, if His Majesty the King of Siam were to hear such a thing, he would be very angry. It was owing to this that Pinya-keng, the Siamese Commissioner, did so much for us till he met his brother at Da-Yeik. Again, with reference to their wishing to discontinue work, at every interview the Siamese Commissioners expressed a desire to leave off in the latitude of Tavoy and go to Moulmein; also, had not the Court

of Siam intended the demarcation to extend this year as far as Tavoy and no further, they would, I imagine, have not restricted their Commissioners' powers in the way they did. Captain Street and myself had a long consultation on the question, and we came to the conclusion that going away to Bangkok was simply doing no more work this year; and what would that entail on me? This: the responsibility of having spent a large sum of Government money in maintaining the establishment and without anything to show for it. That we were perfectly right in thinking that the Government of Siam had no idea of continuing the work may be seen in the annexed copy of the British Consul's letter, which reached me on the 10th March on the Tenasserim River. In it may be seen that the authorities wished me to go to Bangkok to consult about the next year's operations, not to see if they could not manage to help me on this year.

I was quite alive to the fact that marching over to the west side of the watershed and keeping the Tenasserim River as my base of operations would entail such difficulties as to render it next to impossible to reach "Kra" and complete the work as I wished; but I considered it right to do my best and give an equivalent amount of work for the money spent: and this was not to be expected by going to Bangkok to talk about what we were to do next year. Again, a survey of the Tenasserim River was almost necessary to a complete illustration of the boundary; it would give me the mouths of all streams and their probable sources, which might be more accurately determined by marching northwards from Kra next season on the Siamese side, where the hills are so accessible; it would enable me to make a map of the Tenasserim side of the boundary, while the next season would give me the Siamese side; and lastly, it would enable me to carry out the idea I have always entertained of not only furnishing a bare map of the boundary line, but of preparing maps both of Siam and Tenasserim and adding to the general knowledge of those countries. I do not mean by this that in order to carry out this year I did ever, or would, delay the demarcation of the boundary line. I mean that I wished to give the Government a greater knowledge of the physical geography of the two countries, which no man but one in my position could hope to obtain.



Being influenced by these considerations and convinced of the futility of going to Bangkok, we crossed the hills by the Amya Pass into our own territory not without difficulty ; for I was obliged to send the few elephants I had backwards and forwards and get on step by step just before my departure from Weng-mok (Captain Street had gone on two days before). The Camboorie Myo-sa offered to get a few elephants ; I waited for them, but I found that they were only sufficient to take the Siamese Commissioner's things, and therefore of no use to me.

Pinya-keng and myself fixed and marked the boundary in the Amya Pass, and this was the last march made with joint consent, for Pinya-keng fell sick at "Amya," and he and all the Siamese went back into their own territory, though I did all I could to persuade the second Commissioner to remain with me.

I waited at Amya a few days for boats, but when they came they were of no use, being very small and crank, so I had rafts made and went down the Tenasserim River surveying it and determining the halting-places by astronomical observations. The watershed is only accessible in three places on the west side, *viz.*, the "May-pia," "Sarawa," and "Thean-kon" Rivers ; they have all been surveyed and the boundary marked. The Karens on the Tenasserim River dreaded the very idea of giving up these passes. The "May-pia" and the "Sarawa" do not deserve the name, as there are no real tracts. I walked for seven days in water when ascending the May-pia River, and was laid up with fever the sixth day.

On the 7th March we reached "Oung-tha-wara," or what is now called "Theng-gan-ngok," the boundary of the Tavoy District, and there I met Mr. Shepherd, the Deputy Commissioner of Mergui.

On the 22nd March we reached Tenasserim, and here came to a dead-stop, for after my head Surveyor had finished the survey of the "Thean-kon" River there was nothing more to be done. There was no possibility of getting any further south, except by going to Mergui, Chateing, Katoos, and making for "Kra." But even this, though feasible, was not advisable, for by the time we had got the Katoos and reached "Kra" the monsoon would have caught us, and we could not have returned without great risk, and even without that not much could be gained by giving to such a distant point *not* on the-watershed, where

there was no connection with the work we had already done. Such a proceeding would have cost a large sum of money without producing any good.

I was deliberating what my next step ought to be when I heard that the monthly steamer had not come in, so I thought it the wisest and cheapest plan to go at once to Mergui and take my establishment up to Moulmein, thus saving two months' pay.

The length of boundary line determined this season is about 230 miles.

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From THOMAS GEORGE KNOX, Esq., Her Britannic Majesty's Council, to LIEUTENANT BAGGE, &c., &c., &c., Royal Engineers, Boundary Commissioner,—dated Bangkok, the 22nd February 1866.

I HAVE the honour to acknowledge the receipt of your despatches relative to the difficulties you have experienced in endeavouring to obtain elephants and the means of transit to enable you to proceed on your journey for the purpose of settling the boundary question.

I have spoken to His Excellency the Prime Minister on the subject, and he states that he did not receive sufficient notice of the route you intended to take and the elephants you would require on the journey.

In any case, he informs me it would be very difficult to obtain a large number of elephants in that particular part of the country; but this might have been done if early warning had been given.

Under the present circumstances, it appears to me that your best plan would be to come to Bangkok at once, when you can make further arrangements for next year. The sickly season is about to set in, and you will be unable to continue your operations without danger to health.

By coming to Bangkok every arrangement can be made to enable you to complete your business next year without inconvenience.

The Siamese Authorities are also anxious to see you.

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