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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No. 144 Press
B.P. No. Mis.

Dated 25. 11. 1972 196

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Department,
13*th November* 1872.

No. 19. Read the following Extract from the Proceedings of the Government of India in the Department of Agriculture, Revenue, and Commerce, dated Simla, 13th September 1872, No. 566:—

Read—

Letter to the Surveyor-General of India, No. 205, dated 13th September 1871, sanctioning the formation of two parties for conducting Survey operations with the Lushai Expeditionary Force in 1871-72.

Read—

A letter (with enclosures) from the Surveyor-General of India, No. 160-F, dated 22nd June 1872, submitting reports on the professional results obtained by the above-mentioned Survey Parties.

Resolution.—The Governor-General in Council has read with much interest the report of the Surveyor-General of India, with its accommpanying papers, on the geographical results obtained by the two Survey Parties attached respectively to the right and left columns of the Expeditionary Force despatched into the Lushai hills in the cold weather of 1871-72.

2. Starting each from an assured base, these two parties have, in the space of one short season, topographically delineated 6,500 square miles of new, difficult, and hostile country, and contributed most materially to fill up the gap which had hitherto separated the survey of Chittagong from that of Cachar.

3. The Southern Party under Major J. Macdonald, pushing north from Chittagong, succeeded in completing a triangulation of 2,300, and topographical mapping of 1,700 square miles, connected with the eastern frontier series of the Great Trigonometrical Survey. The tract thus explored lies between 22° 30' and 23° 45' north latitude and 92° 30' and 93° east longitude, and its survey has determined a considerable extent of the watershed between the Cachar and Chittagong and Akyab water systems. Forty well-defined geographical points have been established, and the heights of thirty-seven of these obtained with mathematical accuracy.

4. Captain Badgley in charge of the Northern Party started from Cachar, making connexion with a good base belonging to the secondary triangulation of the Great Trigonometrical Survey, and accomplished about 600 square miles of triangulation, with nearly 200 linear miles of route survey and 4,800 square miles of topography. The region thus surveyed extends to 93° 30' east longitude and nearly to 23° north latitude, and includes the whole course of the Tui-vi and its tributaries, which pour their waters into the Barak at Tipai Mukh. The labours of this party have also contributed to fix a portion of the watershed between the affluents of the Barak and those of the Koladan.

5. The reports of the various officers contain also much interesting information as to the physical aspect of the country surveyed and the manners and customs of the inhabitants, while both these points are still further illustrated by the spirited sketches of Lieutenants Leach and Woodthorpe attached to the Northern Party.

6. Military considerations did not permit of a junction being made between the two parties, nor was the party under Major Macdonald able to push far enough

north to determine the upper course of the Dhaleswari and the Sonai, more westerly affluents of the Barak. Hence there still remains a blank in longitude between those portions of the two surveys which overlap in latitude, as also a gap in latitude between the northern limit of the tract surveyed by the Chittagong Party and the southern boundary of surveyed Cachar.

7. But the thanks of the Government of India are due for the valuable work accomplished in the face of many difficulties and hardships, and the Governor-General in Council desires cordially to acknowledge the services of the officers named in the margin, who, under the able control of the Surveyor-General, have contributed such valuable materials towards the knowledge of what has hitherto been an unknown country.

Major J. Macdonald, Officiating Deputy Surveyor-General in charge.
Captain H. F. Badgley, Deputy Superintendent.
,, H. B. Tanner, ,,
Lieutenant R. G. Woodthorpe, R.E., Assistant Superintendent.
Lieutenant E. P. Leach, R.E., Assistant Superintendent.
Mr. C. Barrett, Assistant Superintendent.
,, G. Cooke, ,, ,,
,, M. J. Ogle, Assistant Surveyor.
,, W. Robert, ,, ,,
,, J. McCay, ,, ,,

8. Paragraphs 18 and 19 of Major Macdonald's report might, the Governor-General in Council observes, be read as intended to attribute the failure of the Survey Party in obtaining observations at Benkoya's village to mismanagement on the part of Captain Lewin. His Excellency in Council, however, hopes that Major Macdonald only desired to explain shortcomings for which he feared he might be considered responsible, and, while fully acquitting that officer of any blame for this failure, is also satisfied that Captain Lewin is blameless in the matter, and that Benkoya's refusal to permit the entrance of the Survey Party into his village arose from a misunderstanding for which the Civil Officer with the column was in no degree responsible. The Governor-General in Council feels it the more incumbent on him to put these facts on record inasmuch as Major Macdonald in other passages of his report would seem to cast reflections on Captain Lewin—reflections which the Government of India believes to be altogether undeserved, and which were entirely uncalled for on Major Macdonald's part.

ORDER.—Ordered that copy of the above Resolution be forwarded to the Surveyor-General for information and communication to the officers concerned.

Ordered, also, that copy of the Resolution, together with a complete set of the papers read, be forwarded to the Department for information.

Ordered that a copy of this Resolution and the papers read be forwarded to the Local Governments and Administrations noted on the margin for their information, and for communication to Museums, Public Libraries, and learned Societies.

Madras.	Oudh.
Bombay.	Central Provinces.
Bengal.	British Burmah.
N. W. Provinces.	Mysore.
Punjab.	Hyderabad.

Ordered that a copy of the Resolution and the papers read be forwarded to the Trustees of the Indian Museum for information.

Proceedings of the Madras Government, Public Department,
13th November 1872.

Ordered that this Resolution, and the papers read, be published in the Supplement to the *Gazette of India*.

(True Extract.)

(Signed) A. O. HUME,
Secretary to the Government of India.

Office Memorandum from the Secretary to the Government of India in the Military Department, to the Secretary to the Government of India, Department of Agriculture, Revenue, and Commerce, dated Simla, 14th August 1871, No. 372.

It having been determined that an Expeditionary Force to operate in the Lushai Country shall be formed in November next, the undersigned is desired to intimate that it is considered most desirable that each of the two columns advancing from Cachar and Chittagong, respectively, should be accompanied by suitable and efficient Survey Parties, and to request that the Surveyor-General may be at once requested to prepare and submit a scheme for carrying this into effect.

2. It is hardly necessary to observe that these parties, while as complete and efficient as possible, and under thoroughly reliable officers, should be limited in strength, so far as is compatible with the above requirements, in order to obviate difficulty in regard to carriage in such a country.

3. Colonel Thuillier should also be called upon to submit a statement of the carriage which will be required for the officers and establishments of which the parties will be composed, and whether it will be necessary for the Commissariat Department to supply rations for the Native establishments, and on what scale.

4. An early reply is solicited.

[Confidential.]

From Colonel H. L. THUILLIER, R.A., C.S.I., Surveyor-General of India, to the Secretary to the Government of India, Department of Agriculture, Revenue, and Commerce, dated Simla, 16th August 1871, No. 4[illegible]1.

In compliance with the instructions contained in Military Department Office Memorandum, No. 372, dated the 14th instant, directing me to submit a scheme for providing two efficient Survey Parties to accompany the two columns of the Expeditionary Force to operate against the Lushais on the Eastern Frontier in the ensuing cold weather, I have the honour to state that I propose the following parties, to consist of the officers as specified, for the south and north columns respectively.

One enclosure—Map.

2. Major Macdonald, Officiating Superintendent of Revenue Surveys in the Lower Provinces, who has already been twice employed in the Lushai Country, I understand, has been directed to accompany the force from the south or Chittagong side, and that officer being now in Calcutta will be able to make his arrangements with the same ease and facility he did last year, when he accompanied Major Graham, Deputy Commissioner of the Hill States. Major Macdonald's experience and knowledge of the country render him highly qualified to command the Survey operations in this direction.

3. To Major Macdonald's party it is proposed to attach Captain Tanner, Deputy Superintendent of Revenue Survey, at present in charge of the Bhawulpore Survey, and from which he can easily be spared temporarily. This talented officer is very experienced in hill-sketching and exploring difficult ground, and having worked in the Kohistan of Sindh with Major Macdonald, and also in the Satpoora Range of the Central Provinces, is admirably suited, both physically and professionally, for the work in question, and fully prepared to go.

4. Mr. Barrett, an active Assistant Superintendent, attached to the Revenue Survey, who has served for several years under Major Macdonald's orders and been named by him, is a well-fitted officer, and will complete the party to render it as efficient, and likely to attain the object in view, as could be desired.

5. With reference to the instructions contained in the 2nd paragraph of the Military Department Memorandum, the exact number of native followers which may be absolutely necessary for carrying on the Survey duties, conveyance of instruments, signals, &c., will be reported on definitely by Major Macdonald, and the strength kept down to the lowest possible limits, as on former occasions. The question of carriage or porterage, and of Commissariat rations, will be replied to as soon as practicable in a separate communication.

6. The Southern Party will work up from the base of the triangulation of the lower section of the Eastern Frontier series, and from the fixed points of the old Topographical Survey of the Chittagong Hills, and geographical information already obtained in the direction of Major Graham's and Major Macdonald's route of 1871 from Chittagong, as shown in the accompanying copy of the map of the Eastern British Frontier, penetrating, as far as practicable, to the north and east until a junction can be formed with the routes and reconnoissance to be made by the second party, operating from the north or Cachar side.

7. For the executive of this latter party to accompany the column from Cachar, the Topographical Survey Establishment now employed in the Khasia and Naga Hills forms the best and most convenient source of supply.

8. Major Godwin-Austen, Deputy Superintendent, lately in charge of this party, is unfortunately now in Europe on furlough, which does not expire until April 1872. He is by far the best and most competent officer in every respect for explorations of this difficult character, and he has already marched with Colonel Nuttal's Force in 1869 a certain distance into the Southern Cachar Country, and has a very fair knowledge of it.

9. I have good reason to believe that, if Major Godwin Austen received early intimation by telegraph, he would, with his usual zeal for the public service, be glad to come out for an expedition of this sort, and it would be a great advantage to the public service if he could take part in it.

Chilworth Manor, Guildford, Surrey.

If I am authorized, therefore, I can send him a message to the address as per margin, or it can be done direct by the Government through the India Office. In either case, it will be essential to provide for a reply message.

10. In the event of Major Godwin-Austen's services not being available, then the present Officiating Deputy Superintendent of the Khasia and Garo Hills Survey, Captain Badgley, can be deputed, and from his former experience in the Department he is the next best fitted and available officer for such duty, and, being close at hand, will be able to draw such men and supplies as may be needful from his own Survey Establishment, the current duties of which can be sufficiently provided for by ordinary departmental arrangements, so that the regular Survey operations in the Naga Hills need not be stopped in any way.

11. With whatever officer who may go in command of this Northern Survey Party will be associated Lieutenant Woodthorpe, R.E., Assistant Superintendent, lately appointed to the Department, a very active and accomplished young officer, who is now under training for this special work at Mussoorie, and with such strength, I trust, the objects of obtaining good geographical information and improving our knowledge of this hitherto unknown territory may be fully accomplished.

12. There is a good base of triangulation to start from, and several well-known and fixed points in the Cachar District, which will enable this party to prosecute their reconnoissance to advantages, and they will, I hope, be able to advance southwards until a junction is formed with Major Macdonald's party, and so enable us to improve and fill up the present map very materially.

13. The provisions of paragraph 3 of the memorandum as regards this Northern Party will also be duly communicated at the earliest practicable date.

Proceedings of the Madras Government, Public Department,
13th November 1872.

No. 134, dated Simla, the 18th August 1871.

Endorsed by the Department of Agriculture, Revenue, and Commerce.

Copy (of the letter from the Surveyor-General and the demi-official reply) forwarded to the Military Department for information, with reference to the Office Memorandum thence, No. 372, dated the 14th instant.

[*Confidential.*]

Extract from the Proceedings of the Government of India in the Military Department, under date Simla, 21st August 1871.

Read—

Docket from the Department of Agriculture, Revenue, and Commerce, No. 134, dated 18th August 1871, and enclosures, regarding the arrangements for the Survey Parties to accompany the two columns of the Lushai Expedition.

No. 558.

Copy of the above forwarded to the Quartermaster-General, for the information of the Commander-in-Chief, in continuation of docket, No. 373, of the 14th instant, and with an intimation that the arrangements proposed by Colonel Thuillier for the Survey Parties to accompany the Lushai Expedition are approved in the Military Department.

No. 559.

Copy of the above forwarded to the Department of Agriculture, Revenue, and Commerce for information, with reference to the docket* from that Department above cited.

* Map returned.

It is, of course, understood that, while approval is conveyed to Colonel Thuillier's proposal to telegraph to Major Godwin-Austen to offer the post to him, his return to India, in order to take it up, should be quite optional, and that he should not be ordered out.

From Colonel H. L. THUILLIER, R.A., C.S.I., Surveyor-General of India, to the Secretary to the Government of India, Department of Agriculture, Revenue, and Commerce, dated Simla, 31st August 1871, No. 496-F.

In continuation of my confidential report, No. 411, dated the 16th instant, on the subject of deputing Survey Parties with the Expeditionary Force to proceed into the Lushai Country next cold season, I have the honour of stating, for the information of the Government of India, that, having been summoned by His Excellency the Commander-in-Chief to a consultation as to what strength of Survey Parties I proposed sending, His Lordship expressed his anxiety to have the two Survey Parties as efficient and complete as possible, so as to guard against sickness, and to have separate Surveyors for each column or detachment of troops, and that the junior officer should in each instance be competent to take the place of the senior in case of need.

2. With the approval of Government, therefore, it is now proposed to make the two Survey Parties for the north and south columns as follows :—

For the Chittagong or Southern Party.

Major Macdonald, Officiating Deputy Surveyor-General.
Captain Tanner, Deputy Superintendent.
E. C. Barrett, Esq., Assistant Superintendent.
G. H. Cooke, Esq., Assistant Superintendent.

For the Cachar or Northern Party.

Major Godwin-Austen, Deputy Superintendent.
Captain Badgley, Deputy Superintendent.
Lieutenant Woodthorpe, R.E., Assistant Superintendent.
Mr. Ogle, Assistant Surveyor.
,, Robert, Assistant Surveyor.
,, McCay, Assistant Surveyor.
One Native Sub-Surveyor.

This will absorb the whole of the Khasia and Garo Hill regular party, with the exception of one or two individuals who are not fitted for a campaign of this nature, and who will be transferred for duty elsewhere. The ordinary Survey operations in the Khasia and Garo Hills will, in consequence, have to be placed in abeyance for the season, as the whole available strength of the establishment will be required. It will be no material consequence to stop the Garo or Naga Hill survey for a short time, as we can always carry on our operations there unmolested, whilst on the Eastern Frontier, where the troops are likely to penetrate, we may never have such another opportunity, and, therefore, in His Excellency the Commander-in-Chief's opinion, we should do our utmost on the present occasion to secure the largest possible amount of geographical knowledge of the whole country traversed, in which I entirely concur.

3. The foregoing programme differs very slightly from that submitted in my former letter above quoted; and if it meets the concurrence of the Governor-General of India in Council, I beg that the same may be intimated to the Bengal Government with reference to the ensuing season's regular topographical survey proceedings.

4. To the telegram, dated the 18th instant, transmitted to Major Godwin-Austen in England, I regret to say no answer has been as yet received; but I have addressed him fully on the subject by post, and explained the wishes of the Government to have his services for this expedition. In case this officer does not come out, Captain Badgley is very competent to take charge of the party, and another young officer (Assistant Surveyor may be found to fill up the place. Instructions have been issued to this officer, but his reply has not been received as yet.

5. I beg to enclose copy of a letter from Major Macdonald, as per margin, giving his views as to the strength of the Native establishment and nature of equipment necessary for the expedition, which his knowledge of the country best enables him to determine. His proposals seem to me well suited for the purpose. Another European, or fourth officer (Assistant Superintendent), is to accompany his party, which will slightly alter his calculations. His Excellency the Commander-in-Chief has, moreover, promised to allot to these Survey Parties soldiers from the Corps of Native Sappers and Miners to assist in the actual Survey duties, and, therefore, it will be necessary to draw up a complete and revised estimate when the arrangements are in a more forward state. Every officer and assistant shows the most laudable desire to be employed on this duty.

Dated 22nd August 1871.

6. As soon as the plans for the Northern Party can be matured, I propose submitting a full statement for the whole, to show the number of native followers and other particulars. It will be observed that it is absolutely necessary for the Commissariat Department to supply rations for the whole of the Survey Establishments.

7. I solicit the sanction of Government to the proposals contained in Major Macdonald's 12th paragraph. The Budget of this Department will amply provide for the salaries of all the officers and assistants employed; but not for the contingent expenses necessary to be incurred. I shall be glad of instructions as to whether the entire expenses are to be separately calculated and debited against the expedition.

Proceedings of the Madras Government, Public Department,
13th November 1872.

[*Confidential.*]

From Major J. MACDONALD, Officiating Deputy Surveyor-General, to the Surveyor-General of India, dated 22nd August 1871.

I have the honour to acknowledge receipt of your No. 412-F, giving cover to No. 372 from the Military Department, to the Secretary, Department of Agriculture, Revenue, and Commerce.

2. I have communicated its contents to my colleague, and the arrangements demanded in the 4th paragraph of your letter are made.

3. I gladly accept the position assigned me, and can also answer for the extreme willingness of the two other officers mentioned.

4. During the absolute hostile advance I apprehend our services will be chiefly used as aids in giving information regarding the line of advance; but when the occupation of the Syloo Hills is complete, we might commence a triangulation on the parallel of 23° from Great Trigonometrical Survey Bhanga Mura and Bhatti Moni across to the Howlong Range, about fifty minutes of meridian, and carry it to the north along the meridian of 92·30, where we should either meet the efforts of the topographers from Cachar working to the south, or push on to peak Z.

5. I would take the following instrumental equipment:—

Three Box Chronometers and Nautical Almanacs		Armed with knife, tulwar or spear. Strong suitable men will be selected.
Two seven-inch Theodolites, 1·5-inch,	6 lascars	
Three Plane Tables...	6 ,,	
Three Compasses	3 ,,	
Three Heliotropes, 8-inch Three Aneroid Barometers Three Standard Thermometers	3 ,,	
Three sets Boiling Apparatus		

6. Our strength would be—

Three European Officers...	8 coolies	To carry baggage and 3½ days' rations for the whole party,
Eighteen lascars	12 ,,	
Six servants	3 ,,	

twenty-three coolies for a strength of twenty-seven men, in all fifty men, consuming 137 lbs. of food per diem. The eighteen lascars would carry the instrumental equipment.

7. The best plan is to entertain our own coolies, for it may easily happen that, when we are free to move and act independently in secure positions, the Commissariat would be unable to meet a special demand for extra carriage to enable the Survey Parties to move out efficiently with a supply for eight or ten days. All the establishment must be rationed by the Commissariat.

8. I think it would be advisable to attach one non-commissioned officer and eight soldiers from one of the (Native) regiments engaged to each survey officer. These twenty-seven men would require fourteen coolies for their baggage and eight coolies to carry 3½ days' rations for their whole party, which, working with us, would be complete in itself, acting either as observers or in an armed body as guides.

9. I will endeavour to entertain fifty men in Upper Assam from the Nagas. In this respect Major Godwin-Austen will be very fortunate in being able to get Hill Kookees in Cachar, who will readily accompany an armed force. I know the rates offered to the Commissariat Cooly Corps; and if money only can do it, they are sufficient to tempt the Nagas. Any assistance I can obtain in labour will be gladly welcomed by the officer in charge of the transport. If I succeed in getting these men, they will be as good as the Lushais in the jungles.

10. All the natives employed should each receive a kit of good boots, cotton clothing, and a good double blanket, as well as a good waterproof bag, divided in two pockets, one for food, the other for tobacco and sundries; 20 lbs. weight may be allowed as sufficient for bedding, clothing, and cooking pots.

11. I shall prepare plane table sections on scale four miles to the inch, showing all Great Trigonometrical work and intersected points ruled out in blue lines on squares of one minute in latitude or longitude for the whole area similar to those I worked on in previous years.

12. If this general plan is approved, I solicit an order from Government to incur cost in making my own arrangements to obtain carriage for the equipment of the party, and entertaining an effective establishment to be assembled at the Presidency after 15th October and before the 10th of November, submitting my bills for the cost of the same, and authority to draw such advances which the coolies and lascars might wish to leave at their homes to an extent of Rupees 12 for each man.

13. I append a statement I have drawn up of the equipment required—

Indispensables.

	Weight in lbs.
Two pairs stout walking boots (one in wear)	2½
Two suits stout charsootee cotton clothing (ditto)	3
One pair strong canvas gaiters bound in leather and fastened with tags (in wear).	
One cork mattress, air pillow, and oil-skin cover	11
Two blankets	8
One India rubber sheet, 7½ × 6½	10
Three flannel shirts, four pairs knitted socks, four towels, handkerchiefs, &c. (one of each always in use)	3½
	40

Weapons.

A light rifle, cartridge belt bearing in frog, a heavy knife or light sabre, and a waterproof bag.

Necessaries.

One pair good light shoes or boots.

One seer good *momerogan* to keep boots and leather soft, a small bottle of oil for weapons, a good hand-lamp, a small air-tight box in compartments, to contain fusees, matches, tobacco, cartridges, a small medicine box, kettle, and two cooking-pots, 6½lbs.

The whole weighing 15 to 16 lbs.

14. This would give a light effective kit for each officer, the whole within the powers of two coolies carrying their own food for 3½ days in addition to the officer's baggage. It would not be safe to rough it too much in the dampest jungles in India. Nothing has been allowed for seats or tables or beds; all these will be made up from day to day. Out of bamboos, huts will also be run up in all halting places. In the above I have shown the equipment and strength of a strong body of observers, working alongside of a military expedition into a hostile country.

Telegram from Major AUSTEN, Chilworth, to Colonel THUILLIER, Simla, dated 31st August 1871.

"Health will not permit return."

No. 498-F, dated Simla, the 2nd September 1871.

Endorsed by the Surveyor-General of India.

Copy of the above telegraphic reply message from England from Major Godwin-Austen, Deputy Superintendent of Topographical Survey, stating his inability to return to India for the Lushai Expedition, is forwarded for the information of the Government of India, Department of Agriculture, Revenue, and Commerce, with reference to Survey-General's Office, No. 411-F, dated the 16th August 1871.

Memorandum from the Under Secretary to the Government of India, Department of Agriculture, Revenue, and Commerce, to the Secretary to the Government of India, Financial Department, dated Simla, 5th September 1871, No. 185.

The undersigned is directed to forward to the Financial Department the papers noted on the margin, and to state that it is proposed to issue the draft letter with the concurrence of that Department.

From the Surveyor-General of India, No. 496-F, dated 31st August 1871.
Draft reply.

2. The return of the papers is requested, with the reply, at an early date.

Office Memorandum from the Assistant Secretary to the Government of India, Financial Department, to the Secretary to the Government of India, Department of Agriculture, Revenue, and Commerce, dated Simla, 9th September 1871, No. 3496.

In returning the papers* forwarded with Office Memorandum from the Department of Agriculture, Revenue, and Commerce, No. 185, of the 5th instant, the undersigned is directed to state that this Department concurs in the orders which it is proposed to issue to the Surveyor-General of India regarding the expenses to be incurred by the Survey Parties ordered to accompany the Expeditionary Force to the Lushai Country next cold season.

* Surveyor-General's letter, No. 496-F, dated 31st August 1871.
Draft reply.

From the Secretary to the Government of India, Department of Agriculture, Revenue, and Commerce, to the Surveyor-General of India, dated Simla, 13th September 1871, No. 205.

I am directed to acknowledge the receipt of your letters, No. 496-F, dated 31st ultimo, and No. 498-F, dated 2nd instant, and to convey the approval of the Governor-General in Council to the arrangements proposed by you for the Survey Parties to accompany the Lushai Expedition.

2. It is observed that, while on the one hand, the transfer of the Garo Hill Topographical Survey Party would not be attended with any additional cost, the deputation of certain officers from the Southern Revenue Party would entail extra expenditure, which could not be met from the Survey Budget grant without serious inconvenience. I am directed, therefore, to state that it may be debited to the expedition; and that whatever expenses may be entailed by the survey arrangements connected with the expedition may be charged by you, in addition to the ordinary budget grant for surveys.

No. 206.

Copy forwarded to the Government of Bengal, with copies of the letters from the Surveyor-General of India—

No. 411-F, dated 16th August 1871.
,, 496-F, ,, 31st ,, ,,
,, 498-F, ,, 2nd Sept. ,,

No. 207.

Copy forwarded to the Military Department, with copies of the letters from the Surveyor-General of India—

No. 496-F, dated 16th August 1871.
,, 498-F, ,, 2nd September 1871.

Proceedings of the Madras Government, Public Department,
13th November 1872.

No. 20. ORDER THEREON, 13th November 1872, No. 1246.

Copies of the foregoing Resolution with the Report and Map referred to will be distributed as follows :—

	Copies.
Revenue Department	2
Library in the Government Central Museum, Madras	1
Madras Literary Society	1
Ootacamund Public Library	1
Government Office	1

(True Extract.)

Officiating Chief Secretary.

To the Revenue Department.
,, Superintendent, Government Central Museum,
,, Committee, Madras Literary Society,
,, Committee, Ootacamund Public Library,
} with Report and Map.

Exd. J. Wright.

Revenue Dept.

W. 3723.

Govt. of {1872} Madras.

PUBLIC.

To

THE REVENUE DEPARTMENT,
&c., &c., &c.

Dated November, 13th.

Recd. " 19th. Encl. 1

G. O., 13th November 1872, No. 1240.

Survey
Secretary
Revenue Survey
10th Nov 1872

NOVEMBER.
Nos. 19-20.

Issuing orders for the distribution of copies of the Resolution of the Government of India with the Report and Map therein referred to connected with the Survey of the Lushai Country in the cold season of 1871-72.

With Ltr
No 144 - 25 Nov 72

W. 4464

Ordered that one copy of the papers received with the foregoing Ltr be forwarded to the Supt. of Rev. Survey

25 Nov 72

5 Supt Rev Survey - Dec 27 Nov 72

Revenue
No. 3728.
Dated 1st Dec 1874

92° 30′

Chatharchura H. Peak
G.T.S.

93° 0′

93° 30′

24° 0′

Gutur Mukh

Tut Dung or Gutur R.

Dhullesar R. or Rieung Dung

Hill Peak Z.
Long Vohr Klang

COUNTRY ADJOINING
THE CHITTAGONG HILL TRACTS
EMBRACING THE FIELD OF THE OPERATIONS OF THE
RIGHT COLUMN LUSHAI EXPEDITIONARY FORCE
1871-72.

SCALE 4 MILES = 1 INCH.

4 3 2 1 0 4 8 12

REFERENCES

Trigonometrical Heights shewn thus

Approximate Heights by Aneroid " 5114

The word "Klang" or "Tlang" in the Kookie language. "Mooin" in Chukma, & "Toug" in the Mugh language, signifies a hill or range. 200

"Doong" in Kookie signifies a stream.

Kaukal Dung Hill

Tut or G R

Klang or Ellers R

Sukpilal

Revenue Department
Certified that this Copy

This range continues up to "Kolak" Klang as far as 23° 40' when it joins the continuation of the Kuchet Dung hill to a hill called "Chepui."

23° 30'

23° 0'

Sukpilal

3254

Tui or Chin R

Klong or Ngeri R

Sanis Shuak R

DARLUNG 3733

MUALTUNG 5300

Jai Tung

Suk Beng 2957

KUCHET 3229

PUKZING

Lal Ngura 2900

Laljika 2957

Lal Kura 5059

Jankhowa

Sangvunga

ARBAM PEAK 5558

Toi Fang 6200

Loong loong Tong

Vutai

Kohuitangani

Rao Venuja

Lahongri Kure

Thungmaina

Benkova 4222

Von Kunga

Von Kunga

Von Nhung

Lal Ngur 2800

Savunga 3229

Venkoya

Hulien

Boeppee

Van Sang

Laleya

SIR KLANG 3681

Yanoya

Cascade

Vanoya

KOTEER 3113

Vanoya

Von Nhung

BELKAI 2734

Kon Puya

Bue Burra Khal

Lalthira 2498

Rutoma

Dowteava

Mum Pum

Mat Dung

Tui Chung (Kaladyne) R

S. Double Peak

Peak N°32

PURAN KLANG

Chendu Vill on Peak N°29 6056

TIL KLANG

Sai Puya

SIRTAY 2235

1912 Stockade

Nura

Dempgri

Otan Cultra

Kawra Dung

Van Tong

Nura

AITUR KLANG

Bundula

LUNGMAN

SAI PUYA 4021

LUNG LEH 3707

Rutton Poya 1548

TERIAT

HELAM KLANG

Van Tong

MALIAM PUI KLANG 5511

MOI SUM 5058

BOL PUI 5300

DARJOW KLANG

LULA 2028

SANG AL KLANG 7433

The Tui Pui (Kaladyne) R scarce flow here

Peak N°22 8137

BIDKUL 1850

NOTES.

(1) Number of Pages 8f

(2) Date of repair 16-11-65

Surveyed by Captain H. C. R. Tanner, Deputy Superintendent and Messrs. E. C. Bartell and G. H. Cooke, Assistant Superintendents of Revenue Survey, under the Superintendence of Major J. Macdonald, Offg. Deputy Surveyor General

Published under the direction of Colonel H.L. Thuillier, F.L.=F.R.S., Surveyor General of India.

Surveyor General's Office, Calcutta, June 1872

Photozincographed under the Superintendence of Capt. J. Waterhouse.

Map Projected and Drawn by M.C. Hicks 1872

NOTES.

RIVERS.—The Kumaflie is navigable for small steamers to Kesalong, and thence by boats and canoes to the foot of the Rupuan Range. There are however shoals, Rapids and Dangerous falls.

The Supuk is navigable to a point four or five miles north of Yanuma's Ghat. It's source is unknown, but may perhaps be found a few miles north of latitude 32½°.

The Tui Chong is navigable for ten miles from its junction with the Kumaflie.

The other feeders of the Kumaflie are not navigable, nor, with the exception of the Kawa and Deb Dinga are their sources known.

The Kiong—Dulleset of Cachar, is navigable to latitude 33-30 or a few miles south of Bypasa Bazar. It is joined by the Ith Dang (Gatur of Cachar) at Gatur Mekh. The Yeh is said to be navigable to latitude 33-45.

The Kolodyne, which in the Howlong country is known as the Tui Chang, or Tui Yang, is said to be navigable to the latitude of the "Blue Mountain," and it is so possibly very far north of that point. Its source is unknown, but is somewhere north of latitude 33-30.

RANGES.—The Mountains are composed of soft sandstone and clayey loam. They have a tilt to dip generally exposing the western strata. Their slopes are steep and the ravines and streams have for the most part high and almost precipitous sides. The vegetation of the valleys and lower ranges is rank and dense owing to the heavy rains which lie over the face of the country during the night for many months in the year. The summits of the higher mountains are clothed with forests with a slight undergrowth. Oak abounds above 3600 or 4000 feet.

The northern continuation of the Tayral Range in Latitude 33-30 is called by Mr. Baker "Thachim". The continuation of the Thd-Rang he calls the "Akroung" and the Kyok of that map, the "Kok-Fail". He describes the "Fakwa" a clear stream flowing rapidly north between the Thachi and Akroung ranges. Mr. Baker's force in 1869 probably struck the Akroung Range in Latitude 33-50

NOTES.—The ridges of the ranges are generally traversed by Kukie foot-paths the gradients of which are easy. Cachar may probably be reached from Vanima's Ghat by proceeding along the Tu-Rang ranges to Gatur Mekh and thence by water. It may also be reached from Akyab by proceeding by boat up the Koladyne to the southern foot of Bol Pui mountain; thence along the range past Mol Sum peak, (9918 feet) and finally along the Kyek range to Gatur Mekh—the route not crossing a single stream throughout the entire distance.

LOCALITIES OF TRIBES.—Rutton Poya's village are now found on the Upshim Stray, and Saichal Rongpa, and on the Sujuk Valley Ridges. His old village also are found on the Jang Bin and Jang Rang ranges and on the ridges in the valley of the Tui Chong.

The Howlongs occupy the valleys and ranges drained by the Mat Dung stream; also on the Howlong Klang from which the cribe derives its name; on Salum Klang, and to the eastward as far as the Arbum range. They touch on the Fuis or Shendoos about Aitch Klang, Arbum Klang, and Aslum Fui. The Southern limit of the Howsong country is on the left bank of the Koladyne and embraces the Jol Pui mountain.

The Syias occupy the Nulum, the Tyaral, the Kan Klang, and the Bor Pui ranges, and the Tui-Hang as far North as Latitude 33-5? where Shiplai's country commences. They are bounded to the north by Shiplai, east the Howlongs, and to the west by Tippereah and Uy Rutton Fyge.

There are a few Tippereah villages near Dorangta and Burkul.

92° 30′

93° 0′

93° 30′

24° 30′

Barak R.

Phoolbary

Dullesar R.

Burra K.

Julinga N.

Hylakandy

Loharband

Sonarband

Verner poor

Katta K.

Alexandrapur

Katlicharra

Dullesar R.

Burancharra

SILC AR

Ombe apoor

Banskandy

Sonaimukh

Rukni R.

Rookney

Monir Khal

Sonai R.

Bonkong H.S. Out post

LUKHIPUR

Ramphan H.S.

Alni R.

Burak R.

Mainadar

No 1 Str.

No 2 Str.

Barak R.

BHOOBUNG

BONGPO

Punjar Klang

CACHAR HILLS



24° 30'
24° 0'
23° 30'
Vernerpoor
Mainadar
Alexandrapur
Kallicharra
Barancharra
Bonkong H.S. Out post
Nº 1 Stn
Nº 2 Stn
Out post
Out post and Stockade
Dome
Kolashib Hill
Nº 3 Stn
Conical P
Punjar Klang
Chaturchura H.S.
Approximate Boundary of Muneepoor
Kailam
Lungtul
Gooturmukh
Lushai Hat (doubtful)
Peak Z
Dallesur R.
CHULFIL
Genl: Nuthall's Camp
Chepui
Tuikung
Kungnung
Chelam or Sell
Raimang
Tulcheng 5800
MOOMRANG
Sources of the Tui-vi or Tipai
LENGLENG
Songuin
ROUGH PRELIMINARY MAP

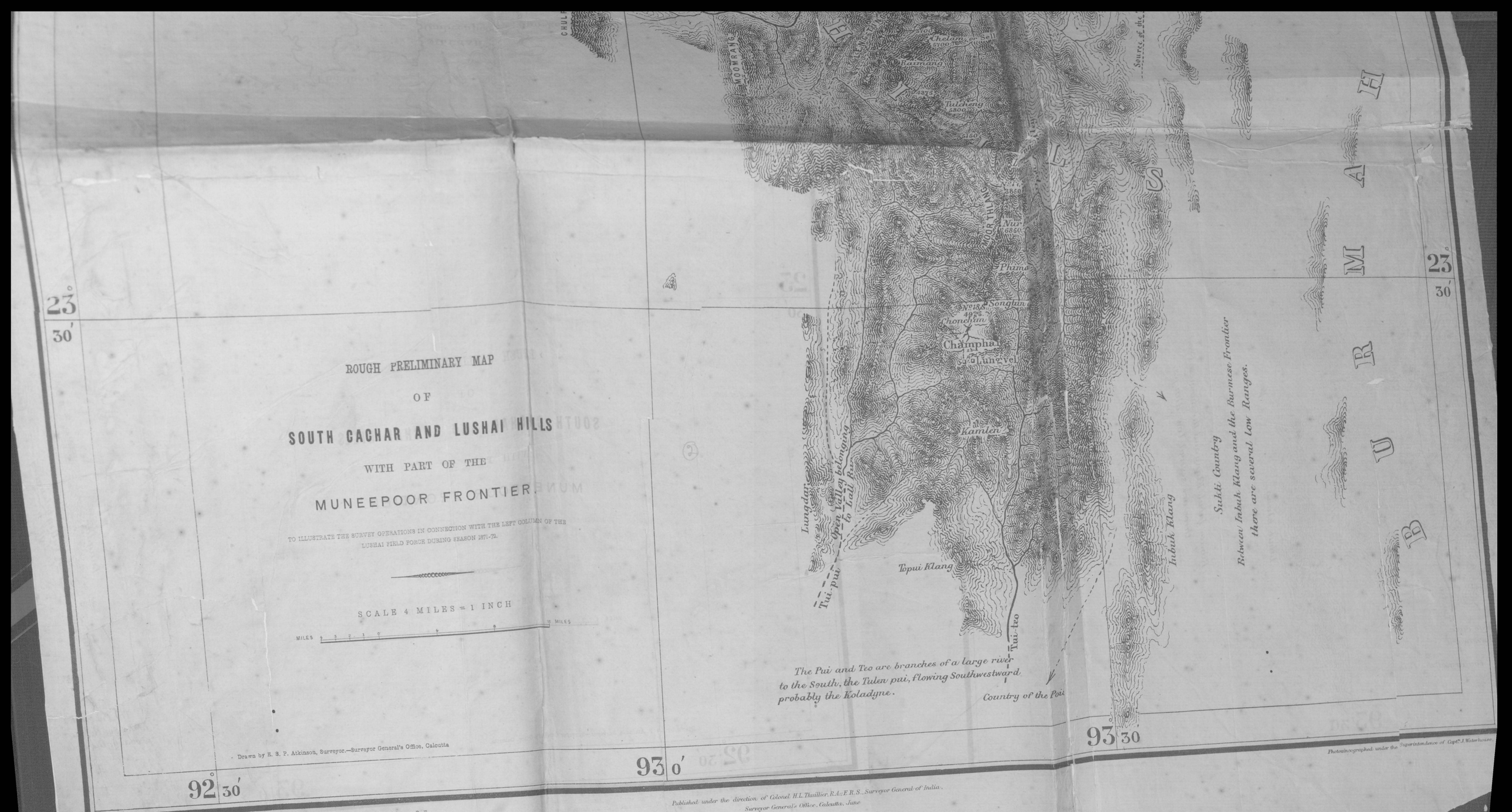

ROUGH PRELIMINARY MAP
OF
SOUTH CACHAR AND LUSHAI HILLS
WITH PART OF THE
MUNEEPOOR FRONTIER.
TO ILLUSTRATE THE SURVEY OPERATIONS IN CONNECTION WITH THE LEFT COLUMN OF THE LUSHAI FIELD FORCE DURING SEASON 1871-72.
SCALE 4 MILES = 1 INCH
MILES
Drawn by E. S. P. Atkinson, Surveyor.—Surveyor General's Office, Calcutta
Published under the direction of Colonel H.L. Thuillier, R.A., F.R.S., Surveyor General of India.
Surveyor General's Office, Calcutta, June
Photozincographed under the Superintendence of Capt.n J. Waterhouse.
Chonchim
Champhai
Lunvel
Kamlen
Phima
Songlun
Nur
Tuisheng
Rairang
Chelam
Sell
Lungdar
Tui-pui
Tui-teo
Tuipui Klang
Tuibuk Klang
Sukti Country
Between Tuibuk Klang and the Burmese Frontier
there are several low Ranges.
The Pui and Teo are branches of a large river
to the South, the Tulen pui, flowing Southwestward
probably the Koladyne.
Country of the Poi
BURMAH
LUSHAI HILLS
KOOMRAN'S
23° 30′
92° 30′
93° 0′
93° 30′

CHART OF TRIANGULATION

EMBRACING THE FIELD OF THE OPERATIONS OF THE

LEFT COLUMN LUSHAI EXPEDITIONARY FORCE

1871-72.

SCALE 8 MILES = 1 INCH.

Salama Tila G.T.S. 250·03

Samphan G.T.S. 678·42

Bhuban Cliff 2546

Bhuban H.S. 3134

Dhubidhar H.S. 1864

Peak Precipitous 2757

H.S 1836

Bonkong H.S. 1231

Myradhar H.S. 3558

Rhuban Sᵗʰ Pk 2560

Stockade 1573

Koloshib H.S. 1953

Puroon Sip 2656

L + H.S 3615

G. 4127

Round Hill H.S 3565

Chatachara 2108

Byrabi 2028

Sᵗʰ Peak Nº 1 2559

Sᵗʰ Peak Nº 2 2434

Y.H.S 2497

Junkam 3115

Nº 6 H.S 3671

Najot

Fair Peak 3599

Nᵗʰ Peak

Lungtol

Sᵗʰ Peak

Puroon Sip Sᵗʰ Peak (L.9) 3180

Senwong H.S. 2413

Pabarchang 3127

Thepui H.S. 3105

Lunglong 3631

Long Vohr

Vansong Hᵗ Pᵗ

Khulel H.S. 3218

Surkleng H.P.S. 6554

Khulel H.P.S.

Kanymung H.S 3584

Langtang (tall tree)

Peak Y.G.T.S 5088

Chelfil H.P.S 6190

Langtang H.P.S 7051

Momrung 5988

Chelfil S.P.S

Langlang

Jagged Ridge

Conical Peak

Triangulated under the direction of Col. H. L. Thuillier, R. A., C. S. I., &c., by Capt. W. F. Badgley, B. S. C., Lieut. R. G. Woodthorpe, R. E., Lieut. E. P. Leach, R. E., & Mr. M. J. Ogle, drawn by Lieut. R. G. Woodthorpe, R. E.,

Photozincographed under the Superintendence of Captⁿ J. Waterhouse,

CHART OF TRIANGULATION

EMBRACING THE FIELD OF THE OPERATIONS OF THE

RIGHT COLUMN LUSHAI EXPEDITIONARY FORCE

1871-72.

SCALE 8 MILES = 1 INCH.

Projected and Drawn by Lieut & Messrs E. C. Barrett, & G. H. Cooke, Asst. Superintendents

Photozincographed under the Superintendence of Capt. J. Waugh, R.E. F.R.S. Surveyor General of India.

Note. The values of "Sedupahar" and "Gilasari" are derived from the G.T. Chart of the Eastern Frontier Series. The Stations of "Phuka Muir," "Sirtay" N° 2, "Ruijam," "Koteer," "Rachet," and "Sir Klang," appear to be very nearly identical with the Stations on Mr O'Donels "Triangulation" Chart.

M.R.O. 1—20,002—12-8-65.

92° 30′

93° 30′

24° 30′

24° 0′

23° 30′

Barak R.
Phoolbary
SILCHAR
Ombecapoor
Banskandy
Sonaimukh
Dullessur R.
Burra R.
Jatinga R.
Rukni R.
Hylakandy
Loharband
Sonarband
Monir
Vernerpoor
Alexandrapur
Hattichurra
Barancharra
Out pos. and Stockade
Jatinacherra
Chaturchura H.S.
Out pos.
Out pos.
Bonkong Out post
Jampui HS.
Gootumukh
Lushai Haut (approximate)
Peak Z
Peak Y
Bypari Bazar (approximate)
Ramphan H.S.
Ramadar
Approximate Boundary of Manipur
Changchal
Kailan
Langtal
Cheput
Tuikang
Thungnung
Genl. Nuthall's Camp
Mar Range
Phenum
Tin Forest
CACHAR
LUSHAI HILLS
MANIPUR
LOOSHAI HILLS
CHULFIL
LENGLENG

MAP

TO ILLUSTRATE THE SURVEY OPERATIONS

IN CONNECTION WITH THE LUSHAI MILITARY EXPEDITION

ON THE

EASTERN FRONTIER OF BENGAL

IN THE HILL TRACTS

SOUTH OF CACHAR & NORTH OF CHITTAGONG

INHABITED BY LUSHAI, KUKI, SYLU, SHENDU,

HOWLONG AND OTHER TRIBES.

SEASON 1871-72

Scale 8 Miles = 1 Inch.

NOTE.—Reduced from the Maps of the "COUNTRY ADJOINING THE CHITTAGONG HILL TRACTS" and of "SOUTH CACHAR, THE LUSHAI HILLS & PART OF THE MUNEEPOOR FRONTIER, submitted by Major Jno. Macdonald, Offg. Deputy Surveyor General and Captain W. F. Badgley, Dy. Supdt. of Topogl. Survey.

Sukti Country

Between Inbuk Klang and the Burmese Frontier there are several low Ranges.

The Pui and Tee are branches of a large river to the South, the Tulen pui, Flowing Southwestward probably the Koladyne.

Country of the Pois.

Published under the direction

Photozincographed under the Superintendence of Capt.n I. Waterhouse,

C.E.F.R.S. Surveyor General of India.

23° 30′

23° 0′

22° 30′

92° 30′

93° 30′