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267

*Proceedings of the Madras Government, Revenue Department,
3rd August 1874.*

Read the following papers:—

No. 13. From J. C. HANNYNGTON, Esq., M.C.S., to C. G. MASTER, Esq.,
Acting Secretary to Government, Revenue Department, dated Salem, 23rd
June 1874:—

HAVING visited the Anamallay Hills during the late recess of my Court, and having, during my leisure hours, jotted down notes of such points as struck me as being of interest, and having also surveyed and sketched a portion of the upper plateau, I think that perhaps the results of my trip may not be without interest to Government.

2. I have, therefore, the honor to forward herewith eighteen photographs, being three copies each of six views, together with a report, and also a map of Michael's Valley and part of the adjacent country, for the kind acceptance of Government.

3. Being myself a very indifferent draughtsman, I have had the map tolerably copied on a reduced scale of 2,000 yards to the inch. I however also forward my own rough sketch, which is somewhat more accurate, together with a plan on the same scale showing the principal triangles from which the map is worked, and any intelligent draughtsman can from these construct a map to any desired scale.

4. I do not, however, claim extreme accuracy for my map, the survey having been carried out with a rather coarse instrument, and I would suggest that if any thing be done with the report and map, that the most the map is worth in its unfinished state, is to be copied on the scale, say, of a mile to the inch, in a clear bold manner, and have the copy photographed.

5. I had intended sketching the whole of the upper plateau, but was prevented by various circumstances; perhaps, next year I may be able to complete the sketch; but considering the uncertainty of all human affairs, I have considered it best to send to the report and map, as it stands, in its unfinished condition.

Extract No. 1.

Early in the year 1863, having obtained three months' leave, I was advised by Colonel Michael to explore the higher ranges of the Anamallays for sporting purposes.

2. Colonel Michael proposed to me that I should essay a route which had not previously been tried, viz., by Dhullee, Peondy, and Apple mountain.

3. I accomplished the ascent to Michael's Valley easily in three marches from Dhullee, and was subsequently joined by Captains Michael and Hill, who, however, remained but a short time owing to the illness of Captain Hill.

4. The general results of Captain Michael's visit on this occasion are embodied in his report to Government, dated 16th April 1863. Unfortunately, ~~on my trip~~ ^{on my trip} Captain Michael was attacked with a serious illness, and Captain Hill died; but the illness of neither of these gentlemen was attributable to their visit to the Anamallays, nor the accidental incident served to give to the upper ranges an evil character for malarial fevers which belongs by right to the lower part of the hills only.

5. In 1864, Colonel Douglas Hamilton and Mr. Barker (7th Lancers) visited the upper ranges and remained there about two months; the account of this trip is contained in Colonel Hamilton's interesting report, dated 18th December 1865.

6. Several parties have since visited the upper plateau, but, owing to the difficulty of access and the bad odor for fever that the name "Anamallay" has obtained, this truly magnificent country has not received the attention it deserves.

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7. The obscurity in which the spot is shrouded is I doubt not, in some measure owing to the inaccuracy of the existing maps, an examination of which would lead to no idea of the existence of such an extensive and salubrious plateau.

8. In view, therefore, partly to the enjoyment of the loveliest scenery and most delicious climate in South India, and partly to render the same pleasures available to others, I resolved to spend a portion of the winter of 1874 in exploring, and perhaps mapping out the plateau; and though owing to very unfortunate weather, a steaming ankle, and other circumstances my explorations were confined until the results, as far as they go, may be of use to others who may be led to follow and proceed beyond my footstep.

9. It is necessary to say that preparations must be made beforehand. Coolies from the low country are only unwilling to go up these hills, and though I did on these occasions obtain the services of a few low country coolies, the extremely stormy weather soon drove my allies to the wind again.

10. I am indebted on this occasion to the old route to Appia Mulla. The ascent by this route has been so well and carefully described by Colonel M. J. and Hamilton that it needs but brief notice.

11. I traversed the foot of the Poonjy Ghats some six miles from Chivisee about midnight, started early down a steep and a little more the ascent. The ground is impracticable for horses or laden mules.

12. It is hard to remember that the Poonjy, who stand at Mayadev, Poonjy and Kumbhale, and who are the only men who carry their burdens on their backs, not on their heads, and that should be remembered. As the work is moreover, steep and the men not very strong, it is not at all an easy climb.

13. The Poonjy Ghats are a very steep ascent, and are a very difficult passage, a valley is whereby to contain the water.

14. The steep ascent to the plateau at which the village of Poonjy stands is about 1500 feet in two miles. There is a gentle rise for about three miles to the foot of Appia ridge, and then an abrupt rise to the top of the ridge.

15. This view of the mountain is a very beautiful (Photograph No. 1).

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22. By making an early start from Appia ridge, the fatigue of the next march is much reduced, as the path, which runs along the eastern side of the valley, is shaded by the mountains from the morning sun.

23. The view of Tangachy and Atka in the morning light, with the light mist touching their foreheads and their feet hidden in the dark forest, struck me as very beautiful. (Photograph No. 2 gives a very faint idea of the scene.)

24. The first part of the walk is uninteresting, being up and down over a series of ridges and valleys; but after about four or five miles the path enters the forest, and the ascent is more equable. The Torachadya river is crossed at an elevation of 4600 feet, and a quarter of an hour's walk leads to the open grass, when half an hour more up a very steep incline brings one to a stream called Seringuacottam. Here there is a fair camping ground, being the spot where the expedition of 1858 under Dr. Cleghorn encamped.

25. For bad weather, however, it is worth knowing that there is a cave and tolerably snug camping ground in the shade at the back of the usual camp. There are also plenty of leeches.

26. Seringuacottam is situated on the slope of Poonjy at a height of 5760 feet (Bar. 24.15), and commands a lovely view of the valley looking down towards the north.

27. It is easy for a good walker to reach Michael's Valley by one march from Appia ridge, but on the whole it is more comfortable to halt at Seringuacottam as a point of one's choice.

28. The next morning's march takes one easily to Michael's Valley. The route is through open grass for about two miles (the lower path being the best) to Kachikuthi ridge, and thence about four miles through undulating forest.

29. No mistake can be made as to the usual place for camping, which is certainly the most convenient spot for headquarters to establish on this route. It is well sheltered, well watered, and there is a very good fire and camping ground for one's horse and mule and baggage.

30. The Appia trees (Robusta) and some apple and pear trees planted by Colonel Hamilton and other visitors were a few days before my arrival carefully examined by an elephant, who seemed to have fully recognized them to be foreigners, and resumed then proceeded a demonstration of civilization upon his master.

31. The camp is situated at the foot of the northern stream of Michael's Valley and is separated from the main valley by a thin strip of forest and a low ridge of hills. The height is about 4000 feet (Bar. 23.80). It is situated in a place where the elevation would be about 4000 feet.

32. On the 25th February 1874, the water in a brass basin outside my tent, and at a height of two feet from the ground, rose completely over. The mean temperature of the air from 26th April to 5th May 1874 was—

Mean maximum 74.2
Mean minimum 53.4

The temperatures at the Wellington Observatory for the same period were—

Mean maximum 73.7
Mean minimum 57.1

33. The elevation of the two chains of the Wellington and Poonjy Ghats is the same as nearly as possible, it will be remarked that although the height of Poonjy is about equal, the extremes are greater at Poonjy. This may possibly, but not certainly, be accounted for by the observations at Poonjy being taken in a valley.

34. The Photograph No. 2 taken from Poonjy shows the view to the Poonjy Ghats as seen from Poonjy.

35. The route to the foot of the ridge was the same as the route to the Poonjy Ghats. Photographs Nos. 3 and 4 are taken from Poonjy, and show the view to the Poonjy Ghats.

36. From the foot of the ridge one can see the valley, and the other flows in a more direct line just the same, and is known by the name of Michael's Valley. The stream flows in a more direct line just the same, and is known by the name of Michael's Valley. The stream flows in a more direct line just the same, and is known by the name of Michael's Valley.

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37. An elephant path, which may be faintly traced in Photograph No. 5, leads along the ridge dividing the two valleys from the foot of Palamallay to the very head of the valley. The gradient is very easy, and the path so good that in its present state it might be galloped over.

38. There is no good path up the valley in which the camp is situated.

39. The southern valley is wonderfully level all along the borders of the stream. The stream is bordered by marsh, and the fall in two miles does not exceed 30 feet. It would be a capital spot for an engineer to sit a hindu on a horse, at his own expense.

40. The greater part of the valley consists of a series of rolling hills, with a few small mountains here and there.

41. Palamallay, which is within half an hour's walk of camp, is well worth a visit, not merely for account of the views from its summit, but also on account of some very curious natural caves which exist in the face of its rocky peak. Two of these which I failed to reach may be seen from the camp with the aid of a telescope. They appear as round holes in the face of the rock. One which is on the south face of the hill is easily reached, and is used as a shooting lodge by the Madivars. It forms a very snug habitation, and is depicted in Photograph No. 6. In the foreground of this picture may be seen the horns of a good buck that *O. Hildebrand*, and it is a curious fact that the horns found about the old encampments are almost always those of old bucks. This may be accounted for by the method in which the deer are pursued, the herd being driven into a narrow gorge, and the deer being the first to be caught. The deer being the first to be caught, the deer being the first to be caught, the deer being the first to be caught.

42. There is a good deal of fine country to be seen on the western slopes of Palamallay. On the whole, the best way to ascend Palamallay from camp is to go up the elephant path I have before alluded to as going up the ridge dividing Michael's Valley, until opposite the waterfall shown in the map, then strike down into the western valley, and proceed up the stream and past the cave (also marked in the map).

43. This cave is exceedingly comfortable and convenient. It contains a spring of remarkably pure water, and one can put up in it for nights, and thence explore Akke, Langney, and the Palamallay slopes without the trouble and expense of carrying tents or of toiling up and down the steep slopes of Palamallay.

44. The honey to the west of Michael's Valley, and on the western slopes of Palamallay is collected by the Maratop Palamallay. The right of collecting the honey in the valley and in the jungles to the east is held by the Pandy and Kurumallay Palamallay. A path, which runs along the ridge of Palamallay, leads to Maratop and Pandy, to the Office persons on Palamallay.

45. There is certainly good camping ground on the slopes, and the Maratop men informed me that there is a cave which they frequent on their honey-gathering expeditions.

46. The path which leads to Kurumallay, which is referred to in Colonel Michael's report, is depicted with sufficient accuracy in the map. The same path leads to Kurumallay (Windy Mountain) and Anamallay.

47. Continued rain on the 10th and 11th May, which severely tested the endurance of my party, and on the 12th May I was compelled by various circumstances to leave the camp and to journey. I sent the greater part of my party to the camp at Palamallay, and I myself went to the camp at Kurumallay, whilst I myself went to the camp at Kurumallay.

48. The best and easiest route is that which is marked on the map as "uncertain". There is, however, a path, which may be traced from the camp, and I extracted from the Palamallay that the best route is that which is marked on the map as "uncertain".

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51. By a stream not far from this cave is a spot held sacred by the Madivars. The only things to be seen are some small iron tridents stuck upright, and a few pieces of iron in the shape of spear heads and knives laid before these, apparently as offerings. I found a similar shrine close to the cave on Palamallay, and another also on Palamallay, immediately opposite the Akke.

52. Viramputh and the cave, which is about a mile east of Viramputh, are situated on a grassy plateau of moderate extent called by the Palamallay by the general name of Poudhattamallay, the general elevation being about 7,000 feet.

53. An exceedingly easy path leads from this to Melkumallay, a distance of about six miles. There is only one portion of this path, extending for a quarter of a mile, which is inaccessible to ponies. This quarter of a mile is, however, very steep and precipitous indeed.

54. I am assured by the Palamallay that there is a circuitous route through the forest to the west by which a pony might be taken, and if a pony could be taken to Kurumallay this route would be well worth exploring.

55. Melkumallay may, I think, be considered a safe halting place, the height being 4,340 feet (Baro. 30.45). There is excellent camping ground and a spacious cave. The ground is open and well watered.

56. Kallumallay, which is a considerable Palamallay village, is about two miles from Melkumallay, is quite a thousand feet lower, and is not at all safe from rain.

57. A steep, almost impassable for ponies, leads in some five miles to the pretty Palamallay temple called Thirumuthy Gudi. The temple is quite in the plain, on a level with and but five miles distant from Dhalles, to which it is connected by a capital heavy-track.

58. I strongly recommend this new route by which I descended to future visitors of the higher ranges. In the first place, the ascent is easy, and the first march takes one to better and more convenient camping ground, namely Melkumallay. Then the second march takes one in two and a half or three hours' easy walking to a fine open plateau at a height of 7,000 feet. A good walker could easily reach Shadumallay in one march from Melkumallay, and thus at once reach, in fact, the centre of the Anamallay plateau.

59. I have no doubt that any one who tries this new route will prefer it to the other. To those who desire especially to visit the Anamallay plateau mentioned by Colonel Hamilton this new route is in every respect preferable. The scenery is fully as beautiful, if not so grand, as in the other route. Moreover, the road between Dhalles and Kurumallay is full of interest. The ponds of the Naks near Dhalles and the Thirumuthy Gudi are well worth some time spent in examining them.

60. With reference to the map which accompanies this sketch, I think it may be accepted as fairly correct in detail. I do not profess it to be full in detail, but it is full enough and accurate enough for all present practical purposes. It is, however, the maiden effort of an amateur, and the scientific may regard it as the innocent recreation of an Indian Judge. Probably the distant points, such as Kurumallay, Anamallay, and Poudhattam, are within 100 yards of truth; the nearer points about the valley must be very nearly correct.

61. The names have been written as pronounced by the Palamallay, and certainly it is difficult to recognize some of them as connected with the names entered in the Ordnance Map. Many of the names in the Ordnance Map I could not identify at all. What is entered in the Ordnance Map as Chelamallay is now, to the Palamallay, Kurumallay. The hill of the hill is now, to the Palamallay, Kurumallay. The hill of the hill is now, to the Palamallay, Kurumallay.

62. The Palamallay say that the names of Anamallay ridge and Kurumallay Hill are derived from the fact that in days gone by certain Malabarans, returning from a harassing expedition across these hills, found themselves unable to take the horses and donkeys which formed part of their booty further than the edge of the plateau, and therefore abandoned them on the hills.

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and that the above-named spots are the sites of their encampments. I think, however, these ingenious gentlemen (the Pulars) told a Mr. Payne a very different story some years back, to the effect that the names were derived from the fact that the animals had been sacrificed on these spots, having been carried up the hills for the purpose.

In conclusion, I would remark that, although there is all about the plateau an immense amount of available forest land well adapted for both Tea and Coffee cultivation, yet the scarcity of labour and the scarcity of labour would probably lead to the certain ruin of the pioneers of planting, and considering the great extent of forest which still remains to be opened out in the vicinity of the Ponnally estate, to which Government has opened a road at considerable expense, I should much doubt the advisability of encouraging planters to settle on these hills, whilst there is still ample forest for all possible requirements in more accessible localities.

Levels of water and vegetation will, however, find here much that will repay the trouble of a trip, and the sportsman will find sufficient game (Bison and Deer only) to occupy him.

Is it too much to ask of any who may avail themselves of the information given in this sketch that they will refrain from murdering the game? If the sportsman requires food for himself or his followers, let him by all means shoot, whatever he can get, but that I should introduce to the lovely scenery such a stain of extermination, as have in a few short years, with cutting down and burning, destroyed the sports of the village, by leaving the dead and mangled bodies of every four-footed animal, as a painful mark for sucking and for the use of a knife at a distance.

The photographs referred to are in the hands of Mr. Karsak of Coimbatore, from whom copies can be obtained. I beg to state that I have no pecuniary interest whatever in them.

APPENDIX No. 1.

Thermometric Register, Ponnally Estate, from 20th June to 11th July, 1874.

Date	Mean therm.	Bar. therm.	Remarks
April 20th	72.3	34.8	Fair
" 21st	70.8	37.1	Clearing fair; afternoon rain.
" 22nd	77.0	35.2	Do. do.
" 23rd	80.0	30.0	Do. Heavy rain.
" 24th	70.1	34.1	Cloudy; fair.
" 25th	75.0	32.0	Cloudy; afternoon rain.
" 26th	75.0	31.0	Cloudy; fair.
" 27th	75.0	31.0	Cloudy; fair.
" 28th	75.0	31.0	Cloudy; fair.
" 29th	75.0	31.0	Cloudy; fair and wind.
" 30th	75.0	31.0	Heavy rain; fair.
" 1st	75.0	31.0	Heavy rain; fair.

Barometer reduced to sea level, and from the ground and under first foot road.

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APPENDIX No. 2.

Approximate Heights of some Peaks of the Anamalai Hills.

Poliary	8,147 feet (Baro. 23.13)
Anthrallat	7,072 " (" 23.02)
Karathakatti	7,240 " (" 23.88)
Kalar	7,491 " (" 22.67)
Sheshandy	7,300 " (" 22.77)
Poinakatti	7,210 " (" 22.90)
Upper Kurumalloy	4,340 " (" 25.45)
Bottom of Michael's Valley	6,060 " (" 23.89)
Top of Michael's Valley	6,200 "

The heights are roughly estimated. A mean of barometric readings was taken whenever practicable. The Aneroid Barometer employed was a very good instrument by Elliott, Brothers, and was set by the Madras Observatory Standard. I took as my guide Airey's Tables calculated from a sea-level with Barometer at 31.00.

Taking the mean of Madras Barometer at 29.30, this would give a height according to Airey's Tables of about 1,070 feet, which I take roughly to be about 1,040 feet above truth.

I have, therefore, simply deducted 1,040 feet from every observation.

Thus, Mean of observations Coimbatore camp, Barometer 23.89

Height according to Airey's Tables 7100

Deduct 1040

Height of camp = 6060

This is no doubt a rough and ready way of calculation which may attract the scientific, but to show that it is probably not very far from truth, I give the result of the observation of a known point by the same Barometer.

Dodabet—Mean of observations 41663

Height by Airey's Tables 9740

Deduct 1040

Height of Dodabet = 8700

It is interesting to note, in connection with this, the result of some boiling point observations of the same station, the height of the lowest station being determined as above by the Aneroid.

Dodabet—Boiling point (mean of six observations) 106° 14, Thermo. 62

Velamhoody 209° 12, Thermo. 65

Velamhoody Baro. 23.72 height = 1040 feet

Dodabet—Boiling point 106° 14, Thermo. 62 = 8627 feet

Velamhoody—Do 209° 12, Thermo. 65 = 1070

Mean = 73 = factor 1040

2820

1040

1780

1040

1780

Add correction for 2,000 feet = 423

Difference between stations = 7863

+ height of Velamhoody 1040

8903 = height of Dodabet

1040

1. *Phragmites australis* (Cav.) Trin. ex Steud.
 2. *Scirpus americanus* (L.) Link.
 3. *Eleocharis acicularis* (L.) Rostk Schmidt
 4. *Sagittaria arifolia* (L.) Link.
 5. *Alisma plantago-foliosa* (L.) Rostk Schmidt
 6. *Sparganium angustifolium* Michx.
 7. *Najas* sp.
 8. *Chara* sp.
 9. *Utricularia* sp.
 10. *Hydrocotyle* sp.
 11. *Salvinia* sp.
 12. *Wolffia* sp.
 13. *Elodea* sp.
 14. *Hydrilla* sp.
 15. *Chara* sp.
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 157. *Hydrocotyle* sp.
 158. *Salvinia* sp.
 159. *Wolffia* sp.
 160. *Elodea* sp.
 161. *Hydrilla* sp.
 162. *Chara* sp.
 163. *Utricularia* sp.
 164. *Hydrocotyle* sp.
 165. *Salvinia* sp.
 166. *Wolffia* sp.
 167. *Elodea* sp.
 168. *Hydrilla* sp.
 169. *Chara* sp.
 170. *Utricularia* sp.
 171. *Hydrocotyle* sp.
 172. *Salvinia* sp.
 173. *Wolffia* sp.
 174. *Elodea* sp.
 175. *Hydrilla* sp.
 176. *Chara* sp.
 177. *Utricularia* sp.
 178. *Hydrocotyle* sp.
 179. *Salvinia* sp.
 180. *Wolffia* sp.
 181. *Elodea* sp.
 182. *Hydrilla* sp.
 183. *Chara* sp.
 184. *Utricularia* sp.
 185. *Hydrocotyle* sp.
 186. *Salvinia* sp.
 187. *Wolffia* sp.
 188. *Elodea* sp.
 189. *Hydrilla* sp.
 190. *Chara* sp.
 191. *Utricularia* sp.
 192. *Hydrocotyle* sp.
 193. *Salvinia* sp.
 194. *Wolffia* sp.
 195. *Elodea* sp.
 196. *Hydrilla* sp.
 197. *Chara* sp.
 198. *Utricularia* sp.
 199. *Hydrocotyle* sp.
 200. *Salvinia* sp.
 201. *Wolffia* sp.
 202. *Elodea* sp.
 203. *Hydrilla* sp.
 204. *Chara* sp.
 205. *Utricularia* sp.

a chance for things to clear

This paper having been marked for transmission to the Secretary of State, copies are registered.

1798

[illegible]

Early in the year 1868, having obtained three months leave, I was advised by Colonel Michael to explore the Higher Ranges of the Andes for geological purposes.

Colonel Michael proposed to me that I should essay a route which had not previously been tried, namely, by Iketu, Potosi and Apiza Mountains.

I accomplished the ascent to Michale Valley easily in three marches from Iketu, and was subsequently joined by Captains Michael and Hale, who however remained but a short time, owing to the illness of Capt. Hale.

The general results of Captain Michael's visit on this occasion are embodied in his report to Government dated 18th April 1868. Immediately after this trip Capt. Michael was attacked with a serious illness and Capt. Hale died, but the illness of neither of these gentlemen was attributable to our visit to the Andes, but the excessive exertion required to join the upper Ranges in cold character for unhealthiness, which belongs by right to the lower part of the Andes only.

In 1865, Colonel Douglas Hamilton and Sub Lieutenant (18th Cavalry) visited the upper Ranges and remained there about two months; the account of this trip is contained in Colonel Hamilton's interesting report dated 10th December 1865.

Several parties have since visited the Upper
Plateau, but owing to the difficulty of access
and the bad season for game that the famous
"Anamalai" has obtained, this truly magni-
ficent country has not received the attention
it deserves.

The obscurity in which the spot is buried
is, I doubt not, in some measure owing to the
inaccuracy of the existing maps, an expan-
sion of which would lead to the discovery of the
existence of such an extensive and valuable
plateau.

In view therefore, partly to the enjoyment of
the loveliest scenery and most delicious
climate in South India, and partly to render
the same pleasures available to others, I re-
solved to spend a portion of the season of
1874 in exploring and perhaps mapping
out the plateau and though owing to very
unfavorable weather, a strained ankle, and
other circumstances, my explorations were
unfruitful, still the results so far as they go
may be of use to others who may be led to
follow and pursue beyond my footsteps.

It is needless to say that preparation
must be made beforehand. Coolies from the
low country are very unwilling to go up
these hills, and though I did, on this occasion,
obtain the services of five low country volunteers,

the unfortunately stormy weather soon drove my allies to the plains again.

I ascended on this occasion by the old route via Appia Valley. The ascent by this route has been so well and carefully described by Colonel Mitchell and Hamilton that it needs but brief notice.

I reached the foot of the Poondy Giant (some six miles from Shuller) about midnight and at early dawn on the 23^d April commenced the ascent. The Giant is impracticable for horses or laden bullocks.

It is well to remember that the Palikars, who reside at Maradaga, Poondy, and Kurnan valley, and who are the only available coolies, carry their burdens on their backs, not on their heads, and loads should be arranged accordingly. As the ascent is very steep and the sun hot very strong, no load should exceed 35 lbs.

The Palikars have brought to perfection the art of making lampnags, a vehicle whereby to convey their thoughts.

The steep ascent to the plateau on which the village of Poondy stands is about 1500 feet in two miles. There is then a further rise for about three miles to the foot of Appia Ridge and then an abrupt rise to the top of the ridge.

The view of Koluma Valley from the Plateau is very beautiful (Photo. 291).

The plateau of Poudy is exceedingly dangerous
as regards fever (the elevation being about
2800 feet) and servants or coolies who
should on no account be allowed to sleep at
Poudy, though they will invariably petition to
be allowed to do so. Appia ridge is however
I believe perfectly safe. The only case of sickness
amongst my followers was that of a man, who
in disobedience to orders, left Appia ridge
and slept two nights in Poudy. He contracted
a very severe fever.

Good drinking water is to be had on Appia
ridge at all seasons, there are two or three
springs. No rain had fallen for about six months
prior to my arrival, nevertheless there was suf-
ficient, running, pure water.

The grass makes a very fair camping ground
being sheltered and tolerably level.

The height is about 3940 feet above the sea
(Baro. 26.34) and the thermometer read on
this occasion, in the shade. Noon 81°. 8 P.M. 78°
6 A.M. 67° a very delightful and equal
temperature.

The view of the Torcadavie Valley from the
saddle of the ridge, would alone repay the
trouble of the journey from Comodoro.
To the immediate left lies Appia Valley,
next comes a hill called Paranga, beyond this
towers the lofty form of Kokan valley, one mass
of precipices and quaintly shaped peaks.

5
in front, due south, in the extreme distance, is the
green summit of Shadiandy peak; on the
right of the valley towers the huge grey rock
of Tangachy attended by her sister the Akka;
towards the west, and behind them, stretches the
long grey back of Poliray.

Much of the fine forest of the valley has been
destroyed by the erratic and destructive
action of the landslides.

By making an early start from Apsara
village, the fatigue of the next march is much
lessened, as the path, which runs along the
eastern side of the valley, is shaded by the
mountains from the morning sun.

The views of Tangachy & Akka in the morning
light, with the light mist touching their foreheads
and their feet hidden in the dark forest thick
are so very beautiful. Photograph No. 2 gives an
very faint idea of the scene.

The first part of the walk is annoying, being
up and down over a series of ridges and valleys
but after about four or five miles, the path
enters the forest and the ascent is more
equable. The Torcaduro river is crossed
at an elevation of 4500 feet and a party
of an hour's walk leads to the open grass, where
half an hour more up a very steep incline
brings one to a stream called Perigana Colu.

Here there is a fine camping ground, being the
spot where the expedition of 1858 under J.

Elephant encampment

For bad weather however it is worth knowing that there is a cave and tolerably dry camping ground in the chokah at the back of the usual camp. There are also plenty of Caribbees.

Perijana Column is situated on the slope of Polioy at a height of 5700 feet (Baro. 24.15) and commands a lovely view of the valley looking down towards the North.

It is easy for a good tracker to reach Michael's Valley in one march from Appia Kaga, but on the whole it is more comfortable to reach Perijana Column on account of our coolies.

The next morning's march takes one easily to Michael's Valley. The route is through open grass for about two miles (the lower path being the best) to Katheri Katti ridge, and thence about four miles through angulating forest.

No mistake can be made as to the usual place for camping, which is certainly the best communication for horse quarters to travellers by this route. It is well sheltered, well watered and there is a very good cave and camping ground for our followers in the chokah above at hand.

The Australian trees (Roburta) and some ^{planted by Capt. Hamilton and other visitors} apple and pear trees were a few days before my arrival carefully eradicated by an elephant, who seemed to have fully recognized

recognizes them to be foreigners, and treats
them precisely as an intrusion of civilization
upon his domain!

The camp is situated at the tail of the
northern stream of Michael's Valley and is
separated from the main valley by a thin
strip of forest and a low ridge of hills.
The height is about 6000 feet (Baro 13.89)
The climate is cooler than the elevation would
lead me to expect.

On the 28th February 1863, the water in
a brass basin outside my tent and at a
height of two feet from the ground, froze completely
over. The mean temperatures in the shade
from 26th April to 8th May 1874 were

Mean Maximum 76.2 Mean Minimum 58.4

The temperatures at the Wellington Observatory
for the same period were

Mean Maximum 73.7 Mean Minimum 57.1

The elevation of the two observatories (Wellington
and Conclan) being the same or nearly so
possible, it will be remembered that although
the mean temperature is about equal, the
extremes are greater at Conclan. This may
partly but not entirely be accounted for by
the observations at Conclan being taken in a
valley.

The Photograph N°3 taken from Palumbay
(best known to Europeans as Misoclar Hill)
gives a very fair idea of Michael's Valley.

8.

The hill at the head of the valley is
Anaitassi or the Elephant head. Photographs
nos. 4 & 5 are taken from points near the foot of
Anaitassi.

From the foot of this hill rise two streams
one of which meanders round the southern
valley and the other flows in a more direct
line past the camp and is known by the
name Conakano. These two streams unite
at the foot of Palumlay in the midst of dense
forest and form a beautiful waterfall. The
stream thence taken I believe the name of
"Torakadara".

An elephant path (which may be faintly
traced in Photo No. 3) leads along the ridge
dividing the two valleys, from the foot of
Palumlay to the very head of the valley.
The gradient is very easy and the path so
good that in its present state it might be
traversed over.

There is no good path up the valley in which
the camp is situated.

The southern valley is wonderfully level all
along the borders of the stream. The stream
is bordered by marsh and the fall in two
miles does not exceed 30 feet. It would
be a capital spot for an amateur engineer
to tilt a beam across - at his own expense.

The greater part of the valley consists of a
series of rolling hills with a few small

Shalaho here and there.

Palmallay which is within half an hour's walk of camp is well worth a visit, not merely on account of ~~the~~ the views from its summit, but also on account of some very curious natural caves which exist in the face of its rocky peak - two of these, which I failed to reach, may be seen from the camp with the aid of a telescope. They appear as round holes in the face of the rock. One which is on the south face of the hill is easily reached and is used as a shooting lodge by the Malaysians. It forms a very snug habitation and is depicted in Photo No. 6. In the foreground of this picture may be seen the horns of a good buck sheep (*C. My. Corvia*) and it is a curious fact that the horns grow about the old encampments as almost always those of the buck. This may be accounted for by the manner in which the sheep are pursued, the horns being driven into the nose as described by Colonel Hamilton, and the old bucks being the most wary and the first to make off and are consequently the first to be caught. Victims to their own caution!

There is a good deal of fine country, north

exploring on the western slopes of Poliany.
On the whole the best way to ascend
Poliany from Camp, is to go up the elephant
path I have before alluded to as going
up the ridge dividing Michael's Valley, until
opposite the water fall shown in the map,
then strike down into the northern valley
and proceed up the stream and past
the camp (also marked in the map).

This route is exceedingly comfortable
and convenient; it contains a spring
of exquisitely pure water, and one can
put up in it for a night and then explore
Adika, Tanyachy and the Poliany slopes
without the trouble and exertion of carrying
tents or of toiling up and down the steep
slopes of Poliany.

The honey to the west of Michael's Valley
and on the western slopes of Poliany is
collected by the Mavado Polians. The
right of collecting the honey in the valley
and in the jungles to the east is held
by the Poudy and the remaining Polians.
A path which runs along the ridge of
Poliany, leads to Mavado and I presume
to the coffee estates in Poudy valley.

There is evidently some camping ground on
the slopes of the Mavado men informed me
that there is a cave which they frequent in
their honey gathering expeditions.

The path which leads to Kinnaricah, which is referred to in Colonel Michael's report, is indicated with sufficient accuracy in the maps. The same path leads to Kattakulley (Windy mountain) and Anis-messie.

Continual rain and the Cyclone of the 6th May, which severely tested the endurance of my little shikar tent, prevented any exploring beyond Kinnaricah, and on the 12th May I was compelled by various circumstances to start on the downward journey. I sent the greater part of my kit by a short route, past Palkulley and through the forest to Vinniputti, whilst I myself went round by Shadianan Hill.

The best and easiest route is that which is marked in the maps as uncertain. There is however but little doubt in my mind, from the information I extract from the Pehians, that this uncertain route may be traversed on horseback.

The lower route which I adopted, is in parts somewhat steep, and finally joins the short route, via Palkulley, not far from a camp of the Pehians called Vinniputti. There is no room at Vinniputti and it is necessary to pitch tents or build huts. By joining the upper route however one is led to an excellent one, which I have marked

At Kurnool may I think be considered
a safe halting place; the height being
4340 feet (Baro. 25.45). There is excellent
camping ground and a good water supply.
The ground is open and well watered.
Kurnool is a small town which is a convenient
Pulicat village, is about two miles from Kurnool.
Kurnool, is quite a pleasant place and
and is not at all safe from fire.

A steep path, impassable for iron shoes
former, leads in some five miles to the
pretty Pulicat temple called Thirumithy
Coil. The temple is quite in the plain, on
a level with and but five miles distant
from Dullin to which it is connected by
a capital hardy track.

I strongly recommend this new route by
which I intend to future visitors of the
Kurnool Range. In the first place the route
is easier and the first march takes me
to better and more convenient camping
ground than Kurnool. Then
the second march takes me in two and a
half or three hours easy walking to a
fine open plateau at a height of 7000 feet.
A good walking and easily reached Shedi-
and Kurnool is the march from Kurnool
Kurnool, and then at last reach in fact
the centre of the Kurnool Plateau.

I have no doubt that anyone who has seen this
new route will prefer it to the other. To
those who desire especially to visit the
Muisca plateau mentioned by Colonel
Mammillota this new route is in every respect
preferable. The scenery is fully as
beautiful if not so grand as in the old
route. However the road between Páramo
and Kaurimallay is full of interest. The
Tombs of the Incas near Páramo and the
Thirteen-day Coil are well worth some time
spent in examining them.

With reference to the map which accom-
panies this sketch I think it may be ac-
cepted as fairly correct in detail. I do not
profess it to be full in detail, but it is full
enough and accurate enough for all practical
purposes. ~~The map is a very rough sketch, but it is~~
~~the only one I have seen, and it is very~~
~~interesting in its details. It shows the route~~
This however the historian's effort of an amateur
and the scientific may regard it as the
immanent recreation of an Indian judge.
Probably the distant points such as Kauri-
malla, Kaurimallay & Páramo are within
500 yards of truth, the nearer points about
the valley must be very nearly correct.

The houses have been entered and
monumented by the Pulis, and certainly

it is difficult to recognize some of them and
compared with the names entered in the
Ordinance maps. Many of the names in
the Ordinance maps I could not identify
at all. What is entered in the Ordinance
maps as Calabazilla valley, is known to
the Pahlans as Kharat Kutta, "the hill of
the tree and". Kharat Kutta is "the hill of
the windy hill".

The Pahlans say that the names of
Kharat Kutta valley, and Kharat Kutta
Hills are derived from the fact that in
days gone by, certain Mahometans, returning
from a wandering expedition across
these hills, found themselves unable to
take the horses and donkeys which formed
part of their booty, further than the edge
of the plain and therefore abandoned
them on the hills, and that the above
names are the sites of their an-
campments. I think however that
the Pahlans (the Pahlans) told
a tall story, a very tall story, some
years back, to the effect that the names
were derived from the fact that the horses
had been sacrificed on those spots, having
been carried up the hills for the purpose.

In conclusion I would remark, that
although there is all about the Plateau
an immense extent of unperfected

clays and other loess, no regular

forest land, well adapted for both tea
and coffee cultivation, yet the difficulty
of access and the scarcity of labour which
probably lead to the certain ruin of the
hundreds of plantings, and considering the
great extent of forest which still remains
to be opened out in the vicinity of the Prachin
states, to which Government has opened
a road at considerable expense, I have
much doubt the advisability of encouraging
planters to settle in these hills, whilst
there is still ample forest for all pos-
sible requirements in more accessible
localities.

Lovers of scenery and exploration will
however find here, much that will
repay the trouble of the trip, and ~~perhaps~~
the sportsman will find sufficient
game (deer and deer only) to occupy
him.

So it is much to wish of any who may
visit these regions of the information given
in this sketch, that they will refrain from
murdering the fauna. By the sportsman
surrendering food for himself or his followers
let him by all means shoot whatever
he can get, but that I should introduce
to the ^{country} such a class of sportsmen
as have in a few short years, with galling
beats and armed coolies, destroyed the

of the Kilgiver, by beating the shole,
and wantonly killing every four footed
animal, be it prairie hind or sucking calf
would be to me a source of continual
regret.

The Photographs referred to, are in the
hands of Mr. Kendrick of Ottumwa, from
whom copies can be obtained. I beg to
state that I have no pecuniary interest
whatever in them.

Very truly
yours
Manning

Appendix No. 6

Plas has been in the Richmond Valley
from April 12 to May 5 - 1874

Date	Bar	Wind	Remarks
April 26	76.3	SE 4-6	Clear
27	76.4	SE 4-6	Clear. fine. afternoon rain
28	77.9	SE 4-6	Do. Do.
29	80.0	SE 4-6	Do. Heavy rain
30	76.0	SE 4-6	Cloudy - fine
May 1	75.0	SE 4-6	Cloudy - afternoon rain
2	75.5	SE 4-6	Cloudy - fine
3	76.0	SE 4-6	Cloudy - fine
4	76.0	SE 4-6	Clear - day
5	76.0	SE 4-6	Cloudy - rain & wind
Mean	76.2	SE 4-6	Mean temperature
6 th	80.0	SE 4-6	Heavy rain with rain

The weather fairly agrees in shade. 10 feet from the ground
is under the ground surface.

Approximate heights of some peaks of the
Annapurna Range

Polya - 8147 feet (Baro 2288)
Ani-talai - 7872 feet (Baro 2302)
Kountai Kite - 7260 feet (Baro 2288)
Kalar - 7401 feet (Baro 2287)
Shadimay - 7860 feet (Baro 2277)
Pain Kite - 7210 feet (Baro 2280)
Upper Karamay - 8800 (Baro 2265)
Karamay
Karamay Kite - 6000 (Baro 2289)
Top of Karamay Valley - 5200

The heights are roughly estimated. A barometer of aneroid
readings were taken at various points. The barometer
employed was a very good instrument by Elliott Brothers
and was set by the aneroid observing standard.
I took as my guide diving table calculated from a
sea level with Baro at 30.00.
Taking the mean of the aneroid observations to be
29.80, the mean gives a height according to diving
table of about 1070 feet, which I take roughly
to be about 1000 feet above truth.
I have therefore simply deducted 1000 feet from
every observation.

Mean of observations Caudine Camp. Baro. 28.89
Height according to diving table 7100
Deduct 1000
Height of camp = 6000

The height of Lincolnton is entered in the
maps as 8640 or 8780, the latter being
supposed to be the more correct.

Again another example

Old Mills - P. 22-185 = 8105

By the maps = 8090

I think these examples are sufficient to
show that the heights as estimated by me
are probably not very far out.

J. C. H.

Received 12/20/74

Salem

June 28th 1874

To

J. C. Huntington Esq

C. G. Keaster Esq

Secretary to Government

Norwich Department

Sir

Having visited the surrounding hills, examining the late means of my coast, and having during my leisure hours felted was able of such points as attract me as being of interest and having also surveyed and sketched a portion of the higher Plateau, I think that perhaps the results of my trip may not be without interest to Government.

I have therefore the honor to forward herewith a few photographs, being three copies each of six views, together with a report, and also a map of the whole valley and part of the adjacent country, for the kind acceptance of Government.

Being myself a very indifferent draftsman I have had the maps laboriously copied on a reduced scale of some yards to the inch. I have also forwarded my own rough sketch which is drawn at more or less, together with a plan on the same scale showing the principal features.

from which the map is worked, and any
intelligent draftsman can form these
maps to any desired scale.

I do not however claim extreme accuracy
for my maps, the survey having been carried
out with a rather coarse instrument and I
would suggest that if any thing be done with
the report and maps, that the best the maps
in their present state, is to be copied
on a scale, say of a mile to the inch, in a
clear bold manner, and have the copy
photographed.

I had intended sketching the whole of
the Upper Plateau, but was prevented by
various circumstances; perhaps next year
I may be able to complete the sketch, but
considering the uncertainty of all human
plans, I have considered it best to send
you the report and maps, as it stands, in its
present condition.

I am the honor to be
Sir
Your obedient servant
Henry J. ...

I have the pleasure to acknowledge the receipt of your letter of the 10th inst. in relation to the photographs of the valley of the Saguenay. I have the honor to inform you that the photographs of the valley of the Saguenay, which I have the honor to send you, are the property of the Government of the Province of Quebec, and are not to be used for any other purpose than the one for which they were taken. I have the honor to inform you that the photographs of the valley of the Saguenay, which I have the honor to send you, are the property of the Government of the Province of Quebec, and are not to be used for any other purpose than the one for which they were taken.

13

Assault

7. Copy: Revenue Department.
Proceedings of the Madras Government.

Under date the 3rd Aug 1897

Read the following papers:
from J. C. Hammington Esq.

Forwarding a report on the An:
namallak Hills, together with 18
copies of photographs of six views
of the Hills and also a map of
Michael's valley and part of the
adjacent country. &c.

(N.E. 23rd June 1874.)

Memor. by the Chief Engineer on 21 July 1874.

The Government are much obliged to Mr. Hamington for his interesting report which will be printed and laid on the Editors' table.

2. The Map and accompanying papers will be sent to the Survey Department for the preparation of a Map on the reduced scale indicated in the Chief Engineer's Memo. and for record in its office.

M.H.
94)

To
B. J. Mason
Inspector of Fishing
Lepidoptera
Prof. DePaul
Egerton Noble
C. H. Whittington

Aug 28/97
Aug 28/97
Aug 28/97
Aug 28/97
Aug 28/97
Aug 28/97

to Mr. C. H. Whittington

9/11

at station Cape Maclear
of the camp and with the
advantage of many in the
S. 1894

Chief Engineer's Memorandum

I am of opinion that it will detract greatly from such value as this paper may have if it be not accompanied by the map; which I would have copied on a scale of 2 miles = 1 inch, in order that it may agree with the scale of the printed map accompanying Capt. Michael's Report of 1863, which it will supersede. I would leave it to the Rev. Survey Dept. to make the necessary arrangements, and the papers of triangulation should be recorded in that Dept. Mr. Hannington hints at an intention of exploring the high range west of Plateau to the South of Michael's Valley on a future occasion; and if he were to extend his Survey over that tract also, it would not fail to be of general use hereafter.

I trust that future explorations of the country will avail

Respectfully,
J. H. R. R. R.

themselves of the route
from Jambator via Po-
lancy and ~~the~~ the
village of Mungamullay,
whence a road would be
made, continuous to the
top of the Ponnanday Shan.
It will be visible in the
course of this year; and
the rest of the route to Mi-
chael's Valley along the
Upper Ranges of the Jor-
kadawo, should be much
more practicable than any
of the routes from Dhallee;
which have been proposed.
The high ridges bordering
that country before they drop
into it. - The route I recom-
mend is that along which
the future high road to the
Mungamullay High Ranges
must run.

I note that the Khamthi Kuttie
Bill of Mr. Hume's map
coincides with the Kandyvase
of the printed map (not with
the Ponnanday Shan, as he
supposed) - It may be well
to note the difference
of the two maps for as I

can make them out. The best
will be useful if the new map
is not printed.

Polany = Tunkhamullay.
South Polany = Poldicottamullay.
Palmullay = Ponnacolum Wood.
Maytullay = Pottakia Padum.
Kalar = Payatramullay.
Muniputti = Jorakhamullay.
Shadikandy must be the in-
correct peak marked on the
printed map immediately
above the letter c of the word
coveal (Ponnacolum) -

G. M. W. L. S. D.
Chief Engineer, S. P. S.

Datukhamullay
21st July 1874

Photograph No. 111, ~~which~~
with the map, and Mr. Hume's
reigning description, com-
bine to give a perfect idea
of Michael's Valley, even to
me who has never seen it.

G. M. W.

Interviews with
 Col Walker - whose
 suggestion must be
 printed with the
 paper.

It does not
 seem open to complaint
 as to the map a
 very little of geographical
 knowledge is of
 value.

MR

Revenue Department

Notes

The reports already
 published upon the Upper
 Ridges of the Himalayas
 are put up.

They are as follows:-

This is an in-
 -teresting paper & I
 would print it -
 but I hesitate
 about printing the
 maps - as they are
 many of the maps are
 not very accurate.

I. O.

8-7

will be all
 Col Walker.

For the purpose of
 a paper on the Himalayas

(1) Dr. Cleghorn's "Expedi-
 tion to the Higher Ranges
 of the Himalayas Hills,
 Kashmir in 1858" Page
 289 et seq. "Cleghorn's
 Forests and Gardens of
 Southern India".

(2) Sir J. D. D. D. D.
 Report recorded in G.O.
 9th June 1880. 18950 R.D.

(3) Captain Michael
 Report dated 15th April
 1880. with Map.

(4) Colonel Hamilton's
 Report dated 15th December
 1880.

MR

Mr. Hamington
writes to me as follows.

"If it is proposed to
photo the map it ought
to be plotted boldly on
a large scale say 1100
yards to the inch or
larger and then photo-
graphed on to a 13x10
inch plate."

"If the map is made
20 inches square on a
scale of 880 yards to the
inch and then photogra-
phed to 10 inches square
the scale will be an
mile to the inch. In
plotting the map regard
should be had to the
photograph so that
the latter may be as near
as if it is plotted to
880 yards to the inch."

3/10

There should be written
on it 1 mile to the inch
to suit the photo.

E.H.L.

13-14-15-16

13-14-15-16

13-14

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