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I.—*Journal of a visit to the Mishmee hills in Assam.* By WM. GRIFFITH, M. D. Madras Medical Establishment.

[In a letter to Captain F. JAMES, Political Agent, N. E. Frontier; communicated by Government to the Asiatic Society, the 5th April, 1837.]

In pursuance of my intention of visiting the *Mishmee* hills, as soon as the season was sufficiently advanced, I left this station on the 15th October, and proceeded up the *Brahmapútra*, or *Lohit*, to the mouth of the *Karam Pánee*, which we reached on the third day. I thence ascended this river, which is a mere mountain stream, for a similar period, at the expiration of which I had reached its extreme navigable point at that season of the year, even for the small boats which I employed. At *Chonpúra* the rapids of the *Brahmapútra* commence, and thence they increase rapidly in frequency and violence; so much so, that the river is only navigable for small boats one day's journey above the mouth of the *Karam*. No villages exist on the great river, the extreme banks of which are clothed with heavy tree jungle. It is much subdivided by islets formed of accumulations of sand and boulders: these islets being either scantily covered by coarse species of sugar, or tree jungle, or grass and tree jungle. The *Karam* is a considerable stream, consisting of a succession of rapids; its banks are clothed with very heavy tree jungle, among which the *simul**, *údal*†, and a species of alder occupy conspicuous places. On the second day of its ascent we reached the Kamptee village *Palampan*, situated about a mile inland in a southerly direction; it is small and of no consequence, although the Rájá is of high rank.

* *Bombax heptaphyllum*.

† *Sterculia* sp.

At this village my attention was first directed to a very valuable native dye, the *room* of the Assamee; with this dye all the deep blue cloths so much used by the Kampteas and Singphos are prepared. What is more curious, it belongs to a family (*Acanthacea*), the constituents of which are generally devoid of all valuable properties—it is a species of *Ruellia*, and is a plant highly worthy of attention. Leaving the boats, I proceeded up the *Karam*, the general direction of which is about E. S. E., and after a tedious march of five hours over small boulders, reached the first *Mishmee* village on the route. This village is called *Jingsha*, deriving its name, as appears to be always the case, from the Gam: it is about six miles from the foot of the hills—it is small, the number of houses not exceeding ten, and possesses apparently very few khets. The Gam is a man of inferior note. After a halt of two days to enable my people to bring up the provisions, &c., I left for *Brahma-kúnd*, which, from Captain WILCOX's description, I imagined to be the usual route to the interior. *Brahma-kúnd* lies to the E. N. E. of *Jingsha*, from which place it is distant by the path, which is very circuitous, about twelve miles. The route at first follows another bed of the *Kuram* to the S. W., thence ascending the *Dal Púnee* to the eastward, thence diverging to the north through a heavy tree jungle, and after traversing this for about an hour ending at the *kúnd*, to which place the descent is steep, but short. Of this celebrated place much has been said, but no description at all answers to it, as it exists now. The scenery is bold, the hills on either side of the river being very steep but of no great height, and the *kúnd*, or reservoir itself is totally lost in the contemplation of the immensely deep bed of the river and the gigantic rocks visible in every direction. The extreme width of the bed of the river is certainly upwards of one hundred yards, but of this only the left half is occupied by the stream. The *kúnd* is contemptible, and unless the attention were especially directed to it, would quite escape observation. The *Deo Púnee* is a paltry attempt at a waterfall. The course of the river is slow and sufficiently tranquil, but to the eastward there is a violent rapid ending about sixty yards from the *kúnd* itself. This reservoir owes its existence to the projection of two rocks into the *Lohit*; at this season it contains but little water. The fuqeer's rock is a huge mass perforated near its summit; its extreme apex is accessible, but with difficulty; it does not represent Gothic spires, this appearance, so far as I know, being limited to shell-limestone. At this romantic spot I staid three days, paying particular attention to the vegetation of the place, which presents some curious features, of which the most

remarkable is the existence of a species of maple and one of rue: the former being an inhabitant of *Nipal*. the latter of considerable elevations on the Khasiya ranges. I was met here by TAPAN GAM, the chief of the *kând*, who claims all the offerings invariably made to the deity by every native visitor of whatever rank or religion he may be.

After examining the adjoining hills, over which the route pursued by Lieutenant WILCOX lay, I was convinced of the impracticability of proceeding, at least with the usual description of Assamese coolies. I was therefore compelled to retrace my steps to *Jingsha*, having previously arranged with TAPAN GAM for guides to shew me the usual route. At *Jingsha* I was delayed for several days in bringing up rice, which had been kindly forwarded from *Sadiyd* by Lieutenant MILLAR, and without which I knew it would be impossible to visit the interior. From *Jingsha* I proceeded up the *Kavam* in an easterly direction, diverging thence up the *Kussing Pánee* in a N. E. direction, thence skirting the foot of the hills, through remarkably heavy bamboo jungle. After a long march we descended a low hill to the *Las Pánee*, but at a higher point than any previously visited. The following day I commenced the ascent, passing during the day a small Mishmee village without a name, and halting on the slope of a hill in heavy tree jungle. Commencing our march early next morning, we ascended and descended several considerable hills, and at noon reached *Deeling*, the *Dilling* of Captain WILCOX. This is a small village consisting of a few houses, scattered in various directions, and opposite to it on the great mountain *Thumathaya* is another called *Yeu*: there is about this place a good deal of cultivation. It was here that I came upon the route previously followed by Captain WILCOX. This I followed as far as GHALOOM's: it is correctly described in that officer's memoir on *Assam* and the neighbouring countries. Our halts were as follows:—on the third day the bed of the *Lohit*; on the fourth at the mouth of the *Lung*; on the fifth at GHALOOM's, whose village has been removed to the banks of the *Lohit*, and at a distance of about one hour's march in advance from the old site. From GHALOOM's I proceeded to КНОСНА's, whose village is on the north bank of the *Lohit*. I crossed the river, which is here about forty yards wide, and as usual deep and tolerably rapid, on a bamboo raft, no one but the Mishmees venturing by the suspension canes, which are here stretched over a space of about eighty yards, and at a formidable height from the stream. From КНОСНА's I proceeded to PRIMSONG's, whose village is at a much higher elevation than any of the others: but PRIMSONG was unfortunately absent. This was the extreme point to which I was enabled

to proceed, and after waiting three days for the arrival of the chief. I returned to КНОСНА's, where I met with PRIMSONG, who had just returned from a visit to ТАУСОНЕ, a chief whose village is far in the interior.

I had thus become acquainted with all the influential chiefs near our frontier, and by all I was received in a friendly and hospitable manner. In accordance with my original intentions, my attention was in the first place directed towards ascertaining whether the tea exists in this direction or not, and, as I have already informed you, I have every reason to think that the plant is unknown on these hills. From what I have seen of the tea on the plains, I am disposed to believe that the comparative want of soil, due to the great inclination of all the eminences, is an insuperable objection to its existence.

As I before observed to you, during my stay at *Jingsha* my curiosity had been excited by reports of an incursion of a considerable force of Lamas into the Mishmee country. It hence became, having once established a footing in the country, a matter of paramount importance to proceed farther into the interior, and, if possible, to effect a junction with these highly interesting people; but all my attempts to gain this point proved completely futile; no bribes, no promises would induce any of the chiefs to give me guides, even to the first Mishmee village belonging to the Meyhoo tribe. I was hence compelled to content myself for the present, with obtaining as much information as possible relative to the above report, and I at length succeeded in gaining the following certainly rather meagre account.

The quarrel, as usual, originated about a marriage settlement between two chiefs of the Meyhoo and Taen tribes: it soon ended in both parties coming to blows. The Meyhoo chief, ROOLING, to enable him at once to overpower his enemies, and to strike at once at the root of their power, called in the assistance of the Lamas. From this country a force of seventy men armed with matchlocks made an invasion, and, as was to be expected, the Taen Mishmees were beaten at every point and lost about twenty men. The affair seem to have come to a close about September last, when the Lamas returned to their own country. Where it occurred I could gain no precise information, but it must have been several days' journey in advance of the villages I visited.

It was owing to the unsettled state of the country, resulting from this feud, that I could gain no guides from the Digaroos, without whose assistance in this most difficult country, I need scarcely say, that all attempts to advance would have been made in vain. These people very plausibly said, if we give you guides, who is to protect us

from the vengeance of the Meyhoos when you are gone, and who is to insure us from a second invasion of the Lamas? Another thing to be considered is the influence even then exercised over the Mishmees near our boundaries by the Singphos connected with the Dupha Gam; but from the renewal of the intercourse with our frontier station, there is every reason for believing that this influence is ere this nearly destroyed.

I was, after various attempts, reluctantly obliged to give up the affair, although I am by no means certain that, had I known of the delay that would take place before I met Captain HANNAY, a longer sojourn in the hills would not have been attended with success. I returned by the same route, halting at *Deeling* to enable me to ascend the great mountain *Thumathaya*, on the top of which I passed one night, and the ascent of which in every respect amply repaid me for all difficulties incurred. On my return I visited TAPAN GAM's* village, where I met several Singphos, who were engaged in the late troubles on the side of the Dupha, and which is reported to be the favorite haunts of a famous Singpho dacoit, CHU'N YU'NG; thence I returned to *Jingsha*.

Nature of the country. The country traversed during the above journey consisted of a series of ascents and descents, as must always evidently be the case where the route follows the course of a considerable river; for difficulty it cannot well be surpassed, this again depending on the proximity of the route to the *Lohit*. The only comparatively easy portion is that between *Dat Pánee* and the place where we descended to the bed of the large river. The hills are invariably characterised by excessive steepness, and as the greater portion of the route winds round these eminences at some height above their bases, the marching is excessively fatiguing and difficult, to say nothing of its danger. In very many places a false step would be attended with fatal consequences; in one place in particular, upwards of an hour was consumed in traversing a sheer precipice at a height of at least one hundred feet above the foaming bed of the *Lohit*; the only support being derived from the roots and stumps of trees and shrubs, and the angular nature of the face of the rock, which is, I believe, grey carbonate of lime.

Paths. The paths are of the very worst imaginable description, always excessively narrow and overgrown by jungles in all directions. In very steep places the descent is assisted by hanging canes, which afford good support. No attempt is ever made at clearing them of

* This chief is not worthy of any encouragement. He would feel this the more, owing to the proximity of his village to our boundary and its easiness of access.

any obstruction : indeed the natives seem to think that the more difficult the paths the better, a greater security being thus obtained from foreign invasion. Better paths do exist, and there is one in particular on the north of the *Lohit*, which is that commonly used by the Mishmees when carrying cattle back from the plains to their homes. But it was my fortune to be shown the very worst, although I escaped the cliff above alluded to by following on my return another but very circuitous route. Up to GHALOOM'S old site the hills are nearly entirely clothed with dense tree jungle, the points of some being covered with a coarse grass ; thence every step towards the eastward is accompanied by a most material improvement, the hills presenting a very pleasing and varied surface, and being only clothed with tree jungle towards their bases. The extreme summits of the loftiest are naked and rugged.

Rivers and Torrents. The torrents which are passed between the foot of the hills and GHALOOM'S are the *Tussoo* (*Dissú* of WILCOX), which separates *Thumathaya* from *Deeling*, the *Lung* and the *O*. Of these the *Lung* is the only one not fordable ; the Mishmees cross it by suspension canes. I preferred constructing a rude bridge, which, as the torrent is divided by huge boulders, was neither a difficult nor a very tedious affair. The *Tid-ding*, which is of considerable size, is on the right bank of the river. The rills are frequent, especially towards the foot of the hills. I saw only one waterfall of any magnitude near the *Tussoo* : the body of water is not great, but the height of the fall is certainly one hundred feet. The *Lohit* itself beyond the *Lung* is of no great size, the average breadth of the stream at that season being from forty to fifty yards. At GHALOOM'S its depth did not appear to exceed thirty feet. It is a curious fact, its temperature is lower than that of any of its tributaries. Although I have not seen the *Dibong*, judging from the comparatively small size of the *Lohit*, the probability is much in favor of the former carrying off the waters of the *Tsan-poo*.—PRIMSONG indeed informed me that the *Lohit* above the *Ghaloom Pánee* (*Ghaloom Thee* of WILCOX) is an insignificant mountain stream.

Altitude of Mountains. Of the height of the various ridges surmounted I can give no idea : the only thermometer I had was unfortunately broken before my arrival at the *kánd*. The highest I visited was *Lamplang-thaya* ; the next in height *Thumathaya* : on both these snow occasionally collects during the cold months. The western face of the latter is completely bare towards its summit, the eastern being covered with tree jungle. Of the former, the upper third is completely naked ; and two efforts to complete its ascent were fruitless.

Geology. Of the geology of these hills I am unfortunately incompetent to judge; nor was I ever enabled to make a satisfactory collection, owing to the impossibility of procuring additional carriage.

Zoology. The subjects presented by the animal kingdom are certainly not extensive either in number of species or of individuals. I observed no wild quadrupeds except monkeys and an occasional squirrel; no tigers exist, but bears are represented as tolerably numerous. The number of birds which I succeeded in procuring barely amounted to species.

Botany. Of the botany it is not my intention here to give an extended account. It is sufficient to state that it appears to have similar features with other portions of the *Sub-Himalayan* ranges. I did not reach the region of fir trees, but I could plainly distinguish by the telescope the existence of very extensive forests on the loftier ranges to the eastward. The families that have the most numerous representatives are *Compositæ*, *Urticæ*, *Balsamineæ*, *Cyathandiaceæ*, *Acanthaceæ*, *Gramineæ* and *Filices*. The most interesting, chiefly from the indicating elevation, or from their being usually associated with climates similar to that of northern Europe, are *Ranunculaceæ*, including that valuable drug the *Mishmee-Teeta*, and the celebrated poison *Bee*. *Fumaroaceæ*, *Violaciæ*, *Camelliaceæ*, *Hamamelidiæ*, including the *Bucklandia* and *Sedgwickia*, *Gentianeæ*, *Vacciniaceæ*, *Campanulaceæ*, *Thymaleæ*, *Juglandæ*, *Cupuliferaæ*. The most unique plants is a new genus of *Rafflesaceæ*, like its gigantic neighbour of the Malayan Archipelago, a *parasite*, on the root of a species of vine.

The natives of this portion of the range are divided into two tribes, *Taen* or *Digaroo* and *Meyhoo*, these last tracing their descent from the *Dibong* Mishmees who are always known by the term crop-haired. The *Meyhoo*, however, like the *Taens*, preserve their hair, wearing it generally tied in a knot on the crown of their head. The appearance of both tribes is the same, but the language of the *Meyhoos* is very distinct. They are perhaps the more powerful of the two; but their most influential chiefs reside at a considerable distance from the lower ranges. The only *Meyhoos* I met with are those at *Deeling*, *Yeu*, a small village opposite *Deeling* but at a much higher elevation, and *Tapan*. I need scarcely add that it was owing to the opposition of this tribe that Captain *WILCOX* failed in reaching *Lama*. The *Digaroo*s are ruled by three influential chiefs, who are brothers, *DRISONG*, *КНОВНА*, and *ГНАЛОМ*: of these, *DRISONG* is the eldest and the most powerful, but he resides far in the interior. *PRIMSONG* is from a distant stock; and as the three brothers mentioned above are

all passed the prime of life, there is but little doubt that he will soon become by far the most influential chief of his tribe. Both tribes appear to intermarry. The Mishmees are a small, active, hardy race, with the Tartar cast of features; they are excessively dirty, and have not the reputation of being honest, although, so far as I know, they are belied in this respect. Like other hill people, they are famous for the muscular development of their legs:—in this last point the women have generally the inferiority. They have no written language;—their clothing is inferior; it is, however, made of cotton, and is of their own manufacture;—that of the men consists of a mere jacket and an apology for a *dhott*,—that of the women is more copious, and at any rate quite decent: they are very fond of ornaments, especially beads, the quantities of which they wear is very often quite astonishing. They appear to me certainly superior to the A'bars, of whom, however, I have seen but few. Both sexes drink liquor, but they did not seem to me to be so addicted to it as is generally the case with hill tribes:—their usual drink is a fermented liquor made from rice called *month*: this, however, is far inferior to that of the Singphos, which is really a pleasant drink.

Religion. Of their religion I could get no satisfactory information:—every thing is ascribed to supernatural agency. Their invocations to their deity are frequent, and seem generally to be made with the view of filling their own stomachs with animal food. They live in a very promiscuous manner, one hundred being occasionally accommodated in a single house. Their laws appear to be simple,—all grave crimes being judged by an assembly of Gams, who are on such occasions summoned from considerable distances. All crimes, including murder, are punished by fines; but if the amount is not forthcoming, the offender is cut up by the company assembled. But the crime of adultery, provided it be committed against the consent of the husband, is punished by death; and this severity may perhaps be necessary if we take into account the way in which they live.

The men always go armed with knives, Lama swords, or Singpho *dhao*s and lances; and most of them carry cross-bows—the arrows for these are short, made of bamboo, and on all serious occasions are invariably poisoned with *bee*. When on fighting expeditions, they use shields, made of leather, which are covered towards the centre with the quills of the porcupine. Their lances are made use only for thrusting: the shafts are made either from the wood of the lawn (*Caryota urens*) or that of another species of palma *juce*—they are tipped with an iron spike, and are of great use in the ascent of hills.

The lance heads are of their own manufacture and of very soft iron: They have latterly become acquainted with fire-arms, and the chiefs have mostly each a firelock of *Lama* construction.

Their implements of husbandry are very few and rude. They have no metal utensils of their own manufacture,—all their cooking being carried on in square capacious stone vessels, which answer their purpose very well. The population is certainly scanty, and may be estimated as follows:—

Jingsha,	50
Tapan,	80
Deeling and Yeu,	80
Ghalooms,	80
Khasha,	100
Primsong,	70
	460

This must be considered as a rough estimate, and probably is considerably exaggerated.

The number of villages among which the above population is distributed is seven, but it must be remembered that there are two other villages, namely, *Meerisao* and *Rulings*, close to the *Khashas*. By far the greater number of villages appear to be located near the banks of the *Lohit*; I saw only one situated on the *Leeng*; while on the summits of *Thumathaya*, the villages *Jingsha*, *Tapan*, *Deeling* and *Yeu* consist of several houses, none, however, exceeding ten in number; and *GHALOOM'S*, *KHASHA'S* and *PRIMSONG'S* consist each of a single house. The houses in the former case resemble a good deal those of the *Singphos*, and are of variable size; in the latter case the house is of enormous length, this depending on the rank of the possessor, and capable of accommodating from eighty to one hundred and sixty persons,—all are built on *machauns*, constructed almost entirely with bamboo, divided into compartments and thatched with the leaf of a marontaceous plant (arrow-root family) likewise found in *Assam*; this being again covered, at least in some instances, with the leaves of a species of *ratan*. The leaf of the former answers its purpose admirably both as to neatness and durability, and forms an excellent protection against the rain. *KHASHA'S* house is certainly one hundred and sixty feet in length; it is divided into twenty apartments, all of which open into a passage: generally it would appear on the right side of the house as one enters, along which the skulls and jawbones of the various cattle killed during the possessor's life time are arranged. In each apartment there is a square fire-place, consisting merely of earth,

about which the bamboos are cut away. As no exit for the smoke is allowed, the air of the interior is dense and oppressive, and often exceedingly painful to the eyes.

Domestic animals. Their live-stock consist chiefly of hogs, *mathoons*, a noble animal intermediate between the bull and buffalo, and fowls. Of these the hogs are the most common—they are easily procurable; but they are not at all disposed to part with the fowls, which they say is the favorite food of the deity. I was hence frequently reduced to eat pork, which seemed to me, no doubt, on account of its vile feeding, very unwholesome. On my arrival at each village a hog was killed as a matter of course, of which a portion was presented to me, and a portion to my people. In one case only a young mathoon was killed; in all these cases, the flesh is immediately cut up and devoured as soon as possible. Their cooking is very rude, chiefly consisting of minces. Chowrie-tailed cows are only to be met with farther in the interior.

Their dogs are of the ordinary pariah kind. Cats are uncommon.

Among the skulls ranged in their houses, those of several other kinds of cattle occur, including the cows of the plains, and the buffalo; the remainder are procured entirely from *Lama*.

Cultivation. Their cultivation is scanty, apparently not sufficient to supply even their wants, and carried on in a very rude way. The most favorable places are of course selected, either on the slopes of the hills or on the occasionally more level patches, and joining the *Lohit*. The soil in almost all cases consists of a thin superstratum of vegetable mould. Some of the villages are in possession of a good sort of hill rice, but the chief cultivation is of *bobasá**, *goomdan†* or Indian corn, *khonee‡* and two or three still inferior grains. The villages situated at low elevations produce excellent yams and *aloos* of several kinds. They are unacquainted with wheat, barley, &c.; nor have they even taken the trouble to obtain potatoes. The capability of the country up to the point to which I searched, is not great, but thence the landscape is at once sufficient to convince one that the improvement is rapid as one proceeds to the eastward.

Of *kaneé* a small quantity is cultivated, chiefly however for sale to the Singphos, although many of the natives are great opium eaters. They cultivate a sufficient quantity of cotton for the manufacture of their own clothing, but it seems to be of inferior quality. Tobacco is in great request, still it does not seem to be regularly cultivated. Both sexes, young and old, are determined smokers; their pipes are

* *Elettaria caracana*.

† *Tea woyá*.

‡ *Davallia* sp.

chiefly of Singpho manufacture ; the poor classes contenting themselves with those made from bamboo.

Granaries. I should have mentioned that the produce of their fields is kept in small granaries, at some distance from their houses : and it is a regulation calculated to prevent quarrels, that each wife, (for they tolerate polygamy,) has her distinct granary. Their bridges have been well described by Captain Wilcox ;—the passage of that at GHALOOM's which is full seventy yards in length, occupying from two to two and half minutes. The articles in the greatest request among them are salt, woollen clothing, printed cottons, and glass beads of various colors. Of the existence of salt, within their own boundaries they are unaware : generally they have none. Occasionally they procure Lama rock-salt, which is (in bulk) of a reddish color, from being mixed up with a red earthy substance somewhat aromatic. For these they exchange cloths of their own making, and their three staple articles, *mishmee-teeta*, *bee*, and *geitheoon*, which are, in fact, at present the only valuable known products of the country.

With *Lama* they carry on an annual trade, which apparently takes place on the borders of either country. In this case *mishmee-teeta*, is the staple article of the Mishmees, and for it they obtain *dhaos* or straight long swords of excellent metal and often of great length ; copper pots of strong, but rough make, flints and steel, or rather steel alone, which are really very neat and good ; warm woollen caps, coarse loose parti-colored woollen cloths, huge glass beads, generally white or blue, various kind of cattle, in which *Lama* is represented as abounding, and salts. I cannot say whether the Lamas furnish flints with the steel implements for striking light ; the stone generally used for this purpose by the Mishmees is the nodular production from *Thumathaya*,—and this, although rather frangible, answers its purpose very well ; with the Singphos they barter elephant's teeth, these animals being found in the lower ranges, for slaves, dhaws, and buffaloes.

With the Khamtees they appear to have little trade, although there is a route to the proper country of this people along the *Ghaloom Púnee*, or *Ghaloom Thee* of Wilcox's chart ; this route is, from the great height of the hills to be crossed, only available during the hot months.

With the inhabitants of the plains they carry on an annual trade, which is now renewed after an interruption of two years, exchanging cloths, Lama swords, spears, *mishmee-teeta*, *bee*, which is in very great request, and *gertheana* much esteemed by the natives for its peculiar and rather pleasant smell, for money (to which they begin to

attach great value), cloths, salt and beads : when a sufficient sum of money is procured, they lay it out in buffaloes and the country cattle.

Political relations. With reference to their political relations they were all—at least all those near our frontier—active supporters of the Dupha Gam, to whom they rendered very effectual assistance in the erection of stockades, although they declined fighting. Formerly the Rája of Assam exercised almost exclusive control over them, entirely, as it appears, from making their most influential chiefs trifling annual presents of one or two buffaloes. With our government their intercourse has, as I before mentioned, been entirely interrupted during the last two years ; at present, however, they appear inclined to pay all proper respect to the Assamese authorities. From the active assistance they rendered Dupha Gam, and in the second instance to put an impediment in the way of the trade of slaves, it is obviously of importance to keep them in this friendly state, and this would be best done by adopting the plan followed during the times of the Rájás of this portion of Assam ; and with this view I would beg to direct your attention to GHALOOM, KHOSHA, and PRIMSONG : of these three, KHOSHA is perhaps possessed of the greatest influence, but he is getting old and inactive. The same may be said of GHALOOM, his younger brother. The most active, ambitious, and enterprising man is certainly PRIMSONG, who is still young ; and as he evidently looks up to the possession of the chief authority among the Gams, any favor shewn to him would render him a steady friend. He is the only chief I saw who is in the habit of visiting Lama. It was from materials given by him that Captain WILCOX drew up that portion of his map which has reference to the course of the *Lohit*, and it is through him alone that we may look forward to becoming acquainted with the country of the Lamas. He is, in fact, far superior to all the rest in talents and information, and, as a proof of his activity, he has just returned from the *Hookum* territory, where he saw Captain HANNAY, and whither he had no doubt followed the Dupha Gam. So long indeed as the Mishmees are in relation with the Singphos, so long will there be a ready way in which to dispose of slaves by the Singphos, a people on whom no dependence is to be placed. At the period of my visit to KHASHA, I saw a slave who had been actually sold by Singphos residing within our territory, within the last six months. With the *Dibong* Mishmees they are, and always have been, engaged in a war of extermination. Of this tribe, both Mooghoos and Digaroos entertain the greatest fear : their inroads have caused the latter tribes to forsake their haunts on the *Digaroo* mountains, and I am told that

at this time none are to be found to the westward of the *Tid-ding*, With the Lamas, as I have before observed, they are at present at rupture; and protection might be promised them against the inroads of either people, such protection being chiefly limited to the loan of old muskets and ammunition. It is chiefly owing to their proximity to the Lamas, that the country of the Mishmees, as being the most feasible route thither in this direction, is worthy of attention. It is obvious from all accounts that the Lamas are a very superior race, and that they greatly resemble the Chinese. It would hence be highly desirable to open a trade between *Upper Assam* and *Lama*, and to this I really see no insurmountable objection. The great object to be first attained is personal communication with these people, and I have every reason to believe that through the influence and aid of *PRIMSONG*, who is well acquainted with them, that I should be able to accomplish this. On this subject, however, I have already addressed you officially.—*PRIMSONG*, in the event of the non-consent of the other chiefs, has promised to take the responsibility on himself, and as the route he has promised to take me leads across the termination of the *Himálayas*, and ends in some distance from the southern extremity of the valley, in which the inhabitants of this portion of *Lama* reside, he could necessarily act independently of them; almost all the *Meyhoo* chiefs, from whom the chief opposition is to be apprehended, being located along the *Lohit* to the westward of the junction of the *Ghaloom Pánee*. Having once gained access to the valley, a return could be effected along the banks of the *Lohit*, so as to materially increase our knowledge of that river. From my knowledge of the Mishmees I am confident that the slightest care would ensure me from any attempts at treachery. Open hostilities they would never attempt, and as there would be no crossing of any considerable river, no attempts could be made, as they, the *Meyhoos*, appear to have intended in Captain *WILCOX*'s instance, on the party when subdivided. The hasty retreat of this officer has been attended with unfortunate results in increasing the fear which the *Digaroos* entertain for the *Meyhoos*.

With reference to my making the attempt, I can only say that sixty maunds of rice are already lodged within the hills, and my orders are only necessary to cause its transportation to the villages of *КНОША*, *GHALOOM*, and *PRIMSONG*. Thus one great obstacle in all hill expeditions is already removed. *PRIMSONG* has engaged to provide me with men for the transports of my carriage and the necessary presents; thus I shall run but little risk from detention owing to the sickness or laziness of coolies. In short, the only thing likely to interrupt my

progress will be sickness; but having once reached PRIMSONG'S, safety would be perhaps insured. I speak here in allusion to the season, the route being, from the great height of the mountains to be crossed, only practicable during the rains. I shall close this portion of my letter with a few remarks on the Lamas, for which I am indebted to PRIMSONG. He describes them as resembling the Chinese, whose peculiar manner of wearing their hair they adopt; the country is very populous, the houses well built, and the people are well supplied with grain, the staple one being rice. They are of a large stature, well clothed, wearing Chinese trousers and shoes, navigating their rivers by means of boats, and using horses, of which they possess three varieties, as beasts of burthen. They possess in addition, no less than seven kinds of cattle. They distil ardent spirits, and their manufactures, which are numerous, are said to be very superior.

On my arrival at *Jingsha*, I determined on crossing the country towards *Beesa*, having heard that tea existed in this direction. Leaving *Jingsha*, I proceeded up the *Karam* to the east, thence diverging to the south along the now nearly dry bed of the *Kamptee*. During the march I passed one small Singpho village, and in the evening arrived at *Onsa*, the largest Singpho village I ever saw. On the following day I left for *Suttoon*, and after a march of three hours halted beyond *Suttoon* close to the head of the *Tenga Pánee*. From this, on the following day, I proceeded crossing the *Tenga Pánee*, the course of which I followed for some distance, thence diverging to the S. W. towards the *Minaboom* range through excessively heavy bamboo jungle. On reaching the *Muttock Pánee* I ascended its dry bed for some distance until we reached the hills. This range, along which I proceeded some distance, is entirely sandstone, and in no part exceeds five hundred feet in height; thence descended and arrived at the *Meerep Pánee*, in the bed of which we halted. The next day carried me after a long march to *Beesa*, the course first laying down the *Meerep Pánee*, thence to the westward and through a very low and uninteresting and nearly uninhabited country. We emerged from the jungle about a mile and a half above *Beesa*, to which place our course lay along the nearly dry bed of the formerly larger now small *Diking*. This river, which up to last year drained a great portion of the Singpho country on this side of the *Patkaye* range, is now nearly dry, its waters having taken a new course into the *Kamroop*, and thence into the *Boorer Diking*. It is now only navigable for small boats as far as the *Degaloo Goham's* village, which is but a short distance from its mouth.

The valley occupied by the *Khakoo* Singphos, which I had thus crossed, is bounded to the N. E. by the *Mishmee* mountains, and to the S. W. by the *Mimboom* range; it is of a triangular form, and not of any great extent: it is drained by the *Tenga Pánee*. The whole valley is comparatively high, and may be considered as a low table land: it is incomparably the finest part of our territory inhabited by Singphos, that I have yet seen: between *Itusa* and *Luttora*, I passed, although it was a short march, five large villages; and whatever the case may be with the other portions of our Singpho territory, this valley is very populous and highly flourishing. *Luttora* is a village of no great size: formerly *Luttora Gam* was the chief of the whole valley, but his followers, since the affair of the *Dupha Gam*, have divided themselves between *Itusa* and *Ittanshantan Gams* who are friendly to our Government.

From *Itusa Gam* I met great attention; from *Luttora Gam*, until lately an avowed enemy to our Government, I received a visit, being the first he ever paid to any officer. He made the usual professions of submission; but on my telling him that he should send in his submission to the officers at *Sadiyd*, he replied very quietly, that he must first communicate with the *Dupha Gam*. (Latterly I understand that he has sent his submission in to the Political Agent.) He was attended with a considerable number of men armed with lances and *dhaos*. He is a large, ruffianly-looking man, nearly blind, and for a Singpho very dirty. He was attended with an adherent of the *Dupha Gam*, who had just returned from *Hookum*. This man descanted on the general satisfaction given to the chiefs about *Hookum* by the presents of Captain HANNAY, and he said that all the chiefs had agreed to bury the remembrance of all former feuds in oblivion.

The chief cultivation of the valley is that of *ahoo dhan*, the fields of which are numerous and extensive.

The manners of the *Khakhoos* are the same as those of the other Singphos; they are represented, however, as excelling these in treachery and cruelty. I met with no opposition on the journey, although I was attended by only sixteen Donaniers; and although, as I have since ascertained, my adoption of this route caused great offence to the chiefs, one of whom sent a letter of remonstrance to the officers at *Sadiyd*. They have a great number of Assamese slaves, and there is but little doubt that the practice of slave-selling still exists among them. In fact a Donanier from *Chykwas* was actually obliged to place himself under my protection. None of the villages are stockaded. *Luttora* is on a strong site, being built on a steep eminence nearly surrounded by two

small streams; and as the ascent is steep, although not great, it is difficult of access, and might be well defended.

I gained no clue to the actual existence of the tea, although the yellow soil was not unfrequent towards the head of the *Tenga Pánee*. The *Minaboom* range, as I have above observed, is of no considerable height; it is covered with tree jungle, among which occurs a species of *dammai*, *amagnolea*, and one or two species of oak.

On arriving at *Beesa* I heard that Mr. BAUCK was at *Fingree*, and as that gentleman had previously expressed a wish that I should give my opinion on his mode of tea culture, I immediately determined on proceeding thither: with this view I left for *Rapoo*, which I reached in two ordinary marches. There visited the tea, and then left for *Rapoodoo*. Here also I visited the tea, which is abundant, appearing to me the best of that produced in the Singpho territory;—the soil is precisely the same, in all its external characters, as that of the other tea localities.

The tea plant being certainly adapted to some degree of shade, the free exposure to the sun seems wrong in principle, evidently producing a degree of coarseness in the leaves, totally incompatible, I presume, with the production of fine flavored teas.

From this place I proceeded through heavy jungle, uninhabited except by elephants, for two days, literally cutting my way where the tracks of the elephants were not available owing to their direction. Our course being determined by that of the *Dibora*, on the evening of the second day we arrived at *Choakree Ting* in the *Muttock* country, and halted on the *Rolea Pánee*. The third day, after a very long march of nearly twenty miles, carried me close to *Ranga gurrah*. On reaching this I found that Major WHITE was expected daily, but that Mr. BAUCK had already returned to *Sadiyá*.

I had the pleasure of accompanying Major WHITE three days after my arrival to *Tingree*, from which place we returned direct to *Sadiyá*, the march occupying three days.

The greater part of *Muttock* which I had thus an opportunity of seeing may be characterised as capable of producing tea, the soil being in almost every instance of that yellow color, hitherto found to be so characteristic of the tea localities. To this the only exceptions exist in the swampy ravines, which are occasionally of great extent. The better portions consist of rather high plains, covered with tall coarse grasses, and intersected here and there with narrow strips of jungle. It may be considered as a comparatively open country;—the villages are numerous, and the people satisfied. Altogether *Muttock*

may be considered as a well-governed flourishing district. But on this point I need not detain you, as the nature of the district is sufficiently well known.

The villages passed between *Beesa* and *Muttock* are few; the first is a small temporary village occupied by Nagas, about ten miles from *Beesa*. The next is *Dhompson*, a large Singpho village, half way between the Naga village, and *Rapoo*, *Rusoo*; and, lastly, *Rupádoe*. Between this and *Choakri Ting* no villages occur.

II.—*Corrected Estimate of the risk of life to Civil Servants of the Bengal Presidency. By H. T. PRINSEP, Esq. Sec. to Govt. &c.*

In the number of this Journal for July, 1832, some Tables were published showing the risk of life amongst Civil Servants on the Bengal Establishment, and in a short article the principles were explained upon which the tables had been framed. The method adopted in that article for computing the risks of life in the Civil Service of the Bengal Presidency has met the entire approbation of the most able actuaries in England, and the tables have not only been adopted as affording the best estimate forthcoming of the chances of life amongst persons in good circumstances in the climate of India, but attempts have likewise been made to apply the same method of computation to other services. Amongst others, Mr. CURNIN has, we understand, successfully computed tables framed on the same principles for the Military Services of all the three Presidencies of India, from the year 1765 to the present date,—a work of immense labour, the results of which we have seen in abstract, and lament that the publication of them has been so long delayed. As our Civil Service tables have thus acquired an importance, as well from the use made of them by insurance offices, as from the application of the principle to the construction of other tables, we have deemed it necessary, now that another lustrum of five years has passed since they were framed, to republish them, completed to the close of 1836, and to draw attention a second time to the method adopted in their construction. We will not conceal that a principal motive with us for taking this trouble is that we have discovered some errors in the Tables of 1832, and therefore are anxious to supersede it for practical use by supplying one more accurate. We are glad also to avail ourselves of the opportunity to point the attention of public officers and persons of intelligence at other Presidencies to the expediency of keeping registers and framing similar tables for the different services with which they may be con-