ART. XVIII.—*Further Evidence in favour of a Hill Residence for European Soldiers in India.** By WILLIAM CURRAN, L.R.C.P., Edin.; M.R.C.S., England, &c.; Assistant Surgeon Army Staff.

THE importance of locating as many European soldiers in the hills as can be safely spared from the plains, having been already freely discussed, and, as I believe, fully established, it now becomes a duty to ascertain the class of cases for which a hill climate is most suited, and inquire into the circumstances under which troops might be most advantageously massed in them. The conviction daily gains ground that the Himalayas are the proper and most suitable residence for the European troops that are serving in India, and the man who by devoting a portion of his time to the task of collecting reliable data, statistics founded on fact and free from fiction, and thereby influencing the public mind in their favour, would be doing a service to the country which it is impossible to over-estimate, and conferring a benefit on his brethren in the army, the extent of which it is not easy for an untravelled Englishman to realize. I am aware that no little divergence of opinion and conflict of authority exist in reference to this question, but the same may be said of other and perhaps more important matters, and it is to reconcile or modify these as far as I may that I write. I need not go into detail, for my object is not controversy, and it will appear as I proceed that I agree in the main with the two principal disputants. Both are right from their respective stand points, and no one, as far as I know, has been bold or stupid enough to deny that a cool climate is more congenial to health than an excessively hot one. The evidence adduced by myself elsewhere, and furnished in much greater abundance by others, proves this with almost the certainty of a demonstration, and many diseases which are common in the plains are rarely, if at all seen, and then only in a much milder or more tractable form in the hills. Those terrible scourges cholera, dysentery, and sunstroke, which have proved so destructive in the former are almost unknown in the latter, and all sanitarians are now agreed that "newly arrived lads, whether as recruits or entire regiments, should proceed to them direct."

"A few years ago" to use the words of a writer in the *Pall Mall*

* See my paper, "The Himalayas as a Health Resort," in the *Practitioner* for January, 1871.

Gazette, "the royal commission on the sanitary state of the Indian army, had under consideration the possibility of stationing troops, and arranging for them tours of duty in such a way as to render their services less hurtful to health. After carefully examining the subject they arrived at the conclusion that it was advisable to reduce to a minimum the strategic points in the hot plains, and hold in force as few unhealthy stations as possible; then to quarter at least a third of the troops required to hold these points on adjacent hills and stations which should enjoy the best sanitary regulations. From that to the present time, this important question has been discussed only in a desultory sort of way, and has never been properly considered in an imperial sense." That was strictly true when written, and is indeed quite applicable yet, and I apprehend that something more than the report of a roving sanitary commission will be required before its provisions are carried out, or regiments are sent as they ought to be, straight from home to the hills. A royal or sanitary commission is a very good thing in its way; it asks numerous questions and elicits sundry answers, its members fare sumptuously, and travel *en grande tenue* at the public expense; and it issues a report which furnishes material for some spicey leading articles in the papers, and then goes to the pastry cooks and cheesemongers. And this is often about all the good that comes out of it. The value of its suggestions is acknowledged on all sides, but they are never acted on, its deductions from facts are unassailable, but the latter were known to every one before, and the consequence is that things remain pretty much as they were, and that all the tall talk, fine writing, and costly publication, go for nothing. They sometimes, indeed, lead to worse by making or magnifying difficulties which their members may have created, and thereby affording means of escape from action to those who may want or wish to avail themselves of them.* *Laudatur et alget*, and

* What Carleton, the Irish novelist, says of parliamentary committees in general, in his story called "Tubber Derg or the Red Well," equally applies to sanitary and royal commissions. Alluding to the mal-administration of the poor laws, and to the necessity of studying the question among those who suffer from it, he says—"As for parliamentary committees upon this or any other subject, they are, with reverence be it spoken, thoroughly contemptible. They will summon and examine witnesses, who, for the most part, know little about the habits or distresses of the poor; public money will be wasted in defraying their expenses, and in printing reports; resolutions will be passed; something will be said about it in the House of Commons; and in a few weeks, after resolving and re-resolving, it is as little thought of as if it had never been the subject of investigation. In the mean time the evil proceeds—becomes more inveterate—eats into the already declining prosperity of the country—

to show that such is really the case in the present instance, I sub-join a table taken from an official source, from which it will appear that only 5,844 men were in the hills in 1870, out of the whole of Bengal, and this too during a season in which the transfers from the plains were unusually numerous.

ABSTRACT.—*Return of the Number of Troops, Soldiers' Wives, and Children, that were stationed in Hill Stations, Convalescent Depôts, or employed as Working Parties in the Hills during the hot season of 1870. See Military Department, Letter No. 405, dated 28th May, 1870.*

PLACES	DETAIL OF STRENGTH								REMARKS
	Officers	Sergeants	Rank & File	Total N. C. Officers, Rank and File	Wives	Children			
						Over 10 years	Under 10 years	Under 2 years	
At Hill Stations,	123	180	2,914	3,094	270	34	246	138	The Hill Stations, so called, are Bagsoo, Chukrata, Dugshai, Rancee Khet, and Subathoo. The Convalescent Depôts are Darjeeling, Nynsee-Tal, Landour, Dalhousie, Kussowlie, and Murree and Cliffden, and troops were employed as working parties in some of the former, as well as more specifically at Chunglagully, Khyragully, Chumba Roads, and Kalabagh.
At Convalescent Depôts,	63	134	1,807	1,941	262	46	308	107	
Working Parties,	40	53	1,123	1,176	50	5	56	23	
TOTAL,	226	367	5,844	6,211	582	85	610	268	

Something more has doubtless been done since, as it is well known the present popular commander-in-chief is bent upon effecting a radical change in the allocation of the European troops so happily placed under his command, and “the important question of hill sanitarium, in its widest sense, is attracting especial attention in India at the present time.”

When stationed during last summer, at Kussowlie, a small hill station in the Sirhind division, about 45 miles from Umballa, which is situated on an isolated hill 6,000 to 6,500 feet above sea

whilst those who suffer under it have the consolation of knowing that a parliamentary committee sat longer upon it than so many geese upon their eggs, but hatched nothing.”

level, in lat. 31, and long. 77, and which commands a good view of the snowy range, and also of the stations of Simla, Subathoo, and Dugshai, I determined to turn my residence there to some account, and ascertain, as far as the opportunities at my command would allow, the advantages or otherwise of hill sanatoria for European residence. I was anxious to test their capacity for restoring health that had been lost or damaged by service in the plains, their immunity from malarious or other injurious influences, or *vice versâ*, and finally, I wished to know if there was any foundation for the charge urged against them by some to the effect that a residence in them sometimes originated or reproduced disease that might otherwise have never appeared, or that might have lain dormant in the system for years. This, it must be allowed, was rather an ambitious flight for a man of my calibre. I perhaps, aspired beyond my strength, but then the object was a good one, and failure in such a cause can scarcely be said to entail reproach.

I left the plains after several years' continuous residence in them, with the solemn conviction that prevention was better than cure, that physic though it might in many instances relieve suffering, and in some cases check the progress of disease, yet was a weapon of uncertain temper and questionable potency in an encounter with tropical disease, and I was anxious to regain confidence in the virtues of an art which I liked for its own sake, which I had done my best to master, and which I had practised with some success in other climes. With these views I entered upon the inquiry, and the general result is given below. To make this more intelligible, it will be necessary to say a word or two about the station itself, but this need not detain us long, a few leading touches will suffice, and on the principle of "*ex uno disce omnes*," what may be said of one will, in a general way, apply equally to all. I will only add that I reached the place about the middle of May, consequently about the hottest period of the year for that locality, just before the rains set in, and that I left it late in October, when all trace of the latter had passed away, and when the absence of haze drift and the crisp transparency of the atmosphere generally, enabled the eye to realize the grandeur of the scene, and revel over the beauties of a panorama, which could not easily be surpassed. In other words, I left it just as residence there was becoming most enjoyable, and after a season of unprecedented severity in the hills, during which the ordinary features of disease were aggravated by the rigors of climate, and complaints that would scarcely call for treatment

elsewhere were turned into serious illnesses. This should be borne in mind in any inferences that may be deduced from the conclusions I have arrived at, and it should never be forgotten that the constituents of the dépôt were feeble men, whose health had given way in the plains, and whose cases were in the main utterly unsuited for such a climate.

The ridge on which Kussowlie stands is about three and a half to four miles in length, about half a mile of which, at its extreme western end, is occupied by the barracks and hospital, while the remaining portion is thickly studded with private houses that are inhabited by the families of officers in the plains from April till October. The soil is light and porous, resting in some parts on a sandstone basis, in others, on calcareo-argillaceous rocks and indurated clays of various colours; and the prevailing diseases of the natives are intermittent fevers, diarrhoea, syphilis, goitre and calculus vesicæ. The hospital is beautifully situated on an isolated spur at the very extremity of the ridge on which the station stands, lower than, but within easy reach of the barracks, with an east and west aspect, and a commanding view of the hills about Simla. It is double-storied and open to currents of air from every direction, large covered verandahs surround it on all sides, and its sanitary surroundings are good. The wards are, on an average, 30 feet long, 20 feet wide, and 16 feet high; they are calculated to accommodate eight patients each, and give a cubic space of 1,289 feet, or a superficial of 78 feet to each patient. The water is obtained from wells on the north and south sides, and the following analysis of it, taken from an official source, will better show its quality than any description I could indite:—

	North Source.	South Source.
Total hardness - - -	4·32	4·2
Permanent hardness - -	3·70	1·818
Removable hardness - -	·62	2·382
Total solids in 70,000 grains -	8·96	7·22
Volatile matter - - -	·350	·26
Mineral matter - - -	8·610	6·96
Amount of oxygen needed to oxidize organic matter of 1,000 grains - - -	·000,700 grs.	·000,137 grs.
Re-action before and after boiling, feebly alkaline		
Earthy salts insoluble in water -	6·043	5·10

	North Source.		South Source.	
Carbonate of lime from insoluble matters	-	-	4.573	3.86
Chloride of sodium	-	-	.816	.16
Sulphate of soda	-	-	.429	.945

It is brought up in skins on the backs of mules, and is sparkling and agreeable to the taste. Beer of fair quality is manufactured in the station, and potatoes, maize, and barley are the principal products of the district. The rain-fall varies a good deal from year to year, but the average is about 70 inches, more or less, according to season, and I subjoin below a carefully prepared table of the temperature which is taken from a local source, and which will give a better idea of its variations and range than any statement I could offer:—

1868	Highest in Month	Lowest in Month	Ranges in Month	Means of all highest	Means of all lowest	Mean daily Ranges	Approximate Means for Months	REMARKS
June, -	89	59	30	78.10	65.50	14.70	71.80	The only points calling for notice in connexion with this table are the great differences of temperature that obtain in the same month, and the ranges or variations which take place during the rains. These are very trying to weakly men; and it is no wonder that many diseases are aggravated by them which might be alleviated by heat or the more relaxing atmosphere of the plains.
July, -	87	55	32	77.82	63.71	14.40	70.76	
August, -	83	55	28	77.25	64.21	13.03	70.73	
September, -	79	59	20	74.96	63.82	11.35	69.39	
October, -	80	51	29	69.90	54.10	12.10	62.40	
November, -	66	46	20	60.67	50.21	10.46	55.44	
December, -	60	36	24	52.53	43.07	9.46	47.80	
Means, -	77.71	51.57	26.14	70.17	57.80	12.21	64.04	

The point will be still further illustrated as we advance, and the differences will then be more clearly appreciable. They are unfortunately too great to be good for health in either place, and it is unfortunate that extremes are the order of the day everywhere in India. Finally, the station is well-shaded by trees, chiefly of the spruce fir variety, but other descriptions obtain, and

the deodar and rhododendron are sparingly met with. Snow lies occasionally on the ground towards mid-winter, and fires are in request from October to April.

I have given these general particulars of Kussowlie, as it is the station in which I served longest myself, and with which I am best acquainted; but what can be fairly said of one, applies generally to all,* inasmuch as the geological formation and other peculiarities are pretty much the same throughout the Himalayas, and the following remarks are intended to apply to the whole range; one station may be more favoured than another in respect of shade, rainfall, and water supply; the social attractions of one may be greater than those of another; but the same sun shines equally over all, and it is our duty to watch its working and see how far it influences the conditions with which we are most concerned, or conversant. And, first, as regards that bugbear of the Himalayas, hill diarrhœa, which prevails during, if it is not mainly induced by the rains, when the atmosphere is surcharged with moisture, and haze drift covers the hill sides, there are various opinions. Of these, however, I do not mean to take notice in detail here, and the following contains, in substance, all that I personally know, or consider necessary to communicate respecting it at present. To avoid unnecessary subdivision, I would say at once, that it occurs in two forms, first, under the form of a pale, yellowish mass, which retains for some time the consistence of ordinary fæces, but soon becoming whiter and more diffuent, ultimately assumes a putty-like hue and fluid character, or is squirted forth as a dirty opaque liquid, with much force. The stools are, at first, copious, and accompanied by the discharge of large volumes of gas, but they soon diminish in quantity, and consist, after a few days, of little more than mucus and slime. The tenesmus, griping, and calls to stool, appear to increase in urgency as the discharge declines in quantity, the patient strains ineffectually, or sits without obtaining

* *Facies non omniresuna, nec tamen diversa*

Sed qualis debetesse sororibus. (I quote from memory and may be wrong.)

The heights, above sea level, of hill stations may be roughly estimated as follows :—

	Feet
Subathoo	- 4,000
Dugshai	- 6,000
Nynee Tal	- 6,000
Kussowlie	- 6,500
Laudour	- 7,000
Darjeeling	- 7,600
Murree	- 7,800

relief over a pan, and the disease resembles, in the early part of its course, dysentery. It might indeed be called, at this stage, a dysentery incruentia, but there is no blood, and I can testify from personal experience that its effects are very depressing. Should it persist, as it not unfrequently does in spite of every precaution to the contrary, it leads to loss of appetite and flesh, and finally to death by asthenia. In the other and more frequent form, the patient passes large quantities of a dirty discoloured fluid like pea-soup, which contains numerous nodules of broken fæces in suspension, which look like pieces of split pea or mustard, and are almost inodorous. These are often voided with force, and much escape of flatus, but the disease generally passes away with the evacuation, and there is less griping and irritation about the rectum in this variety than in the other. It is, in fact, a much more tractable malady than the other, and though very liable to recur, and productive, while it lasts, of much inconvenience and debility, it yet rarely becomes chronic and scarcely ever proves fatal. It is called the windy diarrhœa by the soldiers on account of the intestinal noises and distension it causes, and more than one officer complained to me, while suffering from it, that his inside had been converted into a machine for the manufacture of sulphuretted hydrogen. Removal to the plains is the best preservative, and failing this, alteratives, astringents, and such remedies as increase the action of the skin, influence the biliary secretion, or improve digestion, are indicated. As regards its cause, the public generally ascribe it to the use of the hill water, but the analysis given above shows that the water of Kussowlie is not to blame, and yet there are not wanting medical men who take the same view of it. As an instance in point, I will here quote the opinion of a Deputy Inspector-General of the Indian Army, of many years standing, who has had ample opportunities of studying the question, and who, in a letter to myself, on the subject, writes as follows:—"I have for many years past connected these hill diarrhœas with the presence of sewage in some shape in the drinking water, and I believe the best preventive to be boiling the water, and afterwards filtering it through clean animal charcoal. These are precautions I have for many seasons adopted in my own house, and the disease is unknown among the members of my family. Nor have I ever known our guests staying with us in the house to be attacked. But I have more than once known guests coming to us with the complaint, *cured* after a few days stay. Rightly

or wrongly I have always attributed this to the extreme care we exercise in obtaining the purest drinking water possible." So speaks one of the most experienced of Indian medical officers, and there are, I know, many others of the same service who think with him. On the other hand, a large number, with whom I may say I agree myself, ascribe its prevalence during the rains to that cooling of the surface that follows a journey to the hills, and to the frequent changes of weather that one experiences in the latter; changes so sudden and severe as often occasion a difference of 45 degrees between the morning and evening temperatures of the same day. However that may be, the complaint is always an unpleasant, and often a very intractable one, and when it leads, as it sometimes does to a fatal result, the appearances most observable on examination are a softish, sodden, or macerated condition of the mucus membrane of the large intestine, which extends sometimes into the large bowel, and is often protracted even as far as the duodenum. Indeed, I have heard the disease ascribed by some, to a pulpy, dis-integrated condition of the covering of this part of the gut, which exhibits whitish blotches or blebs on its surface, that are not unlike an eruption of herpes. I have never seen this appearance myself, but am well assured that it sometimes exists, and patches of ill-defined ulceration, or rather of erosion, not actually amounting to ulceration, but partaking rather of the nature of desquamation, may be found in the cæcum and elsewhere. One may also meet now and then, a thinning and constriction of the large bowel near the sigmoid flexure of the colon, a warty, corrugated, or puckered appearance of the membrane of the rectum, enlargement of the mesenteric glands, and a flabby anæmic condition of the abdominal viscera generally. These are the changes I have discovered in the cases that came under my own observation, and these, it need scarcely be added, are quite sufficient to account for the emaciation and dyspepsia that prevail during life, and for the absence of fat, and the evidence of anæmia that are found after death.

* Lancereaux quotes the cases of two individuals who, after having presented various syphilitic manifestations, sank under obstinate diarrhoea, and in whom were found, "together with lardaceous degeneration of the liver and spleen, multiple rounded ulcers in the large intestine, cicatrices, and warty looking excrescences."—A Treatise on Syphilis, Sydenham Society's Transactions, Vol. i., p. 317.

The following is a summary of the *post-mortem* appearances of one of the last, the best marked, and most pronounced cases of chronic diarrhoea aggravated by hill agency which I have ever seen. It will best speak for itself :—*Post-mortem* 10 hours after death—Body was very much emaciated and sunk in over the abdomen, and the

Though the advisability of sending healthy troops to the hills is now generally acknowledged, and though the question as to the advantages of working parties for road making, &c., appears to be settled by the evidence in their favour adduced by myself and others, yet is there grave reason to doubt their fitness for the reception of men whose constitutions have been greatly impaired by a protracted residence in the plains, or who suffer from organic disease of the brain, heart, lungs, or liver. But it may be asked where could such sufferers expect relief, and would any remedy short of a removal to sea, and a residence in Europe suffice? I think not, and the practice now in vogue of sending unsuitable cases to the hills, is calculated to aggravate the sufferings of the sick themselves, and bring into question the hygienic value of hill sanatoria generally. This will best appear from the table herewith subjoined,* which contains a summary of the cases of 50 men and 27 women, as they presented themselves to me in hospital or elsewhere, and as they were taken down by myself from their own mouths, and often in their own words. It is but fair to say,

pelvic and other larger bones were everywhere starting through the skin on the surface. Head not examined. Chest—the lungs were closely adherent on either side, but more especially so on the right, where the pleura had undergone some thickening, but in point of structure they were both healthy, and there was no appearance of tubercle or cheesy matter in either. Heart small and free from adventitious deposit, weighed $3\frac{1}{2}$ oz., and there were 6 oz. of clear fluid in the pericardium. Abdomen—Liver fleshy to the feel, and dense on section, with an unusually patulous condition of the portal veins, afforded no other appearance of change, and its tissue throughout was of normal character and consistence. The spleen and kidneys were both flabby and anæmic, and the cortical surface of the latter gave evidence of incipient amyloid degeneration on the application of iodine. Intestines outwardly attenuated and transparent, and quite free from fat, presented no peculiarity calling for notice; but on closer examination the mucous membrane of the large bowel was found to have undergone considerable change, and several portions of it had disappeared by desquamation; soft and macerated in the region of the cæcum, raised and indurated farther down, and converted towards the rectum into a soft pulpy mass, which easily yielded to pressure; it displayed here and there patches of ill-defined ulceration, and its continuity was quite lost near the anus. The warty condition referred to above was here well developed, but while it resembled in one place the dirty, diffused, reddish hue of suppressed small-pox, in another it assumed a deeper tint, and its more dusky discoloration approached nearer in appearance to an attack of purpura. In a word, the membrane was everywhere altered in consistence as well as in colour; it peeled off easily before the touch, or hung in shreds to the sides of the gut; and this degeneration, by interfering with, if it did not entirely arrest absorption, was doubtless the cause of the emaciation and dyspepsia that precedeth death, and of the pallor and anæmia that followed it.

* These tables are unavoidably omitted for want of space in the present number of this journal.

however, that these notes were taken soon after the close of an exceptionally moist and inclement season, and the utter unsuitability of many of the cases will be apparent at once. Indeed, the strange views entertained by some medical officers about hill sanatoria and their curative powers, are more calculated to surprise than to edify a looker on, and the following cases that came under my own personal observation, will give a better idea of some of the selections that are made than any remarks I could offer. In the first instance a pale delicate lad, with tumid abdomen, puffy face, and œdematous extremities, was sent in a dying state to the hospital of my late regiment, at Agra, as soon as he had arrived there, on his way to the hills from Morar. He died soon afterwards; and on examination, we found a large quantity of dirty puriform fluid in the cavity of the abdomen; the bowels were matted together by flakes of recent lymph, the liver was cirrhotic, and there were several patches of old standing ulcerations in the cæcum. In a second case, the subject, as it was supposed, of chronic hepatitis, and which terminated fatally as the man was being carried in a dandy up the hill; extensive disorganization had taken place in the left lung, while the liver was quite sound; and in the third, which was regarded in the plains as a case of lumbago or chronic rheumatism, suppurative hepatitis was diagnosed on his arrival at Kussowlie, and on section the right lobe of the liver was found to be the seat of a large abscess. Cases of this kind are obviously unsuited for a hill climate, yet these often constitute the majority of those that are selected in the plains, and it is not to be wondered at, that their condition is aggravated by the change, and that they are themselves sooner sped on their journey to "that bourne whence no traveller returns." This will in some measure account for the unsatisfactory results described below, and show that greater caution in selecting cases is required in the future than would appear to have been exercised in the past.

With regard to that distressing palpitation and irritability of the heart to which soldiers are so subject, I examined seven well-marked and indubitable instances of both before I left Kussowlie, and found that though some relief was experienced by three, yet that the others were just as bad as they were in the plains, and all complained that the irregularity and steepness of the ground distressed them. Wherever organic mischief existed, it remained. The same may be said, *totidem verbis*, of the cases of phthisis I had under my care. They generally lose ground in the rains, which

they often regain in the colder months, but there is less tendency towards hæmoptysis, dyspnœa, and night sweating during the progress of this disease in the hills than in the plains, and all appeared to prefer the former as a residence to the latter. This is, at best, but a negative recommendation in their favour, yet it is as much as can be alleged of them in other and even more favourable instances, and the following note which I entered in my private memorandum book on the 22nd of September last will show this, and show also that the advantages of the hills have not as yet been properly availed of—if, indeed, their peculiar therapeutic value has not been exaggerated or misunderstood:—"As junior member of the medical board that sat yesterday and to-day to select cases for invaliding, I examined some hundred and fifty or more men, and ascertained that not one of these expressed himself willing or anxious to remain in India; and they were fewer still who described themselves as benefited by their stay in the hills. In a very large number of the cases that were sent up for fever, hepatitis, anæmia, and the like, there were signs of enlargement of the liver, and though there was evidence of improvement in many, several looked pale and anæmic, and all, or nearly all, had that pearly glassiness of eye and that pasty sallow look which indicate the presence of malarial cachexia. The conclusion forced upon me by previous experience was confirmed on the present occasion, and I am now satisfied that the hills are more calculated to maintain health than to restore it." To inculcate this simple but withal very valuable fact, is one of the objects of this communication, and this, too, is the lesson which the cases that came under my notice are calculated to teach.

These cases^b speak for themselves; they require no analysis,

* The number brought before the board was 230, out of which 189 men were selected for the purpose of being subsequently brought forward for invaliding. This, of itself, shows the stuff of which the depôt was made, and proves the necessity of selection.

^b The details are necessarily withheld for want of space, but the general results are given in the text, and, for greater precision, they will admit of being roughly classified as follows:—Fifty cases of men and twenty-seven of women were recorded under the conditions already specified—that is, they were dealt with indiscriminately as they presented themselves for treatment or otherwise, and there was no attempt made at a classification or selection in either case. Of the former, twenty were described as good, favourable, improved, or satisfactory; and of the latter, fifteen were found to come under similar headings; while all the others were either injured or unaffected by the change. This shows a much larger percentage of improvements on the part of the women than on that of the men, and so far tends to support the conclusions arrived at in the text, and show that the hills are more suited for retaining than restoring health.

and were we able to follow them out to the end, I make no doubt that the results would be equally unsatisfactory. They obviously point, in some instances, to the necessity of substituting home for the hills, and for others they indicate a residence, if such could be found, which is free on the one hand from the depressing effects of a burning sun, from what Mr. Keeble would call "the torrid summer's sickly clime;" and on the other from the haze drift and drenching rain of a Himalayan hill-side. They also confirm the views of Dr. Gordon, and prove that the hills, as used heretofore, can, at best, only be regarded as bad substitutes for a greater and more radical change to Europe. It will be noted that whenever healthy men or women were sent up, or whenever men or women whose health had only slightly suffered in the plains came to Kussowlie, that they either improved or remained in *statu quo*, and the plan adopted there for, I believe, the first time last year, at the instance of Deputy Inspector-General of Hospitals, Dr. Munroe, C.B., of sending up men debilitated by climate and fever, and replacing these by others who had recovered their health, answered admirably, and is richly worthy of further trial. This, however, could only be carried out in a few stations like Rawul-Pindee, Umballa, and Bareilly, and a larger measure of relief is clearly called for.

And to show that this might be advantageously carried out on a much more extensive scale than that heretofore allowed, I will now reproduce here two tables which give the strength and describe the admissions to hospital, prevailing diseases, and mortality of two regiments which suffered severely in the plains, and which were sent to the hills as they stood, without any selection being made, and with, it is to be feared in both instances, the general health of their respective constituents being very much below par. For these I am indebted to the courtesy of Drs. Roe and Teevan, of H.M.'s 41st and 3rd Regiments of Foot;* and though the access of cholera does not allow the former to speak very highly by contrast of the advantages of the climate of the hills, it must yet be remembered that the 41st went to them after having been greatly enfeebled by fever, bowel complaints, and other depressing diseases at Agra. While in this condition cholera made its appearance among them, and carried off, as will be seen, a goodly number. Besides, Subathoo can scarcely be said to be a hill sanitarium at all; it can, at best, only be regarded as a kind of resting-place or

* Now of the 30th Regiment.

half-way house between the hills and the plains; and this shows the danger of half measures in a country like India, where epidemic disease is so rife, and where complaints that run for the most part a mild course elsewhere, often assume a fatal complexion from the beginning, or put an end to life at once. This complication should not be lost sight of in the calculation, and any one who has seen, as I have, the 41st Regiment at Agra and Subathoo, and compared its appearance in the former place with its physique in the latter, would at once notice a difference, and ascribe it without hesitation to its proper cause—the influence of change.

Dr. Roe, the surgeon of the regiment, writing to me on the point in October last, said, “No doubt Subathoo is not quite so healthy as the higher hill stations, but still the improvement it has wrought in the health of our men is very decided. The regiment is now in a very different state from what it was when it arrived in 1869, and even from what it was when I first made its acquaintance in February last.” And having premised so much, I will now leave the table to speak for itself.

A Comparative Statement, showing the Strength, Admissions to Hospital, Deaths, and prevailing Diseases in H.M.'s 41st “The Welch Regiment,” at Agra and in Subathoo. for the years 1867, 1868, 1869, and 1870.

Stations occupied by the Corps	Average strength of the Battalion in each year	Total admissions from all causes during the year	Total of deaths from all causes during the year	Rates of average daily sick to strength per cent.	Rates of deaths per 1,000	Prevailing diseases during the year	Number invalided each year	GENERAL REMARKS
Agra, 1867,	851.58	1,141	13	7.06	15.26	Bowel Complaints, Fever, and Venereal	37	Sixteen of these deaths were caused by cholera.
Agra, 1868,	846.66	809	8	4.60	9.33	Do.	47	
Marched from Agra to Subathoo on 12th of Feb., '69, and arrived at Subathoo 21st Feb., 1869,	842.16	1,081	37	4.98	43.93	Do. do. and cholera,	56	
Subathoo up to 12th of October, '70,	815.33	548	7	4.04	8.53	Fevers,	29	Two of these deaths were accidental.

The return so kindly furnished by Dr. Teevan tells a different tale, and will, in consequence, call for very little comment or criticism; indeed, were any such wanted, the best place to go for it would be the reeking and crowded graveyard of Meerut; and the graveyards of India disclose facts which do not admit of being ignored, and which serve as standing memorials of mistaken policy or faulty hygiene in the past. Would that we might even now profit by the lesson they teach, and would that even at this eleventh hour we might turn to better account the splendid sanatoria that stud so thickly the slopes of the Himalayas. When I stood before the monument of the Buffs, and read its terrible inscription—which I was unfortunately unable to copy at the time—and saw that it was inscribed to the memory of two officers, three colour-sergeants, three sergeants, six corporals, fourteen drummers, one hundred and eleven men, sixteen women, and forty-three children, and reflected that similar, though, perhaps, not equally aggravated records might be found in the principal graveyards of India, I was strongly affected, and turning towards the great mountains, whose mighty outlines could be dimly traced in the distance, I reflected that, had their sides been more freely availed of, this and similar sacrifices would never have taken place. Had the 36th been in the hills in 1869, instead of at Peshawur, they would not have lost, as they did, 120 men, 11 children, 7 women, and 1 officer; neither would the 104th have lost 103 souls at Morar; nor the 58th been more than decimated, as it was, at Allahabad. But it is unnecessary to multiply examples. *Si quaeris monumenta circumspice*, if you require further proofs, go to the Blue Books and the cemeteries of India, and if these do not suffice, you will find them in abundance in the unpublished “annuals” of military medical officers.

This table lacks, unfortunately, the number of invalids sent home for change or discharge, but these are, at best, but an imperfect evidence or description of the state of a regiment, as surgeons differ a good deal in their views of the class of cases that are suited for or that require change to England, and it is hardly fair to saddle Dughshai with the consequences of a disease which originates at Meerut. I cannot, however, help observing, that I think the invaliding follows in India too close on the heels of the hot season, by which many men, who might pull up in the cold weather, are so debilitated as to call for earlier change to England. A high departmental authority considers that many men are invalided who might be safely kept longer in India, and I, too,

quite agree that such is often the case; but due allowance ought to be made for the beneficial effects of a long sea voyage, and it is always safer to err on the side of the sick. But this is a phase of the question that may be more appropriately discussed elsewhere, and space forbids my going into it further at present.

Comparative Statement, showing the Strength, admissions to Hospital, Deaths, and prevailing Diseases in H.M.'s 3rd Regiment, "The Buffs," at Meerut and Dugshai, for the years 1867, 1868, 1869, and 1870.

Stations occupied by the Corps	Average strength of the Battalion in each year	Total admissions from all causes during the year	Total of deaths from all causes during the year	Rates of average daily sick to strength per cent.	Rates of death per 1,000	Prevailing diseases during the year	Number invalided each year	GENERAL REMARKS
Meerut, 1867,	679	1,058	133	5.74	195.87	Cholera spasmodica	This column was unfortunately left blank.	Cholera prevailed in an epidemic form from 17th of Aug. to 1st of October.
Do. '68,	761	729	15	4.89	19.71	Diarrhœa and intermittent fever		Regiment enjoyed good health during the year.
Marched from Meerut en route to Dugshai on 9th January, and arrived at Dugshai on 14th of April, 1869,	871	623	5	3.67	5.74	Ague and rheumatic affections		Do. do.
Dugshai up to 26th October, 1870,	886	366	5	2.87	5.77	Fevers of the intermittent & remittent types		Do. do.

But it has been well said that "statistics may be made to favour anything," and the truth of this phrase is well exemplified in the two tables given below. One of these gives the strength, mortality, prevailing diseases, temperature, and rain-fall of the dépôt and hospital at Kussowlie, while the other gives similar information about the 88th Regiment that was stationed at Agra, and the

result is, on the whole, in favour of the plains. The difference will, however, appear less striking when it is remembered that the hot season of 1870 was everywhere mild in the plains, while its counterpart was quite the reverse in the hills. Again, the 88th had been effectually weeded of sick and weakly men when the comparison began, and its general tone and morale had been improved by a long march and by the assurance of an early return to England. On the other hand, the *dépôt* at Kussowlie consisted almost entirely of men whose health had given way in the plains, and who were in many, perhaps too far the larger number of instances, quite unsuited for such a climate. Many, indeed, would have been better in the plains, while others were in a condition that called for change to sea, or admitted of no improvement from any course of treatment. And in instituting a comparison of this kind, it should never be forgotten that the climate of the hills has been proved to be unfavourable to invalids suffering from organic disease of the heart, liver, lungs, or bowels, and especially so during the rains—the very period referred to within—when the variations of temperature are so great as to necessitate precautionary measures on the part of even the strongest, and aggravate any tendency that may exist in the weakly towards catarrhal complications, congestive disorder or fluxes. It is, in a word, more fitted for preserving than restoring health, and hence the necessity for selection, and the advantage of sending healthy troops *ab initio* to them—troops just arrived from England, rather than those whose health has been greatly impaired, perhaps irreparably injured, by repeated attacks of fever, dysentery, or other *plain* disease. The comparison is not, therefore, a fair one; yet is the table no less suggestive, and, as such, I reproduce it here. It will explain itself; and, as intimated before, the particulars it contains regarding temperature, rain-fall, &c., will apply to other sanatoria as well. The same will also hold good in connexion with the other table in respect of the plains, and it will be easy to strike an average from, or base an estimate on, the details of both whenever it may be necessary to compare or illustrate the peculiarities of either of the places to which they refer.

Too much is expected from the hills, and, as a consequence, when they fail to realize the results that have been perhaps too eagerly looked for from them, they are unjustly credited with blame, and saddled with a liability which they do not deserve. They will be more appreciated when they are better understood, and to effect this is one of the objects of the writer of this paper.

TABLE showing the Strength, Admissions, and Deaths at the Kussowle Hospital from
1st April to 30th September, 1870.

PERIOD	Average strength of Depot for the 6 months	Total of admissions from all causes of disease during the 6 months	Total of deaths from all causes during the 6 months from 1st April to 30th Sep., 1870	Ratio of admissions to strength per 1,000	Ratio of deaths to strength per 1,000	Prevailing diseases	TEMPERATURE				Rainfall	REMARKS
							Max.	Med.	Min.	Prevailing winds		
1st to 30th April, 1870,	245.75	93	1	199.93	2.30	Rheumatism, Aguish Disorders, and Bowel Complaints.	82	63	45	S.W.	Inch 3 ¹ / ₁₆	Regular rains set in on 12th June, and ended on the 4th of September. The deaths that took place resulted from:— Bronchitis, 1; Encephalitis, 1; Phth. pul., 2 (one of these was brought dead to hospital); Abscess of liver, 1; and Apoplexy, 1. Total, 6.
1st to 31st May, 1870,	423.50	104	1				92	76	60	S.W.	¹ / ₁₆	
1st to 30th June, 1870,	498.25	102	1				No	Thermometer		S.W.	21 ¹ / ₁₆	
1st to 31st July, 1870,	503.25	108	3					Do.		N.W.	20 ¹ / ₁₆	
1st to 31st Aug., 1870,	514.75	73	—				80	69	58	N.W	36 ¹ / ₁₆	
1st to 30th Sept., 1870,	535.40	64	1				75	65	55	N.W.	16 ¹ / ₁₆	
Total,	2720.90	544	7			Average,	82.25	68.37	54.50	Total,	99 ¹ / ₁₆	

TABLE showing the Strength, Admissions, and Deaths in the Hospital, 88th Regiment, at Agra, from 1st April to 30th September, 1870.

[illegible]

TABLE showing the Number of Deaths that took place in the 88th Regiment, and the Diseases by which they were caused, during its stay of three years in the Punjab. These include the Deaths of Invalids that occurred en route to England during same period, as well as those that took place in working parties and at Sanitaria in the hills.

Year	Station	No. of Deaths	Diseases by which these were produced	REMARKS
1867	Rawul Pindee	4	Continued fever, 2; diarrhoea, 1; secondary syphilis, 1.	Rawul Pindee is reckoned one of the healthiest stations in India, and there was a wing of the Regiment, 256 strong, detached as a working party in the hills.
1868	Peshawur	12	Hepatitis, 2; bronchitis, 1; phth. pulmonalis, 1; psoas abscess, 1; remittent fever, 1; del. tremens, 1; insolation, 1; dysentery, 1; contd. fever, 1; typhd. fever, 1; aneurism of aorta, 1.	The insalubrity of Peshawur is proverbial; and so much does malaria influence the mortality, that the 36th lost 1 officer, 2 women, 11 children, and 120 men there by cholera in 1869. The 104th lost 90 souls there, and the Artillery 25 men, 3 women, and 7 children the same year.
1869	Nowshera*	25	Diphtheria, 1; bronchitis, 2; contd. fever, 1; secondary syphilis, 1; dysentery, 3; feb. enteric, 1; congestive apoplexy, 1; suicide, 2; cholera, 2; del. tremens, 1; aneurism of aorta, 1; hepatitis, 1; phth. pulmonalis, 2; enteritis, 1; ague, 2; hepatic abscess, 1; pneumonia, 1.	Nowshera, on the Caubul river, is situated in the Peshawur Valley, and therefore under the same influence as its big brother. The heat there is sometimes almost unbearable in the hot season, and it is one of those stations that might be altogether abandoned.
1869	Attock	6	Phthisis pulmonalis, 3; aneurism of aorta, 1; ague, 1; hepatitis, 1.	A limestone rock, on the Indus, that rejoices in the unpleasant repute of being the "hottest hole in the whole of India."
1869	Murree	1	Phthisis pulmonalis, 1.	A favourite hill station, and the Sanitarium of the Punjab.
In the Hills.	Working Party	1	Bright's disease, 1.	See my paper in the <i>Practitioner</i> for January, '71.
	Nundkotre	1	Cholera, 1.	This is a small sanitarium, near Murree, that is no longer in use.

* The average strength at Nowshera was 706.00, as estimated for a period of fifty-two weeks, and this would, I suppose—for I have not the actual figures by me at present—constitute a fair average for the Regiment during the period here referred to.

People do not gather figs from thorns, neither should a judicious physician think of sending cases of Bright's disease or diabetes to Iceland or Spitzbergen. Yet this, I contend, or something very much akin to it, is what is done in India at present, and the consequence is, that a regiment which has passed nearly thirteen years in some of the worst stations in the plains, exhibits a bill of health at the end of its career there which may compare favourably with a similar record on the part of one of the healthiest sanatoria in the world. We will leave this to interpret itself, and then close the inquiry with a statement of our views on the subject generally.

The opposite table may be quoted in the same direction, as showing the mortality from mainly preventible causes which takes place in the plains in even healthy regiments which have the benefit of every expedient and appliance against injury that science can devise or money procure; and behold the result! It speaks too plainly for itself to require any further elucidation or comment at my hands, and suggests the pregnant question, How long are we to continue playing against nature and common sense at such desperate odds? The answer is, until public opinion declares against it at home, or the matter is taken up in a party or patriotic spirit in Parliament.

In reviewing the history of hill sanitation in India some ugly facts are brought to light which are as much calculated to startle us by their novelty as they are to sadden us by their surroundings. Among these the most discouraging are, that though the advantages of hill sanatoria have been known for years, and though their praises have been sounded so long as almost to tire by repetition, yet that it is only within a comparatively recent period that they have been turned to any account at all, and meanwhile epidemic disease has been stalking with impunity through the plains and numbering its victims by thousands. We do not hold a private firm or association free from reproach, when, from imprudent speculation or want of foresight, its managers abuse the confidence of their constituents, or turn it selfishly to their own account. Neither should a Government be held blameless which ignores such patent facts, and which, while testifying by its own individual acts its appreciation of the advantages of a hill residence, has yet allowed its defenders to pine away in an uncongenial atmosphere, or be decimated by disease, whose shafts might be easily disarmed or turned aside altogether. A prudent regard for the diminution of public expenditure and the disbursements of the State purse

ought undoubtedly be classed among the virtues of a financier; but a too pinching economy is often fraught with danger in the face of sudden demand or calamity, and that happy discrimination of means to an end, that striking of averages which tells most in favour of truth, that *juste milieu* which balances the weight of probabilities with a view to their resolution in the State behalf, and holds the scales dispassionately between the claims of conflicting interests, is rarely acquired in the camp of the General, and but occasionally only in the closet of the Minister. It is because this is so that I and others of my cloth have had to put ourselves forward, often perhaps reluctantly, and sometimes, mayhap, in seeming opposition to the directions of our department, but really because the facts are too strong for us, and because we see no other explanation of or escape from them. Heretofore, 'tis true, very great difficulties existed in the way of sending troops in large numbers to the hills, but these have been removed in great part, and even now a regiment could reach Kussowlie within a week of its arrival in Bombay. Were regiments sent to the hills instead of to Hyderabad or Peshawur, we would hear no more of the horrors of cholera, and there would be a stop put to that drain of time-expired men which one daily witnesses during the cold weather in India in the persons of robust, well-fed, disciplined men, who are in the prime of life, and in the very flush and vigour of their manliness, and who leave a country which can ill dispense with their services for one in which the labour-market is often overstocked, to recruit the ranks of pauperism at home, or of rowdiness in America, or who return again to India with possibly diminished health, and certainly at a three-fold penalty to the public.

There is another advantage in sending whole regiments rather than detached parties to the hills, and that is, that the men are kept together under their own officers, with all their own comrades and home associations about them, instead of being knocked about, as they call it, under men whose voices sound strangely in their ears, and to whose ways they are unaccustomed. There is more in this than some are disposed to allow; and if we would rightly estimate the peculiarities of the soldier, or measure the force of the influences by which he is swayed, we must descend from our stilts, and converse with him in his barrack-room. In this alone lie the secret springs of his movements; and it is from sources having peculiar facilities of access to this inner circle that I derive my information. Bourienne tells us, that the greatest conqueror

known to modern history—he, who, through good repute or evil repute, in sunshine and in storm, was the idol of his own country and the admiration of the world—used to ascertain the name and inquire into the antecedents of the most distinguished of his followers; and while passing along a line would astonish whole battalions by stopping suddenly in his course, accosting a man familiarly, perhaps calling him by his name, and recounting to or interrogating him on his former acts of bravery. Such a recognition can scarcely be expected under our more exclusive *regime*, and in an army constituted as ours is, such a proceeding might savour of affectation, if it escaped censure at the hands of some of our critics. In France, however, where the line of demarcation is less finely drawn, the case is different; and the abolition of the purchase system, and its necessary consequence, promotion by merit and from the ranks, will have the effect of diminishing the preponderance of caste in our army, and increasing assimilation in our ranks. The soldier at present has very little in common with his officer beyond his dress; he breathes an atmosphere of self; lives in a world which is peopled with the creatures of his own limited fancy, and to stand well with his comrades, or fall in with the bent of current regimental liking, constitutes for him the nearest approach to perfection, and fixes the horizon beyond which his ambition rarely soars. These little points ought never to be lost sight of in any legislation affecting officers and men. Their interests are certainly not always the same; their sympathies do not invariably run in the same groove; one has resources at his command to which the other rarely aspires and may never secure; and that officer who would beget confidence and inspire faith, must treat his man somewhat after the manner that the Arab does his horse—that is, treat him well generally, humour him in the day of peace, and trust him in the hour of difficulty and danger.* What's good for the goose is also good for the gander, or *vice versa*. Every officer whose services can be spared in the plains, and that may be taken for granted in our present overcrowded cadres, is entitled to two months' leave every hot season to the hills; and I hope the day

* The remark said to have been made by shrewd old Runjeet Sing to Lord Auckland, after witnessing the splendid marching of our troops at Loodianah, may be appropriately reproduced here. After commenting on and commending their fine bearing, he is reported to have said, "that if he had such troops he would provide each of them with a conveyance for himself, and so save him the trouble of marching at all." We need not do anything like this, indeed its very opposite is what's most wanted, and that can only be obtained in its entirety under the conditions referred to above.

is not far distant, when, instead of being allowed as a favour to run to them for a couple of months in the Summer, he will be ordered as a duty to reside in them permanently with his men, and only return to the plains for purposes of drill or exercise during the Winter.

And with regard to this latter contingency, were I asked to propose a remedy for the diseases and dangers incidental to service in the climate of India, I would point at once, and without a shadow of hesitation to the Himalayas as a residence for healthy European troops during the Summer, and to camps of exercise or cantonments in the plains during the Winter. The marching to and from these, the duties performed in them, the renewal of old acquaintanceship, and the emulation that would insensibly spring up between the different regiments, would afford the men composing them an amount of pleasurable exercise and enjoyment which they can rarely hope to enjoy under the present *regime* ; and the plains of India afford scope for manœuvring troops on a scale and under a sky which have no equal at that season elsewhere in the world. The great plains that stretch along the Sutlej and the Jhelum would accommodate hosts, compared with which the mightiest armies of Europe would sink into insignificance, and the dullest could scarcely fail of being influenced by the glorious memories that attach to the banks of these classic streams. Every inch of ground in that neighbourhood is sacred. Our men might there fight over again in fancy the terrible battles of Ferozeshah and Sobraon, and recall with feelings of triumph the mighty struggles of their fathers.* Too little stress is, in my mind, laid—in these matter-of-fact days—on such reminiscences. Yet are they the food on which the soldier loves to feed, and their influence might be cultivated with much advantage in our army. They are reverently treasured up in the breast of the fair-faced, manly Sikh, who hesitates not to recount them to his friends ; and the people of

* Another advantage of concentrating troops in the hills is that they might be sent at once in overwhelming numbers to any threatened point, and so turned to more immediate account than they could possibly be now. This was well seen at the commencement of the first Sikh war on the Sutlej, when our scattered columns had scarcely time allowed them to form up ere they were attacked by a fresh and vigorous enemy in full force, and several of the officers that were summoned to the fray never arrived at all. On this head Mr. Arnold speaks as follows :—"When Lord Hardinge was on the Sutlej"—or Suttleje, as he spells it—"certain officers were ordered up to him ; they travelled by palanquin dāk, occupied a month and a half upon the journey, necessitated the labour of 7,000 bearers, and then but thirty of them arrived before the fighting was finished."—Dalbousie's Administration of India, by — Arnold, Vol. ii., p. 226.

India are, as a body, wonderfully tenacious of such recollections. A gathering of this kind would produce tenfold more effect than the costly pageants called Durbars, and be much less likely to generate cholera or other disease. Finally, they would impress the native mind with a sense of our power, which a few sickly regiments scattered here and there in the plains, and struggling along on relief from one unhealthy station to another, every other year or so, with a long train of pallid women and pot-bellied children, could never do; and under the system contemplated by me, only a few strategic points, such as Calcutta, Allahabad, Lahore, and Attock or Peshawur need be garrisoned at all, and then only, or in great part, by artillery. Such stations as abut on the hills, as Rawul Pindee, Umballa, and Bareilly might be given up at once, and their garrisons transferred to Murree or its vicinity, to the places named above in connexion with this paper, to wit, Kus-sowlie, Dugshai, and Subathoo, and to Nynce-Tal, or Almorah. But these details are beyond my sphere; they are, however, in my humble opinion, quite feasible, and the sooner they, or some equivalent scheme, is adopted, the better will it be for the health of our soldiers and the safety of our empire.

Were this programme carried out, I feel assured that we might look upon the days of cholera as numbered. We would also hear less of crime, and see scarcely anything of that intemperance, and of its possible consequence, insanity, which are now so comparatively common in our army in India. I remember reading some time ago, in an Indian paper, that many more suicides occurred during the terrible hot season of '69 than have either transpired through the press, or than are otherwise known to outsiders, and the writer accounted for their comparative prevalence as follows:—"We are not surprised at this when we consider the unusual severity of the present season, or the exceptional conditions to which soldiers are subjected in this country. Pent up as they are for many months together between bare walls, with no other companionship than that of their dogs and punkah coolies, and an out-look so barren and bleak as to lack even a tree on which one might in very desperation hang himself, it is no wonder that they are haunted by *ennui* in its worst form, and driven at times for solace to expedients which the law forbids, and morality would shrink from." It is, indeed, no wonder; but this unnatural condition would be quite unknown under the circumstances contemplated by me, and instead of being shut up like wild beasts for several months of the year, all restraint might cease, and the men who now pine away in the plains could

roam about *ad libitum* in the hills, and improve both their health and pocket by catching butterflies,* or practising any trade they may have learned at home. Verily the remedy is at hand if we only knew how to turn it to account. The Genius of the Hills might say to us—to transpose slightly the words of Mr. Keeble—

The herbs *you* seek to heal *your* woe
Familiar by *our* pathways grow ;
Our common air is balm.

But none are so blind as those who will not see, and things will remain pretty much as they are unless public attention is drawn to the subject in this country, or until some patriotic Member will raise his voice in the same direction in the House.

And what avails, I would ask, the costly and complicated system of sanitation so ostentatiously paraded for our admiration in Blue Books and Royal Commissions if the stimulus of excitement is withheld, and the poison of *ennui* is compulsorily substituted in its place? Man, certainly, wants but little here below, but he wants that little occasionally flavoured with a spice of novelty. He does not live on bread alone; and he who interrogates nature in her simplest processes will find that the analogy is not far-fetched, and that to maintain efficiency it is advisable to interest the mind as well as to gorge the body. A great deal of military crime is, I believe, traceable to this source, and time, without a hobby to diversify its monotony, would sometimes hang heavily on the hands of even the most employed amongst us. A great authority has said—

. “Si non
Intendes animum studiis et rebus honestis
Invidia vel amore vigil torquere.”

And the utter sense of blank indifference with which an uneducated man contemplates mere barrack life in India, must of itself almost suggest courses at variance with health, subordination, and morality. The associations of the hearth have, we all well know, a great deal to do, even in more favoured climes, with the regulation of the conduct. 'Tis certainly a pity they cannot be indulged in to equal amount in India. This is, however, I need hardly say, with the class, and under the conditions referred to, quite impossible; but something might be done in another direction, and massing healthy troops in larger numbers in the Himalayas is the best substitute for home and its enjoyments that can be found in that country.

* A favourite source of amusement and profit to invalid soldiers in the hills.