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ART. I.—*Journal of the Mission which visited Bootan, in 1837-38, under Captain R. BOILEAU PEMBERTON. By W. GRIFFITH, Esq. Madras Medical Establishment.*

(Continued from page 241.)

PART II.

[*Remarks on the nature of the country, especially its vegetation, boundaries, and divisions—its government, population, sects, character, customs, manners, and dict—political relations.*]

The following remarks suggested themselves to me during the bird's eye view I had of Bootan ; their superficiality is only to be excused by the shortness of my stay, the want of proper interpreters, the jealousy of the Booteas, and extreme mendacity of such of their Bengal subjects from whom, in my total ignorance of the Bootea language, information was alone to be expected. And as I had daily opportunities of seeing the constancy with which the head of the Mission amassed all available information, I contented myself with remarking on external rather than internal objects, on the face of nature, rather than on that of men. Bootan, I need scarcely observe, is a mountainous country, forming a considerable part of the most magnificent chain of mountains in the universe ; in it are to be found all degrees of elevation, from 1000 to 25,000 feet. In its extent it is rather more limited than was supposed, since Capt. Pemberton has ascertained that the country to the eastward, which is ruled by the Towang Rajah, is directly dependent on, and forms a portion of the Lhasa government.

The boundaries of the country are, Thibet to the north ; the plains of Assam and Bengal to the south ; Sikkim to the west ; and the Kampa country to the east. Its greatest breadth will hence be about 90, and its greatest length about 210 miles.

The physical aspect of this country, so far as regards its most essential point—mountains, presents perhaps but little deviation from that of other parts of the Great Himalayan chain ; but on this point I am unable to give any information. Every variety of surface was met with, from bluff-headed to peaked highly angular summits. In some places the paths were built up the naked faces of precipices ; in others, very considerable elevations might be attained by very gradual ascents, over a sufficiently practicable country. The two most rugged and most peaked were, as might be expected, the two highest—Dongdola and Rodola : the others, which generally averaged 10,500 feet, were very easy. Of the rivers, which are in all cases mere mountain torrents, nothing need be said. The largest we saw was the Monass, which forms the principal drain of the eastern portion of Bootan. No lakes appear to occur : there is below Santagong a jheel of small extent, but it is of no depth, and does not derive its presence from springs or the embouchure of small tributaries. It abounded with water fowl, and was choked up with sedges, and a plant belonging to the family *Hydropeltidæ*, hitherto not, I believe, found in India. Neither is Bootan a country of valleys ; in fact, with the exception of those of Bhoomlungtung, Byagur, and Jaisa, we saw none worthy of bearing the name. That of Pudukka owes its existence to the vagaries of the river, as its only level part has obviously at some previous time formed part of its bed. The three valleys otherwise mentioned are, if viewed in comparison with other valleys situated in similarly mountainous countries, perfectly insignificant, for they consist of a gentle slope from the bases of the contiguous hills to the bed of the draining stream. The valley of Tassisudon is probably of like extent with that of Pudukka, but Turner's accounts are so little to be relied on, that even in a simple matter like this no just conclusion is to be formed. I have only to add, that the three valleys are represented as being close to some of the passes into Thibet : this alone is perhaps sufficient to account for their great elevation.

Hot springs occur one day's journey from Pudukka, and appear to be the resort of many invalids, victims to the most frequent disease, lues venerea. From specimens procured by our guide, Chillong Soubah, there must be at least two springs ; of one the water is of a yellowish tint, and highly sulphureous ; that of the other is limpid, and possesses no sensible properties. I did not hear of the existence of such springs elsewhere.

Of the climate, which is necessarily so varied, it would be useless to attempt to give an account; indeed the only two places of the climate of which the mean could be given for even one month, are Tongsa and Pুনুক্কা. The mean for the month of March at Tongsa may be estimated at $56^{\circ} 3'$, the maximum heat between the 6th and 21st instant being 63° , and the minimum 51° . I have elsewhere stated the results of the observations made at Pুনুক্কা. Throughout the barren portions of the country, which are so generally limited to inconsiderable elevations, the heat must no doubt be great during the summer months; at Pুনুক্কা in April the sun was found very incommoding after 9 A. M.; and as a proof of the heat at such elevations as 7000 feet in some places, I may advert to the culture of rice at, and above Tongsa. The ravines are, however, very narrow about this place, and the faces of the mountain on which the cultivation occurred had a western aspect.

In very many places, however, more abstracted from the influence of radiated heat, delightful climates may be found. It is curious, though not singular, that the best situations were always found occupied by Gylong villages. Considerable elevation is, in addition to other minor causes, requisite at least for a Bootea, during the summer months: thus the Gylong villages were rarely seen under 8000 feet, and oftener about 9000 feet; and the chiefs find a summer change of residence necessary, during which they repair to elevations varying from 7000 to 9000 feet.

The change in the Deb's residence from Pুনুক্কা to Tassisudon in the summer, and vice versa in the winter, is to be accounted for, especially the latter change, on principles of equalization; that is, the ryots about the one place are obstinate enough to refuse supplies for more than six months; such at least was the story heard by us, although it is rendered doubtful, by the total want of regard evinced by the rulers of the land for the interest of their subjects. The most delightful climate we experienced was that of May at Chupeha, which is situated on the steep face of a mountain with a south west aspect, yet the temperature ranged from 46° to 51° . A week afterwards, and we were exposed to the unmitigated fierceness of a Bengal sun at the hottest time of the year.

The most disagreeable part of the climate of Bootan exists in the violence of the winds, more particularly in the valleys. The direction of these winds, which are very gusty, is invariably up the ravines, or contrary to the course of the draining torrents, no matter what direction these may have; the winds therefore are dependent upon local circumstances, as might be expected from the dryness of the

soil, and its effects on vegetation. The winds are more violent throughout the lower tracts than elsewhere, and as in many of these places they are enabled to supply themselves with dust, they often became very positively disagreeable, and formed no inconsiderable part of the annoyances we were subjected to during our residence at Pুনukka. These partial winds* are frequently so violent as to unroof the houses; it must be remembered, however, that the roofs are generally mere shingles, kept in their places by large stones. During our stay at Pুনukka, the regal or sacred part of the roof was blown off; the clattering that ensued from the falling of the copper plates, mixed with the noise of the shingles and stones of other parts of the palace, was very great; a deputation was immediately sent from the palace to request that we would fire off no more guns near the palace, and we found out afterwards that we were looked upon with a very suspicious eye.

We were not much incommoded with rain, neither should I consider it to be abundant throughout the lower elevations, at least no part of the vegetation I saw in such tracts seemed to indicate even a small amount of moisture. We were only once delayed by snow, and on our return enjoyed uninterrupted fine weather until we reached Buxa, where, as might be expected from its proximity to the plains and the season, the weather was unsettled.

As regards quantity of vegetation, Bootan exhibits, it appears to me, considerable peculiarities. In the other parts of the Himalayan chain I have seen, and generally throughout India, the bases and lower portions of the mountains are the most thickly wooded, and it is generally a tolerably certain indication of elevation when less wooded tracts are met with; but in Bootan not only is the vegetation of the lower ranges contiguous to the plains unusually scanty throughout a considerable part of their extent, but throughout the interior it is generally absolutely barren within certain elevations. This scantiness at the base of the mountains is perhaps at its maximum due north from Gowahatti, in which direction the vegetation is almost entirely graminaceous; to the westward it certainly lessens, but even to the north of Rungpore (Bengal) the woods are thin, especially when contrasted with the Toorais of other portions; at the same time the vegetation of the lower ranges is in this direction nearly as dense as it is elsewhere. Of its extent to the eastward I have no actual evidence to offer; but as to the north of Jeypore there is a well defined Toorai, and

* The general winds have, it would appear, the usual direction; that is, they blow from the plains.

as to the eastward again, it would appear to *again* become deficient: it probably is irregular in its distribution, and depends consequently on local causes.

But while there is such difference in the amount of vegetation along the tract at the base of the mountains, the vegetation on these up to an elevation of 1600—3500 feet is uniformly scanty, except to the westward, in which direction, as I have mentioned, they do not differ in absolute amount from the well wooded mountains to be seen elsewhere.

Between Dewangiri and Pুনukka we found that the surface of the interior below 5000 feet in elevation was uniformly very barren, and after crossing the ridge above Telagoung we found similar appearances, but with a very dissimilar vegetation, at elevations of from 7000 to 11,000 feet, but they were by no means so uniform or so general. Throughout the barren tracts* of the first of the above portions of Bootan the vegetation consists for the most part of grasses, among which a few low shrubs occur. The arboreous vegetation is confined almost entirely to *Pinus longifolia*, which is very commonly much stunted. The barren tracts to the westward of Telagoung were remarked almost entirely along the Teemboo, the southern face of the ravine of which was generally remarkably barren, even at very considerable elevations. Grasses did not form here so predominant a portion, shrubs on the contrary abounded, and among these the most common perhaps was a species of *Rosa*, very much like the *R sericea* of Royle's Illustrations.

In Bootan it is only at high elevations, and under certain circumstances, among which aspect and especially humidity are the most important, that the grand forests which have excited the admiration of all travellers in the Himalayas to the westward, make their appearance. The requisite elevation is scarcely ever less than 7000, and is generally about 8000—8500 feet; at such, oaks, magnolias, rhododendrons, and several species of firs attain to great perfection. Between, or on the borders of the woods, patches of swards, adorned in the spring with beautiful herbaceous plants are frequently met with, and form the prettiest object in the whole scenery of Bootan. The vegetation of such, and of much higher elevations, is generally well diversified, until indeed one reaches an elevation of 11,500 feet; at such I found it generally reduced to black firs, stunted junipers, and shrubby rhododendrons, the bulk, as regards amount of species,

* These lower mountains are very frequently curiously marked with transverse ridges. These have much of the appearance of ancient terrace cultivation, but on inquiry I was assured that such was not their origin.

consisting of herbaceous plants, whose growth is confined to a very few congenial months, and which were almost all hid from my view by the heavy snow, so constant between the latter end of October and the commencement of May. Another striking feature in Bootan is the constancy with which southern faces of mountains are, especially towards their summits, bare of trees or shrubs; this it has in common with other parts of the Himalayas both to the westward, where it has struck all travellers, and to the eastward, as on the Mishmees. I am not prepared to state whether any satisfactory explanation of this has been given; it struck me to be due, in Bootan at least, to the searching severity of the winds, which are quite sufficient to keep down all luxuriance of vegetation. Whatever the secondary causes may be, there can be no doubt that the primary one is due to the influence of the south-west monsoon, to which all these faces of the Himalayan mountains are freely exposed.

The higher the altitude the greater, as indeed might be expected, was the uniformity of vegetation, and it was only in such that any general features of vegetation could be said to occur. A very constant feature of high altitude, such as from 11,000 to 12,500 feet, existed in the black fir, a lofty tabularly branched tree of a very peculiar appearance, in comparison at least with other Bootan species, and which, when seen standing out in dark relief, might, from the very frequent mutilation of its lower branches, be mistaken at a distance for palm; with these there was as nearly a constant association of the same species of other plants. The most striking among the partial features of the vegetation of Bootan was presented to us by the three valleys, so often alluded to; these may well be called the region of pines of that country. The range of the three species was most distinct and very instructive, although the Smithian Pine, a little further to the westward, descended to a somewhat lower elevation than it did in the tract above mentioned.

Still more partial features were presented by the *Pinus excelsa*, and more especially by the *Pinus longifolia*, the distribution of both of which appears to depend on local causes. The latter species was not seen on our return, nor was there a vestige of a fir visible after reaching Chuka; no species but the long-leaved was seen below 5500 feet.

I have in the foregoing few remarks merely glanced at the most familiar features of the botany of Bootan. As the importance of strict determination has been much insisted on before correct views can be formed of the botanical geography of any country, I have purposely omitted all details, until the collection shall have been duly examined; but even when this has been done, the difficulties are almost insuper-

able, for although Roxburgh died thirty four years ago, and the number of plants indigenous to India has been increased fourfold since that time, the means exist of determining but a very few more than those described by Roxburgh himself. It is familiar to all botanists that of the 8000 species distributed eight or ten years since by the Honorable Company, not more than 1000 have yet received their promised share of elaboration.*

Bootan is divided into provinces which are ruled by Pillos, of whom there are three—the Paro, Tongsa, and Tacca : they derive their names from their respective residences ; the rank of the two first is, I believe, equal, and they are admitted into council, while that of Tacca Pillo is very inferior.

The provinces are again divided into districts, equivalent to Soubahships ; of these there are several. The Soobah's jurisdictions through which we passed were those of Dewangiri, Tassgong, Tassangsee, Lenglung, and Byagur, all of which are in Tongsa Pillo's province. After leaving Tongsa we came into the province of Punukka, and after leaving this capital we came on the tract attached to that of Tassisudon, or as it is called Tassjeung. The Soobahs all exercise supreme jurisdiction within their own limits, but pay a certain annual amount of revenue to their respective Pillos. The Soobahs of Dewangiri and Buxa are of subordinate rank.

But besides these governors of provinces, and governors of districts, there are other officers of high rank, who assist in moving the machine of government ; they do not however make good exemplifications of the proverb, “ in the multitude of counsellors there is wisdom.” The offices of these additional counsellors are as follow—the Tass Troompoon, or warder of the palace of Tassisudon ; the Puna Troompoon of the palace of Punukka ; and Wandipore Troompoon of the castle of Wandipore ; then there is the Lam Trimpe on the part of the Dhurma, and Deb Trimpe on the part of the Deb.

* The following passage was erased from the proof of Dr. Griffith's M.S. in the office of the Secretary to Government. We insert it as a note, on Dr. Griffith's and our own responsibility, and in the confidence that Dr. Wallich can readily give a full and a satisfactory answer to the implied charges.—EDS.

“ Had Dr. Wallich never been in India the matter would have been otherwise, as it would not then have been a matter of policy to remove every vestige of an Herbarium from the Botanic Gardens, and to publish a confused catalogue of names without characters. As the matter now stands, Indian botanists are reduced to this,—they must either give up all the advantages they possess by being in India, and wait until all the species, amounting to 3 or 4,000, named by Dr. Wallich have been described by others in Europe from dried, and in many cases very imperfect specimens, or they must in no case acknowledge the authority of any body to name an object without giving it a character, and publish such new species as they may deem to be new with their names and their descriptions.”

The supreme authorities are the Dhurma and Deb Rajahs ; the latter representing the temporal government in its strictest sense, as his reign is generally short ; the former the spiritual in as strict a sense, for he is, although infinitely divisible, quite eternal. The immortality of the Dhurma is not so well known as that of the Lama of Thibet, it is nevertheless equally true ; both appear to have been firmly believed by Captain Turner, whose account of the behaviour and intelligence of the Grand Lama, an infant of some months old, is very amusing and characteristic. The present Dhurma is, as I have mentioned, the son of Tongsa Pillo, a curious coincidence.

The chief test of the authenticity of the infant in whom the Dhurma condescends to leave the regions of æther for those of gross spirits, consists in his recognising his former articles of wearing apparel, &c. ; and to avoid any supposition that might arise from the probability of any mortal child being struck with shewy gew-gaws, this child is bound to assert that they are actually his own ; if it does so, surely it is satisfactory evidence. The infant Dhurma may as well be found in the hut of the poorest peasant as in the residence of an officer of high rank, but I dare say, if the truth were known, he is usually made for the occasion.

When he has been completely tested he is removed to the palace, and his life thenceforward becomes one of almost absolute seclusion. Surrounded by hosts of priests, and in the apparent enjoyment of most things deemed desirable by a Bootea, he is nothing but a state prisoner, virtually sacrificed to state ordinances. Neither is it probable that he enjoys any power sufficient to recompense him for being cut off from the merry side of life, for if his teachers have been wise teachers, they probably rule him throughout. But all this holds good only on the supposition that his life is as really monastically rigid as those of some orders of Christian monks were not. We heard strange accounts, especially at Pুনukka, sufficient to suggest that a priest is not necessarily virtuous in Bootan more than any where else.

His revenues are, I believe, derived from certain lands in the plains, and above all from offerings. He is also said to trade, but none of them can derive much profit from commercial speculations.

It is in the Deb that the supreme authority as regards the internal economy of the country is vested. But supreme though he be called, as he can do nothing without consulting all the counsellors, including the Pillos, who have no cause to dread his displeasure, his power must be extremely limited, and very often disputed ; and, if it is remembered that he is always checked by those counsellors who are actually present with him, and that he holds no, or at least very little, territory

on the plains; and that a Pillo has no check on himself, that his province is perhaps remote from the capital, and that he has filled up all his offices with his own relations and friends, it is evident, I think, that the change from governor of a province to that of supreme ruler of the country must be attended with loss of power. Besides, the Deb is only expected to retain office for three years, at the end of which he is expected to retire, provided he be weak enough.

The present Deb, if indeed he now exists, has no authority out of Punukka, and not too much even in his own palace. He was formerly Tacca Pillo, and this seemed to be the grand source of complaint against him.

The chief object of the Deb, as is that of all his officers, is to accumulate money. The sources of this are plunder, fines, reversion of property to him by death of the owners (and this seems to be carried to a frightful extent), tributes from the Pillos, offerings on accepting office, trading, and the proceeds of lands in the plains; but this last source cannot yield much, since the occupation of the best part by Herr Govindh. Our Deb, in addition to his usual sources, added another during our visit, by robbing the Dhurma of all his presents. The revenues of the Pillos are derived principally from their Dooars, or territories in the plains, by plunder either of their own subjects, or those of the British government, fines, in short by every possible method.

Nothing can be said in favour of this many-headed government; each Deb, each Pillo, each Soobah, each officer in fact of high or low degree, is obstinately bent on enriching himself at the expense of his subjects or his inferiors; and their object is to do this as rapidly as possible, as removals are always probable, and are almost sure to depend upon a change of the Deb. There is no security for property, and not much for life, but fines are fortunately deemed more profitable than bloodshed, and, in short, the only safety of the lower orders consists in their extreme poverty. The whole proceedings of this government with the Mission were characterised by utter want of faith, honesty, and consideration. The trickery, intrigue, and falsehood could only be equalled by the supreme ignorance, presumption, and folly exhibited upon every occasion. Procrastination was a trump card in the game they played, mildness of deportment was pretty sure of inducing insolence, and they were only kept in decent order by perceiving that you were determined not to be trifled with.

I am not disposed to assign their behaviour to the nature of the present temporary government; it was only natural in an ignorant, very conceited people, who find that they are treated with distinguished consideration by the only power that admits them to an equality. The

preceding Deb, from convictions of interest, and from having tasted more than once of British liberality, might have treated the Mission with some consideration, but the issue as to business would doubtless have been the same. I regret much not being able to state more about the government of the country, and more especially its internal economy. The usual punishment for crimes is in fines, a method always resorted to wherever money is considered as the grand object. In Bootan I have little doubt but that the commission of grievous crimes would be encouraged, were the lower orders in condition to pay the fines.

I have before adverted to an instance of black treachery: that instance was furnished by a Mahomedan, Nuzeeb-ood Deen, a native of Calcutta; who having accompanied a trader into Bootan had been detained and placed in a state of captivity for twelve years. By some fortunate neglect on the part of the Booteas in the palace, he contrived to gain admission to Capt. Pemberton; and his tale was so consistent, and bore such evidences of truth, that Capt. Pemberton claimed him as a British subject; and the justice of the claim was very strongly urged by the prevarication of the Booteas, who indeed finally admitted it. Nuzeeb-ood Deen returned to the palace, but very luckily for him, Capt. Pemberton, who suspected that the Booteas might dispose of him privily, insisted much that he should be forthcoming when he called for him, and wrote to the Deb to the same purpose; yet even under these circumstances, it was unanimously agreed that he should be cut to pieces and thrown into the river, but they refrained from doing so from fear of the consequences. As soon as he was given up, which happened a day or two before our departure, he placed himself under Captain Pemberton, who advised him not to associate with Booteas, and above all to eat or drink nothing from their hands. Nuzeeb-ood Deen however was not proof against a cup presented to him by a boy with whom he had been very intimate during his captivity. The consequences were every symptom of having partaken of some narcotic poison; he was saved by the action of powerful emetics, but did not recover for some time afterwards; he was carried through the palace and throughout the first march on a Bootea's back.

The *population* of the country is certainly scanty, and indeed could not be otherwise under existing circumstances. Villages are very generally "few and far between," in addition to their being small. The only decently populated bits of country we saw about Santagong and Tamashoo. The valley of the Teemboo as far as Panga was also tolerably populous, but it must be remembered that this is the principal part of the great thoroughfare of the country. The palaces and

castles are the only places well inhabited, but the inmates might very advantageously be dispensed with, as they consist of idle priests in excess, and bullying followers; both too happy to live at the expense of the poor cultivators.

The causes of this scantiness of the population exist in polyandry, and one of its opposites *agynny*, in the bad government, and the filthy and licentious habits of the people. The great rarity of aged people struck us all very forcibly, and is a proof that whatever may be the proportion of births, the proportion of life is below average. The bad influence of polyandry is supposed to be counteracted by the idea, that the spouse of many will be faithful to the eldest so long as he may be present, and after him to the second, and so on;—such an idea is at best absurd, and as regards Bootan women, is positively ridiculous, their chastity not being of such a quality as to induce them to be particular as to relationship, or even acquaintance.

The expected celibacy of so large a portion of the inhabitants, although probably assumed in some degree, and which depends either on acceptance of office or on the course of education, must be very pernicious. The large number thus withdrawn from propagating—the only good in their power—would lead us to suppose that polygamy would be of much more likely occurrence than polyandry; and the custom is rendered still more paradoxical by the contrariety of custom observed amongst most other Asiatic people, who make polygamy almost an invariable consequence of worldly prosperity.

In very many places there is obviously an extreme disproportion of females to males, yet it would be too much to assume that there is a general disproportion, although the two causes above adverted to be would sanction such a belief, unnatural as it may supposed to be. We could not ascertain that the apparent disproportion of females was the result of unnatural conduct on the part of the Booteas, although in my opinion they are sufficiently capable of destroying either male or female offspring, did they consider it expedient to their interests.

Of the diseases, which in all countries form so essential a part of the causes tending to diminish population, I know nothing. The few patients I had at Pুনukka were all suffering from venereal, frequently in its worst form. Chillong Soobah assured me that such cases occur in the proportion of one in five.

The number of half-ruined villages would suggest the idea that the population was formerly more extensive than it now is. But it must be remembered that, in this as well as most other hilly parts of India, the population is partly migratory. In a country where agriculture is not understood, where no natural means exist for renovating the soil,

and no artificial ones are employed, the population must vary their abodes in accordance with means of subsistence. The only cause for surprise is that they should build such substantial houses; they may do so with a view of returning to them after the ground has been sufficiently fallowed.

Education. Of the course of this essence of the growth of the mind I can state nothing. If the assumption of the habits of priesthood be considered as the first step of education, it is rather extensive; but I doubt whether a Bootea boy may not wear these robes for years and then throw them off improved in no good, but in all vice. There is scarcely a village in Bootan in which some exterior decorations, as well as the whole air of the house, do not indicate it to be the favoured residence of a priest; yet I never heard the hum of scholars in any other place than Dewangiri, in which, and it is a curious coincidence, priests were comparatively uncommon.

The Booteas appear to have no caste; they are divided, however, into several sects, and in the account of the Persian sent into Bootan by Mr. Scott, whose account may be found in the fifteenth volume of the Asiatic Researches, as many as fifteen are enumerated. It does not appear, however, that the possession of the higher offices is confined to the higher sects; for Tongsa Pillo is known to be a man of a low sect, although he may be considered, from his station and connexions, the most powerful man in the country.

Most Booteas have much of the same appearance; to this however the people about Bhoomlungtung, Byagur, and Jaisa, as well as those about Rydang are marked exceptions, and have much more of what I imagine to be the Tartar appearance.*

If we look at those sects which do not depend upon blood, but upon education or circumstances, we may divide the inhabitants into labourers, priests, idle retainers, and great men, which is in many places another word for tyrants. The labourers are better acquainted with poverty than any thing else, and are lucky in being allowed to have such a safeguard.

Perhaps the most numerous, and certainly the most pernicious class, is that of the Priests or Gylongs. Their number is really astonishing, particularly when compared with the population in general. Not only do they swarm in the castles and palaces, of which they occupy the best and most exalted parts, but they inhabit whole villages, which may be always recognised by the houses being somewhat white-washed, of a better than ordinary description, and always in the best and

* The people again towards Buxa are of very distinct appearance, but this results from a tolerably free admixture of Bengalee blood.

coolest situations. Of their grades of rank I can say nothing, but much importance seems to depend upon due agedness. The highest were usually admitted to the interviews, and of course expected to be recompensed for the honour they did us; but as they were well contented with two or three rupees, their ideas cannot be said to be extravagant. They are perhaps rather more cleanly than other Booteas, and are reported to bathe publicly every week; but although we frequently saw processions in single files, in all cases headed by a small drum, a sort of gong, a clarionet, and an incense bearer, the priests following according to their seniority, the youngest noviciate ending the tail, I am not convinced but that the bathing part may be more nominal than actual; one thing at least is certain, that the duty, whatever it was, was agreeable, otherwise we should not have seen the processions so often.

They are kept in order in the castles by hide whips, in the use of which some of the brethren are neither sparing nor discriminating. The dress is becoming, consisting of a sleeveless tunic, generally of a chocolate colour, and edged with black or yellow. They are certainly better off than any other class: their chief duty is to be idle, to feast at the expense of the country, and at most, to tell their beads and recite mutterings.

The idle retainers form also a large portion, though by no means equal to that of the priests. As little can be said in the favour of these as in that of those, but they have one disadvantage in not being able to make use of their religion as a cloak for evil deeds. In these two classes all the most able-bodied men in the country are absorbed: they are taught to be idle and to become oppressors, and what is very bad in such a thinly populated country, they learn to look upon the ordinance of marriage, and its usual consequences, as a bar to their own interest. Of the great men I can only say that their influence is undeviatingly directed to the furtherance of their interests; they become governors to oppress, not to protect the governed—they rule by misrule; and as being the sources of the two great evils I have just mentioned—priests and retainers—they are themselves the greatest curse that ever was inflicted upon a poor country.

Of the moral qualities of the Booteas it is not in my power to give a pleasing account. To the lower orders I am disposed to give credit for much cheerfulness, even under their most depressed circumstances, and generally for considerable honesty. The only instances of theft that occurred did so on our approach to the Capital. How strange, that where all that should be good, and all that is great is congregated, there is little to be found but sheer vice; and how strange, that

where good examples alone should be led, bad examples alone are followed.

To the higher orders I cannot attribute the possession of a single good quality. They are utter strangers to truth, they are greedy beggars, they are wholly familiar with rapacity and craftiness, and the will of working evil. This censure applies only to those with whom we had personal intercourse; it would be perhaps unfair to include the Soobahs, whom we only saw once, in such a flattering picture, but it certainly would not be unreasonable; and I must make one exception in favour of Bullumboo, the Soobah of Dewangiri, and he was the only man of any rank that we had reason to be friendly towards and to respect. In morale they appeared to me to be inferior to all ordinary Hill tribes, on whom a Bootea would look with ineffable contempt; and although their houses are generally better, and although they actually have castles and places called palaces, and although the elders of the land dress in fine cloths and gaudy silks, and possess money, ponies, mules, and slaves, I am disposed to consider them as inferior even to the naked Naga.

They are not even courageous. I am inclined to rank courage among physical rather than moral qualities, yet it could not so be classified in the consideration of a Bootea, in whom other physical qualities are well developed. I therefore consider it among those other qualities which, as I have said, are absent in Bootan. A Bootea is a great boaster, but a small performer. All the accounts I heard of their reputed courage were ludicrous. Turner mentions seriously that one desperate revolution superinduced the death of one man in battle; and we were told that in the late protracted one, the only sufferers were two sick people who were unable to escape from a burning house. In a military point of view they could only make up for their deficiency in numbers by an excess of courage and of perseverance under difficulties. They are not even well versed in the use of their national weapons. The Gourkha Soubahdar who accompanied the Mission looked on them with the utmost contempt, and this knowledge he had gained by long experience. In Mr. Scott's time a handful of Assamese sebundies would take stronghold after stronghold, and lead off all the tenants, excepting the defenders who had run away, as captives; and very lately 700 Booteas, with every advantage of ground, were totally routed by seventy of the same sebundies. Their courage may therefore be written down as entirely imaginary.

Their ideas of religion appear to be very confused; religion with them consisting, as indeed it may do among other more civilised people, of certain external forms, such as counting beads, and mutter-

ing sacred sentences. The people throughout are remarkably superstitious, believing in an innumerable host of spirits, whose residences they dare not pass on horseback; and while they are near these abodes they keep the tenant at bay with volleys of incantations. The offerings to these spirits are usually flowers, or bits of rag; this practice they have in common with most of the tribes to the extreme east of Assam.

Of any marriage ceremonies I could not hear; but as chastity would appear to be unknown, no particular forms are probably required; nor do I think that there is a particular class of prostitutes. We all had opportunities of remarking the gross indelicacy of Bootea women; of this and of their extreme amiableness, the custom of polyandry is a very sufficient cause. So far as I could see, there is no distinction of rank among Bootea women, and those only are saved from the performance of menial duties who are incapacitated by sickness or age.

If the account given by Mr. Scott's Persian of the ceremonies attendant on birth be true, another sufficient cause exists for scantiness of population, as well as for a disproportion of women. He asserts that the second day after birth both child and mother are plunged into the nearest river; but so great is the dislike of a Bootea for this element, that I am inclined to discredit the account, and more especially as regards the mother.

The disposal of corpses is much the same as among the Hindoos: the ashes of the body are collected, and are, I believe, thrown into the nearest river. The ceremonies, of course, begin and end with a donation to the officiating priest. The only part of them I witnessed was the burning, and this only in one instance; it was done in a slovenly and disgusting manner.

Of the social habits, little favourable could be said in any place where the women are looked on as inferior beings, and used as slaves. The men generally are excessively idle, and spend most of their time in drinking *chong*, for the preparation of which, as well as that of arrack, there are provisions in most houses. I do not think I ever saw a male Bootea employed, except indeed those who acted as coolies. All the work in doors and out of doors is done by women, to whom about Pudukka Assamese slaves are added. The men are great admirers of basking in the sun, and even prefer sitting shivering in the cold to active employment.

I need scarcely add that both sexes are in all their habits inexpressibly filthy. The women in their extreme indelicacy form a marked contrast with such other Hill tribes as I am acquainted with.

The only use either sex make of water is in the preparation of food

or of spirits—no water ever comes into contact with any part of their person ; they scarcely ever change their clothes, especially the woollen ones. The people about Bhoomlungtung are far the dirtiest, and as they wear dark woollen cloths, rendered still darker by long accumulation of smoke and dirt, they look more like representations of natives of Pandemonium, than of any place on the earth's surface.

As they, at least the official part, are very assuming, so does state enter largely into all their proceedings. All our interviews with them were conducted with all possible state on their part ; and that exhibited to us at Tongsa and Punukka, was striking enough, and will ever after form in my mind as bitter a satire upon state as one could well wish. The effect was much lowered by the usual Asiatic want of arrangement, by an assumption of superiority among the inferiors (probably enough at the instance of their superiors), and by the admixture of the *profanum vulgus*, who had no opportunity of hiding inherent dirt under fine robes. On these occasions the behaviour of the chief was certainly gentlemanly, but the impression was soon obliterated by a messenger overtaking us, probably on our return, for another watch, or another telescope, or any other thing. In personal appearance I did not observe much difference between the higher and the lower orders, with the exception of the ex-Pillo of Tongsa, who seemed to have the best blood in the country concentrated in him. The presents given as returns of the magnificent gifts of the Governor General were beggarly ; and yet there was a good deal of parade in their exhibition. To us narrow silk scarfs were always given, occasionally varied with a foot and a half of blanket. The scarfs are habitual gifts among all the upper classes, and very generally form the inner envelope of letters.

Fine woollens and embroidered China silks form the dress of the nobles ; thick cotton or woollen doublets or tunics are common to every body else, but the chiefs probably have similar dresses in private, at least their principal officers certainly have ; and the only difference in such cases is the belt, from which the *dha* is on occasions suspended these are embroidered, and have a rich appearance. The dress of all is certainly cumbrous, especially when the peculiarly Chinese boots are donned. The boots of the higher orders are certainly not made in Bootan ; those of the lower orders consisted of a foot of some skin, with party-coloured woollen leggins, which lie above the calf. They are worn by both sexes.

The general receptacle for odds and ends, and a most capacious one it is, is between the skin and the doublet. Into this, which (consequent to one side being formed by the body) is not of the cleanest description.

every thing is thrust, from a handful of rice to a walnut, from a live fish to a bit of half putrid dried meat. Tobacco is carried in a small pouch suspended from one side.

A *dha*, or straight sword of a heavy description, is worn by all who can afford it, and the belt of this secures the loose doublet about the waist, and prevents the innumerable deposits therein from falling down. Those who cannot wear *dhas* from poverty, wear ridiculous looking knives, which dangling from the belt have a very absurd appearance. It is lucky that the people are not quarrelsome, and not inclined to resist the followers of chiefs, otherwise from the men being so generally armed, and so generally addicted to drinking, assaults might be expected to be of common occurrence; I only saw however one instance in which a man had been wounded. I certainly shuddered at times, expecting every moment to see adverse parties multiply each other by division; but latterly I was persuaded that cutting blows were rarely resorted to. The end of these disputes, which barring the blows were very fierce, was always brought about by the arrival of some third person, who by espousing one, espoused the stronger cause, and when this was done the weaker withdrew, or was made to withdraw by blows with the flat side of the weapon.

The accoutrements of a man of war differ, so far as his mere dress goes, in nothing. His defences consist of a well quilted iron skull-cap, which, when out of danger, is worn slung on the back; lappets are attached to it which defend the face—perhaps from cold. They also carry circular leathern shields, apparently of rather good manufacture. Their weapons of defence are first the *dha*, which is a heavy unwieldy weapon, without any guard. They are worn on the right side, but this to us awkward mode of wearing does not hinder a Bootea from disengaging his weapon readily, the sheath being first seized by the left hand. A blow from this weapon must cause a desperate wound, and judging from their quarrels, in which not a vestige of any skill in self-defence was shewn, the first blow, when actually struck, must decide the matter. Their fire arms, which are all matchlocks, and which vary in size from musketoons to huge wall pieces, are contemptible: they are of Chinese manufacture. Their powder, which they manufacture themselves, is powerless; indeed in one sense it may be considered as positively lessening power, for Captain Pemberton and Lieut. Blake ascertained that in ordinary charges it could not cause the discharge of the wad, and hence it actually weakened the cap. To remedy this badness they put in very large charges, but after all they seem to depend more on the effect of the noise than on that of the missile, for so little reliance is placed on this, that the marksman is

said to follow up the discharge by the piece by the discharge of a stone. It is likewise said that few venture to take aim except with the stone ; they generally attach the gun to a tree, and without pointing it consider that they have performed a dangerous feat by causing its discharge. All the musketeers I saw, even when there was no ball in the gun, certainly averted their faces very studiously when the due fizzing of the powder warned them that the explosion would soon come on.

The most common weapon next the *dha* is the bow : this we only saw practised at Dewangiri, and the result was not alarming. The bows are longer than ordinary, at least so they appeared to my inexperienced eyes. It must be remembered that they do not, as in some more civilised places, fire at marks the size of an ordinary house. The mark which we saw was a small battledoor-shaped piece of wood, the distance was 150 yards, and the situation of the mark was pointed out by branches of trees ; scarcely an arrow alighted within reasonable distance, yet the mark bore several marks, which we knew were made for the occasion. Each archer was very noisy in applauding his own skill, and challenging the others to equal it.

The dress of the women likewise consists of a loose garment, and is very similar to that worn by Hill tribes to the eastward of Assam. They have very few ornaments: the chief ones consist of a plate of silver fastened round the head, and crossing the upper part of the forehead, wire ear-rings of large dimensions, and peculiar rings fastened to a straight silver wire and worn projecting beyond the shoulder. They appear to be fond of flowers, and frequently decorate themselves with garlands, particularly of the scarlet rhododendron and the weeping willow.

The diet of the lower orders is very, very poor ; they appear to live entirely on grain of an inferior nature, or in the wheat districts on coarse, abominably dirty chowpatties. There can be little doubt but that in many places they are not unfrequently much pinched by want.

The chiefs and their followers, and the inmates generally of the castles, live chiefly on rice brought from the plains ; they likewise consume much dried fish, and very likely not a little dried meat, which they prepare by means of fire and smoke. They are as strict in their ideas of not eating flesh of living animals as the Burmese are ; and they are beyond doubt very fond of animal diet : the salt is I believe brought from Thibet : they eat with the hand.

Their beverages are in the first place tea, but this is I believe used only by persons of some rank or property : they procure this from

Thibet, in the form of huge flat cakes: it does not possess a particle of aroma. Still more common is the beverage called *runga pat*, which may be likewise used for the tea; if their accounts can be relied on it is prepared from the leaf of a pear or medlar. I had no anxiety to taste it as it was of a muddy appearance and reddish colour.

Of intoxicating fluids they have two; one of these is merely fermented, and is known by the name of *chong*; it is a vile preparation from rice, made in the same manner, but very inferior in quality to that used by the Singphos. To this drink, which is not strong, they are immoderately addicted, and it generally is carried with them on journeys in large horns made from the horns of the *Mithan*.

The distilled liquor I had one opportunity of tasting; it was very clear, and much resembled weak whisky, as the Soobah had I imagine diluted it prior to distribution to the spectators.

The *political relations* of the country are as limited as the boundaries. With *Sikkim* they appear to have no intercourse. In the *Kampas* to the eastward there is some reason to believe that they pay an annual tribute. That they are tributary indirectly to Lhasa, and now directly to China, there can be no doubt, although the official people most strenuously denied it. It was affirmed indeed that a considerable time ago the Chinese were in actual possession of the country, but relinquished it finally on account of its poverty. China also exercises its authority in inflicting fines on them, and keeps guards on all the passes into Thibet. The tribute is taken I believe annually to Lhasa accompanied with an envoy. With the British government its chief relations have existed owing to the occupation of certain tracts in the plains called *Dooars*, from their being situated near the passes into the mountains. These tracts are of considerable extent, and are held by the *Booteas* on toleration, as the tribute they are under the obligation to pay is not only so small in amount as to be quite nominal, but is generally allowed to lapse into arrears.

In assigning the continuation of the possession of these tracts wherever an accession of dominion was gained, the British government acted with its usual liberal policy; but this liberality has been so little appreciated by the people of *Bootan*, that the system, as it has worked hitherto, has been fraught with mischief; it has been most positively injurious to the territories in the plains, and it is, I think, injurious to *Bootan* itself.

We had ample opportunities of observing the extremity of misrule to which the *Dooars* in *Assam* as well as those in *Rungpore* are subjected by the infamous government of the *Booteas*, and it was the more striking from the contrast presented by our *Assamese* territories.

and as much so, by those of Cooch Behar. The crossing of a river eighty yards wide is sufficient to carry one from a desert into a country, every inch of which is highly cultivated; yet the richness of the soil is in favour of the tracts immediately contiguous to the Hills, and such are, in Assam at least, especially esteemed by the most laborious part of the population, the Kacharies; and were it not for this predilection in favour of these tracts, and the short-sightedness peculiar to a native population, by which immunity from taxation is preferred to security of property, the Assamese Dooars would rapidly become totally depopulated.

A gift long granted as a favour, in the eyes of an Asiatic, is soon considered as a right; and although the Bootea government has received some severe lessons in the shape of capturing their impregnable places, and of a resumption of portion of the Plain tracts, yet the free and quick restoration of the same on apologies having been made, with copious professions of better behaviour in future, has been attended with a very different result from that which would be occasioned by gratitude. The very severe lesson which they were taught in 1836, in which they were completely disgraced by being defeated by a handful of sebundies, and then punished by losing a Dooar, has taught them nothing. That very same Dooar, perhaps too liberally restored, has been for some months seizable for arrears of tribute. Nor is this all; since that restoration it would appear that their officers have become more than usually insolent. I think that it may fairly be assumed, that they argue on the certainty of restoration, so that a good foray might possibly, if its consequences were only temporary resumption, be a source of profit to them. By the plan of allowing barbarians to hold country in the plains, the inhabitants of those plains lose a portion of their most fertile soil; many of them are besides exposed to all the inconveniences and dangers of an unsettled frontier, for such must such a frontier be;* and hitherto it has not been attended, at least in many places, with the expected effect of securing the friendship of the Booteas, and the quiet of the frontier.

But no argument can place the matter in a clearer light than the facts connected with Herr Govindh, a subject of Bootan, but who is now independent both of Bootan and of the English government, and who therefore enjoys considerable tracts of country without paying any thing for them; nor can any thing more forcibly point out the weakness of the Bootea nation, for not only does Herr Govindh keep them in effectual check, but he has, I believe, offered to take all the Dooars

* Occupation of such tracts is very favourable to the carrying off of slaves, an habitual practice I have no doubt with the Booteas.

from them, if the government will allow him to pay 40,000 Rupees a year as tribute.

It acts injuriously on Bootan by diminishing the energies of its inhabitants, and suppressing the development of those resources which every habitable country may be supposed to possess. It must be remembered that the cultivation of the Plain tracts is not, as in some other instances, carried on by the inhabitants of the mountains, but by the natives of the Plains, who after reaping the produce of their labour appear to be compelled to take it to the first station in the Hills, from which it is distributed to the appointed places.

In all cases of entreaty for restoration it has been urged that the inhabitants of Bootan cannot subsist without these tracts, but they forget that by labouring in their own country they might supply themselves either with grain, or the means of purchasing it; and further, that the supplies drawn from the Plains are only enjoyed by the chiefs and their followers.

Some distress would doubtless result from immediate and final resumption, but this distress would be confined to the better orders, and would be a due punishment to them; it would in a short time be abundantly counteracted by the reduction of the Gylongs, and by the compulsion of a great number of idle hands to work for subsistence. It would also, I think, have a beneficial effect in lessening internal commotions. The ambition or rapacity of a chief is now readily seconded by the greediness of his idle followers, but were these necessitated to become agriculturists they would certainly not respond very readily to his call; as matters now stand, in short, there is a ruinous drainage of a very fertile tract of country, without any sort of return whatever; for the revenue derived from one Dooar during, a short season that it remained in our hands was amply beyond all proportion to the tribute; and it may fairly, I think, be stated that a country which draws every thing from another, and makes no return, may be compared to a parasite, the removal of which is always desirable, and very frequently essential. The Bootan government has been invariably treated with great liberality by the greatest power in the East, and how has it requited it? It has requited it by the rejection of a treaty which could only be productive of advantage to them, by shuffling mendacity, by tampering with British subjects, and by inconsiderate conduct to a British Mission, evinced in many other ways than that of opening its dâks. They object to forwarding communications to Lhasa, they object to British traders entering their country, and, in fine, they object to every thing that is reasonable, and that would be mutually advantageous. In short,

they shewed themselves to be ignorant, greedy barbarians, such as should be punished first, and commanded afterwards.

The objection raised against the resumption of the Dooars, on the plea that no check will then exist on the Booteas, is one contrived to meet expediencies: it has never been attended with the supposed effect. The affair of Herr Govindh, and the recent victory at Silka-bhari are convincing proofs that the Booteas may easily be kept within their own limits. And even arguing the necessity of an increased military force, it must not be forgotten that the same tract which now yields us nothing but a few debased coins, a few inferior ponies, with abundance of disputes and law suits, would in a very short time become equal in richness to any of the neighbouring tracts, rich as these undoubtedly are.

PART III.

[*Natural productions, agriculture, domestic animals, arts, and commerce.*]

Few wild quadrupeds were seen by us in Bootan. Tigers, leopards, and elephants are to be found on the lower ranges, and probably the former straggle up to as considerable a height as they do to the westward. The chief beasts of prey in the interior are bears, but they do not seem to be numerous, and foxes of large size and great beauty: these last are confined to considerable elevations, and none were seen under 8000 feet.

Monkeys as usual abound on the lower ranges, on which the *Hoollock* of Assam likewise occurs. Some long-tailed monkeys occurred above Bulphai, 8200 feet above the sea; and in January I likewise saw a flock of noble ones not far from Tongsa, at an elevation of 5800 feet; these were white, and in form and size resembled the Langoors. Among wild ruminants, I may mention the barking deer, which however scarcely ascend above 4000 feet, and the musk deer, the most valuable wild animal of the country. It would appear to be rather common on the higher ranges, as several skins were brought to us from Punukka; the price for us, of a perfect one, that is without the musk, being five rupees.

The smaller animals that came under our notice were a species, I believe, of *Lagomys*, which Lieut. Blake found dead on the path, one or two animals of the weasel kind, and rats which swarm in very many of the houses.

Three or four species of squirrel were likewise procured, all from elevations of 5500 feet, yet all were likewise natives of Assam. The

most striking one is a black one, with a whitish belly, measuring, including the tail, nearly three feet.*

The variety of birds is, of course, considerable, but the lower ranges seem to be by far the most productive; on these jungle fowl and two species of black pheasant are found. The raven is found throughout, but the very familiar crow or jackdaw never leaves the plains, and never leaves populous places. Throughout the higher portions of Bootan it has as noisy, but scarcely possibly as mischievous a substitute in a red-legged crow. This is common in the three elevated valleys, and not rare elsewhere at elevations of 8000 to 9500 feet: and below these it is scarcely to be seen. Cuckoos, larks, magpies, jays, and sparrows were the chief European forms met with, but except the latter, perhaps, all were of different species from the birds known by those names in Europe.

The cuckoo is rather widely dispersed. I first heard it about Punukka, and subsequently along the Teemboo, at an elevation of 7000 feet; below this height, at least in this direction, its peculiarly pleasing voice was not heard, although I think I saw the bird considerably lower. With the magpie, which has much of the plumage of the European bird, but a shorter tail, we became familiar at Bhoomlungtung, but lost it at Jaisa. The jay, a figure of which may be seen in Mr. Royle's Illustrations, was found pretty constantly throughout the wooded tracts between 5500 to 7000 feet; it is a noisy, but not a very wary bird. Larks were very common in the elevated valleys, and afforded us some good shooting; in habits, plumage, and voice they are to an uninitiated eye the prototypes of the bird so well known in Europe. In the same valleys Syrases were common. Wild fowl are, as might be expected, rare; the only place where they occurred in tolerable plenty was in the jheel below Santagong. The most destructive and numerous bird is the wild pigeon, which is to be found in plenty in almost every village, and in literal swarms in the castles and palaces: they do a great deal of damage to the poor ryots, who are not allowed to destroy them, on account of their being sacred. This exclusion holds good very strictly about the residences of the chiefs; and, although the villagers were in all cases delighted to see them shot, yet they keep no check on their increase, as they have no means of destroying them, and appear never to have thought of doing so by means of their eggs. At Byagur, the place of this bird was supplied by another very curiously marked species, which, it is said, likewise occurs about Simla.

* *Sciurus beng-moricus*, McCl.

None of the wild birds are made subservient to use ; indeed the natives appear to be very deficient in means for procuring them. The sacredness of life may be one reason, but even the most superstitious will eat any bird one shoots, provided it be large enough to promise a substantial repast.

The same remark is applicable to fish, which are common in most streams below 4000 feet. The two most common are the *Bookhar*, which is scarcely found higher than 2000 feet, and the *Adoee*, which is found as high as 4000 feet, and perhaps higher, but its habits render it difficult to see. The *Bookhar* abounds in the Deo Nuddee below Dewangiri ; it is from the sport it affords, and the great readiness with which it takes a fly, to be considered as the trout of India. The *Adoee* is said to refuse all bait, and I have found this to be the case not only in this instance, but in all those which have a similarly situated mouth, such as the *Sentoosee*, *Gurriah*, and *Nepoorah* of Assam. At Punukka, where the *Adoee* is plentiful, it is caught by nooses ; such as were so caught were all small, and the young anglers were obviously afraid of detection. At this place I saw a solitary instance of the use of a casting net, but I suspect that it was under authority ; elsewhere I observed none even of the ordinary rude expedients for catching fish. Both of the above fish are nutritious food, and are so plentiful that they really might form a valuable acquisition to the miserable diet of the lower classes ; but this would not suit the benevolent ideas of the priests, who however appear to eat stinking dried fish from the Plains with great sang froid. To the poor in Bootan every thing is denied. Bees appear to be plentiful, but their buildings are passed with indifference by the lazy Bootea.

Of the vegetable productions that occur naturally in Bootan, the application for purposes of life is confined to timber, fuel, and dyes.* Of the various kinds of timber trees I am quite ignorant ; they are used chiefly for rafters, planks, and troughs, either for aqueducts or for mangers. A great part of the planking is derived from fir trees, which are always preferred for fuel. Of the turpentine procurable from their various species of *Pinus* they seem to make no use, so that they are ignorant of one great value of these valuable trees ; that of the *Pinus excelsa* is very abundant, and highly fragrant. In the lower ranges the bamboo becomes of almost universal application, and constitutes the greater portion of the huts of the inhabitants of these districts ; baskets of various sizes, and implements for clearing the rice from the husk by agitation, &c. are likewise manufactured from it.

* Although the *Bogh Puttur*, or path, is found in abundance on the higher ranges, yet it is not resorted to for furnishing an article of trade. The tree is a species of birch, and the thin flakes of its bark are used in the composition of *hookah* snakes.

In similar places rattans are in demand, and several valuable sorts may be procured. They form the fastening of all the bamboo work, are used in some places to secure the roofs from the effects of the violence of the winds, and form a great portion of the baskets in which loads are in this country universally carried. These are very convenient receptacles, forming a rather narrow parallelogram; they are frequently covered with hides, they open at the top, and are the most convenient hill baskets I have hitherto seen.

The Booteas depend on the plains for supplies of betel-nuts, otherwise they might advantageously cultivate the tree on many of the lower ranges. So far as I had an opportunity of judging, they possess few wild palms of any description, excepting rattans; I observed one, which grows on inaccessible places as high as 2000 feet, and which will probably prove new, but I did not succeed in obtaining the specimen requisite for actually determining whether it is so or not. *Ficus elastica*, the caoutchouc tree, occurs about Dewangiri, but not in abundance, and may be expected to occur throughout greater part of the ranges between the Plains and an elevation of 3000 feet. They are aware of the properties of the juice, and use it to make vessels formed from split bamboos, water-proof. The Simool tree likewise occurs within similar elevations, but they make no use of it, although in Assam the cotton is used for the manufacture of a very light and excessively warm cloth, excellently adapted for quilting.

A solitary mango tree occurs here and there in villages even as high as 4000 feet. The finest occurs at Punukka, in the royal gardens, which are emblematic of the poverty and want of horticultural skill in Bootan. It bears its flowers there at a time when the fruit is fully ripe in the Plains.

Jack trees occur every where about the villages on the lower ranges, and is one of the few fruit trees from which they derive any gratification. These trees thrive remarkably well at elevations of 2000 feet, particularly if within the influence of the Plains.

In villages at similar elevations two or three species of fig may be found, but the fruit is not edible; no oranges are cultivated with a view to the market; a few occur in some of the villages; the tree does not occur above 5500 feet, and in such altitudes it requires a sheltered, sunny place. The oranges which we received as presents, all came from the Plains. With the orange, the shaddock also occurs in tolerable frequency.

One of the most common fruit trees is the pomegranate, it does not thrive however above an elevation of 4000 feet: I saw no fruit on

the trees, which were however loaded with flowers; very fine ones occur about Punukka.

They likewise possess peaches, (perhaps the almond) and pear trees: but I am unable to say of what nature the fruit may be; we saw the trees during their flowering season.

The Bheir also occurs at low elevations; and in the gardens of Punukka I observed another species, forming a handsome good sized tree, but like most of the others, it was not bearing fruit. In the same garden there is cultivated a species of *Diospyros* with edible fruit, which also I did not see, and in fact we did not appear to have been in Bootan during the fruit season. The only fruit which we enjoyed were walnuts; we procured these only at Punukka, most of them in presents from the Deb, and a few by purchase, but these were of inferior quality; these walnuts are very good, and would be much better were care taken at the time of gathering. The trees are said to be cultivated in orchards at considerable elevations, but we saw no attempt at any thing of the sort, although we met with a few isolated trees here and there.

On the lower ranges, but scarcely above 3000 feet, the papaw occurs, but so far as I could see did not promise much return. Pine-apples, which occur so profusely on the Khasy hills, and are of so much use to the natives, are very rare in Bootan, as well as in those parts of the Dooars which we crossed.

On our return, we met with a fruit which promised under improved cultivation to be agreeable enough; it was about the size of a pigeon's egg, with a large smooth shining black seed; in flavour it approached somewhat to the Sappadillo, to the natural family of which it would seem to belong. The only ornamental tree to which the Bootas are particularly attached is the weeping cypress: these occur about all the castles and palaces, and especially about religious buildings. It is as ornamental a tree as can be well conceived, and as it thrives between elevations of 5000 to 7000 feet, I was very anxious to obtain seed for introduction into England; but all that I did obtain were bad, and I imagine that the female tree was alone met with. Of the gramineous plants found wild in Bootan no use seems to be made; wherever such plants are in requisition for thatching, the Plains are resorted to, as these, at least under the admirable management of the Bootea government, abound with *Oollookher*, *Kagara*, *Megala*, *Nol*, and *Iko-ra*. The plants of the hills themselves are chiefly coarse species of *Andropogon*, not serviceable for thatching; among these the lemon grass occurs abundantly. I am not aware whether the natives of these mountains use any plants occurring naturally as *vegetables*, cooked or uncooked; I

never saw any of that scrambling into the jungle on the part of the coolies which so generally occurs in Assam and Burmah, where every second or third plant is a favourite dish.

Of their medicinal plants I am quite ignorant. Our guide, Chillong Soobah, who had a great leaning to the practice of physie, assured me that the Booteas were quite ignorant of any medicine whatever; but this is so contrary to the prevailing practice among barbarous and semi-barbarous nations, that I place no confidence in the assertion.

Of the mineral productions of the country I had no opportunity of learning any thing. The only article of this nature that I saw turned to account was clay for pottery; and this was only met with at Puntukka. In short, whatever the resources of the country are, one thing is at least certain, that they have not yet been developed; and I give the greater part of the nation credit for being amongst the most idle and most useless on the face of the globe.

Of the agriculture of Bootan little is to be said, as so very large a proportion of the supplies is derived from the Plains. The state in which the little agriculture is, that is carried on, argues as little in favour of the amount of agricultural skill they possess, as the uncultivated state of the Dooars does in favour of their numerical extent, or of that of their Plain subjects.

Of *Cerealia*, or culmiferous plants, they have the following sorts: rice, wheat, barley, raggy, millet, maize; and of farinaceous grains, not the produce of culmiferous plants, they have buckwheat; and of *Atriplex*, one or two species of the leguminous grains. They cultivate one or two species of *Phaseolus*, one of which is the *Phaseolus*, Max; the Oror, *Cytisus Casan*; the Pea, *Pisum sativum*.

The only oily seeded plant I saw, and of this only fragments, was the *Tel*, *Sesamum orientale*; I saw no reason however for supposing that they manufactured this oil themselves.

Of the culmiferous plants, rice forms the staple article of food, and is perhaps exclusively used by the chiefs and their adherents, and the very numerous establishments of priests. It is only the staple article viewing the Dooars as forming part of Bootan, for in the interior the proportion borne by this grain to that of either wheat or barley is very small.

Most of the spots available from situation and elevation are cultivated in rice, but in all I saw, judging from the remains of the stubble, the crops must have been small. The cultivation is conducted in the ordinary manner, as is likewise the mode of preparing the slopes for irrigation, or in other words, terracing: as might be expected it is generally a summer crop, and in all places of sufficient elevation, is

made to alternate with winter crops of wheat or barley. The highest elevation at which we saw it cultivated was about Tongsa, to the north of which village there is a slope cultivated with it from an altitude of 5500 feet to one nearly of 7000 feet.

It is principally used boiled in the ordinary manner, and in the preparation of their fermented and spirituous liquors. They do not seem to prepare it for eating in the dry state, as is so generally done by Hindoos. Wheat is perhaps the most common grain cultivated in the interior, yet I saw no instance of the promise of fine crops; it is cultivated as low as 3500 feet, and as high as 9000 feet, but the fields we saw at this elevation were miserably poor, from the effects of the bleakness of the winds. No particular steps are taken to favour its growth, except in the three elevated valleys, where manure is employed from some attention to agriculture being absolutely indispensable. The grain is, I think, of inferior quality; it is principally eaten in the shape of chowpatties, or cakes of heated dough. The flour is ground in mills turned by water, but the meal is badly cleaned.

Barley is nearly of equally extensive cultivation, and I think arrives to somewhat greater perfection than wheat; the cultivation is precisely the same, and probably its application. Two or three sorts occur; of these the finest indisputably is a six-rowed barley, but I am unable to say whether it is identical with the *Hordeum hexastichon*, the bear or bigg of Scotland. This sort occurred in great perfection along the ravine of the Teemboo, especially about Chupcha; it was the only crop, really worthy of the name that we saw in the country.

Of the remaining grains of this nature, Raggy,* *Bobosa* of Assam, is the most common; it is of a very inferior nature, and is only used as a makeshift. Millet and maize are so limited in extent, as not to be worth consideration.

Of the other farinaceous grains, buckwheat is the only one cultivated to any extent; it occurs throughout the greater part of Bootan, but especially about 4000 feet. This grain is either a great favourite with all Hill people, or it is of such easy cultivation as to compensate for its inferiority to some others. The Booteas do not appear to feed their cattle on it, and ours by no means approved of it. It is probably used as a bread corn.

The species of *Atriplex*, and one or two of a nearly allied genus, *Chenopodium*, are scarcely worth notice. They occur in Bootan, as in most other mountainous countries in the East, and are more valuable as affording sorts of spinach than for the grains. Equally unworthy

* *Cleusine Coracana*.

of notice are the leguminous grains of Bootan ; and the few species I saw of the produce appeared to me more probably derived from the Plains than from any labour of their own. The only actual cultivation of such I saw was a small plantation of oror below Benka or Tassgong, and this we were told was more with a view to the produce of lac than dâl ; and of the pea, I saw one flourishing field of small extent between Tumashoo and Oongar.

Of their various other " plants cultivated as vegetables for the table," I am quite as ignorant ; every thing in fact is derived from the Plains. We did not even meet with yams or *kuchoo*s, both of which I have seen among other Hill people in great perfection. They are unaware of the value of the potatoe.

Every body has heard of Bootan turnips, but very few have, I imagine, seen them. With the exception of a few we obtained at Dewangiri we saw none, nor when we reached the interior did we ever hear of any. There is no doubt however that excellent turnip seeds have been sent to some from Bootan, but whether from this *bhote ka moolkh* or the far finer one to the westward, I cannot state ; I only state their extreme rarity, so far as the Mission was concerned. Far more common is the *Mola*, or radish, which I suspect Turner mistook for turnips, for one has only to imagine that an actual Bootan radish is a real Bootan turnip, and it is so. The Bootan radishes grow to a large size, but they are very coarse and spongy, and heavy of digestion even to a Hindoo stomach. The cultivation chiefly occurs between 5000 to 7000 feet.

Of plantains they possess a few specimens, which may be seen struggling for existence as high as 3500 feet. I did not even see any of the wild plantain, easily distinguishable from the white powder with which the under surface of the leaves is covered, and its large stature. This is common on the Himalayan range to the eastward, and ascends as high as 5000 feet.

Of that most useful family the Gourd family, I saw no sorts under cultivation. As they depend on the Plains for all that in their opinion makes life tolerable, so do they depend upon their jungles for all flowers to which they may have a fancy, or which may be considered as agreeable for offerings. There is no such thing as a flower garden in the whole parts of the country we saw. The royal gardens at Punukka are scarcely an acre in extent, and stretch along the river from the bridge to the village. It was made originally with a view to use, never for ornament, and possesses now neither the one nor the other recommendation, although it has an Assamese gardener: oranges, shaddocks, pomegranates, the mango, jack, bheir, &c. &c. are to be found

in it. The Booteas shew some taste in their selection of wild flowers, which is more than can be said for the natives of Bengal, who approve of such vile things as *Ganda*, and *Champa*, and many other equally strong or equally gaudy productions. With Booteas rhododendrons, especially the scarlet and the white arboreous sorts, are favourites, and I observed formed the greater part of some offerings lying in the presence of the Dhurma.

The only cotton, and it was a miserable specimen, that I saw, I have mentioned as occurring along the Monass; yet we were told that a good deal was cultivated in similar places throughout Bootan. That we saw none is accounted for by the bulk of the population wearing woollen cloths, and by the remainder obtaining their supplies from the Plains. No plants were observed used for making cordage, the ropes used for fixing the loads being either made of twisted rattan, or horse-hair. On emergencies the bearers resort to the jungles, in which some very tenacious creepers may be found; but they appear to prefer the species of *Daphne* for this purpose, as the inhabitants of Upper Assam do the *Ood-dal*, a species of *Sterculia*.

No sugar is cultivated in Bootan; a few solitary specimens occurring about villages being the only specimens we saw. The cane itself is imported from the Plains, as well as *ghoor*. The same is equally applicable to tobacco, large quantities of which must be consumed, as all the men are great smokers.

They do not appear to me to be great pân eaters; their supplies of this are also derived from that source, which they do not scruple to drain so freely. A few straggling plants of hemp are to be met with amongst most villages at rather low elevations, but I never saw any to an extent sufficient to warrant me in supposing that any use was made of it.

Of plants cultivated for dyeing, I am not aware that any cultivation is carried on. At Phullung, one villager was attempting to rear a few plants of the wild indigo, so much used in Upper Assam, and which I have elsewhere stated is a species of *Ruellia*. Of this plant which appears to abound in colouring material of a deeper, but less brilliant hue than that of indigo, I have not been able to meet with any account that can be depended on. I have seen that in one of the volumes of the Transactions of the Agricultural Society it is mentioned as *Ruellia carnosâ*: no good authority for the name is given, and on that of the book itself few, I imagine, will be willing to adopt it.

The most common dye in Bootan is that furnished by the *mungisth*. It appears also to be the favourite colour. As the supply obtained from the jungles is plentiful, no means are resorted too to cultivate it. It

forms one of the few articles of export from the country, and is generally exchanged for dried fish. In Bootan at least two species are used, one of these is Roxburgh's *Rubia mungista*. Of the different species of *Rubia* very little is known, and that little is a good deal confused. From Mr. Royle's account it would appear that the article *Munjeeth* is the produce alone of *Rubia cordifolia* (*R mungistha* Roxb.) The two species used in Bootan are very distinct, and very general constituents of other mountainous floras; one of them has leaves without stalks.

Agriculture being in such a poor state, we need not look for improvement in the implements by which it is carried on. The plough is a lumbering article, on the ordinary Indian principle, and the others are equally bad imitations; but as the Booteas pride themselves on being warriors, they are not inclined to turn their swords into ploughshares, and until this is done no improvement can be expected. Manures, so far as I had opportunities of judging, are chiefly confined to the three great valleys; they consisted chiefly of rotten fir leaves, and appeared to me to be of a very poor description. In these parts ashes of stubble and weeds are likewise spread over the surface, but the greatest portion of labour was expended in pulverising the surface. The natives likewise make use of the accumulation of filth under their houses, which judging from the depth of the layer is not always removed annually. This is excellent manure, and is principally used about the little plots of ground attached to most of the villages.

Of fences they are generally very regardless, or at best, place them where they are of no use. Thus the yards of many of the houses, and in some parts what are called gardens, are surrounded with stone walls; some few rising crops are protected by branches of thorny shrubs, but generally the only defence exists in the shape of a herd-boy, who is regardful only of damage done by his own charge.

In domestic animals they cannot be said to be rich. Chowry tailed cows certainly are not common, and would appear to be kept chiefly by the officers of high rank. As their range is restricted to very high elevations, they must be in Bootan of very limited utility. I only saw one sufficiently close to ascertain what kind of creature it was, and I was much disappointed in finding it an heavy, clumsy-looking animal; the specimen, however, was not a fine one. The only herds seen by the Mission were at elevations of nearly 10,000 feet. The Chowry tails exported to the Plains probably come from Thibet; and judging from those which we saw, they are of very inferior quality. The cattle are used as beasts of burden.

A much finer animal is the *Mithun*; this is the same as the Mithun

of the Mishmees, or the animal so known in those parts to the Assamese by that name, but is very different from the Mithun of the Meekir hills. This animal is not uncommon: the finest we saw were at Dewangiri, and none were seen after leaving Tongsa. Nothing can exceed the appearance of a fine bull; it appears to me intermediate between the buffaloe and the English bull, but the cows have much less of the heavy appearance so characteristic of the buffaloe. Their temper is remarkably fine, and their voices or lowing very peculiar, resembling a good deal some of the cries of the elephant. I am not aware that they are of much use to the natives: the oxen are employed at the plough. As the Booteas do not seem to care for milk, they are probably kept with a view to sacrifice, which is with an Asiatic not unfrequently another word for feasting.

The other breed which they possess, and which we only saw between Pুনukka and the Plains, assimilates much to the common cattle of Bengal; it is however a much larger and a much finer animal.

Sheep are not very common: the most we saw were rams, which formed a standing part of the russia. The ewes are used by the Kampas as beasts of burden, but I am not aware that they are of any use to the Booteas. Throughout Bootan I only saw two flocks.

Goats are common enough, and appear to be of the ordinary Plain breed. We saw no *Khussies*, at least live ones, unless I except the six shawl goats sent by the former Deb as presents to the Governor General.

All these animals are turned out during the day, either alone, or attended by boys. The cattle are picketed at night either in yards or about the villages: the goats find their own quarters in the ground floors of their owner's houses. Either no fodder at all is given, or they are provided with coarse straw, which evidently requires great effort to be eaten. During the rains their condition is much bettered; in the cold weather it is bad enough, as the looks of the beasts testify.

Pigs of ordinary customs are common enough, and were the only animals I saw slaughtered: they are kept with more care than either ponies or cows. They are generally treated to a wash once a day, consisting of a decoction of herbs, of which the common stinging nettle appears to be a favourite, and radish peelings. Most of the pigs we saw engrossed the tender cares of the women, who certainly paid much more attention to them than they would appear to do to their own children. They have peculiar cries well known by the pigs, who are generally very obedient, particularly if they see the wash-tub; at night they also occupy the ground floors. The ponies of Bootan are sufficiently well known, and are I think much over-estimated. They

are very inferior to the *Ghoonts* of Simla, in size, strength, and appearance. Like all such creatures they are spirited, and sufficiently headstrong: they understand their duties perfectly, and are orderly enough on a line of march, unless the road is particularly easy. Very few first class ponies are to be found in Bootan, and none are to be obtained except, perhaps, at most exorbitant prices. The *Booteas* patronise nothing but stallions, the mares being almost exclusively used for breeding or for carrying loads; in such cases they are not led, but follow their leader quietly. Ridden ponies are always led; in difficult ascents they are assisted by pushing up, and in descents they are equally assisted by vigorous pulling at the tail. They form a part of all out of door ceremonials, and are dressed out with gay trappings; their switch tails are then converted into regular cock-tails, and ornamented with chowrys. Three or four ponies were selected as presents to the Mission, but as the hour approached for presenting them, the liberality of the *Deb* rapidly fell, and one alone was given to the Governor General. This creature never reached the Plains, for after falling twice, once a height of 15 to 20 feet, it expired above *Buxa*: we heard afterward that it had been very ill for a long time, so that the *Deb* thought it a capital opportunity of getting rid of him.

The mules are fine, and of much more reasonable price than the ponies: they are chiefly kept for riding, and are mostly of good size.

Both ponies and mules are stabled and provided with litters, not as may be supposed of the cleanest description. Their food varies a good deal; on some rare occasions they partake of Indian corn and wild tares; still better off are those which have participated in some religious ceremonies—for these, the green corn of the poor *ryot* is not considered too good; generally, however, they are fed on the worm wood, which is so common throughout Bootan below 5500 feet, and which is cut up, and then boiled; and in some places they are fed on the young boiled leaves of an oak, not unlike the celebrated English tree. We saw few in good condition. It is probable enough that the ponies of the *Deb* and his chief ministers are occasionally treated to paddy husks, as the *Deb* very graciously sent us a handful or two of this nutritious material, in compliance with our requests for some grain for our ponies. Of grass they are deprived except during the rains, although *Deab* grass is to be found about *Punukka* in sufficiency to feed six or seven ponies a day.

The ordinary dog appears to have been brought from the Plains, but its pariah qualities are not improved, neither is its condition. Of this, one was so convinced, that he took advantage of our escort, and returned to his native country with us, evidently highly pleased at

his escape, and very grateful to us for our good offices. Many of the better orders keep Tartar dogs : these are large, shaggy, powerful beasts, apparently very fierce, and the most incessant barkers I ever met with ; they are always kept chained up. At a white face they appear perfectly furious, but perhaps they rely on the chain. Turner says they are not so bad if one is armed with a bludgeon. Mr. Blake found that in almost every instance their eyes were of different colours.

Of domestic birds, the common fowl is the only one : in many places it reaches considerable perfection ; about the capital the breed is as bad as can be imagined. They all appear to be low-bred, and the old birds, especially the cocks, are generally lame from corns. Their crows are most curious, and very unlike those of any other variety I know of ; it is of inordinate length, and when once commenced can not be stopped, for fright only changes it to a hasty gobble. The bird, while he is undergoing the process, walks along with neck and tail at full stretch, and with his beak wide open, totally absorbed in the business. No care is taken of the fowls, or at most, they are allowed to stand round when rice is cleared or pounded.

They have no ducks or geese, a want they share with all the mountainous tribes I have seen. A peacock is occasionally to be seen in the castles, and at Tongsa we saw one associated with a tame jacana.

Fine Arts.—The ordinary form of houses in Bootan is that of a rather narrow oblong, disproportionately high, building : the better order are rather irregular in shape. They are built either of slabs of stone, generally unhewn, or of mud well beaten down ; the walls in all cases are of considerable thickness, and almost universally slope inwards. They are for oriental houses well provided with windows, and are further furnished with small verandahs, of which the Booteas seem very fond. There is little or no ornamental work about them, with the exception of those infested by priests, in which there is generally a rather ornamental verandah. The roofs throughout the interior are of bad construction ; they are formed of loose shingles, merely retained in their places by heavy stones placed on the top of each ; this necessarily requires a very small slope, but even small as it is, the whole roof occasionally slips off. In some few places where bamboos are available the roofs are formed by bamboo mats, placed in several layers, and secured either by stones or rattans. In the better order of houses the great perviousness of the roof is compensated for by the imperviousness of the ceiling of the uppermost story, which is well laid down with mud ; houses situated near the plains, where proper grasses are obtainable are thatched : (the most common grass is the Oollookher, *Saccharum cylindricum*), such roofs from their slope,

thickness, and projecting eaves are excellent. The generality of houses have a court-yard in front surrounded by a stone or mud wall, the entrance to which is, or has at one time been, furnished with a stout door. Access to the first floor, (for the ground floor is invariably occupied by pigs, goats, &c.,) is gained by a rude sort of stair, intermediate between real stairs and ladders, and rather dangerous: a greater degree of safety is sometimes insured by the presence of a banister. Each story is divided into several apartments, which are generally defective in height; no regularity in their distribution appears to be ever observed; they are not provided with chimneys, and in many instances we found the smoke almost intolerable.

The houses of the poorer orders, situated near the plains, are miserable habitations, but still are better than those in common use in Bengal and Assam, in as much as they are built on muchowns.

The castles and palaces are buildings of a much superior nature; indeed it is said that they are erected by Thibetans or Chinese. They are of immense size, varying a good deal in form, according to the nature of the ground on which they are built, and which is invariably a spur or tongue of land situated between the junction of two streams. If the ground be even, the form chosen seems to be parallelogrammic, but if it be uneven, it has no form at all. They are, particularly in the latter case, ornamented with towers and other defences, either forming part of the building or detached from it.

The national walls and roofs are preserved; the former are of great thickness, pierced in the lower part with narrow, utterly inefficient loop-holes. In the interior there are one or two large court-yards. The first and second stories are the chiefly inhabited ones, the ground floor, however, is not so profaned as in other houses. Most of them are ornamented with a raised square or oblong tower or building, in which*
* * take up their quarters. That of Pুনukka is the largest and loftiest, consisting of several stories, and several roofs gradually decreasing in size—an obvious imitation, except in the straightness of the roofs, of the Chinese form; it is in part covered with copper, as the Bootas assured us, gilt.

All these large buildings, as well as the summer-houses attached to them, the houses of recluses, or active priests, the resting houses of chiefs, and religious edifices of every kind or description, are white-washed, and most are ornamented with a belt of red ochre, not far from the roof. The residences of the great men, and some of the religious edifices, are distinguished by a folded gilt umbrella stuck on the top, resembling a long narrow bell, rather than that for which it is intended.

* A blank in the M.S.—EDS.

In none do there appear to be any particular accommodations for sleeping, but in each house there is a *cloacus*. One room is set apart for a cook-room, and constitutes the principal inconvenience in a Bootea house; no use is made of the uppermost story for this purpose, as the Booteas consider it sacred; and as they have no chimneys, out of pure reverence they are content to bear smoke in its blackest and most pungent forms. Their fire-places, that is for cooking, are good and powerful; these are likewise used as furnaces for their stills. A good representation is given of them in Turner's Bootan. The flooring of the houses is generally good, of many really excellent; the doors are folding, and the fastenings of the windows of similar construction; the only very deficient part of a good Bootea house exists in the stairs and want of chimneys.

To the castles, stables are appended; but in spite of their being deprived of this copious source of filth and vermin, the deficiency is made up by the number of inhabitants.

Of their religious edifices, some are of picturesque appearance, being ornamented with carved window-frames and verandahs. The most common are the pagodas, which approach in form to the ordinary Boodhistical forms, such, at least, as are universal throughout Burmah. Those of Bootan are, however, vastly inferior in size, form, and construction, and are mostly such as an ordinary Burmese peasant would be ashamed of building. They are built of slabs of unhewn stone, and are not much ornamented, particularly as they are not provided with a red belt. The handsomest and the largest* we saw was that close to Chinjipjee, this was ornamented with small pagodas at each corner, and had the umbrella, which was of curious form, garnished with bells, with the usual long tongues. In the upper portion each face had a nose of portentous dimensions, and two Chinese eyes. I am not aware whether, as in Burmah, they contain images or not, but slabs of inscribed slate are very generally let into their sides.† Appended to these are long walls of poor construction covered with roofs; on each they bear inscriptions, and in some instances paintings situated in recesses. The other forms generally occur as small square buildings; they are either built up over large idols or are empty, but decorated with paintings of gods, much resembling, especially in gaudiness, the common sorts of Hindoo deities; or they contain the peculiar cylinders which contain incantations, and which are constantly, or at

* The name of this, *Chiotackari kocho*.

† The pagodas are always surrounded by poles either of bamboo or fir, to which are attached longitudinally long strips of coarse cotton cloths, entirely covered with inscriptions.

least ought to be, kept in motion by the action of water. In some places where running streams are not obtainable, as in the Soobah's houses, these are revolved by the hand.

There is nothing particular in the construction of their flour mills, which are very small; the pivot is vertically attached at the bottom to an horizontal water wheel, and passing above through two horizontal stones, of which the upper one alone revolves, the flour is hindered from falling off the under stone by the person in attendance.

Of bridges they have two kinds, the suspension and wooden; the latter are, I think, of better construction than the former, although not of equal ingenuity. The finest suspension bridge in Bootan is that across the Monass, below Tassgong, and has a span of about sixty yards. The chains are slight, and the links too long; the masonry by which the chains are supported is massive, and built into tall respectable looking towers. The motion is very considerable. The great fault in this bridge, and in this respect it is inferior to that of Chicka, is that its bottom or platform is not flat, but forms the segment of a circle, and is continuous with the sides, which are made of bamboo matting.

The wooden bridges, which are thrown over all the second class torrents, are solid looking, and impress one with the idea of great strength. Considerable pains are taken in the selection of such spots where the span is less, and where solid abutments either exist, or may be readily made. The supports are large beams placed in pairs, with a cross timber between each, and which pass through the abutments, on which towers are erected for the purpose of giving stability. The beams gradually increase in length from below upwards, so that each projects somewhat beyond that immediately below it. On the upper pair, which form a slightly inclined plane, planks are placed. As the upper beams only project over perhaps one-third of the span, the centre of the bridge is made up of horizontal beams and planks; if quite complete the bridge is covered with a chopper, and provided on either side with a stout open balustrade. Small streams are crossed by planks, or timbers, the upper surface of which is rendered plane. From the consideration of their buildings it would appear that they possess considerable architectural genius;* but we were told that all those of superior construction are built by Thibetans or Chinese; this was certainly the case with the bridge erecting over the Deo Nuddee, not far from Dewangiri. As long as nature supplies rocks of easy and perfect cleav-

* Turner in mentioning their aqueducts draws a comparison between the Bootas and the wonderful ancients; he compares a few wooden troughs, applied end to end, and so badly constructed that one kick would demolish considerable portions, to those masterpieces of master minds which laugh at time.

age, the houses are built of such materials, and these are used perhaps in all cases in the constructions of rank or sacred character. In many places mud is resorted to; the mud is pressed tightly between planks, and then assiduously beaten down by feet and clubs; in this they shew great dexterity, five or six persons, chiefly women beating at once a piece of mud of small dimensions. The mud is beaten down on that which has been previously so treated, so that when they come to any height, there must be considerable danger of falling, particularly as the beaters make most extraordinary antics. When each piece is sufficiently compacted it is allowed to dry. As portions of mud of a parallelogrammic form are thus treated, the house presents lines, which at first lead one to suppose that it is built of blocks of coarse sand-stone. The process is very tedious.

The sculpture they possess would appear to be Chinese: some of the figures were really excellent; the finest we saw were at Dewangiri, especially that of the Dhurma, before which it is considered impossible to sin, and this may be the reason of the natives striving so strenuously to do so. All these figures were well dressed. The few figures of Boodh that I saw were rather rude, in the usual position, and with the usual long fingers and toes. These people certainly have an idea of drawing, and this was very pleasing. To a native of the Plains you may shew a drawing which you have every reason to be pleased with, particularly if you have done it yourself, and he says, "*kya?*" or he mistakes a house for a boat, or a tree for a cow. In Bootan, however, the case is very different; our sketches were recognised immediately, no matter what subjects we intended to represent. They are also ready at comprehending charts. And with regard to their own performances we had opportunities of judgment presented to us by the walls of many houses, which were covered with scrawls; they excel in the representation of animals, particularly when the shape depends upon the will of the artist.

Music enters into most of their ceremonies, and the favourite instrument emits a sound like that of a bassoon. Another favourite instrument is a clarionet, particularly when made from the thigh bone of a man: the sound of this is equal to that of any Bengal musical instrument, and is as disagreeable as it is continuous, the skill of the performer depending entirely upon his length of wind. One of these instruments generally heads every procession of sufficient importance.

At two of our interviews with Soobah we had an opportunity of witnessing the mode of dancing, which was done entirely by women, and as certain qualifications for dancing girls exist to a remarkable extent in Bootan, they are chosen indiscriminately. The dancing merely consists in slow revolutions and evolutions, and outturning of the

hands. They danced to their own music, which consisted of a low monotonous chanting, of a much more pleasing nature than the al-tissimo screeching so admired in India.

Of their manufacturing skill I saw few or no instances. All the woollen cloths of ordinary quality are imported from Bengal or Thibet; their own manufacture being, it is said, confined to the production of coarse, often striped, blankets, scarcely a foot wide. They make but very little cotton cloth, and the manufacture of this appears to be confined to the villages near the Plains; the article is of poor and coarse quality: all their silks and many other parts of their fine apparel are Chinese.

I have before mentioned the use they make of bamboos, and rattans: in the work of articles manufactured from these materials they are not superior to the wildest of the Hill tribes to be found about Assam.

Their ordinary drinking cups are wooden, and look as if they were turned; and they are perhaps the best specimens of manufacture we witnessed.

Their workers in metal are very inferior; we saw some miserable blacksmiths and silversmiths, provided with utterly inefficient apparatus; however there is not much demand on their skill, as all their arms, and all their better sort of utensils are of foreign manufacture, principally Thibetan. They are said to manufacture the copper pans used for cooking or dyeing, and which are frequently of very large dimensions; and they went so far as to point out the place of manufacture, viz. Tassangsee. But I doubt this, for in the first place the vessels resemble much those made in Thibet; and in the second, I saw nothing like any manufacture going on at Tassangsee, except that of burning charcoal, which is much used in cooking. Paper they certainly do make, and in some quantity: I had no opportunity of seeing the process. The material is furnished by two or three species of *Daphne*. The article varies much in size, shape, and quantity; the finest being white, clean, and very thin; the worst nearly as coarse as brown paper. If bought from the manufacturers themselves it is cheap, the price being six annas for twenty large sheets; if from an agent the price of course increases in a centesimal proportion. It is well adapted for packing, as insects will not come near it, always excepting the formidable white ant, who however consumes the contents of the paper, not the article itself. This paper appears to be precisely the same as that manufactured to the north-west and south-east by the Shan Chinese.

The only potteries, I saw were near Pুনukka, but although they supplied the capital, there were only two or three families employed. The clay is obtained close to the potteries, and is of tolerable quality;

it is pulverised by thrashing with a flat club, and is then sifted. It is subsequently kneaded by means of water into the proper consistence. The operations are conducted entirely by the hand, and the dexterity which is shewn in fashioning the vessels is considerable. Of vessels for containing water the upper half is made first, and the under is added afterwards. Those made during the day are burnt at night, being covered with straw, which is then set on fire; the finishing operation, if required, and which is intended as a substitute for glazing, is rubbing them over with tarry turpentine; they are then packed and carried off to market, or rather to the palace: the artists are the poorest of the poor, and as filthy as any other class in Bootan. They live close to the potteries, in the most miserable hovels imaginable. The wares they furnish are of several sorts—dishes, and pans, (some of which have very small inefficient handles) gurrachs, and large oblong vessels for containing water; of these one family consisting of ten or twelve can make a considerable number, say sixty in one day.

Of their manufactures of leathern articles I can say nothing: the only articles I saw of this nature were the boots, which are of untanned hides, and the reticules for holding tobacco, which are of decent fashioning, tanned and coloured. And I believe I may here close the list, meagre as it is, for the sugar, oil, ghee, &c. they use, is all brought up from the Plains. As their manufactures are at so low an ebb, not much is to be expected in the way of commerce; and this must continue to be the case so long as they derive every thing from the Plains, and make no returns whatever; so long as they may live an idle life at the expense of others. Throughout the country indeed there is but little evidence of frequency of intercourse. The busiest place by far was Dewangiri, but this depended chiefly on the steps taken for the provision of our party, and on the daily assembling of the Kampas prior to descending to Hazoo. The Deb is stated to be the principal merchant, but we only met two coolies laden with his merchandise! All the Soobahs likewise trade, but I apprehend their dealings are altogether insignificant; for excepting their followers, who are disinclined to pay, even had they money, and the priests who will not pay, I know none from whom advantage in the way of traffic could with any reason be expected.

The exports from Bootan to the Plains are generally exposed for sale at annual fairs, of which Hazoo and Rungpore are the principal. The articles are ponies, mules, woollen cloth, and rock salt. To these I must add a peculiar spice, known in Assam by the name of *Jubrung*, and which is used, I believe, to some extent by the natives in their cookery. It is very fragrant, very aromatic, and excessively pungent, and if kept in the mouth but a short time, occasions a

remarkably tremulous sensation of the tongue and lips. It is the capsule of a species of *Zanthoxylon* found on other mountains to the north-east, although I am not aware whether it is used as a spice elsewhere than in Bootan. Captain Jenkins first pointed it out to me, and I had several opportunities of seeing the shrub producing it during my visit to Bootan. All these are of inferior quality, scarcely less so, perhaps, than the article in which they pay the greater part of even their nominal tribute. From Thibet they obtain all their silks and tea, there is, however, very little intercourse between the countries.

I am afraid that this very imperfect account will be considered as prejudiced; but I believe it will be found, if put to the test, tolerably faithful. I went into the country prepossessed in favour of every thing bearing the name of Bootan—I expected to see a rich country, and a civilized people. I need not say how all my expectations were disappointed. Whatever ulterior benefits may be derived from the Mission, one, and that by no means inconsiderable, has already resulted—I allude to the demolition of the extravagant ideas entertained, even by our frontier officers, of the prowess and riches of Bootan. As the Mission will have been the means of reducing this people to their proper level among barbarous tribes, we may expect their demeanour will become more respectful, their behaviour more cautious, and the payment of the tribute more sound and more punctual. In a word, they will understand that they are tolerated by—not the equals of—the gigantic British power. I have stated my opinion of them with some severity, but with impartiality; and my conviction is, that they are in all the higher attributes very inferior to any other mountainous tribe I am acquainted with on the north-east frontier.

It must not be supposed that, however disgusted with the inhabitants of the country, the Mission was not a source of great gratification to me. It afforded me an opportunity of visiting a very alpine country; and, what is much more important, of fixing, through the kindness and skill of Captain Pemberton, the localities of nearly 1500 species of plants with such accuracy, that the collection will be of much interest to all students of botanical geography. It afforded me too an opportunity of profiting from the valuable instructions of Captain Pemberton; so much so, that it will always be a matter of regret to me that I was so ignorant of so many essential requisites during the other journeys I have had the honour of performing.

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