

ART. VII.—*On the White-haired Angora Goat, and on another species of Goat found in the same province, resembling the Thibet Shawl Goat; by* LIEUT. ARTHUR CONOLLY, *of the Bengal Cavalry, Cor. M.R.A.S.*

(Read January 18, 1840.)

ON a recent excursion through part of Asia Minor, being accompanied by a friend who spoke Turkish and Armenian perfectly, I noted some information that he collected, first regarding the long famed silvery white-hair goat of Angora, and next about a goat resembling the shawl goat of Thibet, that exists throughout the country to which the first beautiful animal is peculiar. I was about to forward the said notes from Constantinople, with a box of specimens for the Society, when learning that the second species of goat alluded to abounded in other parts of Turkey, through or near which I should shortly travel, I put my memorandums aside in the hope of being able to extend them. I now beg to offer the result of the whole inquiry thus far, having for the convenience of illustration separated the details concerning each race of the animal under remark.

The goat of the first race, peculiar to the province of Angora and certain adjoining districts, is *invariably white*, and its coat is of one sort, *viz.* a silky hair, which hangs in long curly locks¹. The general appearance of this animal is too well known to need mention here. The country within which it is found, was thus described to us: "Take Angora as a centre: then the Kizzil Ernak (or Halys). Changeré, and from eight to ten 'hours' march (say thirty miles) beyond; Beybazar and the same distance beyond, to near Nalahan; Sevree Hissar; Yoorrook², Tosiah, Costambool; Geredeh, and Cherkesh,"—from the whole of which tract the common bristly goat is excluded. Kinnier did not see a long-haired goat east of the Halys: we marked the disappearance of this animal on the westward, a little before Nalahan³. Our Angora informants

¹ See Spec. A., Nos. 1 and 2.

² A village named from Nomade families so called, who inhabit the mountains above it.

³ This probably is the point noted by Kinnier, as "Wullee Khan," for we met no person who knew a place of the latter name.

agreed that the boundary is decided on all sides, and remarked, that if taken out of their natural districts, these goats deteriorate, in point of coat especially, till scarcely recognisable, adding, that it is difficult even to keep them alive elsewhere, particularly if they are taken to a low or damp soil, after the high and dry land to which they are accustomed¹.

The greater part of the area described above, consists of dry chalky hills, on which there are bushes rather than trees, and those chiefly of the dwarf oak, or else of vallies lying from 1500 to 2500² feet above the level of the sea, which are quite bare of trees, and but scantily covered with grass. In this expanse of country there are spots which produce finer fleeces than others, *e. g.* Ayash, Bey-bazar, and Yoorrook. These are districts where the goats are mostly kept on hills, and the natives attribute a general superiority to mountain flocks, which have, first, a rarer atmosphere, secondly, more leaves, and a greater choice of herbs, for which, nevertheless, they are obliged to range widely, and so are kept in health, on which the quality of their coats mainly depends. The finest fleeces in the aforesaid country are said to come from the *Yoorrooks*, roving tribes who keep their flocks out day and night throughout the year, except when an unusual quantity of snow falls, so that not being enclosed and crowded together, they do not soil their coats by the heat and dirt of each others' bodies. The latter flocks too are more or less kept upon fresh food in winter, as they are then led down from the mountain heights to the tops of the lower hills, from which a little herbage can be gleaned, as the strong winds that prevail at this season drive the snow off them, while the plain flocks must be folded, and fed upon hay and branches.

The fleece of the white Angora goat is called "*Tiflik*," the

¹ It is remarkable that wherever these goats exist, the cats and greyhounds have long silky hair also; the cats all over their bodies, the greyhounds chiefly on their ears and tails. Some of the natives would refer this peculiarity to their "air and water," but are perplexed to account for the nonparticipation of other animals who eat and drink the same fluids. A similar difficulty attends those who would attribute the peculiarity to diet; as sheep's food differs entirely from that of cats and dogs. Possibly hares and other furry animals in this region, have their coats altered also, more or less. Our native friends did not seem ever to have inquired. The sheep dogs are fine animals, with thick shaggy coats, but we did not think their hair unusually fine.

² This rough calculation is made from the measured height of Angora, by Dr. Ainsworth, (*i. e.* 2769 feet,) and native statements about the variation of climate in the different provinces above named.

³ Originally a Persian word.

Turkish for goat's hair, in distinction to "*Yün*," or "*Yapak*," sheep's wool. After the goats have completed their first year, they are clipped annually, in April, or May, and yield progressively, until they attain full growth, from 150 drachms to $1\frac{1}{2}$ "oke" of Tiftik. The female's hair is considered better than the male's, but both are mixed together for market, with the occasional exception of the *two-year-old she-goat's fleece*¹, which is kept with the picked hair of other white goats (of which, perhaps, five pounds may be chosen from a thousand), for the native manufacture of the most delicate articles; none being ever exported in any unwrought state. An oke of good common Tiftik of this year's shearing, is now selling in the Angora bazar for nine piastres, or about 1s. 8½d., and the finest picked wool of the same growth is fetching fourteen piastres per oke.

A curious statement made to us at Angora was, that only the white goats which have horns, wear their fleece in the long curly locks that are so much admired; those which are not horned, having a comparatively close coat. We were at Angora shortly after the shearing season, so could not observe the difference stated, which our informants seriously attributed to the circumstance of the animal's continually combing itself with its spirally twisted horns². A merchant, not of Angora, remarked, that probably there, as elsewhere, the finer the fleece naturally is, the more readily it curls, and he added, that good flock-masters keep their goats' hair as fine as possible, by carefully washing it, and combing out all impurities.

Surplus he-goats, and barren females, are killed in the beginning of winter, when their flesh is parfried, and potted by the poorer classes as a store for the cold season. The skins are sold to curriers, who, after removing the hair by a preparation of lime, cure them for export to Constantinople, where they are dyed of different colours, and chiefly used for the manufacture of Turkish boots and slippers. The fleece is then five or six inches long, but as it is "harsher" than that which is shorn in spring, and is thought to be more or less damaged by the currier's lime, it is sold at an inferior price, under the name of "*deri*" or *skin* Tiftik, a term answering to what English staplers call "dead wool."

The hair of the Tiftik goat is exported from its native districts raw, in yarn, and in the delicate stuffs for which Angora has long been famous. The last are now chiefly consumed in Turkey; a little yarn, and a large quantity of the raw material, goes to Europe.

¹ A weight of 400 Turkish dirhems, or drachms, equal to about 2½ lbs. English.

² See Spec. B.

³ See the pair in the box of specimens.

A few well-cured entire skins, with the curly fleece upon them, are used in Turkey as seats by religious doctors and chief derwishes, and others are exported to Europe, where they are fancied as rugs and saddle-cloths. A fine skin of this sort costs one hundred piastres (or 1*l.*) at Angora, and one hundred and fifty at Constantinople.

When the Tiftik fleeces have been shorn in spring, women separate the clean hair from the dirty, and the latter only is washed, after which the whole is mixed together and sent to market. That which is not exported raw, is bought by the women of the labouring families, who, after pulling portions loose with their fingers, pass them successively through a large and fine toothed iron comb, and spin all that they thus card¹ into skeins of yarn, called "*iplik*" (the common Turkish word for all thread), of which six qualities are made. An oke of Nos. 1 to 3, now fetches in the Angora bazar from twenty-four to twenty-five piastres, and the like weight of Nos. 3 to 6, from thirty-eight to forty piastres. Threads of the first three numbers have been usually sent to France, Holland, and Germany; those of the last three qualities to England.

The women of Angora moisten their carded goats' hair² with much spittle before they draw it from the distaff, and they assert that the quality of the thread much depends upon this; nay more, that in the melon season their yarn is incomparably better, as eating this fruit imparts a mucilaginous quality to the saliva. "Divide (said they) a quantity of Tiftik into two parts; let the same person spin one half in winter and the other in the melon season, and you will plainly see an important difference." In winter (they added) the thread cannot be spun so fine as in summer, since, owing to the state of the atmosphere in the cold season, it becomes more harsh (crisp).

Before this yarn is used by the weaver, it is well saturated with a glutinous liquor called "*Chirish*." This is made from a root like a radish³, which comes to Angora from the neighbourhood of Konia. It is dried and pounded, mixed with water, and well shaken in a bag. Then the liquor is strained off, and small skeins are steeped in it, while large hanks are watered by the mouth when they have been spread out, according to the following process, which I may describe as witnessed by us at Angora.

"We found the workmen before sun-rise on a level space by the

¹ See Spec. C.

² Spec. D.

³ A medical friend describes it as a plant of the *Asphodely* family, which grows on all the high table lands of Armenia. Shoemakers are said to use the dried flour as "*siz*" where the plant is common; but I found a different article in use at all the shoemakers' bazars in Constantinople.

banks of the Angora stream. Upon a centre and two end cross trees was rather loosely stretched a double web of yarn, 70 feet by 7, which was kept extended and separate by sliding cross sticks. Two men walked up and down the sides of this frame at the same time nearly opposite to each other, holding bowls of "Chirish" liquor made into a thin yellow mucilage: of this they continually squirted, or rather blew out, mouthfuls in alternate showers¹, all over the web, while others followed them to press the threads together for a moment, and then to change their position relative to each other, by means of the sliding cross bars mentioned, so that all might be equally moistened, as well as to rebind any threads that had given from the tension. The Chirish liquor had a sweetish and not unpleasant taste, but the squirters complained that it totally destroyed their teeth, and showed bare gums in proof. They distributed their jets with singular dexterity, in broad casts of the minutest drops, and expressed doubts whether, considering the clammy nature of the liquor used, any watering pot could be made to do their work as well, and save them from its inconvenient effects."

This operation is repeated several times²: the work is always commenced in the cool of the morning, so that it may be completed ere the heat of the sun can operate to dry the thread quickly. A long web, like the one described, having been sufficiently moistened, its threads are divided into breadths of the sizes ordered; the weaver sends his comb that one end of a portion may be fitted into it, and carries the rest away rolled up on a stick, to be drawn out as his work advances.

The women of Angora knit gloves and socks³ with the Tiftik yarn, working them both furry and plain, and making some socks of the latter sort so fine as to cost one hundred piastres the pair. The surplus of their yarn they sell to native weavers of stuffs. The weaver seeks threads of equal thickness and takes the skeins that he matches back to the women spinners, who reel them into one thread, assisting this operation with Chirish mucilage. The connected thread being returned to the weaver in large hanks, he, with a hand wheel, winds off small portions through a pan of water on to bits of reed cut to fit his shuttle.

¹ Tobacco for the Turkish pipe is damped by a similar process.

² Moorcroft shows that the preparers of goats' wool and yarn for the Kashmere shawl manufacture, take pains to impart mucilage to each; first kneading the cleaned wool with damp rice flour, and afterwards dipping the yarn into thick boiled rice water.

³ See Spec. F.

The cloths woven from 'Tiftik at Angora, are of two kinds, "Shalli" and "Sôf," or twilled and plain cloth, and the manufacture of these is confined to men. The weaver sits with nearly half of his body in a small pit, at the bottom of which he works two or four treadles with his feet, according as he wishes to make plain or twilled cloth. Part of this loom is fixed to the floor before him, and the rest is suspended nearly over it from the ceiling. He contracts to work a piece of thirty *Piks*, or rather more than twenty-one yards, for a sum which varies according to the texture required, from fifteen up to one hundred piastres, and by working steadily he may finish a piece of this regular measure in six days.

These stuffs are dyed at Angora¹. Indigo and cochineal, with tartar, nitric and sulphuric acids, were mentioned as articles imported from Constantinople and Smyrna. Yellow berry² grows to perfection in the neighbourhood, and some spoke of a grass yielding the same colour as indigenous to the soil. Coffee colour, a favourite among the Turks, they obtain by mixing cochineal with the dried rind of the fresh walnut. They remarked that cloth made of dyed thread keeps its colour till it falls to pieces, while that which is dyed in pieces, fades with comparative quickness.

Angora has always been the chief, if not the only, town in which Tiftik has been manufactured into cloth; the other towns of the area described sending their hair to its looms³. Now not even thread is spun at the latter places, their goats' hair being exported in a raw state, and Angora itself has, from the latter cause, quite declined, there being "perhaps fifty" looms where there were one thousand two hundred in the best days of this provincial capital, and not more than from one thousand to fifteen hundred pieces of stuff sent out instead of twenty thousand that used to be required before the Greek revolution. The citizens take the last event as a point from which to date their decline, remarking, that before that period, there was a prohibition against the export of Tiftik from Turkey, except when wrought, or in the form of *iplik*, or homespun thread, so that the interests of the native spinners and weavers were protected against the machinery of Europe. Up to that time, however, it would seem that there was little demand for the raw material in Europe. Tournefort, indeed, in 1701, speaks of this hair being used in England for *wigs*, and particularly states, that it was required un-

¹ See Spec. G.

² See Spec. II.

³ A near village named Stenzen, at which fine Sôf is made, was mentioned to us as the only other place at which looms were known to exist, and these did not number a dozen.

spun. According to the information that was kindly procured for me by an English merchant at Constantinople, when some bales of white Angora goats' hair were shipped thence to England, in 1820, the article was so little appreciated, that it brought only 10*d.* per lb.; since that period the English demand for the raw hair has been annually increasing, and the ordinary price for many years, has been 18*d.* per lb., though, from unusual causes, it has fluctuated from 27*d.* to 14*d.* Permission is now freely given by the Turkish government to export raw Tiftik, and as European manufacturers find it more convenient to make their own thread by machinery, the demand for Angora handspun yarn has almost ceased, and its value in Turkey has fallen one half. The following list of exports from Constantinople, for the last three years, will show how one article has superseded the other, and what is the present state of the trade.

		Mohair Yarn.		Tiftik.
1836	- -	bales	538	- - 3841.
1837 ¹	- -	do.	8	- - 2261.
1838	- -	do.	21	- - 5528.

No yarn has been, and probably none will be, exported this year. 2679 bales of Tiftik have been already shipped, and it may be expected that fully 3000 more will be exported before the end of the season, from the supply of this year's produce, which is just arriving from the interior². The bales that are brought on horses weigh sixty okes, those that come on camels, one hundred ditto; but the proportion of the latter is small, and seventy okes may be taken as the average weight.

My latter informant thought that from 1000 to 1500 bales might be shipped annually for England at Smyrna.

The native demands for Shalli and Sôf, is said to have decreased since the adoption of an European style of dress by the Turkish grandees, who used to wear full summer robes of these stuffs; but though this change of costume has, doubtless, had some effect upon the Angora manufactures, they have probably been chiefly injured by the introduction of cheap French and English merinoes into the Turkish bazars. Owing to these causes and to the recent large European demand for raw hair, the value of Angora shawl stuffs has gone down so quickly, and so completely, as to entail great loss upon

¹ Year of commercial distress, therefore exports much diminished.

² June, 1839.

the wholesale and retail merchants who dealt in them¹, and little short of ruin upon the weavers, hand spinners, dyers, and others who were connected with the manufacture at Angora itself². But though the city has thus suffered, the province must gain largely by the change, if the Sultan can be made sufficiently aware of his own interest to treat it fairly.

I will now speak of the second race. This goat has an unchanging outer covering of long bristle, between the roots of which comes in winter, an under coat of downy wool³, that is naturally thrown off in spring. A remarkable fine breed of this species exists throughout the area to which the Angora white-hair goat is limited, but similar breeds prevail all over the highlands of Turkish and Persian Armenia and Kurdistan, in the neighbourhood of Kerman, and probably in other elevated parts of Persia. Moorcroft, in speaking of [the shawl] wool which is used in Kashmere, says, "It was formerly supplied almost entirely by the western provinces of Lassa and by Ladakh; but of late, considerable quantities have been procured from the neighbourhood of Yarkand, from Khoten, and the families of the great Kerghiz Horde;" and he elsewhere remarks, that although some districts of those countries produce finer fleeces than others, "the breed is the same in Ladakh as in Lassa, Great Thibet, and Chinese Toorkistan." I quote these remarks because I have little doubt, from Moorcroft's description of the wool brought from the just named different countries to Kashmere, and from actual comparison of London samples, marked "Cashmere wool," with specimens collected in Asia Minor and Armenia, that the double-coated goats which are pastured on the table lands of Thibet, and those which range the shores of the Euxine, are but varieties of the same species.

As far as my recollection goes, the double-coated breed that en-

¹ Formerly there were thirty-six merchants in Constantinople who traded exclusively in Angora stuffs and Mohair yarn; now there are but six, and the Angora "Khan" is nearly deserted.

² Tournfort, in 1701, rated the population of Angora at about 45,000 inhabitants. Kinnier, in 1817, estimated it at 20,000. Our accounts give now but a total of 13,000, of whom many hundreds would instantly emigrate if permitted. We saw but twelve looms at work, because the Sultan had ordered a levy of 150 Christians as pioneers to his army, and all able-bodied weavers were hiding themselves.

³ See Spec. I.

joys the favoured districts of the white Angora hair goat, is of larger size than any in the more southern Turkish provinces that I passed through ; and I should say that its wool is the finest, but I had not sufficient means of comparison to give a positive opinion on the latter point ; and leaving others to investigate at leisure, for the benefit of natural history and commerce, the circumstances which favour the production of a valuable article that seems to be easily procurable from many countries, I proceed to communicate the few notes regarding it, which my friend and myself were able to make during short and hurried journeys¹.

The double-coated race of goat in the Turkish and Persian districts, which have been specified above, is coloured black, brown, golden and light dun, gray, and piebald. The colours of the two coats do not necessarily correspond, black bristle commonly overlies brown wool, and other double coats which are of the same general tint, differ more or less from each other in depth of shade. Goats of this breed in Angora, are occasionally mixed with the white-hair goat first described, either by the shepherd's inattention, or when a remarkable flock-leader is desired. In such cases, that influence, of which we read in the Bible history of Jacob, and in the *Georgics* of Virgil, always predominates strongly ; the produce, we were told, having, invariably, a *double coat* of some *colour*, commonly of piebald. White goats, with both bristle and under wool², are now and then seen in Angora, but this is said by the natives to be almost always, when, after two or three partial crossings, the issue of a white-hair, and of a coloured double-coated goat, is being brought round to the first race³. At most places out of Asia Minor, the people said that white was a rare colour for shawl wool. At Mosul, however, the only sample that I could obtain from the bazar, was white, hair and bristles mixed, and I was assured that it was the colour most commonly brought there. This could hardly have resulted from a cross with the Angora hair goat.

The outer coat is called " Küll" or " Kill," the general Turkish

¹ You cannot make satisfactory inquiries in these countries without time to put repeated questions. A Constantinople merchant told me, on the authority of his brother-in-law, that the best Angora "dehrem" was exported to India for the shawl manufacture in *Kashmere*. The brother-in-law being appealed to, said that he had only expressed wonder that it was not so exported, and it came out that he conceived Hindostan to lie somewhere in the vicinity of England.

² See Spec. J.

³ We noticed after shearing time, that all the flocks we saw were led by piebald goats that had not been clipped like the rest ; but our information regarding the first mixture and subsequent crossing of these two breeds, was imperfect.

word for bristle, and the under coat is called "*dehrem*," at *Angora*, a term, which, according to our informants there, is also applied to the soft down with which nature clothes the camel in winter. In Meninsky's Lexicon, there is a word signifying the same thing, but spelt "*Derhem*," whereas, it was remarkable that; the Armenian merchants at *Angora* pronounced the first syllable with a strong aspirate. I mention this because the word appears to be little known in any shape beyond *Angora*; indeed, only persons in that province who affect correctness, make a point of using it, the common people giving the general name of *Tiftik*, to their goat flocks of cloth species, which, except at breeding seasons, are kept together, and talking of *ak* and *kara* (white and black) *Tiftik*. Beyond those provinces of *Asia Minor*, to which the white *Angora* hair goat is peculiar, the Turkish as well as the Persian shepherds apply the term *Tiftik* to the double-coated goat, and under this name, I imagine, has been sold all the shawl wool that has hitherto been exported to Europe through *Constantinople* and *Smyrna*, or by any port on the coast of *Syria*¹. I was assured by merchants in the *Angora* "*Khau*" at *Constantinople*, who gave me the specimens of "*deri dehrem*" or "*skin wool*," which will be found in the box forwarded², that no *Angora* goat's wool of this second sort had, until the present year, been exported to Europe through the capital. They took the parcels, they said, from a few bales for the first time invoiced by them, and sold to an English merchant, adding that *Smyrna* had hitherto monopolized the export trade of all their "*dehrem*" that was not consumed at home, for their women use it also to a considerable extent, in knitting warm socks and gloves that are esteemed all over *Turkey*³.

In other "*Khans*" at *Constantinople*, used by Turkish and Persian merchants, I found men packing, for Europe, bales of goats' "*skin wool*," that was similar in kind, but inferior in quality, and so full of lime, that much dust was raised when any quantity of it was stirred. This, it was said, came from *Kurdistan*, according to long custom. The Nomade tribes who possess these double-coated goats, sell many of them when they come down from the mountains, in the most convenient villages and towns, to which certain wool traders make circuits. The men of *Kaiserea* appear to be great collectors of shawl wool, and

¹ In the interior of Persia this sort of wool is called "*Koark*."

² See Spec. K.

³ Spec. L. I did not ascertain whether any are exported to Europe. Probably not, except as occasional presents, as their price would not enable them to compete with our lamb's wool fabrics of similar kind.

I have heard of their going as far east as Diarbekir for it. The flesh of these animals, like that of the Angora hair goats, is everywhere sold as winter provision for poor people, and their skins are likewise transferred to curriers, who prepare them for Morocco leather. The bristles are for the most part first removed, by a weak solution of lime, rubbed on the inside of the skin, which loosens them without bringing away the under down, and this, more or less mixed with the finer bristles that remain, is next taken off by a stronger solution of the same substance. The separate bristle, like that of the common goat all over Turkey, is made into ropes and girths, and into hair cloth, which is used for sacking and the packing of merchandise. The wool, mixed as it is with bristles, is either sold to the travelling merchants above mentioned, or used in the country for the manufacture of felt caps, tent coverings, and horse clothing.

When the warmth of spring causes the under coat to leave the skin, it works gradually off towards the end of the bristles, and on which it hangs in small lumps. We arrived too late at Angora to see there any wool in this state, but I forwarded some specimens from Erzurum, which I cut from the back of a double-coated goat that had several remaining on its back in that elevated valley, as late as August. The Kurdish shepherds, I was told, do not think it worth while to collect these lumps of down when they clip their goats in spring for the bristle. At Angora, where this sort of wool is put to a separate and profitable use, one would imagine that there could hardly be the same indifference, yet the "dehrem" gloves and socks knitted there have all some bristle in them, and I cannot say whether this results from the use of dead wool obtained from curriers, or from a difficulty in freeing the spring coat from the bristles with which it is closely associated. Moorcroft thus describes the way in which the Thibetan shawl wool is obtained in spring:—"The goat's bristle having been cut short with a knife, in the direction of its growth, or from the head towards the tail, a rude comb, made of seven willow pegs, is passed in the reversed direction, which brings away the finer wool almost unmingled with the coarse hair, or bristle." Though not positive, I do not think that the Angora shepherds use similar means to collect their spring shawl wool. It seems certain that the other flock-masters who furnish the article, obtain it only from the skin of the dead goat in the beginning of winter, when the coat cannot have attained full growth, and when it probably becomes deteriorated for manufacturing purposes, by the quantity of lime that is mixed with it, the currier principally regarding the skin, and carelessly removing the bristle and down from it as something that

will help to make up the price that he has paid the butcher. Thus it may be doubted whether European manufacturers have yet known the article in its best state. From the little that I have been able to learn about it, I am induced to think that all the shawl wool hitherto exported from Turkey to Europe, has been used for felting purposes. My idea is, that it will become a valuable commodity to English imitation Kashmere shawl manufacturers, if it can be imported at a moderate price, and in a clean state. It is short in staple as now generally obtained, and probably is so at its fullest growth, but it is described at Angora as "spinning well¹," and the socks which the women there knit from the thread they make of it, seem to combine in a great degree, the qualities which are so much desired in shawls, viz. lightness, softness, and warmth. I find among my notes a memorandum that the full grown *Angora* double-coated goat, yields fifty or sixty drachms of wool, but I do not know who gave the information, as we were hurried away from Angora in the midst of our inquiries regarding "dehrem." An English friend at Erzroom, whose attention had been directed to the shawl wool of Armenia, calculated, after native report, that 120 goat skins in that country yield nine okes of rough wool: when the bristle has been tolerably picked from this, there remain six okes, which again will not give more than three okes, when it has been carefully picked and carded. Picking included, an oke of the last would cost eighteen piastres, or four shillings; add two shillings more for freight, &c., and the wool might be delivered in London at six shillings per oke, or two shillings and twopence per pound². By degrees, the different flock masters may be induced to pick their wool, so that it can be exported without further delay, and Englishmen in Turkey, interested in the trade, may not only persuade the shepherds within their reach to collect their spring down by the Thibetan process, but to improve their breeds by crossing. Mr. Southey, in a letter that he was good enough to send me with some samples of Indian and other wools, mentioned that a French gentleman of Versailles, crossed the Angora hair goat with white Kashmere, and that the wool of crosses three, four, and five, was worth double the price of gray Kashmere, or four shillings a pound. It would be easy to import the double coated as well as the hair goat from Turkey, into European countries, in which

¹ It would be easy, by writing to some resident in Constantinople, to get a measured quantity of the best rough "dehrem" cleaned as perfectly as possible at Angora, by handpicking, fine-spun, and then woven into a piece of shawl stuff in one of the looms used for the hair Shalli, or Söf.

² The refuse might sell for something at the picking place.

the elevation of the land and the pasture most resembles that of Asia Minor or Armenia; we might try districts in our own Welsh or Scotch highlands, and, if after the most judicious crossings, it should prove impracticable to acclimate a race at home, our experiments could hardly fail to determine how the best hair and wool can be grown in Asia. Now that the Indus has been opened, English manufacturers may look for an additional supply of shawl wool from the countries which have hitherto been obliged to send their produce by fixed land routes to Kashmere, and we might, perhaps¹, with success import the best Thibetan breeds into many parts of the Himalayan mountains that are subject to British control.

The friend whom I mentioned in the beginning of this letter, is Dr. P. Zohrab, of the British College of Physicians, who is at present residing on his estate near Broussa. He will esteem it a real pleasure to carry out any inquiries that may be made regarding either race of goat in Asia Minor, and there is nobody, who, from his talents or local acquaintance, can do it better.

APPENDIX.

I saw at Bagdad a remarkable sheep, having a very thick, long, and fine fleece of a slightly reddish hue. This breed is called "*Márguzeh*," and it is found in the North-Western district of the province of Ardelan, named Sekkez. Rams of this race might improve our fleeces at home, in India, or in Australia, and a few should be obtained for trial. The animal that I saw belonged to Colonel Shee, commanding the Persian detachment, but Colonel Taylor, the British resident at Bagdad, who is a member of the Asiatic Society, said, that he would be happy to get any that might be applied for.

Revised Note to explain the Specimens sent from Constantinople.

- A. 1 and 2. A whole white-hair goat's skin, and a sample of hair. a extra—a white kid's skin.
- B. A two-year-old female goat's skin; esteemed the best.
- C. Specimen of carded Tiftík.
- D. Six numbers of Angora "Iplik" or yarn.
- E. Some dried and pounded Chirísh.

¹ The heavy, periodical rains on the southern side of the great Himalayan Chain, might injuriously affect animals accustomed to a dry climate.

- F. A pair of common plain white hair socks. Price 30 piastres.
- G. Patterns of dyed Shalli and Sôf, (the latter both plain and watered.)
- H. Angora yellow berry.
- I. A black double-coated goat's skin, with down beneath the bristle. *i extra*—a black kid's skin of this species.
- J. A sample of white bristle and wool.
- K. A packet containing samples of differently coloured "Deri Dehrem," or "skin wool."
- L. Some gloves made at Angora from "Dehrem."

Sent from Erzroom.

- A and B. Two shades of brown goat's wool.
 - C. Gray ditto.
 - D. White ditto.
 - E. Bristle, with lumps of wool attached.
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