WOOL. AND ITS MANUFACTURES.

Τηε word wool is usually employed to designate the *pile* of the sheep and of some other animals. It may be defin­ed a species of hair, but it is distinguishable from ordinary hair, properly so called, by being much more soft and flex­ible, and by possessing in a superior degree the property of felting, which we shall hereafter have occasion to de­scribe. It is sometimes difficult to express that with which most people are familiar ; and yet, as popular conception is often inadequate and incomplete, further description be­comes necessary. This is especially the case with regard to wool. We all seem at first sight to perceive the distinction between wool and hair. In ordinary cases, like light and darkness, they are sufficiently distinguishable. The bristles of the hog stand at a wide distance from the soft pile of the Saxon lamb. Yet, in many intermediate cases, it would be hard to say what is the one and not the other. There are some animal coverings which seem to stand between the two extremes ; the hair of some goats and the wool of some sheep seeming entirely to change characters.

Most of the furred animals have, in a state of nature, both hair and wool ; the hair long and conspicuous, forming the outer coating of the animal ; and the wool short, soft, and down-like, and lying hidden beneath the coarser hair. In the beaver this is very conspicuous. To all outward appearance it is a coarse-haired animal ; and it is not until the long hair is plucked that the soft wool used in the ma­nufacture of hats becomes visible. The skin of the racoon, of the wild cat, and even of the otter, coarse as its outer hair appears, produces wool ; and the finer fleece of the rab­bit, called *coney's* wool, is well known in commerce.

We also apply the term wool to the fibre of the cotton plant (see Cotton Manufactures), an application which was not unknown to the Mantuan bard :

—nemora Æthiopum molli canentia *laná.*

In the present article we shall confine ourselves to a descrip­tion of the wool of the sheep, and its properties ; and especi­ally to its manufacture into woollen cloths and worsted stuffs.

The original stock of the several varieties of sheep is said to be the Argali ( *Ovis amrnon),* which is still found wild on the mountains of Siberia and Kamtschatka. This seems to be scarcely distinguishable from the Moufflon *( Ovis aries),* or wild sheep of the mountain districts of Sardinia, Corsica, and Asia Minor. But its fleece, which is coarse as well as short, resembles hair rather than wool ; and it is not until improved by culture that its covering as­sumes the woolly character.

The effects of a more temperate climate, of more regu­lar and better pasture, and especially of careful shelter **from** the inclemencies of the weather, are indeed very re­markable. The coarser hair gradually disappears, and the shorter and finer wool which we have described as invest­ing the skin of various animals, becomes more abundantly **developed.**

In modifying the physical character of animals by breed­ing, it is well known that the dam has more influence over **the** form and other peculiarities of the progeny than the sire ; yet, as regards the quality of the wool, the order is reversed, and the sire has been ascertained to act the more conspicuous part. In the first place, the ram more rapidly undergoes the change above mentioned when subjected to **man’s** care ; and in the second, he imparts to the wool of the **progeny a** greater share of fineness than an improved ewe would do. Thus it has been laid down by those who have had great experience in the breeding and crossing of sheep, that a fine-woolled ram and a coarse-woolled ewe will pro­duce lambs with wool three fourths instead of half as fine as the wool of the sire ; whilst a coarse-woolled ram and a fine- woolled ewe will produce lambs with wool only one quarter as fine as that of the sire. To keep up the quality of wool, therefore, the finest-woolled rams must be continually in­troduced, otherwise deterioration cannot be avoided. This is well understood ip all the wool-growing countries. In Germany very high prices are given for fine-woolled rams ; and in Australia, the newest field for wool-growing, the at­tention of flock-masters is fully alive to the same fact.

The removal of the coarse woolled is an object of equal importance. Even among the best flocks coarse-haired va­rieties will spring up from mere peculiarities of constitution. This is especially the case in our changeable climate, where the sheep are liable to be affected by sudden changes of temperature. If the removal of such sheep is not at once attended to, the flock will materially deteriorate in a very few generations.

But although deterioration soon becomes obvious, the superior character of a particular breed of sheep will be perceptible in particular localities, even after the lapse of ages ; and it is not a little remarkable, that the vestiges of the finer-woolled animals is still to be traced in localities which were formerly the seats of manufacture. Angora, for instance, the ancient *Ancyra,* still retains the fine-fleeced goat ; and the cat and the rabbit of that district still pro­duce a wool remarkable for its fineness, its softness, and its length. The fine-woolled sheep of Tarentum, so much valued by the Greeks and Romans, originally came from Asia Minor, where the traces of similar animals are still to be met with ; and the descendants of the same breed, con­spicuous even in their degeneracy, form the common stock of Sicily and the southern parts of Italy.

This permanency in the character of the breeds of sheep is doubtless partly owing to food and climate. The effect of pasturage on the fleece is well known. The experiments that have been made in this country have placed it beyond a doubt. The wool of sheep fed in chalky districts will be greatly inferior to that of sheep of similar character pas­tured on land more congenial to the growth of soft wool ; and it is even said, that where flocks have been fed on bad herbage, and their fleeces are harsh, considerable improve­ment will take place by removing them to better pasture, if it be only for a single month previously to shearing. In that case “ the bad effects of any late herbage will be counteracted, and the fleeces of their flocks will handle soft, and increase in weight, and consequently in value.”@@1

“ By way of example,” says the author we have just quoted, “ we will suppose half a flock of South-Down sheep, reared in the centre of thé South Downs (known to be cal­careous and chalky land), and the other moiety transferred to some of the rich land found in the neighbourhood of Pevensey Level, near Lewes. The contrast that would be perceptible in the fleeces of these two portions of the same flock when shorn, is inconceivable to those who have not had an opportunity of witnessing the powerful influence of a change in pasture on the wool of sheep.

“ Both the temperature of climate, and herbage, have an evident effect on wool, as may be seen in England on that of those flocks pastured within a few miles of the sea-coast, beginning with the Isle of Sheppey, round the coast of Kent, Sussex, and Hampshire. The wool of flocks which are fed

@@@1 Southey’s Treatise on Sheep, 1840, p. 14.