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# W O O L

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"That soft species of hair which grows on  
"sheep and some other animals, and which in  
"fineness sometimes approaches to fur. The word  
"generally signifies the fleecy coat of the  
"sheep. "

(Webster)

This is a beauty of a definition. And probably we shall get into trouble for quoting it without permission. What it means is, that wool is hair. It may grow on sheep or other animals. But sometimes it approaches fur in its fineness. Let us see what is fur... Well, here is a discovery: "The short, fine, soft hair of certain animals".

All this boils down to the fact that wool, fur, and hair are really one and the same thing. When we intend to use the whole coat of hair together with the hide, skin, or pelt, we say "fur". But when we separate the hair from the skin and then use it alone, we say "wool".

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Whatever the wool is by definition, it is certainly one of the most interesting yarns (after spinning) ever discovered. Its properties have never been duplicated in synthetic yarns, and what is more, they will never be. Not because the feat is impossible, far from it. Simply because as it is the wool is a headache for the textile industry: it is much too good. It has too many advantages as a yarn, and the worst of them is that when really good it is nearly indestructible. And who wants indestructible yarns in our age of economy based on waste and destruction? For the same reason linen will never be duplicated by synthetic methods, easy as the task may be.

Fortunately we are craftsmen and do not need to worry about world economics.

What are the "induplicable" qualities of wool?

1. Insulation. The heat conductivity of wool made into a fabric is among the lowest known in textiles. There are also furs (cariboo) which are insurpassable in this respect. The least amount of wool by weight gives the highest protection against cold or heat as the case may be.

2. Resistance to water. Wool spun in grease is water repellent. When felted in the same stage it is practically waterproof, but at the same time it is not air-tight. One can sleep under a raw wool blanket with the head covered - without suffocating.

3. Hygiene. When worn next to skin wool automatically cleans it until a point of saturation, which is not easily reached. There are cases of highlanders who do not wash for six months, and keep

reasonably clean. Alpinists, hunters, campers, and lumberjacks, who use raw wool socks - know about it.

4. Strength. This of course can be expressed in scientific terms and questioned. But we know that in practice a good woolen suit can last for more than a generation, and who wants more?

5. Elasticity. A good woolen fabric keeps its shape better than even cotton or linen. For the same reason it is extremely pleasant in weaving.

6. Dyeing. Wool can be dyed easily, permanently, and without loosing any of its properties usually associated with "raw" wool.

7. Texture. Wool is about the only fiber which can be made into a cloth without weaving, simply by pounding it.

8. Weaving. Wool can be woven into more "open" fabrics than any other yarn. Without any artificial ways of fixing the weft to the warp (sizing, dressing, impregnating) a fabric in pure wool may be made about 50% more open than any other fabric.

And about the only shortcoming of wool is its high price when the yarn is really good. But even poor quality wool such as the "native" yarn at a dollar a pound (price in Eastern Canada) is highly superior to its synthetic substitutes, and irreplaceable for heavy rugs, and all sorts of pile fabrics.

After this rather extensive build-up we must come down to the facts. Where Webster did not go very far from the truth is the fact that wool is made mostly from the fleece of sheep.

Then what is "fleece" and what is "sheep"? The first is easy: it is the whole coat of hair of the animal "shorn" in one shearing operation. The sheep itself is another matter. The word itself comes from Anglo-Saxon Sceap, Scēp. The origin uncertain; possibly from Bohemia, and other Slavic countries. But why the Anglo-Saxons should be influenced by Slovaks, as it is very unlikely that they ever met, remains a mystery. Unless of course sheep were brought to the British Isles by the Saxons, and Saxons in turn got them from the Slavs. This seems to be nothing but conjectures.

Sheep is "Ovis" in Latin, and it lives in higher mountains of Europe, Asia, Africa, and America. It is true however that the only species in America is "Ovis Montana" in the Rockies, and there is no mention of its wool being used for practical purposes. To write about all these animals would take more time and space than we can afford. Let us then state the fact that sheep wool has been known mostly anywhere for a long time. Of a particular interest are Merino bred in Spain for centuries. Their introduction to England was a failure, but they adjust themselves well to the climat of Australia, and thence we have the famous Botany wool.

England did not need any help as far as the quality of wool is concerned. The climat seems to be the only in the world for the highest quality and the greatest variety of fleece. But before we turn to the English wool we may just mention the Northern wool, which probably originated in China, and by unknown channels reached Scandinavia, Iceland, and other North European islands. It is very fine

ard it is said that at its finest it can be hardly distinguished from silk. Quite remarkable for wool.

In English wools the following are the most important:  
Leicester, Cotswolds, Lincolns, and Kents produce long wool, up to 15".  
South Down, Hampshire Down, Dorset Horned - short and very fine.  
Oxford, Suffolk, Shropshires - a little longer.  
Cheviots - hair with hard tips, medium quality.  
Welsh, Exmoors, Shetland - so called Mountain Sheep, medium long.

However the properties of a fleece depend not only from the breed, but also from the local atmospherical conditions. Thus the same sheep will produce longer wool in damp and cold areas, and shorter in warm and dry localities.

This is not all yet. Because one fleece of any sheep contains a variety of wools:

- | Britch - hind legs. Coarse.
- | Prime - higher than britch and along the back. Short, weak.
- | Picklock - belly. Short, fine.
- | Diamond - higher than prime and half way or so along the back. long, coarse.
- | Extra Diamond - flanks, and shoulders. Strong, good, varying length.
- | Poll Lock - head. Poor.

The whole problem of sorting a fleece is so involved that nothing short of reading a book on this subject will make it clear. What is the comparative value of Leicester Prime against Hampshire Diamond is matter for experts, or anybody's guess.

Then finally there is the question of spinning. There is carded, and combed wool. Any wool can be carded or combed. Carding means twisting the fibers in all directions so that in spinning they do not lie necessarily in a straight line, when combed fibers are all stretched in the same direction. For instance Worsted is a combed wool.

Which is better is hard to say. Carded wool is softer, but weaker. Combed wool is stronger and smoother. Again any of these can be spun with hard or soft twist. Now, please, let us imagine that we have some 6 basic varieties of fleece, all of which can produce about 5 kinds of wool, which can be carded or combed, or 50:50, and which can be spun in 3 (we are conservative here) different ways. Then the yarn may be single, 2, 3, or 4 ply. Finally it can be as fine as silk (theoretically 40,000 yds/lb) or as bulky or thick as a rope (used in peasant tapestry weaving). Thus the total number of all possible varieties of wool runs into thousands.

The count of wool is another headache. No.1 theoretically should have 560 yds, higher numbers being proportionally finer, exactly as in case of cotton or linen. But there are several methods of designating the "grist" of woolen yarn: the same as for cotton, the same as for linen, weight of 20 yds in grains, and so on. The most popular numbers (in proper wool count) are: 32/2 (8900 yds/lb), 16/2, 8/2, singles 8, 4, and 2, heavy yarn: 6/2, 4/2, 8/3, 6/3, 4/3.

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