

# Spinning and Fiber

## Terminology

whorl – round stone, clay, metal, wood used to add weight to a spindle

spindle – a stick (wood, bone, etc.) used to twist fibers

drop spindle – a spindle used by suspending it in the air, may or may not have a whorl

high whorl – whorl is on the top half of the spindle

low whorl – whorl is on the bottom half of the spindle

hook spindle – a simple stick type spindle with a hook in the end.

combs – tools used to prepare fiber so that the fiber is parallel to the direction the yarn is going. Looks similar to a pair of rakes.

cards – tools used to prepare fiber so that the fiber is perpendicular to the direction the yarn is going

worsted – smoother yarn spun from combed fibers

woolen – fuzzy fiber spun from carded fibers. The yarn is generally softer and lighter than woolen.

warp – the thread that forms the base of the fabric. Goes front to back on the loom.

weft – threads that cross the warp. Goes from side to side on the loom.

ends per inch – The number of warp threads in an inch of fabric

picks per inch – The number of weft threads in an inch of fabric

wraps per inch – number of times thread/yarn can be wrapped around an inch.

distaff – tool used to hold fiber. Can be a stick, sometimes with a forked branch or more ornate top like a comb. The fiber is tied to it.

z-twist – refers to the direction a thread is spun. Fibers form Z shapes when you look at the single ply of yarn. Twisted clockwise.

s-twist – same as z-twist except forming an S shape. Twisted counterclockwise.

ply, plying – putting two or more single threads together to form a stronger thread/yarn.

single – unplied thread/yarn.

reel – medieval name for a niddy-noddy. In period the arms of the reel were parallel, not at 90 degree angles as the modern ones are.

skeins – the finished yarn, wound up and twisted into a neat bundle.

drafting – stretching the fiber out

drafting zone, zone, triangle – the triangle the fiber makes between where the loose fiber is held and where the twist is coming up to.

flyer – the part of a modern spinning wheel that "flies" around the bobbin and wraps the yarn onto it.

## Time Line of Spinning Tools

???? – Rocks or hooked sticks

5000 BCE – earliest known whorls

2000 BCE – hooked high whorl spindles in Egypt

Middle Ages – low whorl spindles in Europe

500 to 1000 – probable first appearance of spinning wheels

1200's – first real evidence of spinning wheels

late 1200's – spinning wheels come to Europe  
1475 to 1480 – earliest evidence of "flyer" wheels  
after 1700's – foot treadles

## **Fiber Preparation and Processing**

There are many many steps in the process from sheep to finished product. I'm only going to deal with those pertaining to spinning at this time.

Processing fiber in the Middle Ages would consist of some of the following processes:

willowing, washing, dyeing, blending, combing, carding, bowing, spinning,  
winding (Crowfoot, pg 17.)

Here are some of my definitions and processes:

Scouring – washing the fleece so that there is little to no dirt or lanolin left in it

Picking – picking out twigs, straw, and such.

Combs – spiky teeth things. Prepared this way, the wool fibers are more organized and go parallel to the direction of the yarn. You get a lot more waste wool using combs than cards but the wool coming off of the comb is mostly of the same length and almost free of vegetable matter.

Cards – tools much like dog slicker brushes. In period they were used to process the wool left over after combing. This wool was then spun and used for weft. Leaves the wool fibers more disorganized than combs and the fiber is perpendicular to the direction of the yarn.

## **Fibers**

Wool - anywhere, anywhen. There are extant articles of clothing whose fiber seems to be in the range of modern Merino. They also used double coated sheep and there are a few modern breeds that still have double coats.

Flax – anywhere, anywhen

Silk – the Vikings had it.

Cotton – only in the Medditerranian until after 1400

Goat – has been found in textiles in England.

Weasel or Stoat – found in felt in London (Crowfoot, p 15.)

## Notes about Medieval Spinning

Wheel spun yarns were used for weft while drop spun yarns were used for warp in the early days of spinning wheels in Europe.

Many period textiles were more finely woven than fabrics made of natural fibers today.

Combed wool was often spun from a distaff.

Spindles would have bumps near the bottom to hold the whorls on.

Wheel spun yarn was prohibited in Abbeville in 1288. In 1290 a Drapers Guild regulation at Speyer prohibited the use of wheel spun yarn for the warp but allowed it for the weft. The medieval wheel was more like a mounted spindle than a spinning wheel. It had no flyer until the late fourteenth century and was turned by a hand crank until the development of the treadle and connecting rod in the early sixteenth century. Guild members initially felt that a finer stronger thread could be spun by the drop spindle; this simple tool remained the preferred method until the fifteenth century.

Most medieval cloth was woven from tightly spun singles. Two ply yarn and thread was used for card weaving and some embroidery. Other crafts such as sprang, naalbinding, and knitting would probably use two ply yarn to avoid slant in the finished piece.

### Textile Fineness:

This section is taken from *Crowfoot* since that book has tons of spinning and weaving details.

Existing woolen textiles found in London have an amazing number of threads per inch or centimeter. A sampling ranges from 14 to 19 warp ends per centimeter which works out to 35 to 48 warp ends per centimeter.

Other fibers go up from there.

It is much easier to spin that fineness of thread on a supported spindle. You get more twist and less weight hanging by the fiber.

### References and Resources:

#### ***Books and Pamphlets***

Twitchell, Linda. *Spinning With a Medieval Twist*. The Compleat Anachronist, 1996.

Crowfoot, Elisabeth, Frances Prichard, and Kay Staniland. *Textiles and Clothing 1150 – 1450*. The Boydell Press, 1992.

## **Websites**

<http://kws.atlantia.sca.org/spinning.html>

<http://www.newyorkcarver.com/inventions3.htm>

<http://ealdormere.sca.org/university/distaff.shtml>

<http://www.cs.vassar.edu/~capriest/spindles.html>

<http://ealdormere.sca.org/university/spindlespinning.shtml>

<http://www.florilegium.org/files/TEXTILES/Fiber-Survey-art.html>

<http://www.florilegium.org/files/TEXTILES/textiles-msg.html>

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