



## An HJS Studio Tutorial: Weaving a Handspun Coat



We raise Shetland Sheep on our small farm in northwest lower Michigan. One particular ewe, Silver Slipper, produces a fairly primitive style wool that's soft and a lovely shade of pale gray. My daughter, Bethany, loves this wool, and wanted me to spin and weave cloth for a winter coat for her. This is a pictorial essay of the project. As I write, I haven't quite finished sewing the coat. Hopefully I'll have a last picture before long.

**Update in 2008:** Well, you know how it goes. Life happens, and you don't get pictures taken right away because it's not convenient, and time goes by and pretty soon the coat is outgrown and stained and battered because it was used and used a lot! Although I never got a photo of her wearing it, Bethany wore that coat til she outgrew it, and that will have to be proof it was worth the spinning and weaving. The cloth definitely stood the test of time. A few pills, but otherwise sound, and might someday be remade into something else. Only those raw edges show the wear and tear—I never did figure out a way to finish them to my satisfaction.

Note on the pictures: The gray of this wool is a clean, very light, gray. Most of the photos were taken at night, and the color is altered as a result.

### Choosing and Preparing the Fiber

Silver's wool, as mentioned above, is somewhat primitive in style. What does that mean? Primitive sheep breeds sometimes retain the original hair outer coat and fine undercoat that the first domesticated sheep had, though now a lot longer—Icelandic, Karakul, and Navajo-Churro being great examples of this. Over the last couple centuries, Shetlands have been bred for short, crimped wool similar to Merino or Corriedale in style, but the earlier traditional wool types still pop up, and are quite common in North America. This makes Shetland an ideal breed for the small spinner's flock: A multitude of natural colors, at least three distinct wool types, and easy care. Please excuse the promotion, but Shetland wool really is wonderful stuff! OK, back to the point :)

Silver's wool is fairly long for a Shetland, averaging about 7-8 inches each year. She has a long, silky overcoat that's wavy rather than crimped, and just a touch of a short, downy undercoat with disorganized crimp. Bethany wanted to include those short fibers in the yarn, for their additional softness and warmth.

My usual method of preparing wool at home starts with washing thoroughly, then precarding to remove all vegetable matter, short cuts, brittle tips, and other debris. I knew precarding would also remove the short undercoat. Precarding was essential to this fleece because it was somewhat matted and had quite a bit of VM. I experimented, and found that if I cleaned



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my flick card frequently, I could remove the undercoat from the card before it got dirty, and drumcard it with the outercoat. A little more dust was in the wool than normal because of this, but most of that came out in the drumcarding.

## Spinning

I experimented a bit to see what kind of yarn would work, and how to sett it on the loom. I spun a fairly thick singles yarn with minimal twist, for maximum softness and warmth, using the 'tug test' to make sure it would be strong enough for a singles warp.

To check the sett, I used this cardboard loom to weave two small samples. One was sett at 12 ends per inch, the other at 15 epi. Bethany chose the more open sett, which had a much loftier feel.



She had chosen the "Simplicity" coat from the book *Fashions from the Loom* by Betty Beard, page 47, which is basically a bog coat. I don't have a loom wide enough to weave the coat in one width, and don't have any experience weaving handspun singles warps double, so decided to do one length of single layer cloth to be cut apart and sewn up the center back seam. This meant I needed a 5.5 yard warp, 26 inches wide. At the sett of 12 epi, this meant I needed about 3400 yards of yarn for the entire project.



The yarn's 'vital statistics' are: 20 wraps to the inch, 1200 yards per pound, Z twist, 10 degree twist angle. Because of the length of the fiber, this low twist angle worked out fine as warp—not a single warp end broke during weaving. I carded about three pounds of wool, using two years' clip from Silver Slipper plus a bit of one of her offspring, a ram named Basil, whose wool is very similar, just a touch longer and coarser. My warp and weft were identical yarns, so I was able to use them interchangeably. In this picture, the warp skeins are sized and on the right, the weft skeins are unsized and on the left.



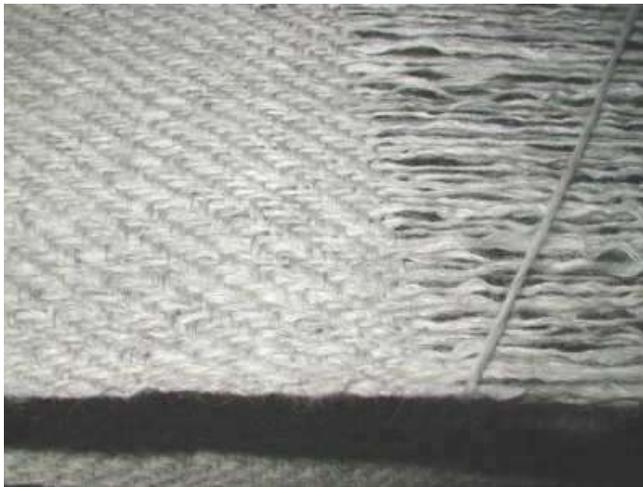
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## Weaving

Weaving was nearly trouble-free. There were no breaks in the warp, in spite of the very softly spun yarn. Interestingly, the weft drifted apart several times as it came out of the shuttle. I suspect that just enough twist was taken out as the yarn unwound from the bobbin that there wasn't enough left to hold it together in those spots. Possibly spinning the weft S twist instead of Z would take care of that problem in the future.



One challenge was posed by the softly-spun warp. The yarn was so soft that, when sized with gelatin like usual, the yarn flattened in places, which you can see in this picture. This made it a little trickier to wind the warp on the warping mill, and sometimes caused the weft to be deflected while weaving. I felt that it would correct itself when washed, and for the most part it did. There are occasional warp loops in the finished cloth that I'm not going to worry about, but they could be pulled lightly to distribute the extra length, if a more perfect cloth is needed.

A note on twist directions in warp and weft: I have found that when warp and weft are spun in the same direction—both Z or both S—twill based patterns show up crisply. A much more muted effect is found when the warp is spun in one direction while the weft is spun in the other direction, because, viewed from any direction, the slant of the individual fibers in each yarn, when viewed in the cloth, is the same. I've only done that once so far, and found it amazingly difficult to follow the pattern while weave. When the piece was washed, it all but disappeared, though it was a diamond twill variation.

## Finishing the Cloth

After the cloth was woven, I secured its ends with a whip stitch and washed it in the washing machine. I used hot water, a little dish detergent, and very gentle agitation, checking the project every couple minutes. When I was happy with the result, I spun out the wash water, removed the cloth, refilled with warm rinse water, and agitated just long enough to rinse the fabric. One more rinse in cold, followed by a few minutes tumbling in the dryer on low to take out the creases. I then draped the slightly damp cloth over my loom to finish drying.



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The process of washing cloth the first time is called 'fulling'. It involves relaxing the weaving yarns, removing any sizing or spinning oil and remaining dirt, and sometimes some amount of felting. I fulled this cloth very lightly, so there's not a lot of felting, but there was some. I pulled weft yarns to give me a cutting line, and they stick a bit. I was surprised there was any felting at all, as I figured the fact that this wool was nearly all hairy overcoat would prevent felting without major agitation. Just goes to show how much more to learn about wool there is!



I don't think words can describe just how amazing this cloth is. It could hardly be more simple—plain pale gray wool, plain straight twill. But it's soft and cushy and warm and honest. Not wearable art, but something more important—cloth meant for comfort, to wrap my child on winter days. The satisfaction is incredible!

### Sewing Up

I spun a fairly fine (about 20 wraps per inch) two-ply yarn of the same wool with moderate twist to be my sewing thread, using a worsted draft on drumcarded fibers. Using a tapestry (blunt) needle, I wove the center back seam by passing the yarn through the weft loops of the butted selvages. I have also hemstitched the bottom edge of the coat, rather than trying to turn a hem in this thick, cushy fabric. Right now I'm dithering on how to treat some edges that will be cut, then placed edge to edge for butted seams. I think I will just hemstitch those edges, then use a baseball stitch, even though that seems a bit untidy to look at. If I ever get that figured out, I'll add another picture with details.

**Update in 2008:** Obviously, I never did take another picture! What I ultimately did was hemstitch the raw edges, slightly overlapped them, and stitched them using a backstitch within the confines of the hemstitching. I didn't like it, but it was all I could think of that would be reasonably unobtrusive across the chest of the coat. It wore fairly well, but over time the cloth did start to pull apart under the stress. I still haven't come up with an alternative way to construct that area without a bulkier standard seam.

I've got enough cloth left for pockets, but not for a hood—which is OK, as Bethany doesn't want a hood. The cloth shrank a little more in width than I expected, and I will probably add knitted-on bands to the center front, to give a little more ease while providing bands for buttons and buttonholes. I haven't yet decided whether to spin the yarn the same as I did for the weaving, or to use a plied yarn, which would probably wear better. **Update in 2008:** Bethany never would let me make the knit bands, or add any kind of fastening!

This yarn is very like Lopi yarn when knit, except more soft and lofty. The sample seen here was knit on size 2 US needles, at a gauge of about 6.5 sts per inch. I washed it in warm water, agitating gently by hand; rinsed it until clean; then rolled it in a towel to sop up most of



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the water. Finally, I laid the sample flat on my workbench and allowed it to dry without blocking or pressure. There is no biasing of the sample, and no slanted stitches.

### **Conclusion**

Every handspun, handwoven project turns out a little differently. Although I had no broken warp ends, I had broken wefts—a first for me. The flattening of the warp yarns was another first. If anyone out there has woven a softly-spun yarn after sizing and has found a way to avoid the flattening, I'd love to hear about it. I thought blocking might have helped (I never block my yarns), then realized that would just

move the flattening to where the skein touches the blocker, or weight and support. And it was also surprising how much shrinkage I had. This is the first time I have used Shetland wool of any type for weaving. I will have to do quite a bit of experimentation before I can feel I know what I'm doing with it.



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