

A Gotland Journey

Pauline Caroline Jones, Dorset Guild, and Sonya Hammond, Dorset & Online Guilds



Our sweet natured wether, Fisk
Photo: Pauline Jones

Pauline Caroline Jones shares her journey building her Gotland flock, and Sonya Hammond discusses her spinning and weaving experiments with their fleeces.

The Flock

We started our pedigree breeding flock in Autumn 2017, with five yearlings and three in-lamb ewes. The following March we were presented with jet black lambs Lumi, Noomi, Ebba, Pia and Fisk and today we have a flock of twenty-three spanning over four generations. Each has their own unique characteristics that change as the flock grows, as do their gorgeous, tactile fleeces. Gotlands are bright, active, friendly sheep full of curiosity...truly wonderful time wasters!

Sue Blacker of Blacker Yarns fittingly describes Gotland sheep as being 'extremely intelligent, with a sense of humour and mischief.'



Jet black Lumi lamb with her mum, Meya
Photo: Pauline Jones

Gotland Characteristics

This beautiful, distinctive breed of sheep originates from the Swedish Baltic island of Gotland, and are believed to be descendants of the primitive Gute sheep (Gutefår). The Swedish have been selectively breeding Gotland sheep since the early twentieth century, and today refer to them as Pälfsfår (pelt sheep) for which they are prized. In the UK they are simply known as Gotlands, and are successfully bred for their fleece, skins and meat.

These are fine boned, medium sized, short tailed ovines weighing around 70kg, with smooth black faces and legs.

They have long, fine, lustrous fleeces that range in colour from a pale silver grey through dark charcoal to black. During the winter months, some develop snowy noses, endearingly known as 'sugar lips'.



Ida showing off her summer fleece
Photo: Pauline Jones

Gotland Fleece

We have our flock sheared twice a year, in late autumn (summer fleeces) and late spring (winter fleeces), producing an average weight of 2.5kg, with a mean diameter of 34 microns. Generally speaking, the higher the micron count the curlier the locks that are the main characteristic of the breed. The growth and lustre of the fleece is very much dependent upon the nutritional balance and mineral availability in the soil, specifically cobalt. This trace element occurs naturally through the breakdown of organic matter and the weathering of the other available minerals into soil particles. A cobalt deficiency leads to, amongst other things, an open fleece. Our flock reside on an eight-acre pasture-rich field, enclosed by native hedgerows with a stream at the bottom end. Our field was once a water course, so the leaching of nutrients is something we are constantly aware of, especially during the wet season. As good practice we have the soil tested regularly and provide supplementary lick buckets and salts, which they love.

Adult fleeces may vary in colour and curl from season to season, although in our experience the darker fleeces remain consistent and lanolin rich, while the lighter grey fibre tends to be finer with a lower micron count and tighter curls. This summer we have noticed that some of our yearlings have a darker streak running along their spine and lighter fleece on their sides, which is apparently quite normal and I must say, looks striking in the landscape.

Our summer fleeces are silky and remarkably clean, with clearly defined even curls and a staple length of between 11-17cm. Shearling fleece is incredibly soft to the touch, and as the original lamb's wool sheds, reveals a long, wavy crimp with a finer micron count. Winter fleeces tend to be shorter, and sometimes have a dense, protective undercoat, which makes them more suitable for felting. Whatever the season, sorting and skirting our fleeces is always a very satisfying, proud moment.

According to *The Fleece and Fiber Sourcebook*, 'Gotland wool is an unusual wool, resembling a fine mohair or an English lustre longwool more than the other Northern European short-tailed breeds. It is also more often comfortable in next-to-skin garments than would ordinarily be expected from the characteristic fiber diameters.'

As Gotland shepherds, we are constantly evolving and understanding more about this wonderful breed. Once we are allowed to travel freely again, we are planning to visit the island of Gotland, but in the meantime, we are investing in having some of our raw fleeces processed into yarn and I am looking forward to learning how to weave...

Sonya now picks up the story of her spinning experiments:

Introduction to the Fibres

The Gotland fibres I used for this test spinning were mainly an assortment of locks in different shades of grey. They were clean and soft to the touch, between 4-6in (10-15cm) in length and easily separable. I also had a shearling fleece (from Fisk) to investigate the 'next-to-the-skin' claim from the *Fleece and Fiber* book.



Yearling Tuva's silver-grey summer fleece with a dark grey spine
Photo: Pauline Jones



Basket of Gotland locks
Photo: Pauline Jones



The colour change seen on some locks
Photo: Sonya Hammond



Spinning style skeins
From left: Sample 1, semi-woollen; sample 2, semi-worsted; sample 3, fully worsted
Photo: Sonya Hammond



Semi-worsted plus alpaca skeins
From left: Semi-worsted (Spinning Style, sample 2), mid grey plus black alpaca (Blending, sample 3); dark grey plus black alpaca (Blending, sample 2)
Photo: Sonya Hammond



All other blends
From left: Black plus sari silk (Blending, sample 1); pale grey plus indigo dyed BFL (Blending, Sample 4)
Photo: Sonya Hammond

I decided to process these fibres in two main groups to assess both their suitability for different types of spinning as well as their affinity for blending with various other fibres. The main group of locks was separated out into colour groups, including one group that displayed colour changes down the fibre itself. The shearing fleece was kept separate from the others for the combing experiment.

All the locks were washed before processing started, with minimal agitation and temperature changes, which successfully prevented felting.

Spinning Style

To assess this aspect, three fibre samples were processed as follows:

1. 150g Pale grey: Drum carded to create a batt, then formed into fauxlags¹ using chopsticks
2. 200g Mid grey: Drum carded, then dizzed off to create roving
3. 100g Mid grey (shearling): Combed on English wool combs, then dizzed off to create tops

All three samples were spun into two-ply yarns at 14wpi and 2.5tpi, washed and a sample square knitted from each skein. Sample 1 was spun in a semi-woollen style from the fauxlags using a backwards draft. The resulting yarn was quite lofty and had a good halo; however, the inclusion of all the short fibres along with the woollen style spin did mean that there were a lot of short ends sticking up from the yarn, which made this comparatively the roughest of the three skeins.

Sample 2 was spun in a semi-worsted style from the rovings using a short forward draft. The resulting yarn felt smoother to the touch than the semi-woollen as it had fewer short ends sticking up, although the loft and halo felt comparable.

Sample 3 was spun in a fully worsted style from the tops using a longer forward draft. The resulting yarn was the smoothest to the touch and felt noticeably 'colder' to the touch than the other two. The lack of short fibres also meant that the yarn appeared more lustrous as well.

From these samples, the worsted preparation best plays to its strengths, showing off the lustre and creating a smooth yarn, which could easily be worn next to the skin, especially if a shearing fleece was used.

However, the semi-worsted preparation also worked, and would be a good use for the combing waste left over after processing into tops. The semi-woollen preparation was the least satisfactory, as although a good usable yarn was still produced, it didn't show off the qualities of this fibre to their best.

Blending Affinity

To assess this aspect, four fibre samples were blended three times on a drum carder to produce the following fibre mixes:

1. 100g Black plus 10g (10%) sari silk waste
2. 60g Dark grey plus 20g (30%) black alpaca
3. 60g Mid grey plus 20g (30%) black alpaca
4. 70g Pale grey plus 70g (100%) Bluefaced Leicester (BFL) dyed with indigo

All these samples were spun semi-worsted into two-ply yarns at 14wpi and 2.5tpi, washed and a sample square knitted from each skein.

Blend 1 created a yarn with striking 'pops' of colour, which felt very similar to the pure Gotland skein, so while the low proportion of silk has a noticeable effect on the colour, it didn't affect the feel of the yarn itself.

Blends 2 and 3 created yarns that were somewhat smoother and softer than the pure Gotland skein and felt warmer to the touch. The alpaca also affected the colour, darkening the yarn and producing a marly effect which was more noticeable in the mid grey Blend 3 than the dark grey Blend 2.

Blend 4 was the easiest to produce, as the two fibres were closest in style, both being longer staple wools. This blend spun up into a marly yarn, showing both subtle colour changes between the pale grey Gotland and the indigo BFL, as well as retaining the lustre of the two original fibres as well. This was also the softest of these blends, most likely because it had the highest percentage of added fibre.

From these samples, this fibre does appear to blend well with a variety of different additions. The silk blend added some striking colour effects, and a higher percentage of silk (perhaps in a more subtle colour) would produce a softer yarn as well. The alpaca blends produced some interesting colour effects as well as softening the yarn, so would be a good route to extend the shade palette as well as creating warmer yarns. The BFL blend was the most successful of these samples, as it produced both a much softer yarn as well as a very interesting colour effect. This blend could also be created from combed tops to produce an even more lustrous and smooth yarn.

Art Yarn

As a final experiment, the colour change locks were spun direct onto a core yarn using a tail spinning method to create an art yarn. This skein felt very soft to the hand, similar to the original fibres, but it used a lot of fibre per foot and produced a very chunky yarn. This is a great yarn to show off the features of the locks, but would be best as a statement piece or embellishment, rather than the main event.

Weaving Experiments

As well as investigating the spinning of these fibres, I also looked at the use of these yarns for weaving. I therefore spun two extremes of yarn:

1. Combed on English wool combs, then spun fully worsted to produce a 2-ply yarn of approximately 20wpi and 4tpi.
2. Spun directly from the fleece to produce a 'textured' singles yarn of approximately 10-12wpi. This was then washed with a higher degree of agitation than the spinning yarns so that it felted slightly.

The first batch of yarns was used to create a tapestry picture, with one of the pale grey skeins also dyed using an acid dye to produce a 'pop' of colour. These yarns worked well for this type of weaving, but the abrasion through the cotton warp did produce a noticeable halo, although it wasn't severe enough to cause the yarn to break completely. While this halo did not detract from this tapestry design, it might be undesirable in a more intricate piece.

The second batch of yarns was woven on an upright rug loom at 6epi to create a striped floor rug. This type of weaving worked well, producing a weft-faced fabric that wasn't too stiff and had very little draw-in. The slight felting of the yarn during processing helped the single to hold together during the weaving process itself. The textured effect of the direct spinning gave a lovely feel to the rug and showed off the range of fibre tones as well, especially where the locks were multi-shaded.



Sari silk blended batt
Photo: Sonya Hammond



Tailspun art yarn skein
Photo: Sonya Hammond



Batch 1 weaving yarns; the central one is dyed with acid dye
Photo: Sonya Hammond



Batch 2 weaving yarns
Photo: Sonya Hammond



Striped floor rug
Photo: Sonya Hammond

Summary

From these experiments, Gotland fleece appears to be an incredibly versatile fibre with lovely natural blue-grey tones; it also blends well with other fibres. When spun fully worsted it produces yarns with a lovely sheen and knitted fabric that drapes beautifully. If a shearling fleece is used, it can also be worn next to the skin.

As well as knitting yarns, these fleeces can also produce yarns suitable for a range of weaving projects from finer tapestries to coarser rugs.

Before I started these experiments, the most common comment that I heard when I mentioned that I was working with Gotland fibre was that it was only suitable for felting. At the end of these experiments I have found that these fibres are also

suitable for a wide range of other projects, and as long as they are not subjected to sudden changes of temperature or excessive agitation during processing, they don't felt significantly either.

The rug shown above has since been machine washed on a wool cycle and is unscathed and unfelted.

Footnotes:

- 1 Fauxlags are similar to rolags, but rolled using two sticks rather than being made with handcarders.

Further Reading

British Gotland Sheep Society: www.gotlandsheep.com



Tapestry of a windswept tree
Photo: Sonya Hammond

About the Authors

Pauline Caroline Jones: In her other life, Pauline is a garden designer, writer and lecturer – in fact Sonya was one of her students! She lives with her partner Tim, their two border collies Ellie and Skye and their flock of pedigree Gotland sheep, in the beautiful Bride Valley in West Dorset.
www.littleflockofcurls.co.uk

Sonya Hammond: Sonya is a constantly curious spinner, weaver and dyer who enjoys investigating new fibres and techniques, with a general motto of 'I wonder what happens if...?'. She keeps a small flock of assorted fleece sheep in the next valley to Pauline and is the Spin Editor for the Journal.

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