

lection at the Viking Ship Museum in Roskilde.

There are extensive links among apparently simple processes, experience, and talent that are required to transmit knowledge over generations. It is this connection we wanted to extend with our work, and for the enrichment of future research. This project took up the connections among lyngheia (heather-covered uplands), the ancient outdoor sheep, production methods, wool quality, sorting, and traditional production methods: rooing (pulling unshorn fleece from a sheep) sorting, napping, teasing, combing, carding, spinning, weaving, and stamping) and the functional qualities of a sail in wool. Continuation of the project includes testing of the sail, measuring changes in the cloth over time, and comparing the sail to other fibers. It is an exciting endeavor that can give insight into the management of resources and technology in the past.

Ellen Kjellmo

Retired College Instructor. (Bodø) She is author of the exciting book, Båtrya i Gammel og Ny Tid (The Boat Rya in Past and Present). She has written many professional articles in various publications. She is curious about cultural themes from the past, humbled when her discoveries reveal a mastery of technique and use of materials by our ancient mothers, glad to learn from their knowledge, and eager to create anew. She experiments with weaves, materials, and dyes. Ellen was a lecturer in the United States at Colour Congress 2002, sponsored by Iowa State University.

Båtrya

I chose to research båtrya (boat rya) to show women's and children's roles in Norwegian fishing culture, to show how wise use of materials in connection with technique results in a functional product unsurpassed for its use, and to help dispel the image of a boat rya as an unaesthetic object of little value. A boat rya is a large heavy blanket of 10-18 kilos of home-grown, homespun wool. One side is smooth woven, the other knotted wool pile,

sometimes with rags knotted in as well. Typically, the knots are not visible from the other side.

Researchers often conclude that things come *to* us; nothing has come *from* us. Some suggest the boat rya is a variant of oriental rugs. I claim that the boat rya is a more technical, ancient discovery. You don't speak in that case of patterns and fine colors, but quite simply about the product's value for its purpose.

Linguists claim that the word 'ru' came to Ireland with the Vikings, which could indicate rya was used already in Viking times, long before oriental rugs were known in Scandinavia. Evidence of flossa (a shorter pile weaving) is found around 300-400 in Øst-Prøysen, and in Sweden from the 700s. In Norway, there is evidence from the 1400s through farm sale records and cloister records. Finally in the 1600s comes indisputable evidence; a rya from Vefsn has the year 1681 knotted in the pile.

It isn't difficult to find ryas in North Norway, but they are of more recent dates. Even though they weren't valued as beautiful objects, and many were torn up, most regional museums have examples in their collections. Many are privately owned.

The large, heavy boat ryas are all woven in a twill variant, diagonal twill Stripes and squares in strong colors mark the smooth side. The knotted side is not known for pretty patterns. There may sometimes be squares, stripes, frames, and geometric patterns, but boat ryas are most often knotted with blended yarns of a wide variation. When you examine an animal pelt in shades of gray, there is little doubt that boat ryas are inspired by fur pelts, but are actually an improvement for their purpose. While a pelt becomes stiff and hard after washing, a rya can be washed and dried and retain its softness.

Indications are that the oldest ryas were made of "utganger" wool. The strong, smooth hard-

spun warp yarn has long fibers that appear to be guard hair. Because this sheep wasn't clipped, but hair that was shed was used, the fibers don't have a cut end where water could enter the fiber. This, in addition to a high lanolin content, tight twisting, and a tight weave, make the rya almost waterproof.

The weft yarns lie hidden in the tight warp and therefore receive little wear. You can see that lesser quality yarn was used for that purpose.

The pile yarn is thick-spun, but tightly twisted. In some cases it is spun so unevenly that you wonder whether it was carded at all. Wool rags and leftover wool from other weavings create surprising spots in the pile.

Natural colors in the oldest ryas include gray, white, brown, and black. There is also frequent use of colors from plant-based dyes; for example, gold and brown from birch trees, heather, and leaves. I recently discovered the use of korsje for purple in a rya from Steiger Bygedetun. The later ryas are characterized by the use of synthetic dyes in the warp, but usually natural colors for the pile. While the larger boat ryas from Lofoten, Vesterålen, are characterized by simplicity in both form and color, the ryas from further south are more colorful.

There is little doubt that creating a boat rya was the work of women and children. This is confirmed by written and oral sources. Sorting the wool was an important part of the process. The long fibers were used for the warp, the lesser quality for the pile, and the poorest wool for the weft. We know little about how the wool was handled before spinning during the earliest times. It could have been combed. My informants only remembered using purchased warp yarn. I have done little analysis of ryas that have hand-spun or three-ply yarn in the warp.

The thick pile yarn was spun in the home, a large amount of wool for each rya. The yarn was washed after spinning in fish bile instead

of soap. Then it was "white and fine," my informants told me. Beating the yarn slightly with a wooden paddle felted it sufficiently that the yarn remained twisted when cut in short lengths.

To set up the loom was a group effort among many women in the neighborhood; most women knew the process. A rya had a 7-10 centimeter border on each end without knots, woven in twill. A row of knots followed. Two centimeters of twill was woven between each row of knots. The rya pile yarn was wound around a "noppakjevle" and cut to lengths two times that of the pile. The "Smyrna-knot" was used; simple to knot, and known the world over. Several of my informants told me that it was the mother or grandmother who wove the background; it was the children's job to knot.

The knotting is done on an open shed, on the raised warp threads. In a four-harness warp-faced weave two threads both in the warp and weft lie under the knots and hide them on the smooth side.

Rya weaving continued after the turn of the century; some have described rya weaving up to 1940. Today it has been rediscovered, and like the phoenix who rose from the ashes, but now in a new costume, not for warmth for the body under a cruel sky, but to satisfy the eye and mind.

Anna Norgaard.

(Denmark) She is a trained weaver who works with the reconstruction of archaic textiles, undertaking projects with museums, textile conservators and textile researchers. She has woven and sewn costumes for the Universitetets Oldsaksamling (University Museum of Cultural Heritage) in Oslo – a Bronze Age costume, a costume from the Roman Iron Age, to costumes from the folk migration period, and a cloak from Viking times. She works now with a project together with women from Greenland on the reconstruction of costumes from the 12 and 1300s, Nordbodrakter. The women spin yarn

*From Norwegian Textile Letter 7
Vol. 10, no. 3, May 2004*