

# ***NORWEGIAN TEXTILE LETTER***

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## **From heather clad hills to the roof of a medieval church - THE STORY OF A WOOLEN SAIL -**

*By Amy Lightfoot*

One late autumn day in 1989, several fragments of brown woolen cloth were removed from darkness beneath the roof of a medieval stone church at Trondenes near Harstad, on the coast of northern Norway. Strips of cloth found between the boards in the roof and on the cap between the roof and the masonry wall were used as (skarsi) scarfing or chinking material. Wear, sewn seams and other signs revealed for the finders that the cloth had once served quite a different purpose. The more than 100 square meters of wadmél (coarse woolen cloth) were woven 600 years earlier and originally used as a sail for a boat.

For more than 500 years, the woolen rags were banished to the quiet darkness of the roof, a silence only broken by the soft and clear chiming of the church bell beckoning faithful parishioners to baptisms, weddings and funerals. After years of intermittent exposure to the unpredictable moods of the wind, the salty sea, a humid dampness from the rain and the sharp light of a midsummer day, a sail was torn into powerless shreds of cloth and left to stiffen between the boards in a church roof. These small fragments once used as a sail were tacit observers of countless everyday and sometimes dramatic events that were never written down. Their existence is tangible proof of the survival of thousand year old knowledge about making textiles.

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My daily work as a craftswoman, and documenter of woolworking traditions in areas of the Faroes, has made it possible for me to detect and interpret a trail of signs visible in the cloth fragments. Over the course of nearly three years, I was responsible for reconstructing a 100 square meter woolen sail for the newly built "tendring" SARA KJERSTINE of Hitra (a tendring is a clinker-built wooden boat used in coastal Norway from medieval times until the middle of the last century). The sail reconstruction was based on pieces of cloth found in the roof of the church at Trondenes. Sometimes, when the laborious tasks associated with this work progressed very slowly, my attention was diverted and thoughts dwelled upon a time 650 years ago when the sail from Trondenes was first made. I can almost visualize the faces of the women involved, but what mental processes dictated their actions, the rhythm of their work, or their choice of tools and equipment? Last but not least, how did they obtain the enormous amounts of raw material of a quality best suited to the purpose?

### **Oral tradition and practical knowledge**

An important aspect of work with documenting craft skills is tracing oral remnants of once lively traditions. This is no simple task when "progress" has impoverished or nearly eradicated the original context in which a skill developed. The work is further complicated because physical actions involved in craft traditions were often

dictated by a collective thought process that was seldom, if ever, articulated. Skills were communicated from hand to hand in a logical series of actions. During my years of work for the Craftsmens Registry documenting wool working traditions in coastal Norway, The Faroe Islands and Shetland, I realized that the remnants of textile traditions uncovered are part of a very ancient culture. One is tempted to compare the isolated fragments of knowledge with mountain peaks on a sunken continent, where scattered islands are the only visible remains of a common heritage transformed and in some cases lost forever.

### **Mountain peaks**

Work reconstructing the woolen sail from Trondenes has served as a practical framework in which to apply knowledge passed on by elderly residents on Shetland, The Faroe Islands and in coastal Norway. Traditional knowledge of textile preparation has guided our efforts from beginning to end. Only after starting the task of making the woolen sail did I consciously realize the importance of piecing together isolated details, gleaned from "mountain peaks" across the ancient Norse influence area. Suddenly the woolen fragments from the roof at Trondenes acquired "voices". strained, eager, elderly voices repeated everyday stories. They explained how quantities of wool grew out of the landscape, through hands which tore, sorted, cleaned, teased, napped, carded, and combed, before

being spun into thread, woven into lengths of cloth called "vad", and sewn into sails.

The story I am about to relate is put together from scraps of information. When speaking to elderly people over the past five years, I never asked anyone how to make a woolen sail. No person has made a woolen sail in a traditional way for more than 140 years. Nevertheless, there are many older women and men between 70 and 100 years of age who possess a finely tuned knowledge of self sufficiency skills developed and passed on in coastal environments. Until the relatively recent past, people in coastal Norway, Shetland and The Faroes were dependent on woolen clothes for use at sea. Conversations about these textile traditions have furnished valuable information useful to our work in analyzing and interpreting the cloth fragments from Trondenes and in reconstructing the woolen sail for SARA KJERSTINE.

### **The heather moor**

When thoughts drift back in time, they do not come to a halt on a particular day 650 years ago, when the assembly (ting) of the parish at Trondenes decided to requisition a new sail for the "leidangskip" (a ship conscripted from the parish in time of war). In fact, thoughts return to a more distant era, when coastal forests were slashed and burned to create moorland. The heather moor is a biotope created and sustained by human activities including

burning and harvesting of heather and, of course, extensive year-round grazing by domesticated, indigenous sheep.

Year-round grazing on the rough pastures of the heather moorland was the basis for the existence of sheep in coastal areas and responsible for development of their unique wool. The wool consists of two layers, a soft undercoat of fine insulating fibres called underwool, and a layer of long, strong and protective guard hairs in the outer fleece. The lanolin content in the wool of sheep living on pasture throughout the year is much higher than for animals kept indoors in the winter. The result is a type of wool with highly developed water-repellent qualities.

When collecting the raw materials to make a sail for the "leidangskip" at Trondenes, age old knowledge about different properties of wool fiber was borne in mind and exploited. Yarn was needed for the warp and weft when weaving a sail. Wool for the warp had to be strong, with an ability to withstand tensile stress and stain from the wind, as well as water repellent. The weft was made of softer fibres which were easily fulled and bound the fabric together to keep it windtight. The people involved knew how to extract the required characteristics from the available raw materials to produce a cloth suited for the job.

At least twice during the summer, the sheep were gathered in from hill pasture and small islands. The final round-up

sometimes took place as late as early July, but usually occurred around midsummer day. Sheep of the primitive short-tailed breeds common in coastal Norway, Shetland and Faroe Islands shed their wool naturally at this time of the year. The loose fleece was pulled off or "rooed" by hand, leaving the newgrown fleece of the year as a protective covering, instead of shearing down to the bare skin. Shearing also resulted in unnecessary extra work for the carders and spinners of yarn. When shearing, short useless lengths of the new fleece are mixed with the long fibers and must be removed before spinning. In addition sheared wool is less water resistant than rooed wool, where the entire fibre length remains intact.

### **Up to five sortings**

In the early summer, sheep were rounded up and herded from moorland hill pasture into an enclosure. Many hands were needed for the job. Year-old ewes without lambs, dry ewes and castrated rams were taken in at the first gathering and rooed. Wool on ewes with lambs grows more slowly, so they are rooed later when the underwool is sufficiently grown to protect them and their lambs from cold or inclement weather. When "rooing", loose wool is pulled off and immediately sorted according to quality. The finest wool from the neck was kept aside for soft shawls and lace of finely spun yarn. More durable wool along the shoulders was used for garments. Wool from the thighs was very coarse and could

be used for hard wearing mittens or socks. Lambswool was not considered to be very durable and was sorted separately. When making cloth for work clothes, wool from adult sheep which had not been mated until their third year of life was thought to be the best. These animals are in excellent condition and their wool is of a much better quality.

After being thoroughly sorted according to colour and intended future use, the loose tufts of rooed wool were made up or twisted into a single length resembling a thick rope. The two ends were joined together and the compact fleece was stored in bags made of sheepskin taken off in the round. This prevented the wool from drying out or becoming rancid during the time between the bright nights of summer and the autumn evenings when wool work began.

### **Teasing the wool**

Autumn darkness descended suddenly over mountainsides of coastal districts, a portent of winter storms and days of landed idleness for fishermen. Peat for winter fuel was stacked and brought indoors, the grain harvest was dried and stored. The time had come to bring out the wool. Skin bags, cured with oil rendered from fish livers, were opened and the wool was emptied onto a mat on the earthen floor near the hearth of the open fire. The flickering of the fire and bright flames of lamps fueled with fish oil were the only sources of light.

A sweltering humidity and strong odour of warm wool filled the entire room. The natural grease of the woolen fleeces ran in the heat. The fibres were opened and teased, and the long outer fleece of guard hairs was separated from the softer underwool. Large amounts of wool were processed in this way, and the work was done by men, women and children. No hand in the household was idle. The softer underwool was sprinkled with fish oil and put back into skin bags where the oil worked its way into the fleece. The coarse hairy fibres were stacked in wool baskets.

### **Combing and carding**

Once the wool in each household was teased, napped and oiled, word was sent to neighbouring women. Coarse fibres were combed with wool combs made of long iron prongs fixed at intervals to a crosspiece of horn with a handle of wood. The softer underwool was carded with wool cards or worked by hand (the exact time when cards were introduced is not known, but wool combs have been found in women's graves dating from the 8th century). The warmth of the room kept the wool fibres supple and easier to card. The work proceeded rhythmically and thoroughly. Pride was taken in a job well done. Rolags and rovings were carefully prepared in bundles called "knokks" and "knytti" (a twisted bundle with a fixed number of prepared rovings or rolags ready for spinning).

When the work was finished, bundles were stowed away and the menfolk were invited to a dance lasting into the wee hours of the morning. The same took place in every house throughout the autumn.

### **The spindle**

The drop spindle is a mysterious and timeless spinning tool. It belongs to the world of women. Women on the west coast of Norway used the drop spindle for spinning warp yarns until early in this century. It is a versatile tool which can be carried everywhere and used while walking from one place to the next to make the most of any idle moment. Women spun the carded and combed wool clockwise to make strong warp yarns of the combed coarse outer fleece, counterclockwise to make the loosely spun weft of the softer underwool. When the yarn was finished, looms were set up in every home.

### **Weaving**

A warp of wadmél for a sail was prepared in widths of about 2 feet (corresponding to the old Norse ell). The width of the warp was slightly greater than the finished cloth to account for shrinkage caused by fulling. Wadmél for sails (coarse woolen cloth) was usually set up in a three or four shafted twill pattern. The finished cloth was then slightly fulling, by a variety of methods depending on where one lived. Fulling stabilized the cloth from shrinkage and made it more windproof. Some laid

## Conference on Norwegian Woven Textiles

October 24-25, 1997

Sponsored by Vesterheim Norwegian-American Museum  
Decorah, Iowa

The Conference will include:

### Formal Papers

- Prehistoric, historic, and contemporary handwoven Norwegian textiles
- Fibers and the processes and equipment used to prepare and weave them
- The role of textiles in everyday life and on special occasions, such as rites of passage (baptism, marriage, and death)
- Pattern drafts and practical information for contemporary weavers

Informal reports, Show and Tell

Workshops on weaving and conservation

Training session for registering old textiles in private collections

Lunch with discussion groups

Banquet with a special speaker

Exhibit in Vesterheim Center

Guided tours of the museum, conservation lab, and textile storage

Opportunities to use Vesterheim's textile collection and reference library

**It's official!** Mark your calendars for the first (of hopefully many) Conference on Norwegian Woven Textiles. Weavers and scholars and students from across North America will meet in Decorah, Iowa for two full days of lectures, discussion groups, and workshops. Planning has just begun, but look for regular updates in this newsletter. Lila Nelson will present the most current information at a meeting of the Breakfast Club during Convergence in Portland, OR.

Laurann Figg, Lila Nelson, and Betty Johannesen make up the "executive" planning committee. There will be many opportunities for Norwegian Breakfast Club members to participate in the conference. In the next newsletter, we will ask for help with several different projects, including publicity, workshop set up, and local arrangements.

A special thank you to Betty and Donald Johannesen for cleaning and repairing the Macomber looms that Vesterheim uses for weaving classes. Betty and Don donated the time and materials necessary to get the looms in top shape for summer classes and our 1997 conference workshops.

If you have not yet received Vesterheim's 1996-1997 Schedule of Craft Classes, please contact me for a copy. In 1996, Linda Elkins, Pirkko Karvonen, and Lila Nelson are teaching beginning weaving, Finnish coverlet weaves, and Norwegian weft-faced weaves, respectively. Anne Holden of Valdres, Norway will be here in July of 1997 to teach tapestry and traditional floor loom weaves.

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the finished cloth in the sea weighted down with stones to let the ebb and flow do the work. Others used large felting boards, working the cloth over the board with their hands, or with another board. The fulled cloth was then stretched and dried. Finally, one by one the lengths of cloth were sewn together by a sailmaker. The finished sail was treated with a mixture of fir-tar, fish oil and sheep's tallow, brushed onto the sail to keep it windproof and water repellent.

Conscientious hands had laboured intensely in a communal effort from beginning to end, and the sail for the "leidangskip" was ready to be hoisted. The woolen cloth from the roof of the church at Trondenes was discovered by accident. In our work reconstructing a sail on the basis of the secrets revealed by the cloth fragments prompted many questions, none of which were accidental. Our questions were answered by bearers of traditional skills with a genuine sense of responsibility. Their goal was to take down the barriers of time and lend their faces and voices to a common heritage which might not be lost after all.

### **SARA KJERSTINE**

Sara Kjerstine of Hitra is a unique boat. She is an accurate copy of a clinker-built wooden boat type used in coastal areas of Norway from the middle ages until about 1850. The replica under sail today is 52 feet long and proudly bears the largest woolen sail entirely handmade in modern times. Woolen sails were common in

northern Europe (including Scotland and Shetland) from the Viking period until the 19th century. Before becoming obsolete in Norway toward the end of the last century, the use of woolen sails was mainly restricted to smaller boats. Several old woolen sails have been found in coastal districts of Norway.

### **Trondenes and the leidang system**

The cloth fragments from Trondenes have been analyzed and dated by the Vikingskipshallen i Roskilde in Denmark. Results from the majority of the samples suggest that the sail was woven sometime between 1280 and 1420. The five year period 1385-1390 is represented in all of the samples. Whether the sail at Trondenes was originally intended for use on a "leidangskip" is a question which remains to be answered. The quantity of cloth remnants found in the roof suggests that they originate from a relatively large sail similar in size to that used by a "leidangskip". The practice of keeping a leidangskip continued in northern Norway until the 18th century. The leidang system was an organized form of maritime defense established some time before the year 1000. The entire country was organized in "skipreder" or settlements, responsible for maintaining and equipping one particular ship. According to a law enforced by King Håkon V in 1309, "the sail and other equipment used in the protection of the country shall be kept in the church in keeping with ancient tradition" (Christie, 1986). An inspection report from 1609

states that Trondenes church was used for storing equipment from two small warships (Goda, 1991).

### Woolen sails today

Over the past 4 years, our workshop has pioneered in developing sailcloth of wool. Product development was done on the basis of my own research on woolworking traditions for the Craftsmens Registry, and investigations of sails and sailing technology by researchers at the Viking Ship Museum at Roskilde, Denmark. The cloth produced is made entirely by hand. Industrializing any aspect of the process would result in a serious deterioration of the quality of the finished product. With proper maintenance a sail of this type can last for decades.

There are only three woolen sails made of raw materials entirely processed by hand in existence today. Two of them were reconstructed by our workshop. Ongoing research into the subject in cooperation with the Viking Ship Museum at Roskilde should result in two new woolen sails for Viking ship copies at Roskilde within the next two years. We hope that others among the many Viking and medieval ship projects now in the planning stages throughout Europe realize that high standards of craftsmanship are essential to all aspects of a reconstruction. By creating a demand for quality instead of using cheap imitations, museums and other institutions support and perpetuate a

cultural heritage which will otherwise soon disappear.

### references:

Andersen, Erik (1995)  
"Square Sails of Wool"  
Offprint from SHIPSHAPE,  
Roskilde

Christie, Håkon (1986)  
"Leidangsmateriell på Kirkeloftet",  
Hikuin 12, Oslo

Godal, Jon (1991) Maritime  
Archaeology Beneath Church  
Roofs, Crossroads in Ancient  
Shipbuilding, Roskilde

AMY LIGHTFOOT, the author of FROM HEATHER CLAD HILLS TO THE ROOF OF A MEDIEVAL CHURCH - THE STORY OF A WOOLEN SAIL, lives and works in Norway. The following excerpts are from a letter written to Lila Nelson February 21, 1996. Lila is kind enough to share them with us.

"Just finished editing a short documentary film I made in Shetland. Good fun editing and clipping old archive fotos, along with video of some of my oldest and best loved informants who are now over 90 years old. Have applied for grants from various sources to make a film about inspiring young craftspeople in rural areas to work with indigenous raw materials and

traditions. The story is based on our experience here at the workshop, in particular working with reconstructing fishermen's blankets. I wrote the manus and will serve as producer and director, with technical assistance from an experienced documentary photographer. So far I have managed to get the project nearly completely financed. We start filming in the end of March in Lofoten.

As far as films are concerned, last summer was quite an occasion. Danish television made a 1 1/2 hour film about our work on the woolen sail and a voyage to Shetland/Faroe with the boat SARA KJERSTINE. The program is being sent prime time in Denmark and Sweden in March, split up into three episodes. The Norwegian Broadcasting Company might buy up rights next year.

## **BOOK DISCUSSION**

*by*

**Barbara Schweger**

**Norwegian Immigrant Clothing and Textiles**

Published by The Prairie Costume Society, Edmonton, Alberta, Canada. 1990. 113 pages, 61 black and white illustrations. ISBN 0-9694539-0-6.

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Betty Johannesen asked that I review this book for the Norwegian Textile Letter. I must stress this since book reviews are expected to be impartial and I authored one of the papers included in the publication. Nonetheless, I do agree with Betty that this offering by the Prairie

Costume Society should become better known among those interested in Norwegian textiles.

The Prairie Costume Society is a unique community of people residing in western Canada, mostly Alberta, who share an interest in costume and textiles, be these contemporary, multicultural, historical, or related to the performing arts. P.C.S. was founded in the early 1980s and, though the degree of activity varies from time to time, it generally hosts two symposia and a variety of lectures or field trips during the year. (For example, in October, 1995, a day long symposium called "The Allure of Lace" was hosted in Calgary. In March, 1996, a seminar was presented in Edmonton on ice skating costumes, this in conjunction with the world ice skating championships being held in Edmonton at that time. In June, 1996, a field trip is scheduled to Custom Woolen Mills in Carstairs, Alberta.)

On May 17, 1987, a one day seminar was held in Edmonton that focused upon various aspects of Norwegian immigrant clothing and textiles. It was no ordinary seminar because Aagot Noss, of the Norwegian Folk Museum in Oslo, and Carol Colburn, of the University of Northern Iowa in Cedar Falls, were invited participants. At the seminar Aagot Noss, Carol Colburn, and Heather Prince (from the University of Alberta) gave slide/lecture presentations. Aagot's talk was entitled "Tradition and Transition: Norwegian Costume from Norway to the United States, 1840-1880".

In this she presented a wealth of drawings, watercolors, and photographs of folk costume and rural dress as she documented changes in clothing practices and adaptations of American styles of immigrants. Carol discussed "Immigrant Handweaving in the Upper Midwest". This focused upon the importance of domestic manufacture of textiles by families as they fulfilled their needs for everyday clothing and household fabrics. Heather reported on her investigation of the continuity of Norwegian material culture, especially textiles and clothing, in maintenance of cultural identity and Norwegian traditions, in her talk "The Tradition in Alberta: A Case Study of Valhalla Centre". (Valhalla Centre is a hamlet in northern Alberta that was founded in 1912 and settled mostly by Norwegians moving there from other regions in the United States and Canada).

Following the seminar, Catherine C. Cole volunteered both to raise sufficient fund and to edit a volume of the proceedings of this meeting to be published as an Occasional Publication of the Prairie Costume Society. With this goal in mind each of the above speakers kindly provided a much expanded written paper of her presentation, as well as numerous illustrations, for the publication. In addition, David Goa, of the Provincial Museum of Alberta, and I also were asked by Catherine to contribute.

David sets the tone for Norwegian Immigrant Clothing and Textiles in his "Introduction: The Norwegian Immigrant

Experience". In this he eloquently provides a Canadian view of Norwegian immigration and ventures opinion on economic, political, and religious events in Europe that stimulated Scandinavian immigration, especially to the Canadian prairie provinces. David notes the national feelings that were retained by immigrants through clothing, textiles, and other materials items. The concluding chapter in the book is "The Farvolden Collection: Clothing and Household Textiles brought to Alberta". Members of the Farvolden family immigrated to Alberta at different times in the 1920s from Telemark. From 1972 until her death in 1989, Svanaug (Nona) Farvolden provided family heirlooms to this museum's collections. As a result, the Farvolden Collection is particularly valuable to scholars of Norwegian immigrant material culture because the provenience of most items is so well documented. When Aagot Noss viewed the clothing, textiles, and jewelry during her 1987 visit she found no discrepancies with the documentation provided and the Farvolden family heirlooms; this is particularly exciting because a few pieces are centuries old. Nona participated in the Prairie Costume Society seminar, but passed away a year before the book became a reality. Norwegian Immigrant Clothing and Textiles is dedicated to Nona Farvolden.

We are all very proud of the publication that resulted through Catherine's diligence and the financial support of various Alberta agencies. This book is available

only through the Prairie Costume Society. It costs \$7.50 for members of the P.C.S. or \$10.00 for non-members; Shipping and handling is an additional \$3.00. Checks should be made out to the Prairie Costume Society and payment can be made either in American or Canadian dollars. If you are interested, order the book from:

The Prairie Costume Society  
Occasional Publications  
Box 61328  
217K 3630 Brentwood Rd. N.W.  
Calgary, Alberta T2L 2K6

I do think this is an excellent book and a financial bargain for the price being asked by P.C.S. Check it out! I also would like to extend an invitation to anyone who lives within commuting distance of Alberta to participate in the activities of the Prairie Costume Society. Just drop a note to the above address and ask to be placed on the mailing list.

### BIOGRAPHICAL NOTES

**Esther Sharrigan** - "In the coastal Maine area there are a number of weavers focusing on Scandinavian designs and patterns including multi shaft damask and opphamta weaving.

I find it difficult getting Norwegian weaving articles and books, there is a lot out there from Sweden including their Vav magazine, but nothing from Norway. Yarns from Norway is another problem. Maybe through the news letter we can make contacts.

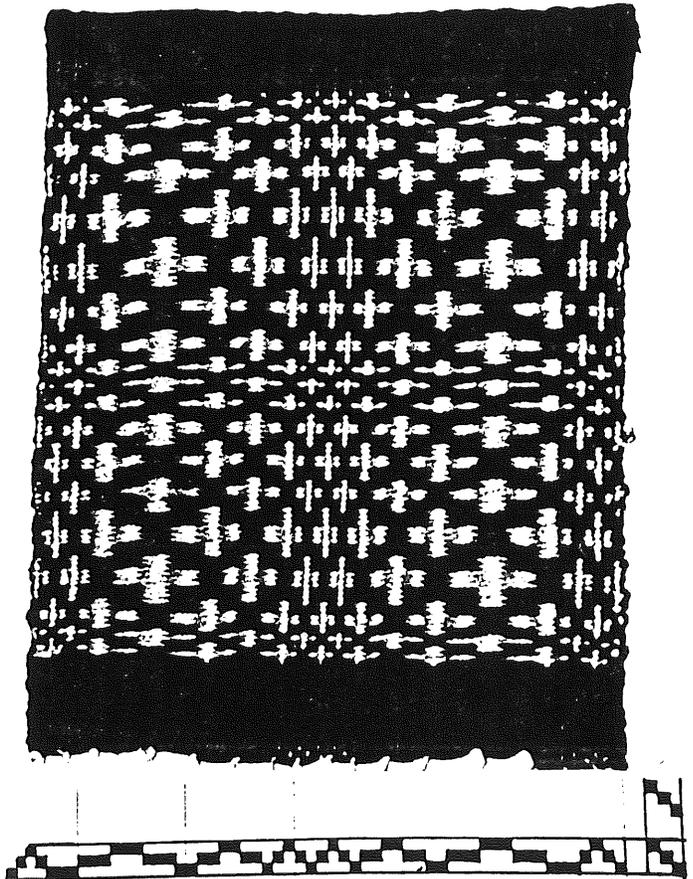
*Continued Pg. 12*

### FOR THE LOOM

#### "KROKBRAGD"

Pointed threading with different distances between the points.

Warp 20/2 cotton -57 warp ends  
Weft DMC 6 strand floss  
Sett 15 epi



3-shaft threading from the class by Ulla Suul, Vesterheim, Summer 1995

#### SKILLBRAGD ???

We would like to feature skillbragd in a future newsletter. Anyone who would like to contribute information, please send it to Betty Johannesen.

*Continued from Pg. 11*

Rosemary Roehl's table runner in rosepath, llynhild and åklævev is similar to a table runner I received as a gift from my mother-in-law in 1957 and what got me stated in weaving table runners. Using the right materials they last a life time.

For those of us selling at craft shows, it would be nice to hear what sells best, is popular and prices from around the country. I have a difficult time putting a value on my work, especially some of the intricate weaving i.e., krokbragd where I use anywhere from 10 to 18 different colors. My husband made me about 20 flat stick shuttles that I wrote the color number on Index tabs to stick on each shuttle I was working with. This helped a lot especially when I was weaving at night.

My looms include a 16 harness Finnish counter march, 4 harness Leclerc counter balance, 60" and 48" respectively and 16" 4 harness table loom. I try to keep all my looms dressed and weave between 4-8 hours a day preparing for the six shows/fairs coming each weekend before Christmas. Learning to spin on an antique Norwegian spinning wheel is another topic of conversation."

Would you like to continue to have **BIOGRAPHICAL NOTES** in your newsletter? If you have not already supplied information about yourself, we would like to hear from you.

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