

Illustration No. 1 Wall-hanging in Norwegian Åklae. Colors: black, gray-green, medium brown and natural. Woven by Mrs. Olivia Kindleberger

Illustration No. 2 Wall-hanging in Swedish Röllakan. Colors: red, brown, yellow, green, white. Woven by Miss Sara Mattsson



Scandinavian Art Weaving

BY ELMER WALLACE HICKMAN

SCANDINAVIAN Art Weaving is too little known in this country. And that is unfortunate; for once possessing the knowledge about the several Scandinavian techniques and the ability to apply this knowledge at the loom, many enjoyable hours can be spent and fabrics will be produced that will be a revelation to one's dexterity.

There are diverse reasons why Scandinavian Art Weaving is so little known to our American weavers: the principal ones being, I should surmise, the unfamiliarity of our American weavers with this type of weaving, actually; the lack of information about these techniques; and the mistaken idea that this work requires too much time to complete any sizable textile. Those of you who are familiar with the Scandinavian illustrations that have appeared in the old Handicrafter have wished, I imagine, — as I had often wished, – to know how the actual weavings were done; and even, perchance, that one could know the secret of those supposedly intricate-looking techniques. None of these techniques are difficult to learn. One can master any of them with a little patience, competent instruction, and persistent application. In the Swedish and Norwegian Art Weaving books there can be seen examples of the many techniques with which most Scandinavian weavers are acquainted, but the accompanying text — even with a very adequate translation — offers such vague and meager instruction that no one, unacquainted with these techniques, could possibly gain sufficient information with which to acquire a proficient working knowledge of them.

It is for the last-mentioned reason that I wish to write a series of articles, giving a comprehensive working knowledge of the principal techniques, so that from the beginning craftsmen can readily follow the procedure, understand intelligently how particular techniques are done, and be able to master that technique. I trust the information will prove not only beneficial but act as an incentive and an influence to try some of the work.

Since I have learned these techniques they have greatly won my admiration. Several years ago I had tried unsuccessfully to locate competent weaving instructors from whom I could get this information. I finally, after repeated attempts, found Mrs. Olivia Kindleberger, a gracious Norwegian lady of some seventy odd years, in New York City, and Miss Sara Mattsson, who is an excellent teacher of Swedish weaving. Miss Mattsson was at the St. Louis School of Fine Arts but is now located at the Cleveland Art School.

These "attempts," as I recall, resulted in experiences that were varied and vastly amusing. One particular experience I

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remember only too well. Several names were given me by an art alliance. With great expectation I chose first to seek out the weaving instructor whose name on the list was most highly recommended. In a downpour, such as, perhaps, New York had never seen, I eventually located the studio. With ravenous hunger in my heart for some coveted instruction, I stated very clearly my want to the charming, and really intelligent, person who admitted me to the studio. I eagerly awaited her response. Her favorable response belied her countenance and a growing suspicion began to creep over me. This most hospitable lady dragged out some Colonial over-shot pieces. I told her that it was not that type of weaving I wished to know. Evidently eager to get a new student, she took me to a loom and asked me if that was what I wanted to learn. And there I peered — not in amazement but in disgust — upon another Colonial design of what was some day to be a coverlet. "No," I told her, as politely as I could, and with a murderous glint in my eye I gracefully as gracefully as a six-foot rain-drenched individual could - bid the charming lady adieu and made my way to the street. I wondered, upon reaching the street, whether it was worthwhile looking farther; but my persistence was awarded, after several days' search, when I found Mrs. Kindleberger.

Please understand that I am not condemning our Colonial weaving — far from it. To me Colonial weaving has always been a rich heritage, full of a national characteristic that is ours and ours alone; and for anyone to propound a substitute is fallacious. Colonial weaving will remain — as will Scandinavian Art Weaving — a distinctive classification in itself, and will continue thus to solidly stand (thanks greatly to the untiring efforts of Mrs. Mary Meigs Atwater) as an ever-undimmed memory of a hallowed past. In introducing these Art Weaving techniques I wish only to urge our weavers to acquire as broad a weaving knowledge as possible.

In the Scandinavian countries, it seems as though the greater part of hand-made textiles are those done in the Art Weaving techniques. Growing developments, recent and otherwise, have brought about the establishing of thirty Swedish Home-craft (Svenska Hemslöjd) Societies. Similar admirable projects have been instituted in Norway. To quote a few of the statements, made in an English translation, from a special catalogue of the "Home Craft," one can see the ideal for which the Swedish Hemslöjd movement stands:

"The foundation of the vigorous home craft activity of presentday Sweden was laid in the sixties and seventies of the past century, when a beginning was made in a rational collection of old Swedish peasant craft products and of copying such products; schools and courses were established for home craft . . . none of the old methods of Art Weaving would seem to be entirely lacking in Sweden not even the primitive and rare, which is known from Egypt, Soumak-weaving is absent from Sweden . . . nearly every region throughout the wide domain has created for itself its own traditions, . . . and has come to feel more and more serious responsibility that these regional units should be able to preserve, as far as possible, their identity in the practice of art . . . many of the fighting-cocks of arts and crafts ask how long home craft will be able to hold its own under the increasing pressure of industrialization. One point, however, it would seem impossible to dispute; and this is, that if home craft is to be continued as a living force, it will also continue to possess an altogether special strength so long as it main-



Illustration No. 3
Wall-hanging in Dukegäng. Colors: rust, graygreen, medium brown, tan, medium blue, dark blue
and gray-blue. Woven by the author

tains its safe anchorage in the traditions that have been created within each several region by past generations."

Furthermore, Nils P. Wollin in his "Svenska Textilier," remarks:

"If we were deprived of crafts it is not only our textile art but our Swedish culture that would be the poorer. Sloyd has been car-



Illustration No. 4
Wall-hanging in Dukegäng and Half-Krabba.
Colors: different tones of tans and browns. Woven
by Miss Sara Mattsson

ried on for centuries out in the countryside, both in forest districts and on fertile plains, and is still flourishing. . . . It is evident from its continual development that the Swedish sloyd industry is not an artificial, romantically emphasized movement; it is an urge springing from ancient traditions — thus the old traditions are reverently preserved, and incidentally an aesthetic sense of color and form. It is a peculiar thing that many of the methods that were introduced into Sweden in the olden days are still preserved here, whereas in Europe otherwise they are only to be seen in museums."

I do not pretend this introductory article to be an archaeological survey — for I fear most of us weavers are not greatly interested in such material — but I do wish that the brief descriptions of the principal Art Weaving techniques will act as a catalogue, so that one will be sufficiently informed about this classification of weaves.

The Art Weaving techniques that are most prevalently used in Norway and Sweden — although known by different names in each of these countries — are listed below:

1. Åklae (Norwegian) or Röllakan (Swedish) is a half-gobelin tapestry weave with the front side of both fabrics apparently the same. It is sometimes called low-warp tapestry. In high-warp tapestry, such as French tapestry, no reed is used and the units of design are built up in sections, while the weft is beaten down with a tapestry fork or comb. But in Åklae and Röllakan a reed is used and the



Illustration No. 5 Wall-hanging in Krabbasnår (bottom design) and Half-Krabba (middle and top design). Colors: tans, rust and browns. Woven by the author

design is woven row after row clear across the width of the warp and beaten down stealthily with the reed. The technique used in Norwegian Åklae is such that either side of the weaving is practical for usage, while, because of the different working technique, only the front of the Swedish Röllakan can be used. Associated with the Norwegian Åklae is the technique known as Lynildbordvevning or Lightning weave. It is a succession of zigzags. The technique is similar to the Åklae technique, but no interlocking takes place while weaving.

- 2. Dukegäng (Swedish) or Sjonbragd (Norwegian) is a laid-in technique usually of geometrically designed figures either with both the design (or pattern) and the background raised entirely across the web, or with only the design laid-in, raised, and the background in flat weave (tabby). This is a most interesting and engaging technique. Illustration No. 3 shows the small borders with only the design raised, while the main designs as well as the background are woven in the Dukegäng method.
 - 3. Swedish Krabbasnår is a so-called embroidery weave

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Illustration No. 6 Rug in Rya. "St. George and the Dragon." Colors: red, black and gray. Designed and woven by Miss Sara Mattsson

that decorates the flat weave of the background. This is an extremely slow process. Each square on cross-section paper represents a pattern change in this technique.

- 4. Half-Krabba is similar to Krabbasnår except that a square on cross-section paper represents three pattern shots before a change is made. The main idea is to work over three warp threads and under three warp threads. Illustration No. 5 is a combination of these two techniques.
- 5. Flossa is a knotted and tufted surface. This technique can be used in many fabrics beside the customary pile rug. The knot is similar to the Turkish or Ghiordes knot, although it is believed that the Flossa knot was an independent development in Norway and Sweden, and not copied from the Ghiordes. The knots were originally tied in separately with short pieces of wool yarn, but now steel guides about 3/8 of an inch high are employed. These guides are made so as to form two pieces of steel with a slit throughout the length, in which a Flossa knife travels to cut the loops that have been

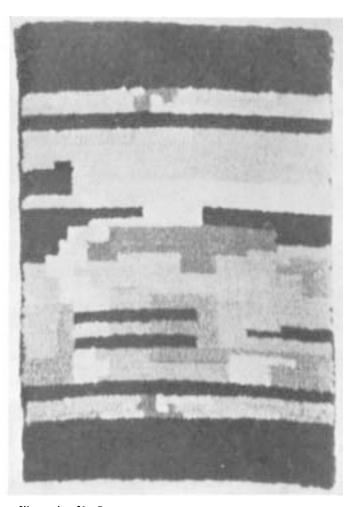


Illustration No. 7
Rug in Flossa. Colors: yellow-red, gray-green, black, gray-blue and blue-green. Woven by the author

tied around this guide and the warp. These loops then form a tufted surface or pile. In Flossa the entire surface is covered with these tufts. For the weft good strong rug yarns of varying thicknesses are used to make the loops. Finer yarns are tied into the warp for other articles, such as runners, pillow tops, bags, etc. Thick linen warp (No. 3 Seaming linen twine), hard twisted, and cowhair yarn for the foundation weft constitute the body of the rugs, usually. This technique is admirably explained in The Weaver, Vol. I, No. 1, by Mrs. Atwater.

- 6. Rya (pronounced Ree-ä), meaning "rough and shaggy," simulates the Flossa method of working. The loops are longer, being made with a steel guide about ½ of an inch high. Because of the length of the loops, as many as ten foundation weft shots are seen in some of the rugs, between the pattern shots. The Rya rug is not as serviceable as the Flossa rug. Although we think of Flossa and Rya in terms of rugs, the use of them was seldom for floor coverings. They were used to cover carriage seats or a chair, or hung on walls for decoration, and often used for bed coverings. Only on festive occasions were they used on floors.
- 7. Half-Flossa is similar to Flossa except that the design only is made tufted and the background is of a flat weave.
 - 8. Slaev-tjäll is nothing more than a Swedish glorified

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rag rug. But the technique so transforms the ordinary rag rug that the old familiar fabric is hardly recognizable. A pattern is usually put in the loom and a design worked in over the rag foundation (botten inslag) with short pieces of rags or yarns. This is an interesting method to know, and one of the oldest types of fabrics to be found in the Scandinavian countries.

9. Upphämpta is done by placing sticks in back of the regular harness set-up. There may be any number of these sticks, according to the complication of the design. These sticks are so placed in the warp threads, back of the harnesses, that the raising of them makes for a pattern design. Long-eyed heddles are used on the regular front harnesses. An arrangement known as Dragrustning is also employed to accomplish this technique. The Dragrustning is a frame placed in front and at the top of the loom through which cords run to the added harnesses in back of the regular harnesses. These added harnesses consist of two sticks between which are strung cord heddles with regular-eyes, and are weighted down with miniature sash-weights of lead. Instead of the warp being picked up on the sticks as in regular Upphämpta, the warp is threaded through the eyes of the heddles on these added harnesses. These harnesses are in turn lifted from the front of the loom by pulling the cords. The cords are supplied with wooden handles; these handles are placed in slots in the frame, in front of the loom, to hold the pattern shed. The handles are then released when that particular shed is no longer wanted. Extremely intricate patterns can be woven by the Dragrustning method. Our regular four harness looms can be easily equipped with a Dragrustning apparatus. An adaptation of this technique is discussed by Nellie Sargent Johnson in The Weaver, Vol. I, No. 1.

10. Rosepath and Monksbelt are also utilized greatly in certain types of Art Weaving. The resulting fabric is rather heavy because the wool weft is so thoroughly beaten down that all the warp is covered. This is made more possible because no tabby is used. This is an easy technique and one from which pleasing effects can be acquired.

11. Flamskvävnad or Flemish weaving is the real highwarp tapestry in the Scandinavian countries. The warp is nearly always flax. The design or cartoon is securely fixed to the back of the warp threads; and the outlines, forms, and colors are rigidly and faithfully followed. The weft recommended for Flamskvävnad is single-ply wool (4½ harvigt ullgarn) using three or four strands as one weft thread. This wool is similar to but finer than Bernat's Homespun. Somewhat like the Flamskvävnad is the Billedvevning (Norwegian) or Picture Weaving. A cartoon is used in a similar way as that used in Flamskvävnad. Both of these techniques are "built-up" in sections. There are no slits in Billedvevning because of the interlocking process. Both of these techniques, in the Scandinavian countries, are ordinarily done on upright looms. The weft recommended for Billedvevning is a two- or three-ply wool (3trd. ullgarn), the same that is used for Åklae and Röllakan.

12. Finnweave and Soumak-inlay might also be added to this classification. Finnweave is a double fabric weave. The (Continued on page 31)

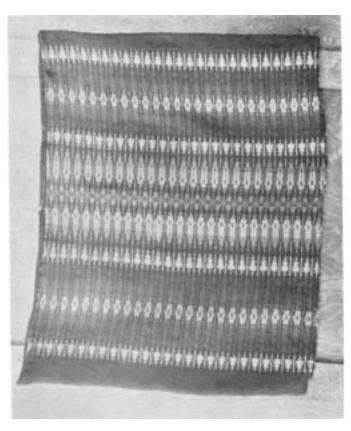


Illustration No. 8
"Bound Weaving." Colors: red, brown, yellow, white
and green. Woven by Miss Sara Mattsson



Illustration No. 9 Wall-hanging in Finn Weave. Gray linen warp and maroon wool weft. Woven by Miss Sara Mattsson

INTERESTING DEVELOPMENTS ON THE "ROSENGANG"

(Continued from page 10)

No. VII

Harnesses

3 & 4 chocolate \ 4 times (or 8 picks)
1 & 2 bisque 4 times (or 8 picks)
2 & 3 chocolate 2 times
1 & 4 valilla
$ \begin{array}{c} 1 & 2 \text{ chocolate} \\ 3 & 4 \text{ vanilla} \end{array} $ 2 times
$ \begin{array}{c} 1 & 4 \text{ chocolate} \\ 2 & 3 \text{ vanilla} \end{array} \right\} 2 \text{ times} $
3 & 4 chocolate 1 & 2 bisque 2 times
2 & 3 chocolate 1 & 4 bisque } 4 times
3 & 4 chocolate 1 & 2 vanilla 4 times
$ \begin{array}{c} 2 \& 3 \text{ chocolate} \\ 1 \& 4 \text{ vanilla} \end{array} \right\} 2 \text{ times} $
$ \begin{array}{c} 1 & 2 \text{ chocolate} \\ 3 & 4 \text{ bisque} \end{array} \right\} 2 \text{ times} $
$ \begin{array}{c} 1 & 4 \text{ chocolate} \\ 2 & 3 \text{ bisque} \end{array} \right\} 2 \text{ times} $
3 & 4 chocolate 1 & 2 bisque 2 times
$\begin{pmatrix} 1 & & 2 \\ 3 & & 4 \end{pmatrix}$ vanilla — 8 picks
$\begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}$ d.b. — 8 picks

THE WEAVINGS OF LOJA SAARINEN

(Continued from page 17)

wood School, Cranbrook, which had been designed by her husband.

Both in structure and in color the room was light and airy as might befit a dining room where young ladies are to eat. The architectural lines of the room are finely articulated, not massive and heavy; the color rose and gray; the dominating notes of the whole, lightness, grace and cheer.

Thus while the wall space called for a wall hanging or tapestry, it had no use for the sumptuous, or imposing. Here was no baronial castle, whose draughty stone walls needed a heavy hanging to keep out the cold air or whose grayness called for the relief of rich color.

Instead here was a well-lighted room in the contemporary spirit, which called for a hanging with a rather light, sheer quality; a slightly rough texture and a suppleness and freshness suited to the room.

Accordingly a combination of weaves was employed to produce a tapestry which should be light and airy, even transparent in some areas, while the pattern as a whole should be graceful and gay, though sufficiently controlled to keep it well within the proper limits of weaving.

This sense of fitness to purpose is characteristic of all of Mrs. Saarinen's work, whether it be the combination of pure silk and heavy gold thread in small handwoven vanity cases and evening bags, or the simple sturdy texture of the curtain fabric for a school girl's room.

BABY BLANKETS

(Continued from page 19)

A third stringing for a carriage robe was done in a true basket weave, Draft (b), also taken from the Shuttle-Craft Book. This was made of Bernat's Laurel wool set at 15 threads to the inch and threaded as follows:

$5\frac{1}{2}$	repeats	of draft in white	77	threads
$5\frac{1}{2}$	cc	in color starting on 8th thrd	77	"
$17\frac{1}{2}$	66	in white	245	"
$5\frac{1}{2}$	"	in color	77	"
$5\frac{1}{2}$		in white	77	"
			553	"

Treadled as follows, using great care to keep the west count 15 shots to the inch and the blocks square: 1, 2, 3, 2, 1, 2, 3, 4, 5, 6, 5, 4, 5, 6.

The weaving should be started in white, weaving 77 shots; then with the colored yarn weave 77 shots. If carefully done and the blocks squared, the large white blocks in the corner will be square. The center of the robe, too, should be square, then reverse the border and the heading.

This robe was bound with a tub taffeta ribbon the same shade as the wool used.

A lap pad on this same stringing proved popular. The heading was woven the same as for a blanket, that is, until the same width as outer white stripe; then weave 7 shots of color; 7 of white, and so on, making about three colored stripes; weave a 9-inch center and reverse stripes. The selvaged edges were bound with the same 2-inch tub taffeta, then the piece was folded through the center, the edges stitched together and later bound with the ribbon, thus making a pocket in which to slip a piece of rubber sheeting, easily removed for washing.

This same material and stringing all in white made an exceedingly nice piece of coast material for the tropics. While there is a long loose-looking thread, it is interwoven in such a way that there is no stretching and sagging as in most loose weaves, and for that reason proved unusually satisfactory for a light weight sports coat.

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(Continued from page 24)

two tabby weaves are interlaced, one above the other, where the designs in the fabric meet. The colors on the one side are reversed on the other side of the material. Mrs. Atwater has expertly explained this technique in a *Handicrafter* supplement, Volume VI, Number 1, Part II. Soumak, or Soumak-inlay as it is called by the Scandinavians, is a technique used principally for rugs — and is thoroughly serviceable. Various methods are used in Sweden to introduce the weft into the warp threads. The classical way is to go over four warp threads, back under two, up over four and back under two, and continue this for the width of the weaving or unit of design. The next row is begun in the same way but from the opposite side, making a chain formation in the weft. A tabby is put in after each weft shot.

A few reference books that might interest our weavers are:

"Flamskväv och Finnväv" (Swedish) by Maria Collin, "Skaansk Konstvävnad" (Swedish) by Maria Collin, "Handbok i Vevning" (Norwegian) by Caroline Halvorsen, "Vaevbog for Hjemmene" (Danish) by Jenny la Cour and Johanne Siegumfeldt, "Swenska Textilier" by Nils G. Wollin, "Hemslöjd i Sverige" by Maj Sterner, "Hemslöjd" edited by the National League of the Swedish Society for Home Craft, "Gammel Allmogeslöjd Fran Malmöhus Län" (7 volumes containing many colored illustrations of Röllakan, Flamskvävnad, Krabba and other techniques), "Finska Ryemönster," and an American book, beautifully illustrated, "European & American Carpets and Rugs" by Cornelia Bateman Farraday.