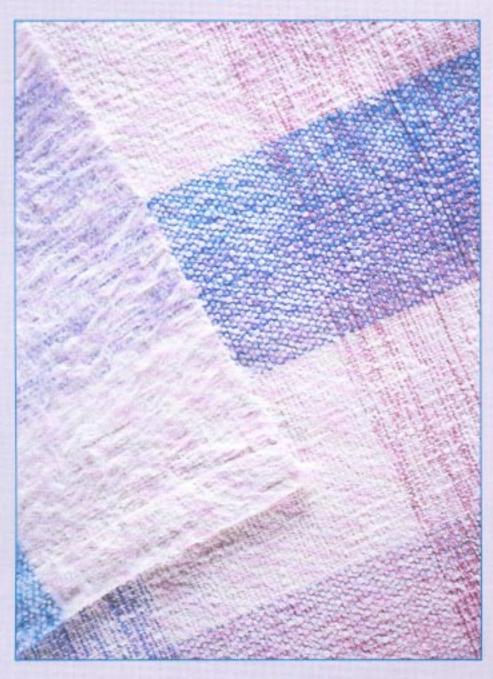
THE SOURNAL Fall 1986 Volume XI, Number 2, Issue 42



Something for you..

If you are a weaver, spinner, dyer, armchair enthusiast or collector, there's something for you in every issue of The Weaver's Journal.

rivel weave, miniatures, coverfers in 2-cir wraves, spot-weave rugs, woven garments, baskerry.

Summer 79 \$2.50

Ring irrae. Shaped, sculptured rugs, rag rugs, corded weaves, bucked cloth. seares, multi-hamess maddle weaver. spirming dog hair, business of wearing

Spring 90 \$3.00

Rug towe. Rug design, shadow weave rags, shaft switching, inble bands, sammer & witter pile alghan. Jerses Multi-harness weaving course, part 2. rwills and satins; Tapestry course,

Summer 80 \$1.00

Shaft switching, curksons weave, 4harness damask, transparencies, hope embroidery, pine needle busherry, bulinese ikar, silk during and starching. Jewer Multi-hatten weaving rouns, part 3, rwill derivarises: Tapestry course, part 3

Summer \$1, \$1.60

Tablecloths, runners, window coverings, limiting waving, multi-harness M's and O's, saris with long-eyed heddles, shaft-swintling for 3-end drafts, felt.

Summer 82 \$4.00

Fabrics for interiors, interview with Jack Lenor Larsen, stitched double cloth, marelassé, weave analysis, cardwoven rug selvages, linen shier, colombian braid, backetop wearing.

Fall #2 \$4.00

Special Plac tone. Plan processing and pittring, lines weaving and dyeing. linen apron, shirts, towels, runners, rug design, blocks and profiles, boutoone, Weavecat L. Series: Whig Bose mady, part 1

Winter \$3 \$4.00

Clothing inwe. Court, capes, triangu-lar shawl, plaid shawl, vest & skin, jacken, crocher finishes, band finishrs, tapritry bug, double two-tierwills. 3-block wease with long-eyed heddles. Jene: Whig Rose study. part 2.

Spring 83 \$4.00

flag mar. Rep weares, rug wearing, rug projects, double-wease pick-up. designing 4-harness double weave color in summer & winner, enlarged patterns, plained cwills. Series: Into. to computers for wearing, part I.

Summer 83 \$4.00

Erbaic searcher town. Museum tentiles. Shaker truther, Norwegian Tapestry, Perurian Ieno, Navajo weaving. Southwest Indian (will rapestry, Sumhonese ikae. Guatemalan weaving. Japanese wearing, meditional damask, 4-block double weave for 4-harness. quee dyring. Sense: Inmo, to computers for wearing, part 2.

Pall 85 \$4.00

Handspan yants for weaven, handspun & handworen saddle blanker. rainbow dyeing, flame retardants, methproofing, yarn counts, name draft program, transparencies, onion basker. Sever: Intro. to computers for wrating, part 3.

Winter 84 \$4.00

Clothing time: Jacker, shirt and skirt projects, woven sweaten, beginnen tops, weave & knit garments, secusucker blazer. Kirnule cloak, compater weaving, cotton spinning, 5. LaPlanez basken, ventmenta, multishaft overshot on apposites.

Spring 84 \$4.00

Ray over. Hamppoint rugs, meet & separate nags, block drafts for rugs, shaft-owitching devices and tech-niques, multi-colored dyring, Kool-Aid dyring, quibed correlet, blanker weare, Tatastan lace, block weares with long-epol heddles, Masterwearer

Summer 84 \$4.00

Jacquard loom, Girdle of Rameses, Norwegian card-woven belt, place man, evershor hanging, felsed tacket, Beiderward dress, shaft-twisch rugs, Greek spite-ply rwining, knowed Chinese burrors

Full 86 \$4.00

Artique spinning and weaving tools, numed drafts in double 2-rie weares. Chinese drawloom, narural dyeing, ramie blouse, heathered yarm, Salish spinning & weaving. Jense: Textile conservation, part I

Winter 85 \$4.00

Clorbing inse. Wrist-to-wrist gar-ment, rabbe-woven garments, pulledwarp rechnique for shaping, comon une, wool see & skire, livergical weaving. Tied Lithusnian, man-made fiben, doublejack. Sever: Temle. conservation, part 2.

Spring 85 \$4.00

Scandinarian Traditions, Rugs & tapestties of Mana Mala Fjettenus Finnish rya artist, Norwegian braided fringe, log-cabin rag rugs, double-faced krokbragd, shaft-switching device, designing for an interior, block wesses with long-eyed heddler. Sewer Textile conservation, part 5.

The University Trumple

Summer 85 \$4,00 Rabari shawl, (India) 5- and 7-loop braids, Middle Battern Kaftan fabrica, satin weave bug, Greek Chemises. Macedonian shirt, weft ikat, Japanese ikar, Ikat blankers of Bolivia. Sever: Textile Conservation, part 4

Ribbon

Full 85 \$4.00

Figures in Boundweive, scaffold. wearing, complex wearing, medieval card loom, card woren fringe, preparation of silk in Japan, silk dening. planning a dye garden, Charto sheep in the Navajo tradition, Equipment Forum. Senio: Color Theory, part I.

Winter 86 \$6.00

Annual Gament Issue, Annu Mayer on wearing handwevens; Vadmal, projects and finishes; wearable fine thread tapouries; Cannelé weave; ribbox wrfo' historical changes affecting Guaternalan clothing; ecclesionical sponents; menumons and suggested projects for 4-16 harnesses; the shed regulator; multi-color random warp dyeing. Sovies: Color Theory, part 2.

Tenth Anniversary Issue. Cloudde Barrers on multi-barriers back; Adele Cablander on warp-faced double cloth; Fabrics for interion; Shaker streets, bemuisching for knem, Danish rwined rag rags, sack rop bathmir. jugna towels, loom woven solvers, custom fabrics for 1930s Caddlar, West African trailes. Boundwave, past and present; or amining the shed; hanging your weaving. Series: Color Theory, part 3.

Summer 86 \$4.00

Images of the Toythwest. An inserview with Noël Bonnett. Kate Peck Kent. Jack Lener Larsen. Clotilde Barrett on Narajo saddie blanker pattents, New Mexico fiber artists, weaters in Chimajó, New Mexico, contemporary Navajo wraning. Spanish colonial foom, trimming the Southwestern look, garments designed for narrow looms. Discreen of massums, those and galleries in Arizona and New Mexico. The Werkend Weaver twilled combin sowels. String heddles. Index to Volume X. Jerse: Color Theory, part 4.



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On the Cover

Wrap your baby in these soft and cozy cotton receiving blankets, designed and woven by Jamie Leigh White. The article, including instructions, begins on page 35. Photo by Jila Nikpay.

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FROM THE EDITORS

A HEARTY THANK YOU to all those Convergence '86 participants who so enthusiastically greeted us at The Weaver's Journal booth. Our loyal contingent of subscribers grew rapidly during the three conference days. We were overwhelmed and gratified by the response.

In addition to Convergence, we and members of our staff attended several other conferences during the 1986 conference season. Here are some of our reactions to what we saw.

First of all, clothing continues to attract the most interest and attention at conferences. Weavers continue to create original and striking clothing, sometimes in collaboration with professional fashion designers. For example, at both the Midwest Weavers Conference and at the major fashion show at Convergence '86 in Toronto, professional models were used to present woven clothing. What an inspired idea! Models of all sizes and ages and both genders enhanced the presentation of the clothing immeasurably. The models at the Midwest meeting were from a modeling school which suggests that this professional touch is not beyond the reach of even the most impoverished guild.

We were disheartened to note that other conference exhibits this summer ones that traditionally feature items brought by participants such as wall hangings. household linens and accessories - did not inspire high participation. At times we frankly wondered how the judges were able to function! What can account for this decline? Are weavers weaving less? Are there more weavers working outside the home? Are new weavers too shy or too modest to bring their work to these meetings? Are fine examples of traditional weaving going unrewarded? Are you seeing the same thing happening in your region? Is this part of a broader trend?

What do you think?

We have always thought that one of the most impressive qualities about weavers is their unselfish sharing of ideas, and their enjoyment of the pride that comes from having work appreciated by their peers. Like the "show and tell" sessions at guild or study group meetings, exhibits have been a great source of ideas for weavers of all levels: new techniques or variations, design concepts, color — both conscious and unconscious. Exhibits afford the opportunity to educate the public about our craft, increasing people's awareness as appreciative consumers and potential students. And for magazine editors, they contain the seeds of future articles.

We all have an obligation to participate in these exhibits for the sake of the vitality of our craft. We will do our part to stimulate increased participation by instituting a special Weaver's Journal Award at the conferences in 1987 that will emphasize exceptional quality and craftsmanship.

Karen Searle & Suzanne Baizerman



EDITOR/PUBLISHERS

Karen Searle Suzanne Baizerman

ART DIRECTOR

Nancy Leeper

ASSOCIATE EDITOR

Susan Larson-Fleming

ADVERTISING MANAGER

Mary Liudahl

CIRCULATION & SALES MANAGER

Phyllis Waggoner

DATA PROCESSING

David Searle

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LETTERS

WHEN I RECEIVED my copy of the Summer '86 Weaver's Journal there were two cover sheets with mailing labels with it. I imagine that the subscriber whose label is enclosed here didn't get her magazine since her mailing label was stuck under mine. Perhaps she has already contacted you, but in any case I'm sure that she will want the issue if she enjoys your magazine as much as I do.

Alice Bright
Pittsburgh, Pennsylvania
Thank you! If any of you have received a second mailing label or have not received your
Summer issue, please let us know.

I RECEIVED YOUR MAGNIFICENT Summer '86 issue today. It is a real beauty! Of course I'm a little bit prejudiced, because you have some lovely photos of my daughter's (Victoria Rabinowe) work on pages 35 and 36. And also a marvelous article by another artist and friend I greatly admire, Mary Rawcliffe Colton. I can hardly wait to read the rest of the Journal from cover to cover. Congratulations on a continually beautiful publication which I always enjoy.

Eve Rabinowe Scarsdale, New York

AS A BEGINNING WEAVER I very much enjoy the variety of subjects covered in your articles, although I find the technical instructions a little tricky to follow sometimes. I wrote to Allen Fannin and spoke with him because he seemed like someone who had given a lot of thought to the business side of weaving. I found him most helpful and I'm glad you include that sort of article too.

Lisa Lattanzio New York, New York

THE PLASTIC MAILING ENVELOPE is great! Thank you.

Mildred Frazier Marshall, Illinois

JUSTANOTE OF THANKS for running the press release on us in the Spring '86 issue. We've gotten many calls from your California weavers.

Deborah Dobbs, Editor Weave California! Walnut Creek, California

WE ARE WRITING to you in the hope that through your publication we can make contact with any professional weavers' organizations in your country. I am a lecturer in woven textiles at the Riverina-Murray Institute of Higher Education as well as being the

Chair of a newly formed professional weavers association in our area of Australia.

Our aims as an organization are to promote weaving as a profession either full or part-time and to support those who do so. We are currently setting up a workshop/studio facility which will include a cooperative yarn store. We will also run workshops for advanced weavers and hold positions open for overseas weavers who wish to work in residency here. I hope that you can put us in touch with other such groups in your country and we can then make lasting ties which we hope will be mutually beneficial.

Jan Joustra Lecturer in Textiles Riverina-Murray Institute of Higher Education P.O. Box 789 Albury, New South Wales 2640 Australia

IT IS A WARM SUMMER NIGHT here in eastern Massachussetts and before I retire to my studio, newly inspired by your magazine, I need to send in my subscription request and my thanks.

I am a painter, woodworker turned spinner/weaver this last year. I am continually impressed by the quality of life expressed in your magazine and reflected in the community of spinners and weavers I have begun to know. There is a common thread (if you will allow the metaphor) of care for the planet and each other as human beings that characterizes the craftsmanship and way of being among this community.

I was especially moved by the interview with Noël Bennett. Her courage and direction to return to painting parallels a similar process and exploration in my own creative expression. It helped me to realize that transitions are vital parts of our lives and that, as she described, learning to see and then to see again encourages growth from those transitions. Whether we choose to weave today or to paint this afternoon there is a powerful strength in the expression of our individual processes which has found some common ground.

I am grateful for your insight and look forward to keeping your words in my back pocket as I move from painter to weaver and back again.

Heather Neill Watertown, Massachusetts

IN ALL YOUR REORGANIZATIONS I do hope that you do not ignore the multiple [more than 4] harness articles. These were

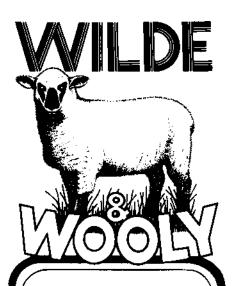
the reason that I initially subscribed to The Weaver's Journal. There isn't a particularly large number of sources for multiple harness work. Give us some more information on the logic of increasing the drafts (or the expansion) from 4 harness to multiple along with the logic of the tie-ups. There are lots of people with multiple harness looms that have not had this information readily available. I am interested in weave systems that are mainly multiple harness weaves. For many, it's a large step to multi-harness/shaft from the 4 harnesses.

Jacqueline Steffen Concord, New Hampshire

ALLEN FANNIN'S CHALLENGE to define the terms "handspun" and "handwoven" raised some reasonable questions (Fall 1985) and should have caused all of us to do some thinking. Since the published responses to his article have not directly addressed the main issue, I would like to offer my thoughts on the matter, belated though they be.

That the terms handspun and handwoven even exist implies the products so identified are special in some way. Those of us who create such products feel they are generally of higher quality, more distinctive, and more desirable, than their mass produced counterparts. At least there is the potential for higher quality and distinction if the producer is com-





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LETTERS from page 5.

petent and hardworking. We all have seen the poor examples of "handspun" and "handwoven" products which should not be offered to the public. More unfortunate than their presence in the marketplace is the willingness of the retailer and customer to view the low quality as acceptable because the goods are made "by hand."

Such acceptance clearly indicates there are reasons other that quality to explain the allure of these products. It seems to me that underlying all considerations of quality, uniqueness, and cost, there is the understanding that "handspun" yarn and "handwoven" cloth (or whatever) result from a process where the machinery involved is perceived as being controlled by the person involved, rather than the reverse. Of course mill machinery is also people controlled, but their powerful nature and apparent complexity make it seem otherwise.

The distinction between the mill operations and so-called "hand" processes is, however, far more than a matter of apparent control of the process of manufacture. In handweaving and in handspinning, there is an ongoing act of creation, subject to change from moment to moment, involving an intellect and spirit at all times. In mill production the design process and product creation typically are separate activities, carried out at different times, by different people. Once the product design is completed and approved, it is effected through use of efficient high speed machinery. To insure their proper function during production, these machines are tended by people with no other involvement, and whose individuality counts for little in the manufacturing process.

With so much uniformity in our culture, whether imposed or accepted, it is desirable to many people to have an object or piece of clothing which is obviously the work of an individual, and which in turn marks the owner/user as an individual. The textile industry gives recognition to these desires, and backhanded praise to the fiber based craftsmen. by their attempts to imitate the look of "handspun" yarns and "handwoven" fabrics. When Walter Hausner contends (Letters, Winter 1986) that the look of handspun can be closely duplicated only by mule spun yarn (which, incidentally, is still produced by Bartlett Mills in Harmony, Maine) he is judging the handspun look-a-like differently than does the general user of yarn. For most, close to the real thing is good enough, especially if it costs less.

Since the "look" can be approximated by high production mills, definitions of handspun and handwoven certainly should not be based on appearance, a conclusion in agreement with Mr. Fannin's position as I understand it

Perhaps most of the difficulty with defining handspun could be eliminated if we instead use the terms "wheelspun" and "spindle spun" to identify products from two of the processes by which individuals, as opposed to mills, produce yarns. Whether or not the fi-

ber used was mill carded is a moot point, as it affects "only" the quality of the yarn and the speed of overall production from fiber to finished product.

Historically, carding mills were welcome additions to a community whose members produced their own yarns and cloth out of necessity. No one questioned the merits of yarn spun from wool that was carded (and possibly scoured) in a mill. They knew that a great amount of work was eliminated and were grateful for that. Present day spinners who want to produce a lot of yarn feel the same way. However appealing handcards may look to the historic site folks who expect their use in "authentic" demonstrations, to me they are tools of last resort whose greatest attribute is portability.

As for definitions of handweaving, I offer for discussion, that handweaving is the act of weaving in which the shuttle is moved or propelled by hand or by spring (fly shuttle attachment and the beater is operated by hand, and shaft movement is controlled by hand or foot. To be more specific, weavings from a flyshuttle loom could be designated "handwoven on flyshuttle loom", while those from a dobby loom could be identified as "handwoven on a dobby loom".

In an age when the term "homespun" is applied to everything from polyester-cotton placemats woven in mills, to stoneware and paper napkins, to a decorator's "look", perhaps it is time to establish some definitions and/or new terms before big business leaves us with little reason for doing so.

Rosemary Bowditch Ann Arbor, Michigan

I HAVEN'T HAD TIME to read the new Weaver's Journal. I just riffled through the pages quickly but not too fast to miss "The Weekend Weaver." It should be a great feature! It's my type of time planning even though I am not a "weekend" person. Many people bog down "en process" time-wise.

Ladella Williams Portland, Oregon

ALL THIS BLANK PAPER [on the Guild Directory request form]—a golden opportunity for a fan note! Hove every issue. I was very surprised (but proud and delighted) to see my color gradations piece in Pat Boutin Wald's color study in the Summer '86 issue. Thanks.

Mary Temple St. Paul, Minnesota

WE ARE ORGANIZING a new guild in this area, which I hope will be named and organized by the time the next directory is published. Too late for this one however. I do enjoy your Journal—even an experienced weaver (40 + years) can find something new—no one knows it all!

Gene Valk Gloversville, New York

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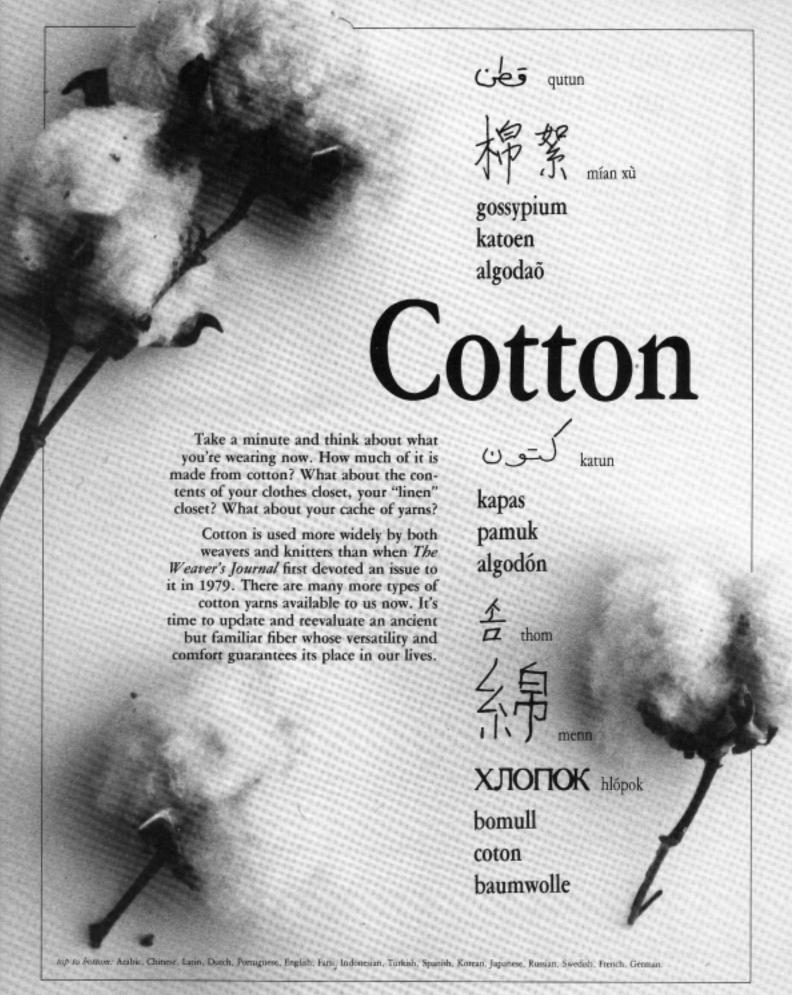
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OTTON GROWS IN warm climates and most of the world's cotton is grown in the United States, the Soviet Union, the People's Republic of China, and India. Other leading cotton growing countries are Brazil, Egypt, Mexico, Pakistan and Turkey.

In this country, the Cotton Belt spans the southern half of the United States from the Carolinas to California. Cotton is grown in seventeen states, and is a major crop in fourteen. Its growing season of about 150 days is the longest of any annual crop in the country. Since there is much variation in climate and soil, production practices differ from region to region. In the western half of the belt, for example, almost all of the crop is irrigated.

Young cotton seedlings emerge from the soil within a week or two after planting. Squares, or flower buds, form a month to six weeks later, and creamy to dark yellow blossoms appear in another three weeks. Over the next three days these gradually turn pink and then dark red before falling off, leaving a tiny ovary attached to the plant. It ripens and enlarges into a pod called a cotton boll.

Moist fibers, each originating from a single cell inside the boll, push out from the coating of the newly formed seed. The boll rapidly expands and takes on the shape of a punching bag. By maturity it is about an inch in diameter and an 1½ inches long. The time interval from bloom to open boll is 45 to 60 days.

After harvesting, cotton is loaded on trailers or trucks and carried to the gin where the fiber is separated from the seed. Powerful pipes suck the cotton into the building and through cleaning machines that remove burrs, dirt and leaf trash. It then goes to the gin stand where circular saws with small, sharp teeth pull the fiber from the seed.

From the gin, seed and fiber go their separate ways. The ginner sells the seed to an oil mill where the downy fuzz (linters) is removed in an operation very much like ginning. Linters are baled and sold to the batting and plastics industries, and the seed is processed into oil.

The ginned fiber, now called lint, is pressed together and made into bales each weighing about 480 pounds. To determine the value of the cotton, samples are taken from each bale and classed according to length of fiber (staple), color and cleanness. Growers usually sell their cotton to a local buyer who in turn sells it to a textile mill.

At the mill, the bales are opened by machines and the lint from several bales is mixed together to provide a more uniform blend of fiber properties. The blended lint is blown by air from the feeder through chutes to carding machines that comb, straighten and shape the fibers into a thin web. The carding machines can handle from 60 to 100 pounds of fiber per hout.

The web of fibers is then drawn through a funnel-shaped device and molded into soft, rope-like strands called slivers. Slivers can be formed at a rate of 1800 feet a minute. Roving frames draw the slivers out even more thinly and then



gently twist them as the first step to spinning into yarn.

Spinning machines further twist the roving and draw it out repeatedly, making it tighter and thinner until it reaches the thickness or "count" needed for weaving or knitting fabric. The strands are twisted as many as 10 to 30 times per inch. Ring spinning frames predominate in this country's mills, but open-end spinning—with turbines that spin twice as fast as the older systems—are becoming more widespread.

After spinning, the yarns which now look much like sewing thread are wound tightly around bobbins or tubes and are ready for fabric forming. Ply yarns may be made by twisting two or more single yarns together on twisting machines which are similar to ring spinning frames.

Textile mills in the United States normally produce about 19 billion square yards of woven cotton goods and more than 5 billion square yards of cotton knits a year. Many of the mills use high-speed "shuttless" looms which perform at incredible rates and turn out an endless variety of fabrics. Some of these looms carry the filling yarns across the loom at a rate of 1200 yards per minute.

These rapier-type looms have metal arms (rapiers) that pick up the filling thread and carry it halfway across the loom where another rapier picks it up and pulls it the rest of the way. Other types employ small projectiles which pick up the filling yarn from large cones and then are "shot" by compressed air completely across the warp and returned by another air blast from the opposite side.

In some plants, optical scanners continuously monitor fabric production, looking for flaws in the cloth as it emerges from the loom. When imperfections show up, computers immediately print out the location of the flaw so that area can be removed before an order is filled.

The drawing on this page was originally reproduced from History of the Cotton Manufacture in Great Britain by Edward Baines (London, 1835) and is cuttently found in Cotton: The Plant That Would Be King, by Bertha S. Dodge (Austin: University of Texas Press, 1984).

Cotton Legacy of Gods & Kings

by Irene Laughing Cloud Schmoller

REEK MYTH TELLS OF the Moirae, a trinity of weaving sisters who determined the fate of each individual. The first of these was Clotho, "The spinnet," she who spins the Thread of Life. Her thread, though sometimes golden, was more often blood red. The second of the three Fates was Lachesis, "The Measurer." It was she who measured out the life-span of every creature, preserving life until the time came for it to end. The final member of this trinity was Atropos, "The Cutter." What was spun by the first,

and measured by the second, was cut by the third, bringing to an end the thread of life.

It was believed that these sisters visited a newborn child and determined its future. One myth described how each individual was tied to the end of a carefully measured piece of yarn, which was paid out yearly, until the time came for the thread to be cut and the soul relinquished to death. The infant was bound with a swaddling band on which class and family marks were woven or embroidered. indicating the child's destined place in society.2

According to Joseph Shipley in his Dictionary of Word Origins, the English word cloth is derived from Clotho, the name of the spinner. Archaeological discoveries of cotton cloth in the Indus Valley date from about 3000 B.C., but some researchers claim it was used in Egypt much earlier. Arab traders carried cotton from India to the Near East, to Central Asia, and from there to China. The word cotton comes from the Arabic word qutun derived from the Egyptian phase khet en shen, "plant (tree or shrub) of hair." Today the definition of cotton fiber as "a cellulose Material derived from the seed hairs of a plant," recalls the

Egyptian description.

At the same time that cotton was being cultivated in Asia, the ancient Inca culture of Peru was producing some of the richest and most exciting cotton fabrics the world has ever seen. From these ancient fabrics of the past to the high-tech manufactured cotton goods of today, we have a wealth of cotton fabrics whose names derived from their place of origin, their appearance, their structure or their use.

There is a special romance and magic to the origin of these cotton fabric names. In learning the origins of

the names, we can incorporate this history into our appreciation of the cotton fabrics we use.

Calico. This inexpensive variety of all-cotton fabric woven in plain or tabby weave and printed with simple designs in one or more colors derives its name from Calicut, one of the chief centers for Indian trade in the 16th century. From this seaport in southwestern Madras, cloths with such names as Calecut, Calicute, Kalyko, and Calyco were exported all over the world.

Cambric. A plain-woven, staple cotton fabric first

made in Cambrai (Flemish: Kameryk), France. Modern cambric is made from American or Egyptian cotton with textures running from 92 ends and 88 filling picks to 100 ends and 100 picks. Yarns range from 60 to 80 in size or count for warp and weft. This very fine fabric is similar to and often indistinguishable from muslin. Chenille. This French word for "caterpillar" looks very much like its namesake. It is woven in a gauze or leno weave with the warp threads taped in groups and the filling beaten compactly into fabric. After the fabric is woven it is cut between the groups of warp ends, and the latter is twisted, thereby forming the chenille effect—soft and fuzzy like a caterpillar.

Corduroy. The origin of this meaning has long been disputed. It might derive from the French corde du roi, "the king's cloth," but it seems to have existed earlier in England than in France. It might be from the Middle English proper name Corderoy, "king's heart". A final suggestion is that is is a shortening of colourderoy from the French couleur du roi, "the king's color." At any rate, it was early deemed a kingly cloth. Corduroy, a strong filling-pile fabric, is known for its excellent wearing qualities. The material has a rounded cord, rib or wale surface, with cut pile yarn providing the effect in the vertical direction. The back of the fabric has a plain or twill weave.

Denim. Serge de Nimes is cloth from Nimes, France

and thus the abbreviation to denim. A durable, rugged, compact cotton fabric yarndyed, twill-woven and mill finished. Traditionally dyed in indigo and made with right-hand or left-hand twill constructions, usually in the latter weave, which affords quick recognition from the face of the fabric.

Dimity. The Greeks would have called this fabric with two or more warp threads when thrown into relief that form fine cords, dimitos "of double thread," from di, "two" = mitos, "thread." Originally it was made of silk or wool but since the 18th century it has been woven almost exclusively of cotton. A lightweight, almost sheer

fabric either corded or made in check effects that may be dyed or printed.

Fustian. Originally a low quality, coarse cotton cloth first made in the *fustat* or ghetto area outside the city of Cairo around 200 A.D. The Egyptians used a double cloth construction to make this goods which, despite the fact that it was regarded as an inferior material, gave long wear. Although the fabric was for a long time woven on a linen warp with a cotton weft, it is now generally manufactured of all cotton. Fustian has come to be used to denote a class of heavy cotton fabrics, some of which have pile surfaces.

Gabardine. The origin of this fabric goes back to the Middle Ages when the Spanish called it *gabardina*, meaning protection against the elements. The first fabric known as gabardine was a cloak or mantle which was loose fitting. The cloth of today is firmly woven, clean in finish, and has a high texture made possible by the use of steep-twill weaves, although some of the cloth is still made with a 45° twill angle.

Gauze. A light, open-weave fabric ideal for the very hot and arid climate of the middle eastern city of Gaza, Palestine from which it received its name. First made as a veiling or netting, probably to tent an Arab bed from the onslaught of insects and mosquitos and now used

primarily for surgical dressings. The fabric is made either in plain weave or leno. Cheesecloth (originally used as a wrapping for pressed cheese) and tobacco cloth (used as shade covering tobacco plants) are examples of gauze.

Gingham. The name comes from the Malayan gingan meaning "striped" and from the French guingan, a term used by the Bretons to signify "cloth made from striped coloring." The original East Indian fabric was made with stripes, cross-stripes or barred effects—a variegated cloth.

Madras. One of the most popular shirting fabrics made with varied stripe and plaid effects. This colorful fabric originated in the province of Madras, India.

Muslin. The city of Mosul in Mesopotamia (Iraq) was the birthplace of this plainweave cotton fabric. Early Indian muslins were handwoven of extremely fine handspun yarns and were very costly.

Percale. Parhalah was a cotton cloth made in Persia for many centuries and was noted for its fine texture, smooth finish and small printed motif. Percale is one of the most popular cotton print goods on the market roday.

Seersucker. A Persian word shir u sukkar meaning "milk and honey," and denoting a puckered or blistered surface gives this textured fabric its name. The fabric is made

with set stripes alternating with plain or crepe ground weaves. The base ends in the fabric are under ordinary loom tension, while the ends that give the puckered effect are woven with a slack tension. Considered by many to be the first "no-iron fabric" with built-in crinkle.

The drawing on page 11 was originally reproduced from History of the Cotton Manufacture in Great Britain, by Edward Baines (London, 1835). The drawing on this page was reproduced from The Cotton Manufacture of Great Britain, by Andrew Ure (London, 1861). Both are curtently found in Cotton: The Plant That Would Be King, by Bertha S. Dodge (Austin: University of Texas Press, 1984).

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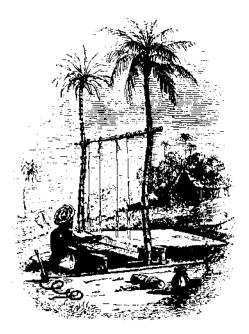
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Cotton Glossary

compiled by Irene Laughing Cloud Schmoller

Acala: Native Mexican variety of cotton introduced into the United States and now grown in the Southwest. Medium staple length. Very white and lofty.

Bale: A compressed pack of fibers in a convenient form for transit. Measures $54" \times 27" \times 30'$ (the size of a standard refrigerator) and weighs about 500 lbs.

Boll: A seed pod capsule containing the cotton seeds and cotton fibers. The boll bursts open when the pressure within it builds from the expanding cotton seed hairs.

Brown Cotton: Gossypium Thurberi, wild cotton that grows on the warm rocky slopes of southeastern Arizona and the mountains of northern Mexico. The tiny seed hairs that it produces are brown. The varieties of white cotton grown today began as white mutants from native colored cottons.

Carded yarn: Not combed. All cotton yarns are carded, but some are given the additional process of combing. Carding machines straighten, clean and untangle the fibers before they are spun into yarn.

Combed Yarn: Yarns that have been carded and combed, an advanced form of carding. Combing separates the long, choice, desirable fibers of the same length from the short, immature, undesirable stock that is called noils. Only the best grades of fiber can be combed, and combed yarns are always superior to carded yarns.

Cotton: Long cylindrical seed hairs that grow on the outer skin of the cotton seed. Wild and cultivated species of cotton have been placed in the genus *Gossypium*. These plants belong to the Mallow family as do hibiscus and okra.

Cotton Yarn Number: Cotton yarn is measured in terms of length per unit weight. No. 1 cotton has 840 yards per pound. No. 10 has 8400 yards per pound (single ply). The count is inversely proportional to the size of the yarn, therefore No. 100 yarn is ten times finer than No. 10.

Durene: A mercerized, combed cotton yarn whose quality standards are set and controlled by the Durene Association of America.

Egyptian Cotton: One of the world's most important cottons, grown mainly in the Nile Valley. Egyptian cotton is a fine, lustrous long-staple cotton usually of a creamy color averaging 1¾" length.

Extra Long Staple: Cotton whose individual fibers average 1 % " and longer, such as Sea Island or an American-Egyptian variety such as Supima, distinguished by its extra strength and luster.

Gassing: The process of burning off protruding fibers from cotton yarn and cloth by passing it over a flame or heated copper plate. This gives the yarn or fabric a smooth surface.

Gin: A machine that separates the cotton lint from the seed.

Mercerizing: Named after its originator John Mercer, this finish is used extensively for treating cotton yarn to increase luster and improve strength and dye affinity. The treatment consists of impregnating the yarn with a cold concentrated sodium hydroxide solution.

Pima Cótton: A cross between Sea Island and Egyptian cottons grown in Arizona. A fine, strong cotton, creamy in color, averaging 1% " to 1%" in length. Used for quality high-fashions, airplane and balloon cloths as well as for tire fabrics.

Quoton: Arabic word for cotton, derivative of the Egyptian term goton.

Sea Island Cotton: The finest cotton in the world. A white, silky fiber averaging 1 ¾ " staple length, which is spun into yarns as fine as 300s for lace yarns. Originally grown on small islands off the coast of the Carolinas and in the southern lowlands along the coast.

Sliver: A strand or rope of fibers which are soft, loose and untwisted. Obtained from the delivery end of the carding machine in yarn manufacture. Sliver is greater in diameter than roving, the last operation before spinning.

Square: The unopened bud of the cotton inflorescence.

Supima Cotton: Trademark for superior type of extra-long staple fiber, 1%" and longer. This is an exceptionally high-quality American-Egyptian cotton grown in the southwestern United States.

Upland Cotton: Used as the standard to which all other cottons are compared. Grown in the United States, it forms the bulk of the world's cotton crop. The short fibers average ¾" to ½" in staple length.

Spinning Cotton with the Linders

by Olive & Harry Linder

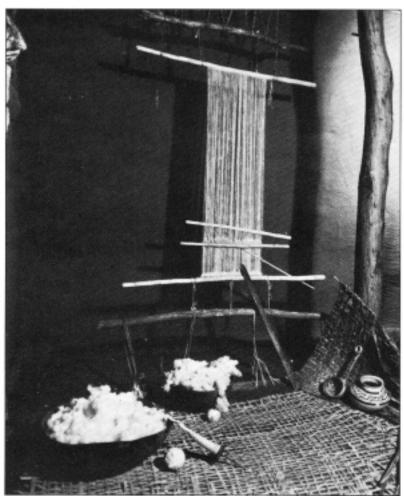


Photo from *People of the Stone Villages*, reprinted by permission of Southwest Parks and Monuments Association, c. 1973.

AST WEEKEND we were asked an interesting question: "We know that you teach other people how to spin cotton, but how did you learn to spin cotton? This set us off on a trail of memories. Harry's working career was with the National Park Service and between the years 1969 and 1971 he was superintendent at the Tuzigoot National Monument at Clarkdale, Arizona. This is an ancient pueblo formerly inhabited by the Sinagua Indians.

In the course of refurbishing the museum the staff recreated an inner room of a typical pueblo. The excavation of the ruins produced cotton seeds, woven fragments of cloth and the whorls of hand spindles so one of Harry's tasks was to set up a primitive loom with handspun cotton as it might have looked in prehistoric times. Harry had a Gilmore loom at this time, and his experience in spinning was limited to wool spun on a spinning wheel.

Harry's knowledge of primitive methods was acquired from museum references such as Charles Amsden¹ and from observation of Navajo weavers who, according to generally accepted theory, learned to weave from the Pueblo tribes. Armed with little experience, Harry laboriously spun enough cotton on the wheel using all his knowledge of spinning wool and began the task of setting up the primitive loom which is still on exhibit at Tuzigoot.

Heartened by his success at spinning, Harry felt it would look more authentic if a bit of fabric were woven on the loom. In weaving he encountered the problem that became the true motivation for many years of study and experiment after his retirement from the Park Service. The difficulty was that the warp threads were not strong enough to withstand the strain of weaving. The warp stuck together and literally wore itself apart.

Some years passed after this first attempt at cotton spinning and weaving. Harry retired, his wife died and he moved to Phoenix. At that time, the Phoenix Weavers Guild was strongly opposed to acknowledging spinning as an integral part of the weaving craft. But a few "closet" spinners met and talked over problems and kept on spinning.

Cotton was of great interest to a few of them. After Harry's marriage to Olive, cotton became a strong focus in their work. They realized that until they could spin a yarn that was going to stay together during use, they would not be satisfied.

The amount of twist in the yarn, the perfection of the joining-on and the smoothness of the draw finally emerged as the principal problems in spinning cotton. Just handling the raw fiber was different than handling wool: it took a lighter touch and a gentle hand.

Travel broadened the scope of our knowledge: Everywhere we went we kept an eager eye out for native spinners working in cotton fiber. In Sweden there was eager curiosity about cotton but the main interest there was in flax and wool. Swedish spinners awakened an affinity to flax in us that was to lie dormant for many years.

Japan had fine cotton spinners in a village that we visited and we had fun spinning with them, even though the posture of sitting flat on the floor was a real challenge to our knees and hips.

Africa was the real inspiration. The beautiful thread spun by African women on tiny clay spindles provided an incentive for us to try to equal the quality of their spinning. And the cotton country cloth woven by the African men was so beautiful in its simplicity that we could hardly wait to get home to try our hand at similar weaving.

When we left Arizona on the day after Christmas, cotton harvest was in full swing. The cotton pickers were rolling through the fields with just one man to guide those huge mechanical leviathans on that sea of cotton.

When we arrived in the Cameroons, we found that they also were picking cotton. But what a difference! The fields, more sparsely planted than the ones in the United States, were swarming with people picking cotton by hand and placing it in handmade baskets.

When each basket was filled, the worker placed it on her head and walked to the road that edged the field where the lint was dumped in a great pile. This pile then had to be picked up and loaded into a truck to be transported to the gin.

We noted that it was *not* a dump truck, so presumably unloading the cotton was again a labor-intensive process at the destination.

When we commented to our tour group leaders on the amount of labor involved, we learned that each seed was planted by hand and each plant was watered by women with handheld gourds. Coming from a state where irrigation replaces rain in nourishing the plants, this seemed like a painfully slow way to water cotton.

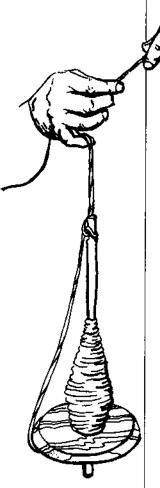
African women do the spinning with small supported spindles. They are made of air-dried clay and therefore are not very durable, but the ones we found were well-balanced. The women spun so gracefully and expertly that they appeared to have spider-like extruders on their finger tips. They were quite surprised that I could spin but when Harry showed them his expertise they had quite a celebration: Spinning is women's work in Africa!

The men do all the weaving and in the country villages men wove strips about two inches wide. These strips would then be sewn together to make the large flowing robes and also the shirts that the men wore. Although the cloth was two inches wide, the warps were tremendously long and extended out from the looms into the streets where children and animals stepped over these hazards, seemingly without interrupting the weaver or harming the warps.

In a sense, it was a humiliating experience to find out that we again needed to apply a great deal of effort to achieve the level we had observed in Africa. It took a lot of cotton spinning and weaving to become genuinely good at it. It took concentration, discipline, and the willingness to see our own mistakes. Our family motto became "Now let's analyze what happened here." It did not come easy, but it was fun.

The experiments we did in singles cotton were so fascinating that the thought of plying rarely entered our planning and testing. We feel that this is a whole area of spinning that has not yet been adequately explored by the amateur spinner.

This is how we learned to spin cotton. And what is next? We have put cotton to rest for a little while. We have resurrected the fascination with flax that we developed in Sweden and have been doing all the necessary experiments and samples to fill a little book called "Handspinning Flax" that is now on the market. Now we can get to the problems in which exploring multiple plies of cellulosic fibers will entangle us. Already finger-plying of bast fiber has Harry mumbling to himself.



Bottom weighted drop spindle.



For our readers who would like to try spinning cotton with a small, supported spindle, we offer some excerpts from the Linders booklet, *Handspinning Cotton*. In it, the Linders share their knowledge of how to spin cotton and use the results.

Decompaction

Cotton must be harvested and the seeds removed before it can be spun. Although this can be done by hand, it is very slow. We prefer to use cotton that has been picked and deseeded by modern machinery. ¹

Cotton fibers cling readily to one another and compact easily. As the lint comes from the gin, it is baled with a hydraulic press to make it easy to ship. This compacts the cotton tightly, so if you buy a pound of cotton that has been in a bale, you need to loosen the lint thoroughly. Cotton can be "teased" or "picked" like raw wool, but this is not the best way to decompact it. Decompaction may or may not be necessary, however, depending upon how your cotton has been handled up to this point.

So-called primitive methods are still effective for loosening the lint. Beating with a forked stick is one way. The stick should be a fairly stout forked branch. This method is most efficient when two sticks are used, one in each hand. The cotton is placed on a mat of some kind: In Mexico a deerskin spread over a bundle of cornshucks is used, and in our culture, one alternative is corrugated cardboard covered with a piece of carpeting. The beating should be rhythmic and vigorous. You will soon find the mass of cotton spreading under the sticks. In time one can shape a sort of rolag from it.

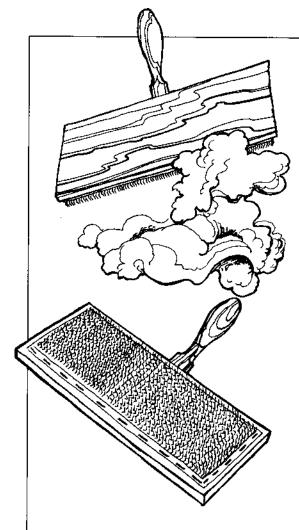
Another method is to put approximately one ounce of cotton loosely in a colander and steam it for three minutes. This re-inflates the hollow core of the lint which in turn loosens the mass, but does not arrange the fiber. If you use this decompaction method, do not allow the cotton to accumulate moisture. Have the steam rolling up before putting the cotton over it and remove it at the end of the three minutes so that condensation does not form.

For the spinner interested in faster production, we recommend the bench carder used for wool as a very good tool for decompacting. The method is roughly comparable to the "picker lap" process in a mill. The bench carder will quickly open up the tight lint but it will not accept an overload. When the teeth get full, they slide over the top of the mass, so load only what can be done efficiently to make the lap.

Carding

The next step in the preparation of cotton for spinning is arrangement of the fibers, or carding, which we consider essential for control.

If you want to spin a fine, smooth thread suitable for clothing, cotton carders are essential tools. Cotton carders have teeth of shorter length and finer diameter wire set more closely together than wool carders. They are specially designed for the staple length and fiber strength of cotton.²



The carding process with hand carders is essentially the same as for wool but we find that most spinners card too vigorously. The following step-by-step procedure emphasizes this important point:

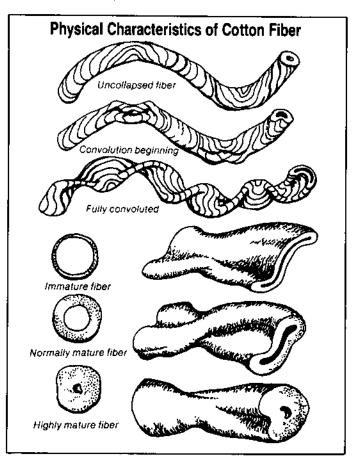
With a loose handful of lint, charge the cotton carders normally with a very light film of fiber distributed evenly over the teeth. Start brushing strokes very, very lightly. Pretend you are smoothing the fur of your pet cat. Keep the lint on top of the teeth. Do not embed the fiber in the teeth of the carder. You will get a smooth, sliding feeling as you gently card. As soon as you hear the teeth begin to scrape together, transfer the lint from one side of the carders to the other. Repeat and alternate the transferring action. Should you discover you are working too hard, tensing the shoulders or wrists, and getting the carder teeth full of lint-stop! You are doing something incorrectly. Start over. Charge the carders lightly, stroke the carders gently, stay on top of the teeth, relax your posture, enjoy the silky feeling of your cotton.

When the lint is carded to your satisfaction and there appears to be a very light film on each of your carders, one rolag may be made by combining the amount on the two carders in the normal manner. However, if you have charged the carders more heavily, make a rolag from each side of the carders. Each rolag should be about the

size of one of your fingers, the most desirable size for spinning a fine to medium thread.

For a heavier or more bulky yarn with interesting slubs or textural interest, more fiber in the rolag is necessary. We often use wool carders for this purpose because it is impractical to make dense rolags on cotton carders, since the teeth will not accept enough fiber to make a really thick roll. With wool carders you will be able to charge the carders more heavily, and the resulting rolag will be an inch or more in diameter. It should be well shaped, firm and of even density. Since the teeth of the wool carders are larger in diameter and spaced farther apart than cotton carders, the resulting rolag will not be as finely prepared but will suffice for a textured or bulky yarn. To save time, run a batt through a bench carder designed for wool and then hand card it with your wool carders.

One can, of course, skip all of the preparatory steps and use sliver from a mill. Both "sliver" and "roving" refer to steps in mill preparation of cotton and result in a long ropelike arrangement of fiber that can be used in place of a rolag. The fiber arrangement is longitudinal rather than spiral. We hope that sometime in your spinning career, you will try it. But we also trust you will find great satisfaction in preparing your own rolags as your fingers become sensitive to the vitality of cotton that has not been devitalized by the necessarily stringent methods of industry.



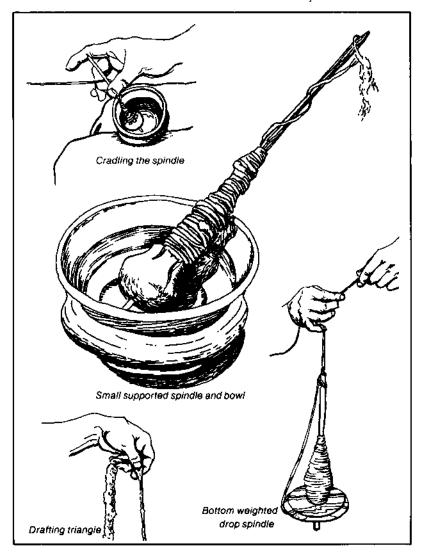
Small Supported Spindle

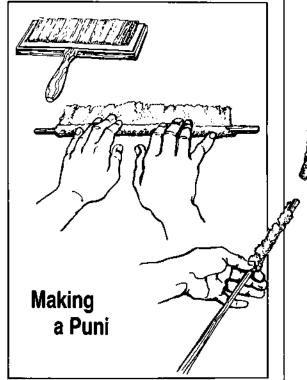


Small supported spindles — basically a ball of clay on a stick—are used in many countries to spin cotton: We have seen them used in Mexico and in Africa. The whorl should be as round as you can make it, about the size of a small walnut. Center the whorl about 1" from the end of a shaft of 1/4" doweling about 9" long. A slight beveling of the short end and a more acute but not sharp tip on the longer end of the shaft are desirable.

A comfortable seated position is best for spinning. Rest the tip of the shaft in a small bowl or saucer. The fiber preparation should be the very best you are capable of, for this type of spindle is used for spinning fine thread. Do your best job of carding with cotton carders and make either a small lightweight rolag or a puni (a denser rolag rolled firmly over a small stick).

The initial lead thread is made by moistening the tip of the spindle then revolving it close to the mass of cotton fiber. It will readily pick up fibers and as it does so, move the hand back to attenuate the thread. When you have about 12





inches spun in this way, move the beginning of the thread from the tip of the spindle to the base of the shaft and wrap it securely around the dowel to make the start of your yarn package close to the whorl. Spiral the thread up to the tip and begin a rhythmic sequence of: spindraw-spin-draw until a length of thread is achieved. While spinning encircle the shaft of the spindle so that it is cradled with the fingers. This prevents the shaft from wobbling about and falling. With a little practice it is possible to get a good spin with the fingers comparable to the action in spinning a top or a coin on the edge. Remember that cotton needs a lot of twist per inch in order to make it strong, so teach your fingers to spin rapidly. Test between your fingers to determine the strength of the thread. This type of spindle is excellent for producing a fine thread comparable to 20/1 cotton or finer. It is also an excellent spindle for traveling because of its portability.

Setting the Twist

The methods used for setting the twist in wool will not work on cotton. This is due to both the amount of twist that cotton requires and the fact that cotton fiber is impregnated with oil during its growing time.

Keep the yarn under tension at all times. The method we use is to wind the yarn directly from the spindle or bobbin onto a short length of PVC (polyvinyl chloride) pipe. This pipe is used in sprinkler systems and can be purchased at a plumbing supply house. We cut it with an ordinary hand saw into 6-inch lengths and put holes in it with a hand drill in order to assist per-

colation of water through the yarn. We install bushings at each end of the pipe to prevent the yarn from slipping off at the ends. Although any size pipe will work, we buy ½ " diameter because it fits our bobbin winder.

After winding yarn on the pipe, be sure that the end of the yarn is secured with a loop or large knot and pinned into itself, so it can be found again. Place the prepared bobbin in a pan of water and boil. If the water is hard, use water softener. The water should be deep enough to allow the bobbin to float freely without touching the bottom of the pan. The water can be either hot or cold to start; don't worry about shocking cotton with temperature.

Boil for 30 to 60 minutes depending upon the amount of yarn on the bobbin and the size of the yarn: Bulky yarn will need more boiling time. The boiling water will dissolve the natural oil from the fiber and you will notice that the entire spool will gradually begin to sink in the water as the temperature reaches the boiling point. After it has sunk, the spool must be turned now and then to prevent the cotton from resting on the bottom of the pan and scorching. Since you have a tightly wound spool and the water must penetrate the entire winding of yarn, do not hurry this process.

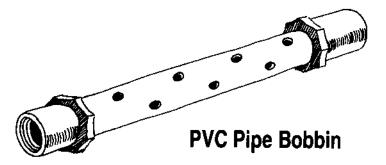
The water may become brown and tea-like, depending upon the amount of vegetal trash in the cotton. Your thread will have variations of soft brown shades and creamy tints in it while it is wet which will fade somewhat upon drying. If you do not care for this coloration, you can bleach the cotton using household bleach.

The yarn can be dried at this point, or sized (see below). Place the tube on a spool rack and wind the yarn on a teel, warping board or niddy noddy. Allow to dry and skein it if you plan to dye it, or store the dry yarn in a ball or on a spool for future use. Do not leave the wet yarn on the PVC pipe to dry because it may mildew.

Sizing for Weft

After the twist is set, nothing further needs to be done to the yarn in order to be a successful weft. However, we have found that sizing our weft makes the yarn easier to handle, minimizes drawin on the loom and contributes to the speed of weaving with handspun cotton.

Place the PVC bobbin with the wet boiled yarn on a spool rack and unwind, running the yarn through a solution of medium starch made according to package directions. We place the starch mixture in a pie tin or other shallow dish and weight the yarn in the liquid with a brick into which we have filed a groove with a rat-tail file. The trick is to keep the yarn in the liquid and avoid abrasion at the same time. The yarn passes through the fingers as it is wound on a reel to dry, smoothing the thread. It dries with a linen-like feeling and works well as weft. This process is a



bit messy, so we work outdoors whenever possible.

Sizing for Warp

Using handspun cotton thread for warp presents some unique and sometimes humbling experiences for the spinner. Perhaps the most important single fact is that nothing compensates for poor spinning. A good thread with plenty of twist and sound joins is the goal that should motivate all of the hours you put into your handspun thread.

We know that other peoples have used maize water, rice water and other starchy liquids for sizing, depending on the part of the world they live in and what is available. We have tried to envision what was available to the housewives of the early colonies. We have boiled our threads in flaxseed, sugar-and-water, laundry starch, and we have soaked our threads in cold buttermilk. And we followed a recipe from Oscar Bericau which calls for beeswax, glycerine, suet, zinc sulfate and water.³

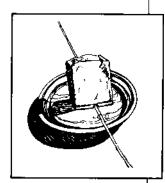
All of these helped a little, but not enough. The problem is that cotton has fuzzy tendrils extending from the spun thread, which, in the weaving process, catch on one another and literally shred apart.

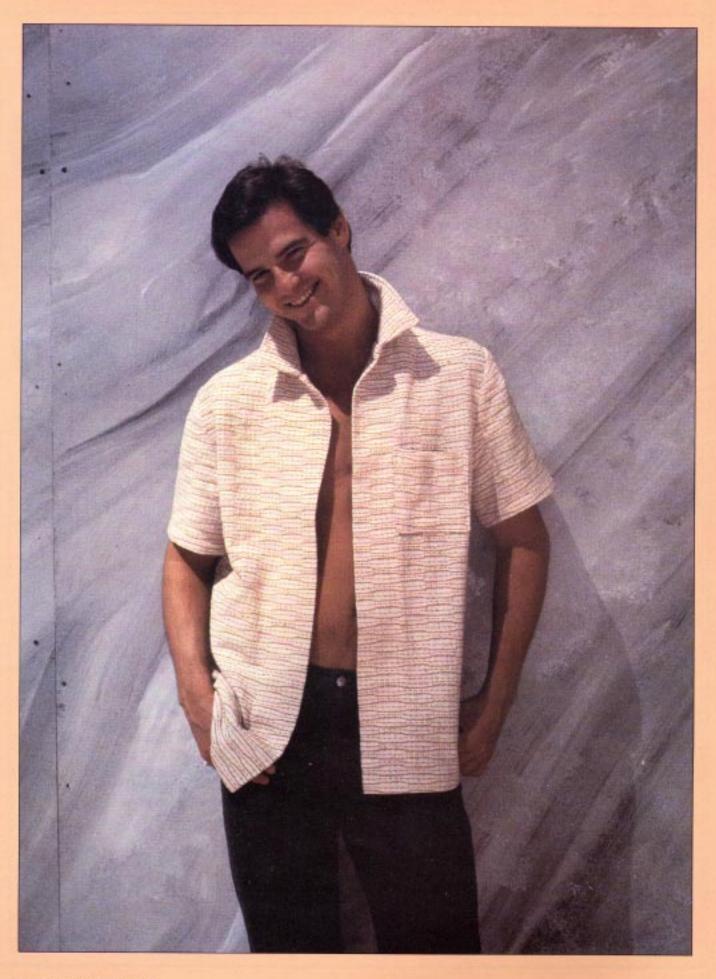
The best sizing we have found is also one of the simplest. Mix a package of gelatin (Knox™ unflavored) according to package directions and run the yarn through the solution in the same manner as described for sizing weft. The resulting yarn will be smooth and the sizing will wash out when the woven piece is taken from the loom and laundered. Gelatin may be used for weft sizing also.

To size dyed thread or any yarn which has been dried after setting the twist, rewind it on PVC pipe and soak in warm water to wet thoroughly before running through the sizing solution.

Notes

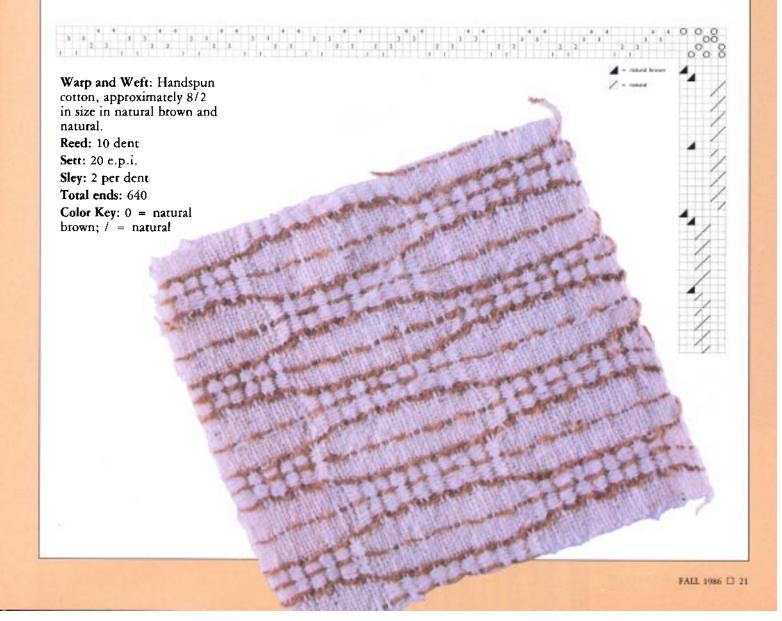
- 1. Reprinted with permission from *Handspinning Cotton* by Olive and Harry Linder. Phoenix: Cotton Squares, 1977. ISBN 0-9602040-0-8.
- 2. At present we know of only two manufacturers of cotton carders: Clemes & Clemes of Pinole, California, and E.B. Frye of Wilton, New Hampshire. The former also makes a drum carder that is admirable for cotton.
- 3. Home Weaving by Oscar Berieau. (Quebec: Department of Agriculture, 1939).



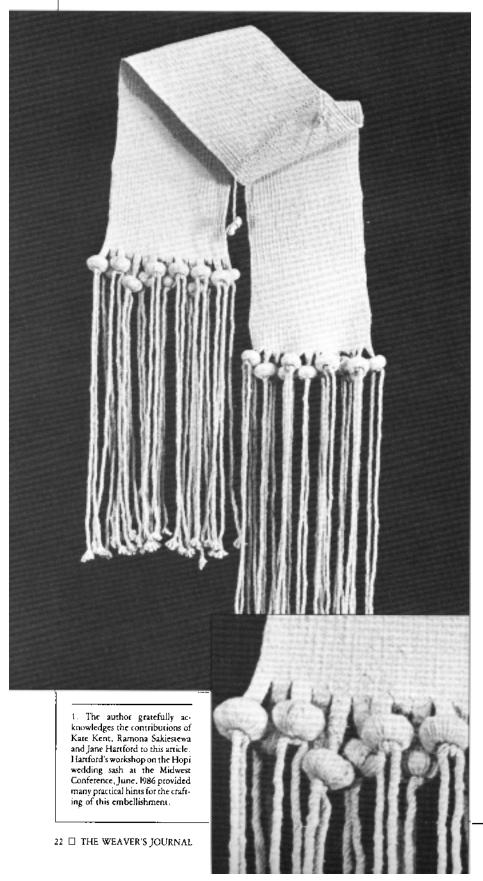


Simply Natural

For warm summer nights and Indian summer days try this jacket of handspun cotton spun and woven by Harry Linder. The technique used is M's and O's from Marguerite Davison's A Handweaver's Pattern Book.



FINISHES/SHARED TRADITIONS



Embellishments on the Rain Sash

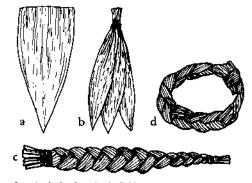
by Suzanne Baizerman

HERE ARE FEW EMBELLISHMENTS which so aptly fit both the theme of this issue—cotton—and the focus of this column—finishes—as those on the elegant, all-white cotton Hopi sash known variously as "the big sash," "the rain sash" or "the wedding sash."

Background: The Hopi are one of the groups of Native American agriculturalists known as the Pueblo Indians who have lived for hundreds of years in the Southwestern United States, predating Spanish settlement of the area. When the Spanish arrived in the 16th century they were duly impressed with the beauty and variety of the Pueblo cotton textiles produced with locally grown fiber. These fabrics were woven by male members of the society for home use and for trade. These textile traditions, while affected by Spanish and Anglo contact, have persisted to the present day.

It is likely that originally the Hopi sash was, although much narrower and less elaborate in form, an item of daily use, but it now serves primarily in ritual, ceremonial occasions. A bride

Traditional Hopi sash with detail of embellishment.



a. Corn husk. b. Corn husk divided into 3 parts and tied. c. Braided corn husk. d. Braided corn husk tied into ring.

Early 20th century photograph taken at a Zuni village. Note the many braided sashes with long fringes. Courtesy of Seaver Center for Western History Research, Natural History Museum of Los Angeles County.

is given two white cotton *mantas* (rectangular shoulder cloths) and a sash during wedding rituals,² hence the name wedding sash. However, the sash is also used by Hopi and other Pueblo Indians for various ceremonies and is worn by both men and women.

Part of the symbolic significance of the sash relates to the meanings attached to cotton. Cotton's "association with clouds links cotton also with kachina supernaturals and rain. It is used to decorate masks, altars, and other cermonial equipment, and it figures in certain mortuary customs. The Hopi traditionally make a mask of raw cotton to place over the face of a deceased person, with the idea of making the spiritual body light, like a cloud." For agricultural people, clouds and rain are critical to the yearly growing cycle. In the sash's embellishment we see a visual metaphor of cotton's meaning: the rounded cloud form on top, the long fringe representing the falling rain, the short ends representing the smaller raindrops. 4

Traditionally the sash is fabricated using a technique known in Europe as sprang. It is worked on a loom-like frame, described in detail in Kate Peck Kent's article. After the main body of the sash is worked, smaller tabs are worked at each end. (Some sashes are now loom woven "in twill or warp float pattern weave to simulate braiding." 5)

After the short tabs are worked, the piece is cut from the frame and long fringe is formed from the loose ends. The way the fringe is worked is so interesting that Kent's observations are reproduced here:

"The fringe strings are placed in damp sand for an hour, so that they will twist more easily. After this the worker begins at the side nearest himself and removes half of a group of twelve strings from the sand. . . . He straightens these out, and ties them near the cut end with one of their own number. He then rolls them on his knee towards himself until they are well twisted. After they are pulled out straight so that the twist is even he has a six strand cord. He then removes the other half of the group from the sand and repeats the process. The paired fringe cords are tied in a simple knot as close to the braiding as possible. He treats every group of twelve strings in this fashion. . . . Taking a little finely-ground white clay in his hand he rubs it on these cords to prevent the sand from staining them."6

Apparently the dampness of the sand helps



to "set" the twist of the fringe. After the fringe is formed, the ball-shaped embellishments are attached over the fringe and secured with a knot.

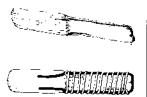
To form the rings: First, a ring is formed of dried corn husk which has been soaked to make it pliable. Other materials could be used instead but the cornhusk has nice body for braiding (and perhaps even symbolic significance). Divide a 6" × 10" piece of cornhusk into three pieces and tie these securely with thread at the broader end. Braid them together using a simple three-strand braid right down to the tapered points. Secure this end with thread. Form the braid into a ring and tie with thread to secure. Trim off excess cornhusk and allow the ring to dry.

A special tool is used to prepare cotton for the cornhusk ring. The Hopis use a hand-carved piece of wood about an inch wide with a groove carved around the outside. While perhaps not as beautiful, an alternative tool could be devised of straight wood or even of cardboard.

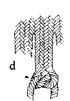
Tie a length of yarn about two feet long into the groove of the tool. Next, wrap yarn around the tool, covering the beginning end. (Lily "Sugar and Cream" or cotton string of similar diameter are suitable.) Work in the last bit of yarn with a needle. Now for the tricky part: Place the cornhusk on the wrapped tool. Draw out the yarn in the groove to form a loop and slowly use it to guide the yarn off the tool and around the cornhusk ring. Carefully tie the appropriate pair of threads together and slowly tighten the strings, then knot. Slip the ring over the a pair of twisted fringe cords. Secure ring in place with a tight half-knot.

Bibliography

Kate Peck Kent, "The Braiding of a Hopi Wedding Sash," Plateau, Vol. 12, No. 3, January, 1940, pp. 46-52. Kate Peck Kent, Pueblo Indian Textiles: A Living Tradition. Santa Fe, School of American Research Press, 1983.









Making rings for fringed sash:

a. Wooden tool for wrapping yarn; b. heavy yarn in place in edge groove, chinner yarn is wrapped around tool; c. wrapping removed from tool; d. knotted fringe; e. wrapping tied around corn husk ring.

^{2.} Kent, Pueblo Indian Textiles,

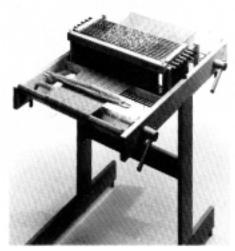
^{3.} Ibid., p. 26.

^{4.} Ramona Sakiestewa, personal communication, 1986.

^{5.} Kent, op. cit., p. 83. 6. Kent, "The Braiding of a Hopi Wedding Sash," p. 51.

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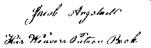
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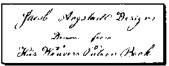


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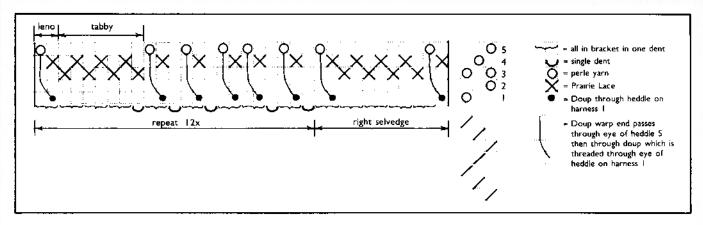
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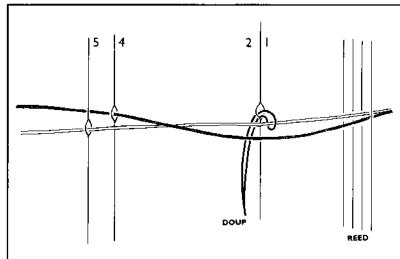
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A doup is a hand-made loop of strong thin cord with the ends tied securely together. It is just long enough to be fastened over the bottom metal tape on hatness two by a clove hitch knot and still reach through the eye of a regular heddle on harness 1 (figure 1). The doup receives the warp end that has passed through a heddle eye on harness 5. The warp end threaded on harness 4 is then crossed over the first end and through the reed with it. This device does the crossing and uncrossing of these two warp ends to create leno. Five harnesses are used in the draft shown. It is best to thread the last three harnesses of your loom with those shown listed for harness 3, 4, and 5. The greater distance between these and the doup harness, the better the shed.

Caution: The warp ends which form the leno part of this structure will have much more take-up than the warps which are in the tabby stripes. To prevent the loss of tension, the tabby warp ends can:

- be warped on a second beam.
- be weighted by a dowel or rod slipped under the tabby warps only and weighted at each end with large c-clamps; or
- be weighted as individual stripes with small weights hung by s-hooks.

Warp: A combination of smooth and textured yarns, such as Henry's Attic "Perle," natural 2 ounces; Silk City "Prairie Lace," natural, 8 ounces. (This stole was woven on a warp used for six stoles of different lengths. A warp for a single stole may require more yarn.)

Weft: A highly textured cotton: Henry's Attic "Twirley" was used here, 8 ounces for 90" stole.

Width in reed: 26 1/2".

Length: 80" (small), 90" (medium); 115" (large), plus 7" of fringe at each end.

Sett: 6 e.p.i. If using a different reed size, be sure pairs of crossing yarns are in the same dent.

Beat: 6 p.p.i.

Weaving: The draft is done according to the system used by Skowronski and Tacker in their monograph *Doup Leno*. If you have problems getting a good shed, try their system for tensioning the warp by using dowels in the sheds behind the harnesses. Slip one dowel in the shed produced by treadle 1, another dowel in the treadle 3 shed. These dowels are fastened to the loom frame with stretchable cords like bunge cords or surgical tubing.

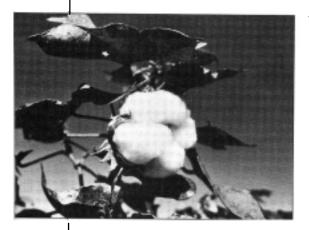
Finishing: Hemseitch on the loom at the beginning and the end of the woven web. Use a large stitch to pull the warp ends together in bunches that relate to the stripe pattern. These same bunches can then be tied together at the cut ends of the fringe. These yarns do not wash up nicely if left as simple cut fringe.

Wash the stole in warm water on the gentle cycle of your washing machine for about three minutes, rinse with warm water, and stop machine before end of spin cycle to prevent wrinkles from overspinning. Air dry. Pressing is usually not necessary.

Bibliography

The Prairie Wool Companion. Issue 6, September 1983. This whole issue deals with doup leno; note the wonderful diagrams on pages 10-13 in an excellent article by Alexis Xenakis and Elaine Rowley.

Skowronski, Hella and Sylvia Tacker. Doup Leno. Shuttle Craft Guild Monograph 32, 1980.



Understanding Cotton Fiber & Yarns

excerpted from "Handweaving with Robert & Roberta"

by Robert & Roberta Ayotte

OTTON, one of the oldest natural fibers, can be grown only in warm climates. The seeds are planted in early spring and develop into three to six foot plants with white blossoms that turn pink, wither and drop off. In their place come the green seed pods known as cotton bolls. When the bolls are fully developed, they turn brown and burst open with puffs of fleecy, white cotton fiber that is then ready to be harvested.

The cotton gin, invented by Eli Whitney in 1793, is a machine used to comb out the seeds. The cotton is then passed into another machine where it is put in layers and packed in bales, each weighing about 500 pounds (225 kg). The bales go to the mills where the cotton is carded, the fibers separated by machine and formed into a rope called a sliver. The slivers are combed and made into a roving, which is a smaller strand, and then spun into cotton yarn and wound onto spools, ready for use.

Cotton is the most versatile and widely used of the natural textile fibers. It is strong, takes well to a wide range of dyes and bleaches, is easily washed, absorbs moisture, takes to many kinds of finishes, and withstands changes of temperature and humidity.

Cotton fibers have varying qualities, such as length, luster, strength and elasticity. The length of the cotton staple vaties from ¼" (1 cm) to 1½" (4 cm). The longer fibers are used for top quality cotton yarns and fine sewing threads; the shorter fibers are used as a base for man-made materials, such as viscose and acetate. The finish of the yarn can be dull but the mercerizing process (immersion in a caustic soda solution) will make the fiber stronger, more lustrous and more receptive to dyes.

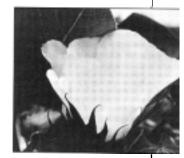
The longer staple cotton yarns are strong and wear well. Plying of two single strands makes an ideal strong warp yarn. To test the strength of a yarn for use as warp, cut a piece approximately 18 inches (46 cm) long and gently pull on both ends simultaneously. If the yarn does not pull apart easily, it can be used for warp. Don't forget that threading many warp yarns side by side will give the entire warp more strength than a single end.

Some novelty spun cotton yarns may be satisfactory only for the weft. This could be due to some thick and some very thin areas in the yarn, heavy slubs or nubs that may catch in the heddles and reed, or a looser yarn wound around a core yarn that shifts when the reed rubs back and forth against it.

Yarns are spun with either an S- or Z-twist: S-twist—left hand, counterclockwise; Z-twist—regular right hand, clockwise. The twist in yarn plays an important part in the development of cloth. Soft fabrics are made from yarn that has fewer turns per inch of twist, whereas coarser fabrics are made from harder twisted yarns—those with a greater number of turns per inch. By warping an opposite twist in a two-and-two order, one twist will resist the other and produce a crinkled effect. Shadow stripes are the result of warping several ends of one twist and opposing it with an equal number of ends of the opposite twist.

To identify a cotton yarn, you can conduct a simple fiber burning test. This can be done on all yarns to find out the fiber content. Does it burn quickly? What odor does it leave? What kind of residue is left? Burn the tip of a piece of cotton yarn. It will burn only when it is held directly in the flame; it burns rapidly with a luminous yellow glow. It smells pungent or choking like burnt paper and leaves a small fine gray ash that is extremely light in weight.

Cotton feels soft and elastic. It makes excellent summer clothing, because it is a good conductor of body heat. It is not attacked by



Cotton blossom.



Photos courtesy of the National Cotton Council of America, 1918 North Parkway, Memphis TN 38112.

moths, and it is easy to wash and iron. However, when cotton material is damp and the weather hot and humid, mildew may form. It can be removed with water or chlorine. (If mildew forms on wool, it can be brushed off.) If exposed to constant sunlight, cotton will deteriorate, so it should not be used extensively in drapery fabric.

Some typical cotton fabrics are sheeting, terrycloth, broadcloth, flannel, cheesecloth, chenille, chintz, corduroy, denim, muslin, organdy and percale. The variation in these fabrics is attained by using different weaves, varying the fineness or coarseness of the yarns, using open or dense sleying and beating of the yarns, or in the final commercial finishing of the fabric.

Cotton yarns blend well with other fibers. A nice combination to use is cotton for the warp and wool for the weft, or mix cotton and linen in clothing or placemats. When mixing fibers in the warp, make sure they are closely intermixed and not in stripes or one fiber may shrink more than the other and create a seersucker effect. We have successfully blended similar weights of 2-ply cottons and 2-ply wools in the warp, mixing them every one or two ends. This blending gives the fabric more body, drapes and resists wrinkling better than an all cotton fabric. A plain tabby woven cotton fabric is not very interesting, so to add interest in design, use a fancy weave or pattern. Cotton was used extensively by early American handweavers as the ground weave in overshot patterns.

The cotton count is figured on a standard single ply length of 840 yards to the pound (1,690 m/kg). The yarn size for this standard length is known as count No. 1. As the count increases, the size is finer and the yardage increases. The count number means that the yarn size is that many times finer than the standard No. 1. Therefore, a No. 2 cotton is twice as fine as a No.

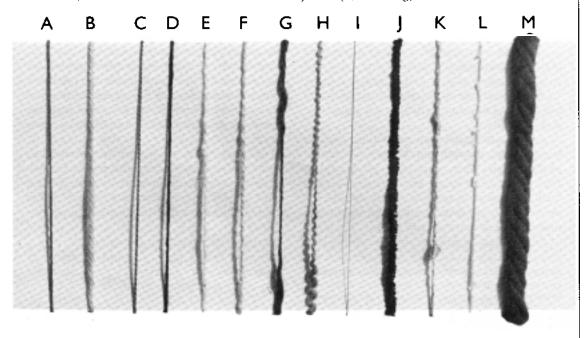
1, and the results are two times the standard 840 yards, or $2 \times 840 = 1,680$ yards per pound $(2 \times 1,690 \text{ m} = 3,380 \text{ m/kg})$ (figure 1). Yarn counts up to 20 are called coarse, 20 to 60 medium and above 60, fine. A general purpose sewing thread is a No. 50, with $50 \times 840 = 42,000 \text{ yds/lb}$ (84,680 m/kg).

Count No.		yds/Lb	(m/Kg)
1	=	standard 840	(1,690)
2	=	$2 \times 840 = 1680$	(3,380)
3	=	$3 \times 840 = 2520$	(5.069)
4	=	$4 \times 840 = 3360$	(6,759)
5	=	$5 \times 840 = 4200$	(8,449)
6	=	$6 \times 840 = 5040$	(10, 139)
7	=	$7 \times 840 = 5880$	(11,829)
8	=	$8 \times 840 = 6720$	(13,518)
9	=	$9 \times 840 = 7560$	(15,208)
10	=	$10 \times 840 = 8400$	(16,898)

Figure 1.

Ply Yarns. When two or more strands or yarns are twisted together, they are designated ply yarns. They are termed 2-ply, 3-ply, and so on, according to the number of strands used in their construction. The yarn count and ply construction are expressed in the following manner: The term 8/1 indicates a yarn count of 8 and is a single yarn. In the same way, an 8/4 yarn has 4 strands of a count 8 yarn twisted together.

To calculate the yardage of a plied yarn, the count size is divided by the number of plies. Since the count number and plies are shown as a fraction, the fraction should be reduced to its lowest common denominator and multiplied by 840 (1,690). For example, an 8/4 cotton is reduced to a $2/1 = 2 \times 840 = 1,680$ yds/lb (3,380 m/kg). A 4/4 is reduced to a $1/1 = 1 \times 840 = 840$ yds/lb (1,694 m/kg).



When ordering yarn, be sure to order a little more than needed, because the yardage per pound varies. For example, a one pound package of yarn may have more or less yardage because of the yarn spinning variables that allows for a thinner or thicker yarn size tolerance. If the yarn is spun a little thicker, the yardage will be a little less per pound. We have experienced this when using several packages of the same yarn at one time and found them running out at different times. To be on the safe side we always plan on 10 percent more than we need.

Here is a selection of cotton yarn samples that show a wide range of the basic and most common types.

- A. 8/4 cotton. Sometimes referred to as carpet warp. A very sturdy and basic warp yarn that is excellent for beginners. This is a No. 8/4 ply cotton having 1,680 yds/lb (3,388 m/kg). It has very little stretch, will not pull apart or rough up and is very strong. This yarn makes a good warp for placemats and runners, tote bags, cotton rag rugs, bookmarks, etc., and may be mixed in the warp with other yarns that are not as stiff. It makes a fairly economical warp and is generally put up on one-half pound (224 gr) tubes in a wide range of colors. This yarn works well sleyed one end per dent in a 12 or 15 dent reed.
- B. 4/4 cotton. A heavier 4-ply basic warp that is softer than the 8/4 and makes a more pliable fabric. It does not pull apart and is strong so it makes a good warp for heavier projects. This is a No. 4/4 ply cotton having 840 yds/lb (1,694 m/kg). It makes a good warp for heavier placemats and pillow covers, and may be mixed with other heavier weight yarns in the warp. It comes in a wide range of colors and works well sleyed one end per dent in an 8 or 10 dent reed.
- C. 5/2 mercerized cotton. A popular warp yarn that has a luster because it has been mercerized. It is a quality yarn because it has less shrinkage, holds the dye better due to the mercerizing process and is not as stiff as the 8/4 cotton. It is an excellent choice for summer apparel, as it is soft and drapes well. It is also called Perle cotton and comes in four standard sizes:
- 20/2 with 8400 yds/lb (16,898 m/kg)—extra fine 10/2 with 4200 yds/lb (8,468 m/kg)—fine 5/2 with 2100 yds/lb (4,224 m/kg)—medium, (C.) 3/2 with 1260 yds/lb (2,534 m/kg)—heavy
- D. 8/2 unmercerized cotton. Use this yarn when you want a softer warp than 8/4 cotton and when you don't want the luster or sheen of mercerized cotton. 8/2 = 3,360 yds/lb (6,758 m/kg).
- E. 4/2 natural soft-twist cotton. This is a good yarn for dyeing and generally is put up in skeins. It is strong enough for warp and makes a nice weft. 4/2 = 1,680 yds/lb (3,379 m/kg).
- F. 2-ply cotton ripple "Ripple" refers to the texture of the yarn, which can be produced in various weights. This particular sample has approximately 1,800 yds/lb (3,621 m/kg) and is a

- strong warp yarn. It gives an interesting texture when used as a warp for placemats or other cotton projects.
- G. 3-ply cotton flake. A warp and weft yarn that is good in placemats, apparel, etc., with approximately 1,800 yds/lb (3,129 m/kg).
- H. Textured cotton flake. Recommended for weft only, as the yarn "shifts" when it is rubbed back and forth through your fingers and reed. Approximately 1,600 yds/lb (654 m/kg).
- I. 50/3 mercerized cotton. A very fine strong yarn that is sometimes used as a warp for a very sheer fabric or blended with other weft yarns as an accent. It generally comes in very vibrant colors. $840 \times 50 = 42,000/3 = 14,000 \text{ yds/lb}$ (28,164 m/kg).
- J. Cotton-rayon chenille. A woven yarn made with a dense filling on a sparse, banded warp that is cut between the warp bands to form a woven fringe. The washing and finishing process rounds the fringe into a full yarn that has a fuzzy pile effect. It may be used as a warp or as a weft with a plain cotton warp, and the end result is a very soft textured velour fabric. Many weavers desire this in apparel fabrics. Approximately 1000 yds/lb (2,011 m/kg).
- K. Cotton knot. A textured weft yarn that has nubs. The nubs will get caught in the reed, so this yarn is not recommended for warp. Approximately 1400 yds/lb (2,816 m/kg).
- L. 2/1 nubby single ply cotton. A very soft textured cotton that is not strong enough for warp. However, it makes a nice weft yarn in placemats, apparel, etc. Approximately 1,680 yds/lb-1 ply (3,380 m/kg).
- M. 4-ply cotton roving. Sometimes sold under the name "rug filler." It is soft and loosely twisted. It is good for heavy border accents, hot mats, tote bags, bathroom rugs, braided for tote bag handles, etc. ½ lb skeins with 100 yds/lb (225 gr skeins with 201 m/kg).

This overview of cotton fibers is from Volume I, Number 2 of "Hand-weaving with Robert and Roberta," a homestudy course in hand-weaving developed by Robert and Roberta Ayotte. The total course involves four separate booklets in each of the four volumes described as Foundation, Intermediate, Advanced and Master. There are 34 specific weaving projects and related learning assignments (for example, making a color chart). Students start with the simplest materials and work up to professional-level clothing design. Each four-part volume sells for \$34.95 and is mailed out periodically as the student advances in expertise.

Weaving Together

The Ayottes of Center Sandwich, New Hampshire

by Shirley Elder

UNSHINE SLANTS THROUGH windows along one side of the room revealing thin, jagged cracks in the old schoolhouse-green shades. A blackboard nearly covers one wall. Patterns on the floor mark where desks and chairs once were locked in place. But there are no students here now, just dozens of cardboard cartons lined up in rows as neatly as the rows of old schoolroom desks.

"We haven't changed a thing," Bob Ayotte says as he shows us around. "Just filled it up." Room after room, from basement to attic, is jammed with the tools of Ayotte's trade, whole



Ayottes' Designery,

looms and parts for others, scraps of materials, pillows, books, washing equipment for finished products and, everywhere you look, boxes filled with all types and colors of yarns. It is quiet here, except for the click-click of a loom downstairs.

Outside, the picture postcard village of Center Sandwich, New Hampshire glistens in the brightness of a perfect day.

It seems particularly appropriate that this building Ayotte now has filled up once was a school, because Ayotte and his wife Roberta, weavers by profession, double as teachers by conviction.

Today, after years of painstaking work, the Ayottes have completed publication of a four-volume, 16-part home study course, "Handweaving with Robert and Roberta."

Setting the pace is Roberta Ayotte, described as a workaholic by her husband. "She's the weaver-designer," he says. "She never thinks of it as work. She loves weaving. I'm more of a salesman." Roberta Ayotte smiles as he talks. She's heard this before, and doesn't dispute it. She says of weaving: "To me it's not work. It's like my work is my hobby."

Roberta is known as "Boo" to friends, a shy and gentle "Boo," not the type who springs from hidden corners to frighten the neighbors. She is her own best advertisement for a weaver's products, almost always wearing her own designs in the vibrant colors she likes best and that set off her dark good looks to advantage.

"I've found I enjoy wearing them. They're very comfortable. I just wasn't pleased with clothing I found in stores," she explains. "Besides it's much easier to weave and make your own things. I've done it so long now if I showed up in commercial clothes, people would think something's wrong."

When the Ayottes married in 1958, friends said it was a perfect match of Boo's creative talents and Bob's practical savvy. But the road to success was not easy. There were years of frustration, years during which a young unknown entrepreneur tried to market the work of a young unknown weaver. She worked at home on a new Leclerc Nilus 45" four-harness jack loom set up in the living room. He worked in a factory designing toys for a small company in Herndon, Pennsylvania. And together they declared themselves in business: Robert the general manager working nights and weekends; Roberta the designer-weaver working all the time.

When the "general manager" drew up time-and-cost sheets and tried to measure the weaver's output, he despaired of ever breaking even. "I discovered that although Roberta's time sheet showed five hours," he says, looking back in amazement, "she would start when I left for work and, except for a lunch break, she would still be working when I came home nine hours later." At the end of their first year, the balance sheet showed: business income, \$92; expenses, \$1,005.27. "Roberta and I were not very knowledgeable about short cuts and efficiency."

Ayotte can smile today about some early experiences but it must have been painful. There was the excitement of their first big client, a New

York City textile design firm that agreed to buy Roberta's upholstery patterns, but after weeks of negotiations the buyer skipped out—with her sample patterns in hand: "We were never paid for anything."

Then there was the time they moved to a new apartment with a larger studio-living room and planned a "grand opening." Invitations went out, ads were placed in local newspspers: "New Craft Studio . . . Fabrics, Gift Items, Oil Paintings." They prepared punch and cookies. And waited. By day's end, fewer than ten people had come. Sales totalled \$25, and that was for a painting.

By then, Roberta was working on Warps 49 and 50. Her work has been numbered in sequence (now past 1130) beginning with that first effort in 1959, a four color warp with a 6-end repeat in the warm tones that were to become her trademark. Oranges and reds set off by pinks and beige.

Slowly the Ayotte business picked up. Orders came in for upholstery fabric. Roberta entered—and won—design shows to gain recognition. She expanded from the simpler work of runners and pillows to apparel and intricate wall hangings, always working. "Her effort was 100-plus," Ayotte says. "The important thing is the love of what you do, devotion to it, and persistence."

By 1966 with sales moving past the \$5,000 mark, he decided to join Roberta in the business full time, helping with weaving handling business matters, plotting expansion. They searched his home state of New Hampshire and discovered the old Quimby High School in Center Sandwich. It was perfect. There was room for everything—a retail shop to be called Ayottes' Designery, workrooms, storage rooms, living space. They moved in September and at the famous Sandwich Fair in October, Roberta won seven blue ribbons for her weaving.

Soon both were working long days with little time off. Ayotte estimates that they earned about 33 cents an hour that first year in New Hampshire even though business was booming. In 1969, with sales of \$428,785, Ayotte decided to increase production by bringing in summer apprentices. It seemed to offer the best of two worlds: more products for Ayottes' Designery and a chance to pass on to others their love and knowledge of weaving. They began to take Sundays off; Bob bought a new sailboat.

In 1974, the apprentice program blew up. Ayotte calls it "The Ordeal," a painful experience that occupied him, preoccupied him, for a year. It started when he fired one of that year's apprentices in mid-summer for misconduct. She complained to state officials and filed a claim for "wages." Ayotte argued the program was educational: instructions were given in exchange for work.

"We are not just an average business," he



said at the time. "We are an extra-special business. We are constantly asked to teach, lecture, give workshops . . . " He won the legal case but lost the apprenticeship program when federal officials decided it did not conform to U.S. labor laws.

Bitter and disillusioned, Ayotte abandoned the apprentice idea. But he's not the type to brood for long. Soon he was planning a new way to share the Ayotte weaving skills: The two would set up a home study course, teaching the art of weaving, lesson by lesson—by mail.

It took the Ayottes nine years and countless hours of work to pull the whole thing together, to prepare the course outline, to set up the weaving projects, to test each one and to write the text in a way that could be easily understood. As each issue was completed, it was mailed off to subscribing students.

The Ayottes, both graduates of the Rhode Island School of Design (RISD), describe their course as equivalent to a college-level program, drawing on both the RISD's basic approach to professional education and their own years of experience as fulltime weavers. Thus, it is more than just a "how-to" course on weaving. Prospective students also learn about fibers, color, design, drafting, equipment, materials and—through a running commentary on the Ayottes' own experiences—marketing.

Robert and Roberta Ayotte congratulate each other on completion of their home study course, "Handweaving with Robert and Roberta." Some of the 34 weaving projects included in their most comprehensive course are displayed. With refreshing candor, the course includes reports on the good news and the bad news of their lives as weavers, the years of productive work, the frustrations when sales slumped, the profit-and-loss figures (mostly loss at first), Ayotte's hard decision to leave a salaried position in industrial design and join his wife as fulltime weaver, the challenge of turning Sandwich's old Quimby School into the new Ayottes' Designety, the painful lesson of trying to teach through apprenticeships and, persistently throughout the narrative, a thread of optimism and determination. "It is amazing," Ayotte writes in Volume II, "what happiness, good health and drive can do if both the mind and body are willing and able."

All the labor has been worthwhile, the Ayottes agree, if others are attracted to weaving. "Setting up a loom is the hardest part," he says. "It used to kill interest in weaving. We have made it so easy, it's a pleasure."

Most weavers are content, even happy, to master the tools of their exacting craft. But Bob Ayotte is, quite frankly, something else: a man driven to achieve, to move, to act, to battle if need be, and above all else to succeed in following a set of carefully outlined predetermined goals no matter how long it takes nor what obstacles rise along the way.

"I believe people usually get exactly what they deserve which is predicated on their own effort or lack of it," Ayotte says with an easy smile that belies the intensity of his work. "I also believe that my life is guided by fate, and that everything that happens to me is for the best."

It was that combination of hard work and, yes, perhaps fate that propelled the Ayottes from their respective home grounds into a first class college education and the independence of owning their own business.

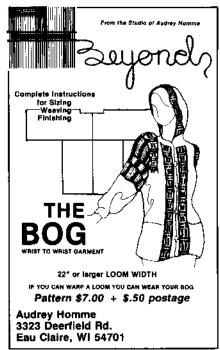
Bob who was born and raised in the gritty mill town of Berlin, New Hampshire wanted something more than to follow family and friends into jobs at the local pulp mill when he got out of high school. So he joined the Air Force and after four years as a military career consultant ("I did not see the world, but I did see some of Texas, Arizona, Colorado and Michigan"), he decided to use the G.I. Bill and seek a career in industrial design.

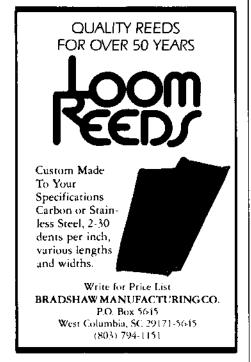
Roberta, born and raised in a third floor apartment in Worcester, Massachusetts, was the brightest kid in her high school class but couldn't afford college. She won a coveted Royal Bailey Farnum scholarship to the Rhode Island School of Design. They met at RISD their freshman year and, as Ayotte recalls, "almost from the start, we became a team."

Teamwork has paid off. When they set up shop in Sandwich, for example, Ayotte took his turn at the loom. When searching for ways to increase business, he added looms, parts for looms, other local crafts for sale. When Roberta began buying up yarn from all over the country, he set up a "yarn club" to share small amounts and special fibers with other weavers. When they needed publicity, he sat down and wrote his own press releases. When they needed more space, he built a barn (it, too, now is full of yarn and looms and a 19-foot sailboat, "Super Shuttle").

Through it all, the impact of lessons learned in college remains strong with the Ayottes. Years later, they recall and heed one of the RISD's messages: "The college is not concerned with the training of followers, but with giving the student that kind of well-balanced education that can make for leadership in his chosen field." The Ayottes chose leadership in the field of weaving.









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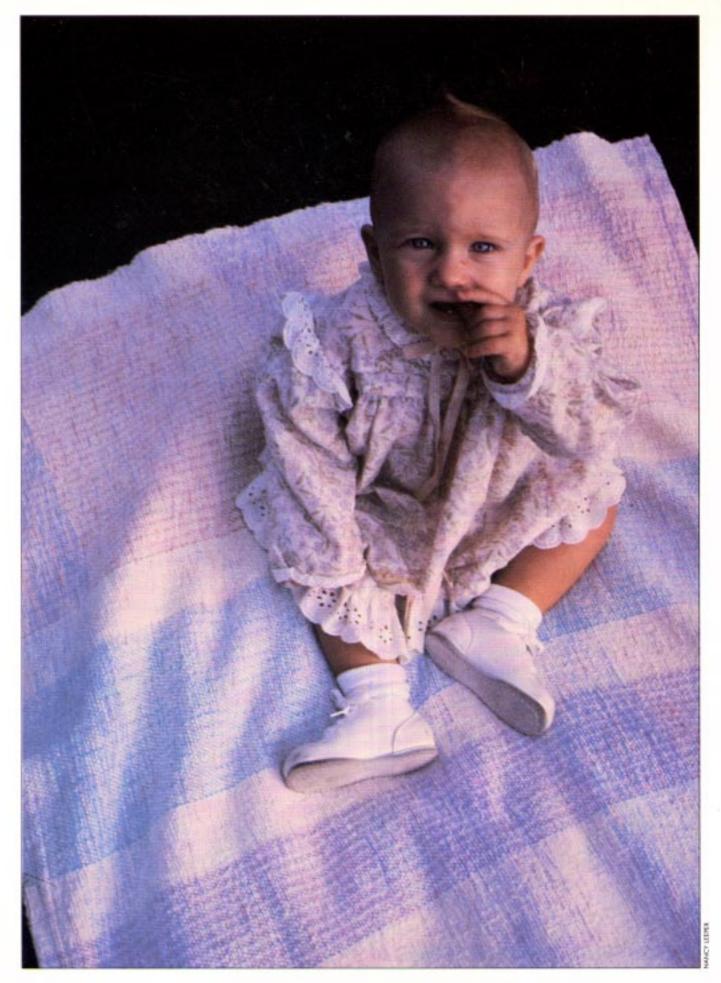
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Soft & Cozy

Cotton Receiving Blankets

by Jamie Leigh White

HEN I WAS A CHILD, my Aunt Florence wove for me, her favorite niece, a simple striped cotton baby blanket. That blanket became my tried and true friend, and for the next twelve years we faced the trials and tribulations of the world as inseparable partners. My special blanket was there when I needed a friend the most—to comfort me after my first major bicycle accident, to provide companionship on long winter nights, to snuggle up to when no one else seemed to understand me, to take as security when overnight visits kept me from my bed at home.

Such early memories run deep within my childhood experience. I can still feel the blanket's lofty softness, visualize its subtle pastel pinks, blues and lavenders, and be comforted by its sense of security today as I weave my own cotton baby blankets for my favorite niece.

Cotton and babies are a natural duo. Babies love nothing better than the soft, non-irritating feel of cotton next to their tender newborn skin. Mothers love cotton because it can be easily laundered day after day and still retain its freshness and color.

Cotton keeps baby cool and comfortable in summer and dry and warm in winter. When a newborn's body is learning to regulate body temperature through its skin, cotton is there to aid in the process. Cotton's natural tendency to absorb body moisture and evaporate it to the surrounding air allows baby's skin its innate ability to breathe, maintaining a cool and comfortable environment on long hot summer days and a warm and dry surrounding on cold winter nights.

Cotton is soft and non-irritating, absorbent, easily laundered and healthy to wear. Giving that special infant an all-cotton blanket will be a treasured gift appreciated by mother and child for many years to come.

The following notes are ideas for designing

your baby blanket. Use them as a springboard to design a blanket unique to your individual taste in texture, color patterns and design. One blanket will become the stepping stone to the next as you explore a variety of compositions that bring together all the loving beauty, warmth, joy and hopes that a special baby inspires.

Designing the Warp

I look at my warp as an empty canvas—my final product will be as basic and simple or as intricate and ornate as the yarns and color patterns I choose for the foundation of my weaving. Although there are an infinite number of warp variations that will work for baby blankets, some of the most pleasing and easiest to accomplish include warps with bands, stripes and random spacing of solid and variegated yarns.

Bands of colors can be separated by white or natural warp threads or can merge one color into the next. For an interesting color progression, follow the natural sequence of colors in the rainbow or break the pattern by placing the blue end of the spectrum in the center of your warp and work the rainbow colors outward toward the edges. These bands can vary in width from three to six inches depending on the number of colors used, the width of the blanket and the number of repeats you want to create. If you choose to have bands wider than six inches you may want to intermix a few of the warp ends of one color band with those of the adjoining band so that the eye moves easily from one color to the next.

Stripes are popular and pleasing designs for baby blankets. A striped warp can be woven into either a striped or plaid blanket. Stripes can be formal or casual depending on the color sequence, the regularity of the size stripes and the texture of the yarns within and between the stripes. For a formal and stylized design, plan your warp stripes to be of equal size with a struc-



tured series of colors. One of my favorite blankets has a random striped warp of pastel rainbow colors playing a sequence of thin (¼") stripes against another sequence of medium (½") width stripes with a bold (1") stripe interspersed throughout to add interest and contrast. By using a combination of colors, stripe sizes and textures of yarn in your weft, you can weave a variety of interesting baby blankets on the same striped warp.

Variegated varns can be used to create an entirely different look to your baby blankets. Most variegated yarns are created by inserting hypodermic-like needles into the cone of yarn and injecting several different colors onto the varn. The resulting varn is a sequence of colors with one color blending into the next. These multi-colored varns (also known as space-dyed or astro-dyed) add interest and a unique touch of color to any warp. Randomly mix a space-dyed yarn into a solid color warp (choose one or two of the colors from the space-dyed yarn that harmonize well together) for a subtle interplay of colors. Bands of variegated yarns can also be interspersed throughout your warp in a number of width combinations. One of my most interesting and easiest to design baby blankets used a predominantly white flake yarn with colored flecks every five or six inches. The colors flowed into the white portion of the yarn, giving a soft progression from color to white yarn. I warped my loom with a textured white flake cotton yarn and randomly added the space-dyed yarn every four or five inches. I used the same white flake cotton for the weft with the space-dyed yarn added randomly every 15-20 shot. The resulting fabric had a soft and delicate design that resembled an intricate ikat pattern. It looked like I had taken quite a lot of time and extra planning to create this effect, when in reality I used the unique patterning of the yarns to work for me.

Choosing the Warp Yarns

Cotton yarns are now much easier to find and come in a greater variety of sizes, textures and weights than in the days when my aunt was weaving my favorite baby blanket. Today, you can find cotton flake, thick-thin cotton, mercerized perle cotton, unmercerized cotton, cotton chenille and many bouclé cottons in sizes ranging from 30/2 to 3/2 to super bulky. Textures range from softly spun, tightly twisted cottons to single ply or multi-ply and cabled (plied yarns backtwisted to form a cable-look) cotton yarns. Cotton is available everywhere these days: Mailorder, discount stores or your local yarn shop all have an offering of cotton yarns to suit your most exotic tastes. Baby blankets can be your answer to using up those three or four ounces of mix-andmatch cotton yarns left on cones from other projects. A multi-color, multi-texture cotton warp and weft blanket will keep any baby content and happy.

For a very strong and hassle-free warp, an unmercerized 8/2 cotton (such as Autora Earth from Cotton Clouds) is recommended. For more texture and interest, thick-thin or flake yarns can be interspersed in the 8/2 warp or used by themselves. Many mail-order companies as well as weaving shops will have a selection of mill-end cotton yarns that offer both variety and affordability to your selection of cotton warp yarns.

Don't be deceived by the sometimes stiff, hard look the cotton fabric has on the cone or on the loom. Once these yarns have been washed and the sizing removed, they become delicately soft and fluffy.

Weaving the Weft Yarns

Most babies require a light to medium weight blanket rather than a heavy blanket to keep them warm, so choose the weight of your weft yarns accordingly. Textures always add visual interest and dimension as well as a soft touch to the fabric of baby's blanket. Two, three or four strands of a soft textured cotton works well for the weft with a warp sett at 12 e.p.i. Your blanket will weave up quickly when you combine several weft threads into one shot. Simply wind the desired number of weft yarns on your bobbin using a va-

riety of colors and textures similar to the warp threads. The first baby blanket I wove was warped in bands of pastel pink, peach, rose, lemon, sea mist blue and lavender using the banded technique described above. When winding bobbins for the weft, I combined four yarns. I first wound three pink and one peach yarn on the bobbin and wove. I then progressed to winding two pink, two peach and finally one pink, three peach following this same patterning all the way up the blanket with each of the warp color yarns. The resulting fabric was shaded from pink to peach on to lavender across the warp as well as up the blanket. There was a subtle casualness and orderly calm to this first blanket: Both mother and child were well satisfied and delighted with it.

Finishing Your Blanket

Hem the blanket before washing to preserve its shape and prevent the edges from ravelling. Zigzag the two raw edges using a medium machine stitch. Turn the stitching under with a generous \%" (2 cm) fold. Turn under the hem allowance about 1 \%" (3.5 cm) and straight stitch near the edge. Hand stitching with a blind stitch or embellishing with a simple embroidery or crochet stitch is also a very effective way to finish the edges. Use a mercerized perle cotton (5/2) to give the edge body and provide firmness to the stitch.

Your baby blanket will bloom after a hot bath and warm drying in your machine. Since you will allow for 10% shrinkage in planning your baby blanket (see below), now is the time to treat it to the hottest water and warmest drying it will ever receive. Do not be timid in handling cotton. You want this blanket to be the most convenient article in baby's wardrobe and thus easily laundered. Machine spinning removes excess water quickly and easily, allowing for quick drying and preventing the cotton from turning yellow, mildewing or losing its shape if hung to dry. Machine dry on hot, removing the blanket just before it is completely dry. The blanket will emerge soft, lofty and fluffy from the drier. Cotton is stronger when wet and will withstand the hottest water and strongest alkali detergents, but for a long life, use a mild detergent in warm water during subsequent launderings.

Statistics for Weaving

Calculating the warp: The following dimensions make a comfortably large blanket to swaddle baby in. However, variations of a few inches would also make an adequate size blanket.

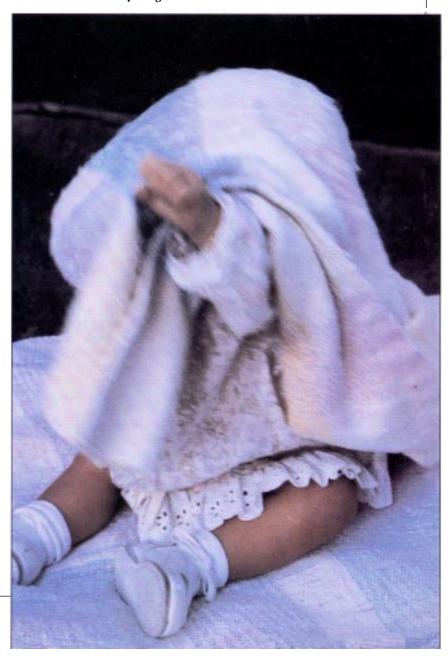
Width in reed: 38" (97 cm). Finished fabric width is 30-32" (76-81 cm) depending on yarns used and individual weaving style.

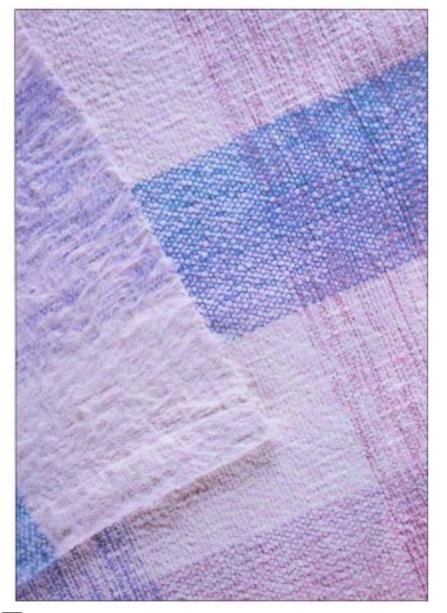
Length: 44" (112 cm) before washing and hemming. 38" (97 cm) to 40" (102 cm) finished length.

Total warp ends: $462 = 38" \times 12 \text{ e.p.i.}$ This includes 6 extra ends for doubling 3 on each side. (metric: $485 \text{ ends} = 97 \text{ cm} \times 5 \text{ c.p.cm}$)

Weave structure: Plain weave, either on a 2- or 4-harness loom. Twill variations could be used but be sure that there are no floats in the pattern long enough to catch tiny fingers. Different weave structures will alter the finished size of the blanket. If you do not want to weave a sample, allow a few inches extra.

Calculating the warp length: Multiply the woven length of one blanket—44" (112 cm)—by the number of blankets to be woven to get the total blanket length. Add 10% for weaving take-up and 10% for shrinkage in washing. Finally, add a minimum of ½ yard (46 cm) for sampling and approximately ¾ yard (69 cm) for loom waste to arrive at the total warp length.





Brushing Cotton

by Carla S. Moore

S THE OWNER AND operaator of Ihana Brushing service I have often had to think creatively of what can be done with brushed fabrics. When it hit me that cotton when brushed would result in cotton flannel, a whole new world of possibilities for handweavers opened up to me, setting me on a continuing exploration into the potentials and limitations of brushed cotton.

Most of the yarns which I have tested and worked with have been wool, preferably woolen (as opposed to worsted) yarns. I quickly realized that cotton is much hardier than wool and it requires different kinds of finishes to complement its basic characteristics.

Short staple fibers. Short staple fibers are more likely to pill—a common characteristic of cotton. When brushed, the nap will be very short with a few exceptions, and with short fibers there is little chance of producing the delightful brushing result known as color bleed.

Smooth staple fibers. Unlike wool, cotton has no barbs that allow its fibers to lock onto one another. This means that the weft yarns can more easily be moved out of position during teaseling and that weft joins are not easily hidden and must be longer than those used for wool yarns. Therefore, the weaver must weave with tight well-balanced weaves

avoiding weft faced products. If the selvedges are not tight a straight machine stitch down each selvedge will make up for the non-locking at this point where most excess yarn is hidden.

Hard fibers. There is little give to cotton during teaseling, so fringe should be avoided and all knots should be repaired before brushing. Looser spun yarns with a minimum number of ply will give more nap than tighter spun, highly plied yarn.

One of the most interesting, exciting and "brushable" cotton yarns is a thick and thin yarn. Whether used in warp, weft or both, the nap achieved from these yarns varies from long to short with eye-catching results. Cotton thick and thins achieve some of that wonderful color bleeding that is so characteristic of woolens.

Cotton is easily washed—an advantage over wool. Again, the characteristics of cotton determine that cotton flannel will muss and may well pill (but only small pills!). Nonetheless, cotton flannel is a valuable option for weavers who must provide for the demands of the marketplace. No matter how mussed or pilled, brushing will still create air pockets that make for a warmer blanket or fabric. For those people who are allergic to wools but who prefer to keep warm with natural fibers, the softness of cotton flannel makes it an ideal alternative.

Ihana Brushing Service, 1037 S. University, Denver, Colorado 80209. Information and Sample \$1.00.

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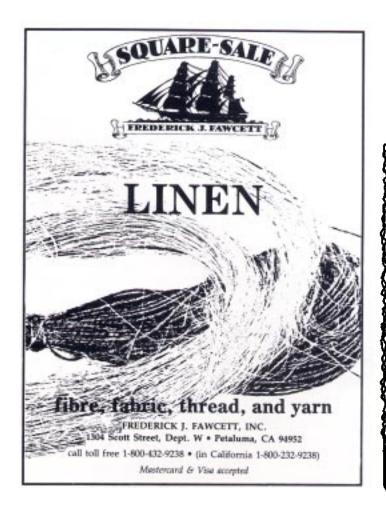
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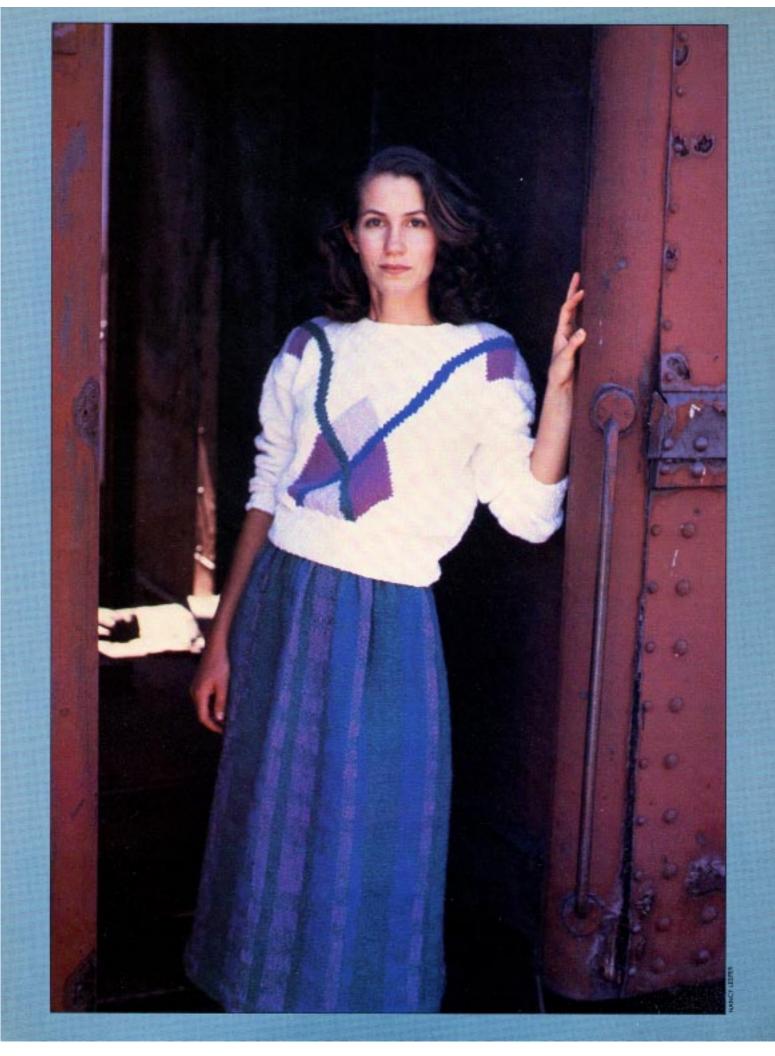
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Colorful Cotton Coordinates

woven by Pat Short

HE COMFORT, TEXTURE and easy care of cotton make it a perfect choice for this skirt and sweater ensemble. The skirt fabric was woven on a summer-and-winter block threading. The colors in the skirt plus white were incorporated into a coordinating sweater knitted by Dinah Pethes, following a commercial sweater pattern.

To determine fabric width for the skirt, use hip measurement plus 2" (5 cm). Add 10% for shrinkage. For length, allow for two panels desired length plus 6" (15.25cm) for hem and

waist casing plus shrinkage.

Warp: Cotton bouclé such as Weaver's Lace from Weaver's Way, 12 oz. (336 gr) Jewel Green, 4 oz. (112 gr) Royal Blue, 4 oz. (112 gr) Lilac. See color arrangement chart.

Weft: same in Jewel Green.

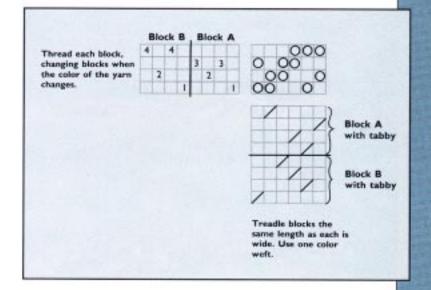
Sett: 8 e.p.i. in an 8-dent reed.

Weaving: 10-12 p.p.i.

Finished dimensions: $3 \text{ yds} \times 36"$ (2.7 m × 91.5 cm).

Finishing: Machine wash and dry fabric using warm settings. Cut fabric in two and secure edges. Sew side seams, tapering seams in at the waist. Fold under and stitch 1¼" (3 cm) at waist for waistband casing. Insert 1" (2.5 cm) elastic in casing. Casing may be faced with 1" (2.5 cm) bias tape to reduce bulk, if desired. Hem skirt to finish.

Sweater: The coordinating sweater in size small used 10 oz. (280 gr) white and small amounts, up to 2 oz. (56 gr), of the contrasting colors. Pattern is from Bernat "Sorbetto" book No. 568.





The Weekend Weaver

Double Corduroy Rug

A friend of ours calls her weaving business "Weftovers,"—an appropriate title for this Weekend Weaver project, a double corduroy rug woven from rags and linen warp thrums.

The double corduroy pile weave is based on the overshot weave system. It has a tabby (1-3, 2-4) ground for structure. Each shaft is raised separately to create the float sheds in which the pile weft is inserted and drawn up into loops and later cut. In *The Techniques of Rug Weaving*, Peter Collingwood has provided a comprehensive description of this pile rug technique.

Step 1: Planning and Design

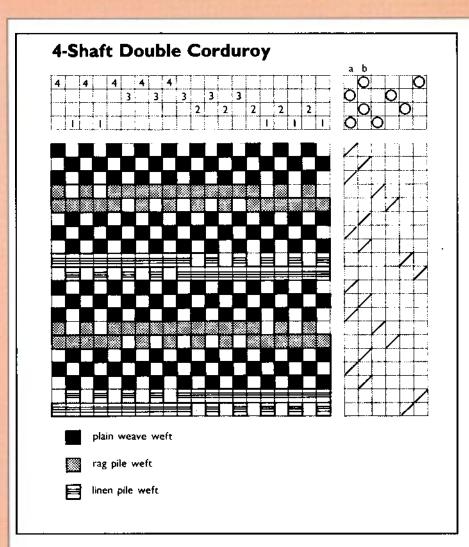
Double corduroy rugs have always been a favorite of mine. The weave produces a delicious pile rug in a relatively short time and can use odds and ends of yarns for the weft. Over the years, I have saved the loom waste from my linen rug warps, believing that there would someday be a use for them. This attitude also explains the stack of worn bed sheets stored in my yarn closet. Together thrums and sheets were recycled into a thirsty bath rug woven in Double Corduroy.

Materials

Warp: 12/6 cotton fiskgarn rug warp (1600 yds/500 gr tube). 400 yds, 370 m, 4 oz or 125 g.

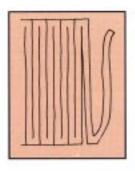
Wefts: Ground weft—4 ply cotton (400 yds/8 oz, Halcyon). 400 yds, 370 m, 8 oz or 250 g. Pile wefts—Rag wefts (A) 1" (2½ cm) wide, two-fold in the shuttle. The 2' × 3' rug used two full-size cotton bed sheets (approximately 400 yds, 3 lbs or 1.5 kg). Linen thrum weft (B) about one pound of 6' long linen rug warp thrums (approximately 200 yds, 1 lb or 500 gr of 5-fold linen.)

Reed: 6 dent, 25/10



When planning rugs for interiors I have found that a simple but strong visual statement can be created by focusing on one design element and subduing the others. In this piece, texture is the dominant element. The natural linen colors appeared tich and warm when viewed next to white. For this reason I chose not to mix the two colors together as one weft but rather weave them separately as warpway stripes. Repetition of vertical lines and the subtle color and value contrasts emphasize the light/ dark highlights and shadows of the pile as well as the rectangular shape of the rug. I wanted the rug be lightweight enough to be washed in a home washing machine so I limited the finished weight to four pounds. Note: One drawback of the cordurov weave is the amount of weft material it uses. For example, a 3' x 5' rug can take up to twice as much weft as a flat weave rug of the same size. Some sampling was required to control this problem.

Step 2: Preparing the Pile Wefts—3 hours



Open up or tear off the top and bottom hems from the bed sheets and tear off the selvedges. Next tear the fabric warpwise into halves or thirds for a more manageable piece. Begin tearing rug strips by making a cut one inch from and parallel to the selvedge side. Tear in the warpwise direction until you are ½" from the bottom. Turn the fabric and make the next cut 1" over from the first

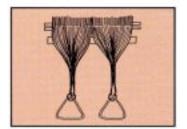
strip. Tear up to within 1 ½" from the top. Continue tearing the fabric as a continuous rag strip in this way (figure 1). Wind the rags into balls. (I combined the linen thrums in groups of five, knotted together and wound into balls. I removed the knots when the linen weft was woven.) Weigh the two weft materials.

Step 3: Winding the Warp-1 hour

Wind 12/6 cotton fiskgarn rug warp 4 ends at a time for a warp of 144 ends. This includes 7 repeats of the 20 end draft plus 4 ends for doubling the first and last two warps at each selvedge. The warp length will be 21/3 yards long which allows for 24" loom waste, 5" (15%) take-up, 8" fringe, 12" for sampling, and 36" for the rug.

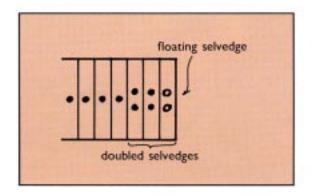
Step 4: Beaming the Warp—1 hour

(From back to front) Insert the lease sticks into the lease cross and spread the warp in the raddle. If you are beaming the warp alone, draw the warp out to its full length and divide in half at the opposite end. Attach a 1 lb. weight to each half. The weights will act as tensioners as the warp is being beamed.



Step 5: Threading the Heddles & Sleying the Reed—3 hours

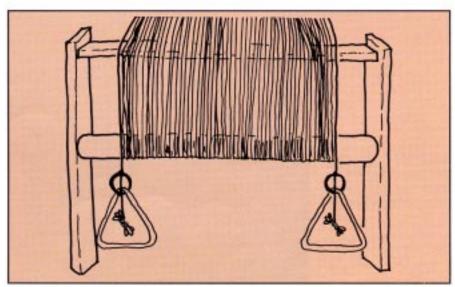
The four shaft double corduroy draft is based on the overshot weave system. The four overshot pairs are expanded in five-end groups, 12121, 23232, 34343, 41414. Count the total number of heddles needed on each shaft for all seven repeats of the threading. Tie off the remainder to the sides of the harness frames. This helps in checking threading accuracy (figure 2). Sley in a 6 dent reed, 1 end per dent. Tie the warp onto the front apron bar.



Step 6: The Floating Selvedges

Measure four lengths of warp, three yards long. Draw each pair through the harness frames and sley through the next available dent in the reed at each side of the warp. Tie to the front apron bar. Carry the floating selvedges over the back beam. For each floating selvedge make a slip knot, insert an S-hook, and attach a one pound weight. As the weaving progresses and the warp advances, move the weights along the floating selvedge.

Tighten the warp so that its tension nearly equals that of the floating selvedge. "Spread" the warp with a few shots of thick scrap weft woven in the plain weave sheds. Beat firmly. Weave in 2 more plain weave shots of a contrasting color weft and check for threading errors. This holding cord will prevent the weft from unravelling after the rug is cut from the loom and before the fringes are finished.



Step 7: Weaving—8 hours

The tag weft flats are pulled up into loops.



Rag weft A covers linen weft B, making a neat selvedge. Note that the rag weft tail is placed under raised warps on shaft 1 at the selvedge.



The uncut linen weft is shuttled beneath the floating selvedge into shed 2.



The Sampler. Weave an inch of plain weave with the 4 ply cotton for the heading. In order to accommodate the floating selvedges that tabby weft will always enter the shed under the floating selvedge and exit over it. The pile wefts will take various courses over or under the floating selvedge but they must always enter the next shed in the opposite position (over or under the floating selvedge) from the way they exited it. Note: The rag pile weft is woven in shed 1 and shed 3. Following this weaving sequence causes the rag weft to naturally cover the other wefts at the selvedge giving the rug a very tidy edge.

Because the weft materials in this project will vary, weave a few inches of the treadling sequence to arrive at the number of rag strips needed for one weft as well as the number of tabby shots needed to separate the rows of pile. I had originally planned to use the rags 3-fold in the shuttle and one shot of tabby. It quickly became apparent that this formula would produce a rug that was too heavy for my purposes. Weaving the rags 2-fold with 3 shots of tabby between produced a sample which seemed a bit sparse at the beginning. However as I continued the sample the pile achieved a satisfactory den-

Measure your sample. Then untavel the wefts and measure and weigh them to project the total weight of the rug and the amount of pile weft material needed. Note on beating: I beat the wefts in firmly but not so firmly that the rug was stiff. The rag pile makes a dense enough rug without packing it in solid. If the warp is quite taut, a firm beat is sufficient (change sheds, then beat).

Fill all the stick shuttles you have with the pile wefts so that weaving can proceed with few interruptions.

The Rug. Leave 4" of warp for fringe. Weave 1" of plain weave using the 4 ply cotton as ground weft. Start the plain weave in the 1-3 shed with the shuttle thrown from left to right. End after the 1-3 shed with the shuttle on the right.

Weaving warpway stripes in 2 colors requires an 8 step treadling sequence plus tabby with an AABB color order.

- Raise SHAFT 1 and throw rag shuttle A from left to right,* pull up 2½" loops from the weft floats between each group of raised warp threads. Leave a 4" tail of weft extending beyond the right selvedge, cut. Close shed, beat.
- Raise SHAFT 3 and throw rag weft A from right to left, pull up loops of pile and cut weft at left selvedge.

Weave three shots of tabby with 4 ply cotton ground weft, beginning with 2.4.

- Raise SHAFT 2* and throw linen thrum weft B from right to left. Pull up loops from floats and cut at left selvedge.
- Raise SHAFT 4, throw linen weft B from right to left, pull up loops but do not cut.

Weave 3 shots of tabby with ground weft beginning with 1-3.

- Raise SHAFT 1, insert tail of rag weft from previous SHAFT 1 into the open shed at the right selvedge. Throw rag weft A from right to left, pull up loops and *leave a 4"* tail extending beyond left selvedge. Cut.
- Raise SHAFT 3, throw rag weft A left to right, pull up loops and cut at selvedge.

Weave 3 shots tabby beginning with 2-4 shed.

- Raise SHAFT 4 and throw uncut linen weft B shuttle from left to right. Pull up loops and cut at selvedge.
- Raise SHAFT 2, throw linen weft B from left to right, pull up loops, do not cut. Repeat this sequence.

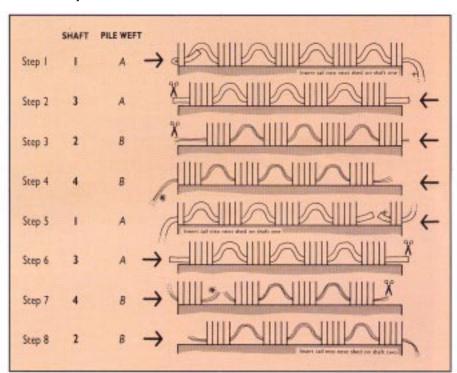
Cutting the Pile Weft. Cut the pile after weaving 2 repeats of the treadling sequence plus 3 shots of tabby (1-3, 2-4, 1-3). Begin separating, straightening and cutting the float loops at one selvedge. Work across the row to the other selvedge. Pull up the loops with the index and middle fingers and then cut with a long (5") blade scissors. Get your fingers out of the way before you cut.

Note: Resist the temptation to weave more than two repeats before cutting the pile because the added thickness of the pile loop rows makes cutting through them too difficult. Measure the length of the cut pile often to assure even height throughout the rug.

Finish the weaving with 1" of tabby.



Weave 2 complete weft sequences, ending with 3 shots of tabby. Straighten the vertical weft loops, then cut.



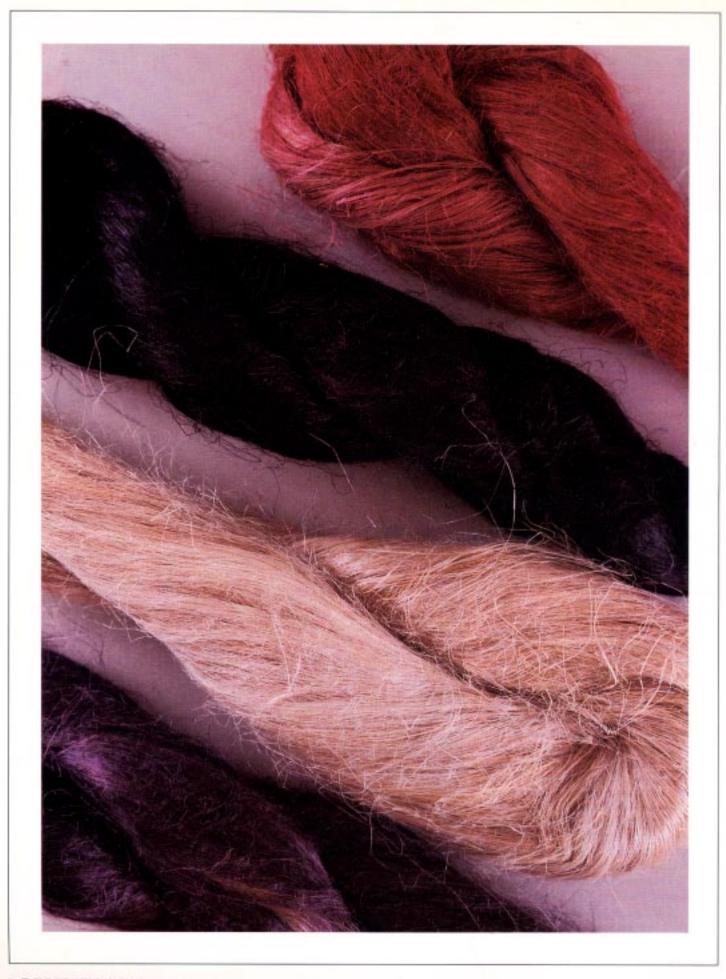
Step 8: Finishing—1 hour

Braid pairs of warp ends in a threestrand braid for 1 1/2 " and tie the ends in an overhand knot.

This rug can be washed using the regular cycle in a home washer, making sure to balance the load with towels.

Dry partially in the dryer and hang along one selvedge with clothespins to finish drying. The rag wefts and linen thrums will bloom, making this a perfect fluffy bath mat.

*In the first treadling sequence that begins the weaving there is not a 4" weft tail to place in the selvedge for shafts 1 and 2. Use an 8" weft length, half the thickness of the normal pile weft. Bring it under the first group of raised warps at the selvedge, bring it around the floating selvedge and back under the same groups of raised warps. The final repeat is finished in the same manner.



Tapestry Weaving with Unspun Flax

by Claire Westerink

Flax is a luxurious natural material most familiar to weavers in its spun form. Claire Westerink discusses her use of unspun flax in her large scale tapestries.

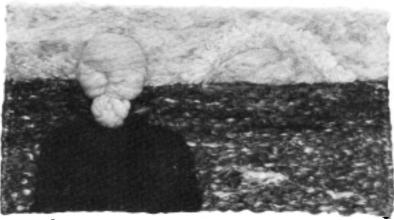
IKE MOST CRAFTS PEOPLE, creating something tangible is my greatest satisfaction. Weaving combines the tactile senses, the visual senses and the intellect and unites these forces to produce satisfying projects.

Two things have influenced my work: First, a love of color and its myriad combinations, and second, the wooded countryside around my childhood home near Utrecht in the Netherlands. My surroundings taught me to value nature and care for natural materials. When I work on a tapestry design I find the colors and textures of my homeland coming alive once more under my hands.

Although I began as a multiharness weaver, I felt restless and began to look for a more satisfying way of working which would make greater use of natural materials and relate more closely to painting and sculpture. When I began to make tapestries, I knew that I had found my medium.

For my designs I use hard materials that will wear and resist soil. Although in the beginning I used jute and wool fleece extensively, their inherent weaknesses led me to explore more unusual materials. Dyed, unspun flax met my requirements perfectly.

I concentrate on large scale wallhangings, many of which are designed to fit a particular architectural space. It is necessary to consider not only the aesthetics of a piece but also its resistance to wear and dirt and textural impact. The neutral colored wall of the art gallery is an ideal setting, but more often my pieces must stand on their own against brick, stone or rough plaster. I use

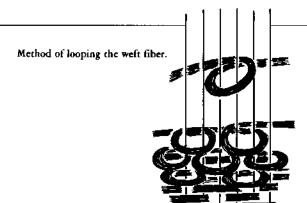


"The Color Purple."

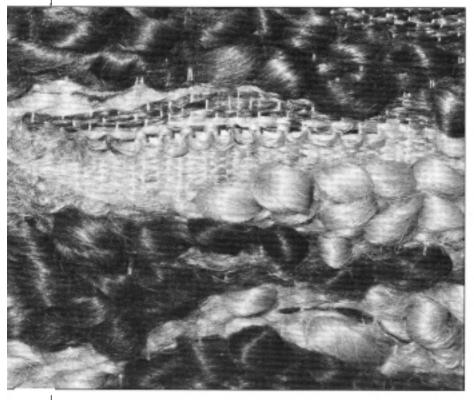
unspun flax to vary the thickness and height of the surface to suit the background. The smooth, lustrous appearance of flax is beautiful and resistant to soil. Occasional vacuuming keeps it clean.

I work on a strong, adjustable frame loom propped against a wall that expands to about seven feet square. The warp is stretched around nails driven into the edges, about 3 nails per inch. The most suitable warp is 8/3 linen carpet warp. Once the loom has been warped, I attach a cartoon of the design to the underside of the loom with tape. A shed stick is run under alternate threads of the warp and left in place near the top of the frame. This forms one shed. The opposite shed is picked up by hand when running tabby lines across the work to lock the floating pattern wefts.

When the loom is prepared, I open a strick of dyed unspun flax and split off a length of the thickness I prefer and weave it into the area reOpposite, natural unspun flax,



Detail of the finished piece.



quiring that color. I take a bunch of fibers, $\frac{1}{2}$ "-1" at a time and lay it in my warp. The result is a bulky, irregular and unusual weaving.

Color blending is very simple. I take a little flax from each color strick, bundle it and start weaving. Because the flax I use is dyed in a strick or skein form, the inside does not absorb as much dye as the outside, producing unique color gradations. Shading with this flax is very exciting and produces painterly effects.

The warp threads are picked up by hand and the pattern weft runs under one warp and over two or more in an uneven pattern determined by the scale of the piece, the thickness of the bundle of flax, the color mix or light reflection desired. A broken satin weave seems to work the best for my designs. Standard tapestry techniques are used where color areas join: As new bundles of flax are added to the weaving, the ends are either blended into those of the last bundle or pushed to the back to be neatly finished at the end of the weaving. I run three rows of tabby all the way across the piece at least every three inches to keep the fabric firm.

Areas of the tapestry that require a lot of texture can be raised and emphasized by using a loop technique. The flax is run under a few warp threads and then wrapped around two or more warp threads. The loops have little structural stability so it is necessary to lock them into the work at frequent intervals.

When completed, the piece is removed from the loom and laid on the floor. All the warp ends are hand tied and worked back into the piece.

I have been using flax in my work for several years and feel it is a unique and exciting material when used unspun on the frame loom. It is easy and pleasing to manipulate, producing new effects each time it is used.







When the weaving is high enough, 3 or 4 rows of tabby are laid in before inserting a dowel between the warp threads.

3 warp threads are tied around the dowel starting with a few knots on both sides and in the middle.

After tying the warp threads the piece is turned wrong side up. Loose ends are worked in between the warp threads in the back.

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MEET THE AUTHORS



ALVIC

Fiber artist, teacher and writer Philis Alvic graduated from the School of the Art Institute of Chicago in 1967. Since that time she has frequently exhibited her work. At her studio in her home in western Kentucky, Philis weaves loom-controlled wall hangings and investigates weave structures. She shares her experience and opinions about weaving through lectures, workshops and writing.

Robert and Roberta Ayotte own and operate Ayotte's Designery in Center Sandwich, New Hampshire. They have recently published the final volume of their home study weaving course, "Weaving with Robert and Roberta."

Vera Becklake lives in Calgary, Alberta. She and her husband Gordon are avid collectors of antique weaving and spinning equipment. As members of the Alberta Handicrafts Guild, she and her husband conduct weaving, spinning and dyeing workshops in Calgary schools and throughout the surrounding area.

Marolyn Downing's interest in woven textiles dates to the early 1960s when she took classes at the Weavers Guild of Minnesota, studied spinning and cardweaving with



DOWNING



ELDEK



LINDERS



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WHITI

Savetta Livingston and dug up heaps of dandelion roots in pursuit of an elusive yellow dye. She is currently textile coordinator and buyer for International Design Center in Minneapolis.

Shirley Elder is a former political writer for The Washington Post and The Washington Star. Four years ago she and her husband moved to Sandwich, New Hampthire.

Allen Fannin lives in Westdale, New York, where he and his wife Dorothy own and operate a small textile mill, producing a line of woven accessories as well as piece goods for retail fabric stores. He also assists handloom weavers in the large scale production of their fabric designs. He is the author of Handspinning: Art & Technique (1970),

and Handloom Weaving Technology (1979).

Olive and Harry Linder are the authors of Handspinning Cotton, Techniques of Code Drafting: The lively art of personal weaving drafts and most recently, Handspinning Flax. They have written articles about textile arts for many magazines and have exhibited their work throughout Arizona. The Linders have traveled the world to study textiles and live in Sun City, Arizona.

Linda Madden is a designer, teacher and production weaver in St. Paul, Minnesota. She is currently president of the Weaver's Guild of Minnesota.

Carla S. Moore is the owner/operator of Ihana Brushing Service, beginning its fifth year as the only professional brushing service available to the handweavers of North America. Carla learned to weave in Finland where her first project, a blanket, was as a matter of course sent off to be brushed. Through Ihana ("lovely" in Finnish), Carla campaigns for warmer handwoven blankets in this country.

Irene Laughing Cloud Schmoller is a part-time cotton scholar and full-time cotton enthusiast. She is the owner of Cotton Clouds, a mail-order business specializing in 100% cotton yarns and related products. She first learned to spin cotton from Olive and Harry Linder.

Phyllis Waggoner has an M.A. in Design from the University of Minnesota where she taught Color and Design. An interest in rug

weaving, color and her Swedish heritage led her to study boundweave.

Claire Westerink came to the U.S. from the Netherlands three years ago and has been pursuing her career as a weaver with vigor. She is vicepresident of Euroflax, Inc. which supplies weavers with dyed flax in stricks, flax roving, and other items related to the spinning and weaving of

Jamie Leigh White is a professional fiber artist who designs and weaves baby blankets and woman's wear using exclusively 100% cotton yarns. She teaches and demonstrates weaving at the University of Arkansas Museum and also weaves cotton yardage for a handmade clothing business.

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European Textile Collections:

Textile Research in Paris

by Marolyn Downing

N INTEREST IN RESEARCHING historic fabrics can lead to fascinating hours of discovery. Imagine yourself seated at an old worktable, surrounded by stacks of very old books full of colored patterns for woven and printed designs. These sample patterns were followed by weavers two centuries ago and provide information and inspiration for weavers and designers today. I found myself studying such samples on a quest for information concerning historic upholstery textiles. If you are interested in researching design, color, technique and/or history of fabrics of the past, it is worth the time and travel to study a portion of a European textile collection that pertains to your particular interest. This series of articles will provide information on European textile collections that may aid you in locating and gaining access to those collections appropriate for your study.

The Musée des Arts Décoratif, an arm of the huge Louvre complex in Paris, holds an extensive collection of textiles. Very few of their textiles are on view to the public, but with time and patience, you can gain access to these treasures. Before teviewing the contents of the collection, a little background is helpful.

The base for this vast textile collection was laid in 1863, when the Union Centrale des Beaux Arts was launched in Paris. The motivating objectives were similar to those which spurred the founders of London's Victoria & Albert Museum. Competition on the world market was intense, especially between the English and the French. Seeking to raise the standards of industrial design, the founders of the Union Centrale des Beaux Arts believed that with a study collection and an educational facility, their manufacturers could earn a larger share of world trade.

The result of these competitive concerns, both in technical expertise and artistic merit, is the collection which today includes the following:

- 6,500 swatch books containing at least 10 million samples of woven and printed fabric;
- 15,000 designs on paper (mises en cartes) in 200 albums, mostly French and Italian, 18th and 19th centuries;
- 250 weavers' record books (livres de remettage), with some 20,000 swatches listing technical details of fabric construction, French and Italian, 18th and 19th centuries;
- 30,000 (estimated) pieces of woven textiles and printed fabrics, stencils including 3,000 19th century Japanese stencils, (one of the world's largest

such collections), ecclesiastical vestments and decorations including about 250 French, Italian and Spanish items from the 15th to the 19th centuries, an important rug collection of about 1500 examples from Europe and the near and far East. embroideries, lace and one of the largest and most important tapestry collections in Europe, with the focus on French, Belgian and German tapestries, many of which are displayed in the public gal-

- approximately 1500 volumes with original designs and textile printer's proofs in repeat;
- approximately 15,000 trimmings (passementerie) swatches for home furnishings and costumes;
- 1,500 complete ensembles of costumes and about 2,000 costume accessories.*

In addition to this enormous collection which occupies five floots and 125 galleries in the Pavillon de Matsan where it has been housed since 1905, this museum incorporates a fine research library and a school of decorative arts. The library is under the direction of Mme. Geneviève Picon, Chief Curator of the museum. This important research facility specializes in books and documents on the decorative arts, with a widely varied collection of documentary material for the textile designer. Volumes and folios are arranged along open shelves, and a special alcove holds a group of original textile designs and swatches of the early 19th century. In another section, 472 volumes in 47 categories cover international costume arts. Opened at the turn of the century, the library's resources have expanded to contain about 1 million drawings, prints and photographs, 80,000 volumes and 60,000 original designs, all pertaining to the decorative arts.

If your research requires access to the textile collection in addition to the use of the library, the following suggestions may make your quest a bit easier. Four to six months prior to your arrival in France, write to request an appointment to see a particular part of the collection. Be as specific as you can: Mention the purpose of your research and indicate the particular time period and fiber (14th century damasks from Venice, 17th century Gobelin tapestries, printed wools or silks, etc.) to enable them to find your subject of study more easily and to save you time. When your appointment date is established, the time of your arrival can be arranged in subsequent correspondence. Their office hours, and the hours of the library, are 10 a.m. to 12:30 p.m. and 2 p.m. to 5:30 p.m., which allows for a long lunch hour, but it

can also delay research if you are on a tight time schedule. You may also be working around holidays which are not observed in the U.S. which can delay correspondence beyond ten days, and need to be considered when making your appointment. The museum is always closed on Tuesdays. and recently has been closed Mondays as well. Be sure to inquire well ahead of your visit.

It is most helpful to know some French, or to have someone with you who speaks French. Very few of the guard staff or museum personnel speak English. If you do not speak French fluently, write for your appointment to the attention of Mme. Lilianne Schildge, who speaks English and is very helpful. Your first appointment may be just to review pages of slides of textiles over a light box, which can take an hour or longer. Then you may ask to see one or two of the hundreds of pieces which you have reviewed. That may be done on the same day, or another day when one of the staff can take you to an area far from the bright, white offices to storage space where the textiles are sequestered from damaging light and heat. In addition to your note-taking materials, you may need a magnifying glass and white cotton gloves.

If you wish to photograph a piece, mention it in your initial correspondence to clarify their policy. Flash photography is never allowed, but you may be able to obtain permission to photograph. A photographic service department, directed by Mme. Sonia Edard, is equipped to make new photographs of pieces in the collection for a fee. To avoid possibly considerable expense, check what photos are available in the archives. A good number of black and white negatives are on file from which prints may be ordered. In the Textile Department, eleven albums of these photographs are available to review. If 18th century French textiles are your focal area, many color slides are available. Writers and researchers often bring their own photographer. If photos are needed for publication, additional use fees are usually charged.

All this advice considered, patience, timing and persistence will put you in touch with textiles you wish to study. Mme. Schildge is hopeful that when new facilities are completed by the summer or autumn of 1987, more of the museum's textile collection will be on view for everyone to enjoy.

While in Paris, several other notable textile collections may be of interest. It is a good idea to arrange for appointments well in advance to study these collections, also. The above suggestions apply as well.

Musée de Cluny. The small but distinguished collection of the Cluny Museum features Medieval and Coptic textiles, spanning ten centuries. A special skylight rotunda features the six panel, 15th century tapestry masterpiece, "The Lady and the Unicorn." Located at the busy Left Bank intersection of the Boulevard St. Germain and Boulevard St. Michel, the Musée de Cluny provides a serene walk back through time.

Musée Guimet. Another small textile collection is held by the Musée Guimet, a reknowned collection of Asian art. The very rare pieces of Chinese silks, with exemplary decorative patternwork, are fabrics that represent the commercial silks that were such a valued commodity in the ancient merchant caravans. Some can be dated as early as 206 B.C. to 220 A.D., the Han Dynasty. The 93 ancient Chinese textile fragments in the Guimet collection were discovered in graves near Tuanhuang by a French expedition of archaeologists. The site was an oasis on the edge of the Gobi Desert that served as a communications center along the silk route. In addition to these rare holdings, the Musée Guimet includes painted textiles from Nepal, a Champa embroidery from Tibet, a collection of Temple banners from Tibet and Nepal, and a selection of lovely Bengal and Gujarat saris.*

Bibliothéque Nationale. The Bibliothéque Nationale, though rather austere, also provides examples of textiles for study. In its collection reside ten examples of the ancient Chinese group which the Musée Guimet shares. To gain access to the large collection, begin on the second floor (remember that in France that will be called the first floot), in the area called Le Cabinet des Estampes. Choose a numbered seat, and look through their textile holdings (Tissus) in a huge loose-leaf catalog. Then fill out an order form for each volume or item you wish to see, which will then be brought to you. If your requested items cannot be located, ask to explore les magazins or storage stacks, where the collection is kept. Section Lh holds a multitude of interesting resources including:

- shawl design, cachemires, from the 19th century. 300 designs in full repeat, watercolor originals, in the Paisley type, very well preserved;
- silks from Lyon and Tours, volumes containing hundreds of swatches, drawings and design tracings;*
- embroidery and lace pattern books, some dated from the early 16th century, containing designs published in Germany, Flanders, England, Italy and France;
- embroidery designs by Lafitte for uniforms of the royal household attendants between 1815 and 1830;
- a volume of original textile designs, largely floral, done in pencil and wash about 1730, noteworthy for their fine quality; and
- the Richelieu Collection, assembled in the mid-18th century by the Maréchal Richelieu, contain-

ing records from 1732 to 1737 of textiles purchased for the royal household. Fabrics from all over Europe used for clothing, upholstery, drapery, table linens and ribbons provide a peek into that period at court. Notations also describe the use, origin and price of the fabrics. Textiles for fashionable clothing from 1720 to 1735, also assembled by Richelieu, comprise another large folio full of velvets, silks and ribbons.*

Bibliothéque Forney. Refreshingly open and accessible, the Bibliothéque Forney is an excellent source of exemplary Art Deco and Art Nouveau textiles, as well as numerous other fabrics and lace. This is a modern research facility housed in a restored medieval building dating from about 1500 A.D., in the ancient Marais district. Founded in 1886 by a Parisian industrialist, the library is now operated by the Préfecture of Paris, and its facilities are free and largely accessible. (The Musée des Arts Decoratif, on the other hand, is operated by the state, and funding often depends upon who is in the Premier's office.)

Most of the material is arranged on open stacks, and everything in the library is clearly catalogued. Rarer sample books are held in reserve, but will be brought out upon request. In the section called *Fonds Iconographiques*, on the 4th floor (3^e étage), you will find 8,000 textile documents ranging from original watercolor designs to swatch books, pencil drawings, and large repeat samples.* Some notable areas of the Forney collection are:

- French textile design from the Middle Ages through the 20th century featuring original Art Deco designs in watercolor from 1925 to 1930, plus more than 200 abstract geometrics in vogue following the Paris Exposition of Art Décoratifs (many items are mounted for easier inspection);
- Art Nouveau, especially work of Czech designer Alphonse Mucha (1890–1939), represented by two full-repeat Mucha designs, printed on both silk and velvet, exemplary of the influential Art Nouveau design era, plus numerous other examples of this period;
- The Potterlet Collection of 16 volumes of 19th century textiles, chiefly French printed percales;
- 18th century French, British and Dutch textiles collected by an Italian, Moccassi, filling a large volume with swatches dating from the 1760s;
- Toiles de Jouy, a major collection of printed toiles in 19 large folios from French printing centers at Mulhouse, Nantes, Rouen, Bordeaux and Jouy;
- Cachemire print designs, "paisleys," in three large volumes.

The Forney's interesting textile collection is diverse, and among the most accessible in Paris. A huge collection of about 250,000 reproductions on a range of decorative arts items is also available. An extensive file of colored slides can be studied, and copies can be ordered, or permission is given to photograph anything in this fine collection.

The Louvre. The Louvre's outstanding col-

lection of Coptic textiles must be noted in a survey of Parisian resources. Over 3,000 examples of Coptic textiles, some painted, cover a span of centuries from the 3rd to the 12th. The world's leading authority on Coptic textiles is the curator of this important hold, representing about one tenth of the known extant Coptic pieces. The permanent exhibit mounts 80 of the collection's finest pieces in three galleties devoted to Egyptian Antiquities-La Salle Copte, near the Venus de Milo on the first level. Major styles and motifs are shown in this well mounted exhibit, a comprehensive presentation. To examine other Coptic textiles held in reserve, qualified researchers can set up an appointment. A few of the objects on display include:

- a child's shirt (5-7th century), with intricate purple wool tapestry decorations;
- a green tapestry-woven panel (2nd-3rd century) showing swimming fish, a fragment from a large or similar panel owned by Lyon's Musée Historique des Tissus;
- the "Chale de Sabine," a shawl or hanging, from 6th century Antinöe;
- a large panel in raised loop weaving, entitled "Triumph of the Cross," with several themes including the tree in the Garden of Eden and the whale swallowing Jonah;
- stencil-painted panel showing scenes from the Dionysus myth, (3rd century) Antinöe.*

The Louvre also owns and displays a notable collection of tapestries dating from the Middle Ages to the 18th century, including Islamic silks, and decorative French wall coverings and draperies. These will be found in the Decorative Arts Department galleries on the second floor around the Cour Carée. Taking time to notice textiles within paintings from a vast range of periods and nations provides yet another way to research fabrics and trims.

A visit to Paris, treasure trove of textiles, offers designers and weavers many sources for new ideas, as well as opportunities to study designs and techniques of the past. Whether your interest lies in contemporary tapestry or in symbolism and historic techniques, take time to explore textiles on both banks of the Seine.

Resources

Gordon, Beverly. "Museum Textiles: How to Get at Them and Use Them," in The Weaver's Journal, Vol. VIII, No. 1, Issue 29, p. 14. Textile Collections of the World. Volume 3, France. Edited by Cecil Lubell. New York: Van Nostrand Reinhold, 1976. Special libraries, specific collection names, publications and names of curators are included. Information marked with * is taken from this source.

Addresses
Musée des Arts Decoratif
107 Rue de Rivoli
(Library, 109 Rue de Rivoli)
Paris, France
Mme. Nadine Gasc, Curator
Mme. Lilianne Schildge, Assistant

PARIS to page 72.

Notes of a Pattern Weaver

Borders

by Philis Alvic

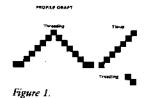
LIKE BORDERS and often use them in my work. A figure plunked into the middle of a lot of open space looks lonely to me and I feel the need to enclose it within a border. If I were a painter, I would confine my objects within a frame. Weaving can also be relegated to a frame, but to me it looks awkward: The substances from which frames are made are not, I think, compatible with the surface textures of fabric. Part of the problem with conventional frames is the tendency to squash the threedimensional qualities of fabric under glass. The presentation of a piece should enhance all aspects of that piece as much as possible. With this in mind I have rejected all external frames and created my own within my pieces through the use

The border, as I use it, serves three major, interrelated functions: 1) it confines the activity of the piece, 2) it separates the piece from the wall on which it is hung, and 3) it acts as a transition between the piece and the wall. These functions work together to make the piece look more complete within itself. Also, a border says to the viewer - "Here is something special, look at it!"

In studying the slides of the collected work of Philis Alvic, I discovered that I use many different types of borders. I will limit myself here to solid borders and leave the patterned ones for another time. My examples here are in Tied Lithuanian, but the principles are applicable to any of the other block weave structures with only slight modification. I have broken down the types of borders I use and their method of construction into categories for clarification.

The first example is a solid color border that runs completely around the edge of the piece (figure 1). To construct this border, two separate operations were required as well as a little preplanning. First, when planning the warp colors, I determined that I might want a border. Note

that there are light colored stripes at either end of the warp in the fringe. The two blocks on each side of the piece were activated for the side bars of the border. The top and bottom bands were woven with a light colored weft held in place by the tie thread alone. I could have raised the side blocks for the top and bottom bars too, thereby extending the vertical bars the full extent of the piece, but I felt that it gave a more effective visual stopping point to have the horizontals in a solid weft. Even though the horizontals and verticals of the border are constructed in different ways and are slightly different colors because of the yarn interlacement in the weave structure, they are perceived as a unit confining a central figure.

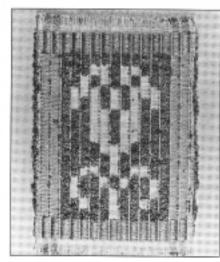


A second solid color border constructed entirely of pattern weft is shown in figure 2. The horizontals are weft held in place by just the tie threads. The verticals were constructed by passing the weft over the end blocks, which remained down. This method provided a homogeneous band of color around the piece, but applications for this technique are limited.

To explain why I find this method of creating a border limiting, it is necessary to describe the method that I employ when designing these pieces. All of the designs have only two elements, either positive or negative, and these are represented on graph paper as either a darkened square or a blank one. To me, the darkened



Figure 2.



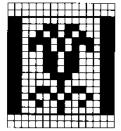
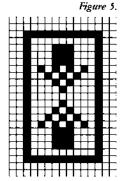
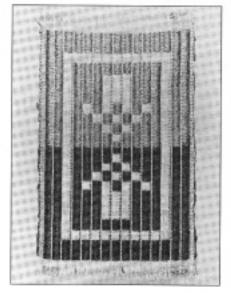
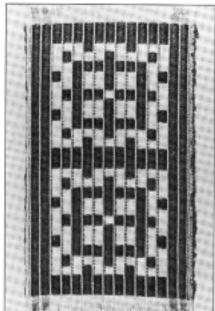


Figure 3.







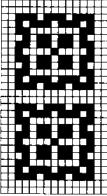
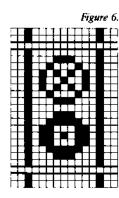
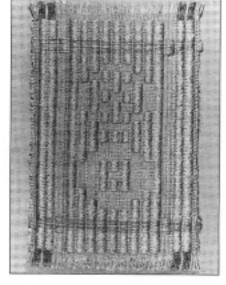


Figure 4.





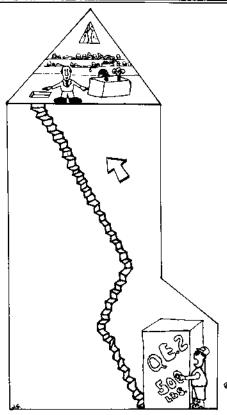
square represents the block that is raised for the design. The most straightforward interpretation of a design conceived in this manner is to have the solid colored warp as the positive element with a solid color weft being the negative. My second example illustrates this method with only the slight digression of different color warp stripes. The first example illustrates a more complex way of presenting the design. By coordinating warp stripes in different colors with threaded blocks, I was able to call them into play when desired. Instead of just the two elements of negative (background) and positive (figure), a third element, the border, was created through the use of color. When I am dealing with only negative and positive spaces and my border is the negative block, then the positive space must be the area adjacent to it. This then leaves the negative for the main figure or an alternation between negative and positive areas, as in my second example.

In figure 3, the same method of thinking of the design in only negative and positive terms is applied. But in this example, the border is recessed rather than at the edge of the piece. This border-within-a-border is made up entirely of activated blocks. For the horizontals, all of the blocks across the piece were raised except the ones at the very ends. The verticals were a single block that was always activated on either side, while the main figures were created. In this version, the outside border and the background were made up of the pattern weft forming the negative part of the design. The inside border and the arrow figures were the positive activated warp blocks.

The next example is also a recessed border, but one that has extended arms (figure 4). I like this version because of its spatial quality: The entire border seems to float above the background. The horizontal is constructed by a weft pattern block in the same color as the warp blocks that make up the verticals. Again, by careful planning of the warp colors, I was able to introduce this third design element.

Each of the four examples given here has its own distinct appearance. I enjoy having a range of choices to adapt to different design problems.





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"Vov've gob bo be Kiddin?"

Antique Spinning Chairs

by Vera L. Becklake



Y THE TIME THE USE OF hand-turned or treadled flyer spinning wheels became widespread, some type of specialized spinning chair was required. The majority of published photos of spinners show them seated on an ordinary kitchen chair or a 3- or 4-legged stool with hand grips. A small spinning wheel could be carried in one hand and the stool in the other to another place in the home, such as a doorway where the light was better.

Examples of special spinning chairs dating from as early as the late 17th century are found in museums in certain areas of continental Europe. These chairs feature a ladder back and one arm on the right side of the chair but none on the left apparently to allow the spinner to lean comfortably on the right arm while spinning flax with the left hand. The seats of these chairs, made of rush, are from 15" to 18" deep and about 19" wide at the front. One chair from the Tyrol Museum is decorated with designs of animals, initials and a date — 1841.

In Britain, low chairs—usually with four legs and a high, narrow straight back—were used for spinning. Many of these chairs were very deeply and ornately carved, chip-carved or decorated with poker work. The height of the seat varied from about 13" to 16" from the ground. The seats were octagonal, often extended at the back to accomodate a slot into which the loose, high back fitted and was held in place by a peg.

Some modern manufacturers of spinning wheels make a similar chair with a higher seat, more suited to today's taller woman, but the low antique chairs are surprisingly comfortable for use by those of us who are shorter.

It is said that the early spinning chairs were the first project of an apprentice cabinet maker. Many of them appear to have been sent to England from continental Europe as blank chairs, without any ornamentation. Carving became a popular pastime of Victorian women who emulated the hobby of the then Princess of Wales, later Queen Alexandra, consort of King Edward VII, and many decorated their spinning chairs with carving. Some of these chairs, occasionally carved with a date and/or initials, were brought

Victorian loose-back oak chair with deeply carved ornamentation. Courtesy of owner: Fern Kelly, Calgary.

Victorian loose-back oak chair with carved design of scrolls, stylized leaves and flowers, initials ER. Collection of the author.



Victorian loose-back dark oak chair; deeply carved designs. Courtesy of owner: Carolyn Brown-Smith, Calgary.

from Britain by emigrating families whose descendants prized them as "hall chairs," probably put to this use after the decline of handspinning. Nearly all the chairs of this type I have seen have a heart-shaped cutout near the top of the narrow back which makes a convenient handhold for lifting the chair. One in our possession has an inverted heart cutout. One might speculate whether this heart motif indicates that the chair was an engagement present from a young cabinet maker to his lady, such as are the heart-shaped maple sugar molds of Quebec. If this was the case, might the inverted heart then mean unrequited love? One of my friends who owns a very highly ornamented example of this type of chair uses a small cushion, as she finds the seat too deeply carved for comfort. Perhaps our ancestors had more padding, natural or otherwise, and did not notice the discomfort.

It is strange that we have seen no pictures showing these chairs in use by spinners. However, in her book Spinning Wheels, Spinners and Spinning Patricia Baines tells us that during the

> Early Canadian fixed-back pine chair with carved 6-point star motif. Collection of the author.

Victorian loose-back oak and walnut chair with chipcarved acanthus leaf design. Courtesy of owner: Eva Connor, Calgary.

Napoleonic wars French prisoners in England made bone models of ladies spinning, seated on narrow, straight-back chairs. We understand that the prisoners would save the bones from their dinner meals for this scrimshaw work which they would sell to the ladies resident nearby in order to earn a little money for themselves.

Spinning chairs were, in many cases, fashioned from oak but other woods such as walnut and pine were used sometimes in combination with the sturdy oak. In spite of their slight appearance, the chairs were amazingly strong and durable.

Now the old spinning chairs are becoming very difficult to find, but once in a while one may show up in an antique shop or at an auction. The ornamented ones in particular command high prices.

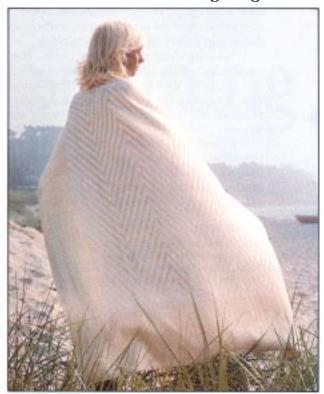
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Aslin, Elizabeth. Nineteenth Century English Furniture. London: Faber and Faber, 1962.

Baines, Patricia. Spinning Wheels, Spinners and Spinning. New York: Charles Scribner's Sons, 1977.



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PRODUCTS

News

WEAVER'S WAREHOUSE introduces its line of 4/2 cotton yarns in several neutral colors: natural, tweed, gray and "burnt cotton." This yarn is suitable for both warp and weft and can be used in a variety of fabrics ranging from sturdy upholstery to table linens to clothing.

When we asked Weaver's Warehouse owner Willie Butt about the origin of the term "burnt" cotton, she informed us that when fires occurred in the cotton mills in the early part of this century, the charred cotton would be salvaged by blending it with natural cotton and re-spinning it into yarn. The light brown color of the finished product became highly desirable, even though the color faded after several washings as the char faded and washed away. Mill fires, fortunately, became rarer, and the popular "burnt" yarn became scarce. The "burnt shade is now manufactured by stock-dyeing raw cotton to the shade of charred cotton and blending it with natural cotton, which eliminates the fading problem."

This stock-dye and blending process is used to create the other colors as well. The 4/2 gray cotton is a blend of stock-dyed black with natural. The most recently added color combination is a tweed, using black, brown and natural.

The burnt, gray and natural yarns are \$2.95 per lb. The tweed is \$4.35 per lb. Bulk discounts and wholesale prices are available. For information: Weaver's Warehouse, 1780 Menaul N.E., Albuquerque, NM 87107. (505) 884-6044.

HARRISVILLE DESIGNS has added 22 new colors to their yarn line, all available in singles, 2-ply, Shetland style and Designer weights. The sample catalog has been redesigned to offer more information on recommended setts, fabric characteristics, knitting gauges and needle sizes, and finishing techniques. The complete sample catalogue is available for \$4.00 from Harrisville Designs, Harrisville, NH 03450.

LISLE YARNS has introduced a new line of hand and machine dyed colors. All colors coordinate with the existing line of hand-dyed variegated colors and are available in all of their natural fiber yarns. For information contact Lisle Yarns, 1201 East 1st, Austin, TX 78702.

MARR HAVEN's American wool yarn has recently been spotlighted in National Wool Growers, a magazine for sheep breeders.



4/2 cotton samples shown on place mats woven by June Ann Fish of Albuquerque using 4/2 burnt cotton sett at 20 e.p.i.

The "Anthea" line of Swiss natural-fiber yarns, formerly marketed by Philmont Trading Company, has been added to SILK CITY FIBERS' line of yarn. Silk City of Paterson, New Jersey has also added "Cherokee" pure wool yarn which features variegated colorations blended on six different base shades.

In fall 1986, Silk City Fibers will introduce handknitting patterns and yarns by British designer Christian De Falbe. Also in fall, Silk City will present a collection of 120 colors reminiscent of medieval tapestries. Silk City Fibers, 155 Oxford St., Paterson, NJ 07522. (201) 942-1100.

WEAVER'S WAY has added "Carolina Cotton," a long stapled Pima, available only in mercerized 5/2 natural. Sample cards and catalog are available for \$2.00 from Weaver's Way, 306 E. Goldsboro St., Crown Point, IN 46307.

GREEN MOUNTAIN SPINNERY has added a "Hearts and Flowers" vest and a cable yoke cardigan to its line of Vermont Designer Patterns and Knit-Kits. Each kit contains the pattern and yarn. Patterns are sold separately from kits. For information: Green Mountain Spinnery, Box 568, Putney, VT 05346.

CLEAR WATER DYE CO. announces the addition of pastel colors in solids, heathers and rainbows to its existing color line of wool batts for spinning and felting. Also new is the Sampler, which includes 12 solid colors of dyed fleece. For information contact Clear Water Dye Co., 1823 10th Ave. S. Minneapolis, MN 55404.

CONSHOHOCKEN COTTON COM-PANY is the manufacturer of "Softball Cot'n Wash," a laundering liquid especially made for cotton. It can be used for all cotton knits and cotton knit blends. It can also be used for other knit yarns but wool should be handled with care. It is available from Cotton Clouds, Route 2. Desert Hills # 16, Safford, AZ 85540.

CLASSIC ELITE YARNS has discontinued both "Cascade" and "Fanfare" (in the stenciled version only) due to production difficulties. There is still stock on most colors. For information contact Classic Elite Yarns, Inc., 12 Perkins St., Lowell, MA 01854 1-800-343-0308.

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PRODUCTS from page 61.

thread with handweaving yarn as as a sideline. As shoe manufacturering on the East Coast declined, handweaving came to dominate the business. After three generations in the same family, the business has been sold and moved to California but will continue to operate as Frederick Fawcett. Fawcett linen arrives in its raw state from Scotland and Ireland and then is dyed and plied in the United States. Yarns will continue to be vat dyed. Fawcett also sells cotton yarns. For information contact Frederick J. Fawcett, 1304 Scott St., Petaluma, CA 94952.

AUSSIE YARNS now offers through its North American retailers a Merino type wool called "Sharlea," available in fleece and worsted tops. Also available is "Cashgora" fleece from cashmere goats. For information contact Aussie Yarns, "Bouer Park," Lower Chittering, Western Australia, 6084.

scandinavian CRAFTS, markets looms, weaving-accessories and weaving yarns made in Finland and Sweden. Owner Ulla Brink cooperated with *Hemslöjden*, the Swedish Handcraft Association, and is a distributor of Bergå yarns and looms. For information contact Scandinavian Crafts, P.O. Box 1145, Crossville, TN 38555. (615) 484-9797.

THE NAVAJO SHEEP PROJECT has Churro (old-type Navajo sheep) fleece for sale. For information: Dr. Lyle McNeal, Navajo Sheep Project, Utah State University, Logan, UT 84322-4815.

Looming Thoughts

by Allen A. Fannin

O THE OLD AND STILL UNANSWERED question of why Johnny (or anyone else for that matter) cannot read, education cynics often reply that Johnny cannot read because his teacher cannot read. The "teacher" implied here is that person(s) at the head of a formal class in a formal institution at whose already overburdened feet is laid the additional responsibility of Johnny's illiteracy. As to whether or not that responsibility is correctly laid, either totally or partially, we will not say. However, we can argue that Johnny's teachers are by no means limited to those who are formally placed in an institutional position of knowledge authority and who hold forth in a classroom. In fact, Johnny's teachers actually consist not only of every person by whom he may be influenced, directly or indirectly, formally or informally, but literally of all the experience he will have from birth to death. The late John Holt held that teaching does not make learners, learning makes learners and vice versa. Therefore, when we evaluate teachers and limit that evaluation to those who are professionally titled "teachers", that evaluation is most short-sighted.

It is a real necessity for those who are beginning to learn handspinning and/or handloom weaving to evaluate their sources of knowledge. Because the fiber field has never had the clarity of standards common to other fields, that evaluation is quite difficult to make objectively. Too often we have witnessed the former student of this or that spinning or weaving instructor evaluating that source of knowledge on the principally emotional grounds of personality. In recent years, various "certificate" programs have grown popular. While we will not comment here on their statistical reliability or on their validity, we would submit that their increasing use as teacher evaluation tools by spinning and weaving students is quite limiting in view of who and what one's spinning and weaving teachers really are in a broader and more long-sighted view.

The late S. A. Zielinski once offered a hypothesis which we find has strong application in the present discussion. He spoke of the often self-defeating, passive dependence of many workshop participants upon the external inspiration of the workshop or of its instructor rather than upon their own active internal needs and requirements. Perhaps if we might be permitted to

extend Mr. Zielinski's thoughts posthumously, we would suggest that first in the process of evaluating their sources of knowledge, however they are defined, handspinners and weavers might serve their own interests best if they were to first evaluate their own personal knowledge needs.

Knowledge, of course cannot be received in any permanently useful way unless one first admits to the ignorance that is the primary and greatest stimulus to learning. If we now move past this essential step, we can explore the evaluation question more broadly. Given the somewhat disconnected way in which the overall knowledge in handspinning and handloom weaving is distributed (and given the further lack of a clearly defined body of knowledge at all) it ought to surprise no one that the relating of one's specific needs for knowledge of a certain type or amount to what is totally available is made most difficult, but fortunately not impossible. Despite that difficulty and despite the confusing picture presented by the many different approaches, philosophies, overlapping techniques and personalities in the fiber field, the effort must be made if one is to take fullest advantage of all that the multitude of broadly defined "teachers" has to offer,

If we were to accept Holt's thesis, then we can also accept an unstated but nonetheless valid ancillary principle that a learner is in fact his/her own first and best teacher and should therefore be subject to the first and most careful evaluation. So dependent have we become as a society upon the formal classroom teacher to motivate our own personal learning process from childhood on, that as otherwise free thinking adults we often fail to regain control of the process whose result largely determines what and who we are as individuals. Given this handicap in our thinking, spinners and weavers at any level who wish to increase their knowledge must try all the harder to engage themselves in the kind of inward evaluation that is so necessary. It is essential to first ask oneself just how badly does one want or need to acquire more knowledge since the answer to this question will determine the strength of one's motivation. We need only recall the persistent three year-old's determination to know the "why" of a truth that the beleagured parent might otherwise blissfully take for granted to see motivation to learn distilled, albeit frustratingly, into its most result-producing form. What happens to that motivation between childhood and adulthood is an exploration to be left for another

Learners of handspinning and handloom weaving need to look with great self-honesty not only at what they want and need to know but further ahead to where that knowledge once possessed will fit into their overall life picture. Frequently spinners and weavers attend classes, workshops, conferences and lessons without later

"... learning motivation ought always to proceed out of the soul of the learner..."

experiencing the growth in their skills and understanding that would have been the case had that attendance been prefaced by a careful selfevaluation. The in-limbo, floating, plateau feeling is common to more spinners and weavers than is healthy for the field as a whole. Unless more participants more fearlessly evaluate their own position, then recognize and accept responsibility for internal control over their learning, that plateau will easily become a dead center which could require external effort from which to break free.

Once an individual has looked internally and assumed control of the learning process, an external evaluation then becomes more properly the next item of priority. The more difficult external evaluation a spinning and weaving learner must make has to do with seeing really how many sources of knowledge actually are at one's disposal beyond those sources traditionally noted. To pass that difficulty it is necessary not only to enter the learning process in awareness of what one wants to know and why, but to have more control over that process. It is further necessary to be willing to accept nothing less that what one wants, no matter how strongly one must act to achieve that goal.

A disadvantage to seeing one's learning resources narrowly as only the formal teacher of spinning and weaving is the tendency to often attribute a value to that resource that might be, in some instances, almost super-human. We recall a homiletical old man tool grinder who once commented that everyone else is one's master at something. That was long ago, but it began a thought process leading us to our present position of seeing everyone, no matter how superficially unlikely, as a potential source of learning. Along this line, each individual is seen as a very specific resource and not a bottomless well of "all you need to know".

Selfish as it may appear or even to some extent be, a learning resource does not function if it is only recognized but not utilized. Former schooling experiences have made many individuals passive about learning, and passiveness and learning are mutually exclusive concepts. A resource cannot be treated as a resource if one sits and waits for the resource to act. Where a teacher of handspinning or handloom weaving acts to cultivate or permit passive and dependent student behavior, any student in those circumstances should react with immediate suspicion as to whose best interest is being served. If, as a student, one has some knowledge, however little, then that knowledge can be built upon, bit by bit. True as the adage may otherwise be, a little knowledge is only dangerous when improperly used. As a basis for further knowledge, a little knowledge is better that none at all. Therefore, beginning with whatever little one already knows, one can draw from any source of further knowledge until either one's needs and/or the

source are exhausted. At that point, one moves onto another source. If the source, in the form of a teacher, has its own interest paramount, as is far too common, the learner will, knowingly or not, suffer. On the other hand, where the interests of the learner are paramount, the interests of the resource are not allowed any negative effects on the learner.

When one is faced, as we usually are, with conflicting information from multiple sources, the problem of evaluating the information can seem overwhelming at times. If we accept the basic principle that information can stand for evaluation on its own, then the problem is vastly reduced. Unfortunately, we hear spinning and weaving students talk disparagingly about this or that teacher, failing to see the information they might have gleaned in a positive sense, regardless of the teacher's personality. At that point, the information can then be compared objectively to other information from other sources as well as to that which one already knows and the truth sorted out from it all. One must, above all, avoid the tendency to place the teacher on a god-like pedestal of authority, for to do so would render an objective evaluation of both the teacher and the information impossible. On the other hand, with a more objective evaluation of information, divorced from the personality of its source, one might very well note that the apparent differences one originally saw were more differences in personality than in fact.

Learning as a process begins in childhood as an activity as natural and almost as involuntary as breathing. Some observers have even suggested that early learning is one of the more important survival mechanisms in what to a child is a hostile and bewildering environment. As one gains in confidence and as the world appears less confusing to us, learning can in fact be an activity that ranks in satisfaction along with eating and loving. We would suggest, therefore, that spinners and weavers could gain much more in the way of knowing something for its own sake if the unnecessary embarrassment at ignorance were overcome. Then, learning a new spinning technique or discovering that complex weaving is not really that complex at all would be far less threatening, and so many more participants in a field that was once more widely shared could grow and develop their real potential. To this observer, at least, learning motivation ought always to proceed out of the soul of the learner, not out of the efforts of a teacher, who should only be present when and if needed. Perhaps then more spinners and weavers will retain or rediscover and experience the child-like satisfaction at dissipating yet another cloud of ignorance about the real world, an experience of which everyone is capable.

Kind regards and thanks.

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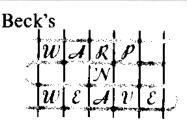
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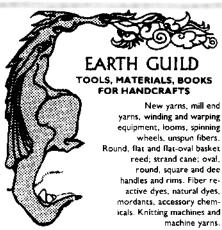
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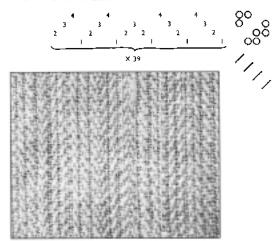
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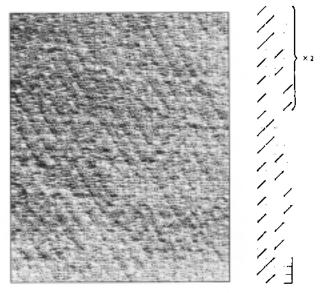
Vol. X, No. 4, Issue 40, Spring 1986:

We have received several letters noting the mix-up of photos and drafts in the Shaker towel article: we apologize for these errors. The correct drafts with their corresponding photos appear below.

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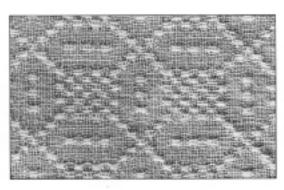
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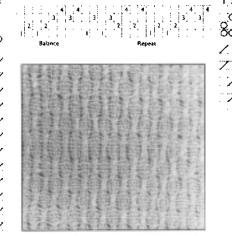


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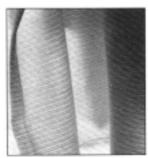




M's & O's



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Vol. XI, No. 1, Issue 41, Summer 1986: "Antigua" by Maria Vergara-Wilson, pictured on p. 22, is owned by the Taylor Museum of the Colorado Springs Fine Arts Center.

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CALENDAR

EXHIBITS, FAIRS, FESTIVALS

ARKANSAS

Springdale: 9th annual Springdale Arts & Crafts Show, October 16–18, 1986.

CALIFORNIA

Claremont: "Fiber R/evolution," October 24-December 15, 1986 at the Galleries of the Claremont Colleges, Claremont, and The University of California, Riverside.

Los Angeles: "Fiber R/evolution," October 24–December 15, 1986 at the Craft and Folk Art Museum.

Mendocino: "Mendocino Coast Festival of Fibers," October 17, 18, 19, 1986 at Crown Hall on Ukiah Street, Mendocino, California.

DISTRICT OF COLUMBIA

Washington, D.C.: "The Scent of Flowers—Woolen Textiles from Kashmir," July 1, 1986 through February 15, 1987 at The Textile Museum.

FLORIDA

Old St. Augustine: 14th Annual Fall Arts & Crafts Show, November 29-30, 1986.

Pensacola: Great Gulfcoast Arts Festival, November 1-2, 1986.

GEORGIA

Rome: Chiaha Harvest Fair, sponsored by the Chiaha Guild of Arts and Crafts, October 18–19, 1986.

HAWAII

Honolulu: "Needle Expressions 1986," sponsored by the Hawaiian Stitchery Guild, January 5–30, 1987.

ILLINOIS

Bloomingdale: "Needle Expressions 1986," June 1-June 26, 1987, Bloomingdale Park District Museum.

Evanston: "Handwoven 86," the annual show and sale of the North Shore Weavers Guild will be held November 14, 4–9 p.m. and November 15, 10 a.m.–4 p.m. at the Women's Club of Evanston.

River Forest: "Fiber Directions '86," a national juried exhibition of contemporary fiber sponsored by Rosary College, will be held October 10-November 7, 1986.

Wheaton: Prairie Star Quilters Guild will sponsor "Quiltfest '86" at the DuPage County Fairgrounds, 2015 Manchester Road, October 24–26, 1986.

INDIANA

Carmel: The Indiana Weavers Guild will hold its 6th annual Holiday Handwovens Fair, Saturday November 15 and Sunday November 16, 1986 at the Keystone Mall, 116th and Keystone.

Valparaiso: "Interwoven Expressions," a sale of one-of-a-kind handwoven articles and fiber arts sponsored by the Duneland Weavers' Guild of Northwest Indiana will be held October 18 & 19, 1986 at Marc T. Nielsen Interiors, 734 North Old Suman Rd., Valparaiso.

IOWA

Davenport: 10th Annual Indoor Fine Arts Fair, Davenport Art Gallery, November 29–30, 1986.

KANSAS

Wichita: "Fiber R/evolution," May 15-June 15, 1987 at the Wichita Art Museum.

KENTUCKY

Bowling Green: "Needle Expressions 1986." April 13-May 8, 1987, The Jackson Museum, Kentucky University.

MASSACHUSETTS

Brewster: The Cape Cod Weavers Guild and the Nauset Weavers Guild will present a joint exhibit and sale, October 4–31, 1986 at the First Parish Church Brewster on Route 6A at Route 124.

Brockton: "Fiber R/evolution," January 16–March 22, 1987, Brockton Art Museum. **Lincoln:** "Fiber R/evolution," January 16–March 22, 1987, DeCordova and Dana

MINNESOTA

Museum and Park.

Minneapolis: "Women of Sweetgrass, Cedar and Sage, Contemporary Art by Native American Women," sponsored by W.A.R.M. (Women's Art Registry of Minnesota) and Minneapolis Indian Center, October 1-October 31, 1986, Art Gallery, Minneapolis Indian Center.

Minneapolis: "ARTWEAR '87," sponsored by the Minneapolis Institute of Art is a major juried competition for runway exhibition of wearable art, beginning April 1, 1987. Guest lecturer is Zandra Rhodes whose work will be on display.

St. Paul: The Goldstein Gallery at the University of Minnesota announces the following exhibits: "Kashmiri to Paisley: Cultural Interactions," July 27-October 3, 1986; "Paris in the Cities," October 19, 1986-January 9, 1987.

St. Paul: The Raymond Avenue Gallery, 761 Raymond Ave. features a continuing exhibition of crafts and photography by twelve leading Minnesota artists. Included are fiber artists Marit Lee Kucera, Mary Anne Wise and Nancy Gipple.

St. Paul: American Craft Enterprises, Inc., in conjunction with the Minnesota State Arts Board and the Minnesota Crafts Council will operate a craftfair at the St. Paul Civic Center, April 8–12, 1987.

NEW HAMPSHIRE

Keene: "Needle Expressions 1986," Thorne-Sagendorph Art Gallery, November 10-December 5, 1986.

NEW JERSEY

Cape May: The third annual Barrier Island Weaver's Guild juried show will be held November 14, 15, 16, 1986.

Cherry Hill: The annual exhibit and sale of the South Jersey Guild of Spinners and Handweavers, "Focus on Fiber," will be held the weekend of November 8 & 9, 1986 at historic Barclay Farmstead in Cherry Hill.

NEW MEXICO

Las Cruces: Renaissance Craftfaire, November 1-2, 1986.

Los Alamos: Fuller Lodge Art Center will sponsor the following exhibits: An exhibition of work by members of the Art Through the Loom Weaver's Guild, October 10–November 9, 1986; "The Fourth Annual Affordable Art Benefit Sale," November 14–December 7, 1986; "December is for Winter Landscapes, Holiday Parties, Christmas Gifts and More," a juried exhibition of work by northern New Mexico artists and craftspeople, December 12, 1986–January 4, 1987.

NEW YORK

Glen Falls: Fourth Annual Winter Festival, November 8–9, 1986.

Lockport: "The Weavers' Guild of Buffalo, New York Fiber Show," April 26-May 17, 1987 at the Kenan Center, Lockport, New York.

New York: "Craft Today: Poetry of the Physical," will be the inaugural exhibit at the new American Craft Museum, 40 W. 53rd St., New York, NY 10019. The exhibit will run from October 26, 1986 until March 22, 1987.

New York City: "Fiber R/evolution," July 11-September 5, 1987, American Craft Museum.

New York City: "Artists in Space: Fiber," featuring the work of Dolly Curtis, Francoise Grossen, Marilyn Meltzer, Joanna Staniszkis, Debra Rapoport and Lenore Tawney, will be held at ARTISANSPACE, Shirley Goodman Resource Center, Fashion Institute of Technology, S.W. Corner of 27th St. and 7th Ave., October 30-December 20, 1986.

Sands Point: Fiber Arts Forum and Exhibit, a juried fiber arts exhibit sponsored by the Nassau County Department of Recreation and Parks will be held October 17, 18, 19, 1986 at Hempstead House, Sands Point Preserve, Sands Point, Long Island, New York. Schenectady: Crafts Festival '86, Schenectady Museum and Planetarium, December 6–7, 1986.

PENNSYLVANIA

Allentown: "Recent Acquisitions: Textiles," October 26, 1986–February 22, 1987 at the Allentown Art Museum, Fifth and Court Streets.

Philadelphia: 10th annual Philadelphia craft show, November 6-9, 1986.

Philadelphia: "Made By Hand in the Delaware Valley—An Artisan Fair." November 15–16, 1986.

Villanova: "Fiber Creations '87," the 34th annual exhibit of juried works by the Philadelphia Guild of Hand Weavers, March 22–April 11, 1987 at the Connelly Center and Art Gallery of Villanova University, Lancaster Avenue, Villanova, PA 19085.

TENNESSEE

Gatlinburg: The Arrowmont School of Arts and Crafts presents "Gloves," by Glen Kaufman, August 19-November 1, 1986.

VERMONT

Woodstock: "A Handcrafted Christmas," November 28–29, 1986.

VIRGINIA

Lynchburg: "Handcrafts 1986," October 24–26, 1986 at the Lynchburg Fine Arts Center, 1815 Thomson Drive.

Roanoke: Roanoke Crafts Festival, Roanoke Museum of Fine Arts, Center-in-the-Square, November 22–24. 1986.

WASHINGTON

Olympia: "Women of Sweetgrass, Cedar and Sage, Contemporary Art by Native American Women," November 10-December 10, 1986, Evergreen Galleries, Evergreen College.

Seattle: "Needle Expressions 1986," February 23-March 20, 1987, Frye Art Museum.

Seattle: The Seattle Weavers' Guild presents its annual sale on Friday, October 31, 1986 and Saturday November 1, 1986 at the Museum of History and Industry, 2161 E. Hamlin St., Seattle.

WISCONSIN

Milwaukee: "Color Celebration 1986," the

annual exhibit of the Wisconsin Handweavers, Inc., will be held at the Charles Allis Art Museum, 1801 N. Prospect Ave., November 1, 2, 1986.

Wausau: "Art to Weave: New Handmade Clothing," an exhibit organized by the American Craft Museum; sponsored by International Paper Company Foundation with special funding by Bozell and Jacobs, Inc., will be at the Leigh Yawkey Woodson Museum, November 2-December 15, 1986.

CANADA

BRITISH COLUMBIA

Victoria: The Victoria Hand Weavers and Spinners Guild will hold their annual sale & demonstration at Harbour View School, November 7 and 8, 1986.

ONTARIO

Brockville: "Domestic Harvest," an exhibition of pottery and textiles by Carolyn Gibbs and Joanne Coljee Ostler, will be held September 20-October 31, 1986 at Heritage Crafts, Sheridan Mews, 182-186 King St. West.

Toronto: The Royal Ontario Museum, 100, Queen's Park Crescent will sponsor the following exhibits in 1986/87: "Loom Technology," a small exhibit of looms and "Vision Versus Value," European Chinoiserie textiles and Chinese Export textiles, July 5, 1986–January 7, 1987; "Textiles of the Mediterranean World," May 24, 1986–January 11, 1987; "Canada's Handwoven Heritage," May 24, 1986–January 11, 1987.

Toronto: "Raettlesnake," an installation by maskmaker Rae Anderson, opens in the Craft Gallery of the Ontario Crafts Council October 1, 1986. The exhibit will run until November 2, 1986.

CONFERENCES

ARIZONA

Flagstaff: The Third Biennial Intermountain Weavers Conference will be held on the campus of Northern Arizona University, July 16–19, 1987. Keynote speaker will be Anita Mayer. For information: Lois Fronk, 1104 Stover St., Ft. Collins, CO 80524.

CALIFORNIA

Asilomar: The Conference of Northern California Handweavers '87 will be at Asilomar, April 1–3, 1987. Featured speakers include Pat Hickman, Lillian Elliot, Sarah and Leo Begay. For information: SASE to CNCH '87 Registrar, 45 Rivoli St., San Francisco, CA 94117.

Los Angeles: The 16th Biennial Conference of Southern California Handweavers, "Threads of Time," will be held at the UCLA campus and the Los Angeles Airport Hilton, July 7 through 12, 1987. Dates include preconference workshops. For information: CSCH '87, P.O. Box 194, Pacific Palisades, CA 90272.

ILLINOIS

Normal: The Dept. of Art and the College of Fine Arts at Illinois State University will host the fifth annual Conference on Textiles, July 10–12, 1987, sponsored by the Charles Babbage Research Centre, Winnipeg, Canada and Ars Textrina. For information: Prof. Naomi Whiting Towner, Dept. of Art, Illinois State University, Normal, IL 61761.

IOWA

lowa City: The lowa Federation of Handweavers will hold their fall meeting at Montgomery Half, Johnson County 4H Fairgrounds, lowa City, October 28, 1986. Featured speaker is Sharon Alderman. For information: Sue Rebro, Secretary/Treasurer, 3316 S. Hampton Drive, Bettendorf, Iowa 52422.

KENTUCKY

Berea: The Precious Fibers Foundation has announced the presentation of The National Fibers Cottage Industry Congress, to be held at Berea College in Berea, Kentucky, May 27, 28, 29, 1987. The conference will concentrate on preparing people to be in the fiber cottage industry. Speakers include Allen Fannin, Linda Berry Walker and Paula Simmons. For information: Precious Fibers Foundation, Inc., P.O. Box 511, Berea, KY 40403. (606) 986-1495.

LOUISIANA

Baton Rouge: Gulf South Fiber Conference, "Cotton Daze—Summer Haze," June 24–28, 1987. Sponsored by the Bayou Yarn Benders and Baton Rouge Fiber Guild. For information: Mary Lynn Jackson, 9326 Cal. Rd., Baton Rouge, LA 70809.

MASSACHUSETTS

Amherst: The 17th biennial New England Weavers' Seminar will be held July 20–23, 1987. Featured speakers include Allen Fannin, Diane Itter and Malin Selander. Preconference workshops will run July 17–19. For information: Kathryn Bardwell, R.D. Box 291, Craryville, NY 12521.

MICHIGAN

Detroit: The annual Michigan Basketmaker Convention will be held October 15–19, 1986. For information: SASE to Kathleen P. Crombie, 25429 Ford Road, Garden City, MI 48135. (313) 522-7760.

MINNESOTA

Minneapolis: The Textile Council of the Minneapolis Institute of Art will sponsor "Artwear '87," April 1–4, 1987. Featured speaker will be Zandra Rhodes. For information: The Textile Council, Minneapolis Institute of Art, 2400 Third Ave. S., Minneapolis, MN 55404. (612) 870-3047.

RHODE ISLAND

Bristol: The Haffenreffer Museum of Anthropology, Brown University, announces a symposium, "Current issues in Ethnographic



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PARIS from page 54.

Musée de Cluny

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Mosée Guimet

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Mlle. Jeannine Auboyer, Chief Curator Mlle. M. M. Deneck, Curator

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1, rue de Figuier

75004 Paris

Mme. Jacqueline Viaux, Curator Mme. Anne-Claude Lelieur, Assistant

Bibliothéque Nationale

58, Rue de Richelieu 75084 Paris Cédex 02

Mile. Th. Kleindienst, Secretary General

Mlle. Galliot, Chief Curator

Musée du Louvre

Bureau de la Conservation 32 Quai du Louvre (Pont des Arts)

75041 Paris Cédex 01

Pierre du Bourguet, S.J., Curator, Egyptian Antiquities

CALENDAR from page 71.

Costume and Cloth: Middle American and the Central Andes of South America, "in March, 1987. The symposium will coincide with the opening of the exhibition "Costume as Communication." For information: Margot Schevill, Haffenreffer Museum of Anthropology, Mount Hope Grant, Bristol, RI 02809.

TENNESSEE

Smithville: The Appalachian Center for Crafts and Shereen LaPlantz will sponsor a conference at the Appalachian Center for Crafts in Smithville, August 10–14, 1987. For information: Shereen LaPlantz, LaPlantz Studios, 899 Bayside Cutoff, Bayside, CA 95524. (707) 822-6009.

TEXAS

Ingram: The second annual Spinfest will be held on the campus of the Hill Country Arts Foundation on October 23, 24 and 25, 1986. The instructors will be Arlene Mintzer, Iris Dozer and Celia Quinn. For information: Jeanne Bowman, Art Director, Hill Country Arts Foundation, P.O. Box 176, Ingram, TX 78025. (512) 367-5121.

CANADA

BRITISH COLUMBIA

Vancouver: The 13th Biennial Conference of the Association of Northwest Weavers' Guilds, "Fibres Forever," will be held June 20–28, 1987, at the University of British Columbia, Vancouver. The keynote speaker will be Ann Sutton. For information: Allen Sanderson, 535 61st St., Delta, B. C., Canada V4K 3X6.

THE NETHERLANDS

Amsterdam: The annual meeting of the Dutch National Weaving Federation (FLWK) will be held November 8, 1986 in the RAI Congres Centrum, Amsterdam. Featured speaker is Peter Collingwood.

TO ENTER

Deadline November 15 for abstracts of 250 words or less of proposed papers for the symposium "Current issues in Ethnographic Costume and Cloth: Middle American and the Central Andes of South America," at the Haffenreffer Museum of Anthropology, Brown University in March 1987. For information: Margot Schevill, Haffenreffer Museum of Anthropology, Mount Hope Grant, Bristol, RI 02809.

Deadline December 5 for slides for "The Human Form," contemporary approaches in all media depicting the human form. For information: Galeria Mesa, "The Human Form," P.O. Box 1466, Mesa, AZ 85201-0904. (602) 834-2242. Exhibition dates: April 14–May 9, 1987.

Deadline January 9, 1987 for "Fiber Forum '87," a juried regional exhibition of fiber

works executed in any medium during the past two years, created by artists living within 150 miles of Miami University. Exhibition dates: February 22-March 25, 1987. For information: SASE to Susan Kristoferson, Fiber Forum '87, Art Department, Heistand Gallery, Miami University, Oxford, OH 45056.

Deadline January 15 for the Cedar City 46th Annual Multi-Media Art Exhibition, April 2–May 1, 1987 at Braithwaite Gallery, Southern Utah State College, Cedar City, Utah. For information: SASE to Cedar City Art Committee, Iron County School District, P.O. Box 879, Cedar City, Utah 84720.

Deadline January 16 for "Small Expressions '87," sponsored by the Handweavers Guild of America. Works must be made using one or more of the following techniques: weaving, basketry, handmade paper or felt and should not exceed 12" × 12" in size; all pieces ready for wall hanging. Exhibition dates: April 1, 2, & 3 at the Conference of Northern California Handweavers. For information: see Fall issue of Shuttle, Spindle & Dyepot. Nonmembers send SASE to HGA, 65 La Salle Rd., West Hartford, CT 06107.

Deadline March 20 for "Fiber Celebrated, 1987." Exhibition dates: during the Intermountain Weavers Conference in July, 1987. For information: send SASE (legal size) for prospectus to Alice McClellan, 1817 Fairway Circle, Las Cruces, NM 88001.

no deadline stated for Boynton's G.A.L.A. (Great American Love Affair), March 7, 8, 9, 1987. For information: Eleanor Wollenweber, Chairperson, Boynton's G.A.L.A., P.O. Box 232, Boynton Beach, Florida 33425-0232.

ANNOUNCEMENTS

The Textile Museum has announced the resignation of Patricia Fiske, Director of the Museum, effective January 1, 1987. Ms. Fiske first joined the staff in 1973 and was named director in 1982.

Santa Fe Weaving and Knitting Center has been purchased by Charlene Neel Gill and Marinell Eva. The grand opening was May 30 and 31.

Silk City Fibers announces that the correct title for Peter Sagal is Vice President, Hand-knitting Yarns and National Sales Manager.

Lisa Lattanzio is interested in opening a store in Manhattan sometime in 1987 to sell high quality handwoven household linens and simple articles of clothing. She is currently trying to locate weavers to produce these items and would also like to connect with production weavers interested in upholstery or curtain fabrics. Contact Lisa Lattanzio, 95 Horatio St., Apt. 501, New York, NY 10014. (212) 924-6729.

STUDY & TRAVEL

STUDY

ARIZONA

Mesa: The Mesa Cultural Program offers an ongoing series of classes in the fibers arts. For information: Mesa Cultural Program, P.O. Box 1466, 155 N. Center, Mesa, AZ 85201.

INDIANA

New Harmony: The following workshops and lectures are scheduled for Fall 1986 at the Harmonie Weaving Institute: "Paper and Felt—Traditional Methods and Contemporary Applications," a lecture and workshop by Lida Gordon, October 17–19; "Unusual Weaves," a lecture and workshop by Clotilde Barrett, November 7–10. For information: Marilyn Schultheis, Director, Harmonie Weavers, 612 Main, P.O. Box 277, New Harmony, IN 47631.

MASSACHUSETTS

Amherst: Horizons, the New England Craft Program will offer fiber classes during its fall session. For information: Horizons, R 137, Williamsburg, MA 01096.

MINNESOTA

Minneapolis: The following workshops will be held at Needle Point of View, 825 Washington Ave. S.E., Minneapolis, MN 55414 (612) 331-6110: Oct. 18-19, Robin Hansen on Northwest-style mittens; Nov. 15-16, Lee Raven on wool combing, worsted spinning, exotic fibers; Dec. 6, "A Knitter's Holiday."

Minneapolis: The Textile Council at the Minneapolis Institute of Art will sponsor the following lectures: Oct. 11, Charlotte Jirosek and John Turner on "Collecting Oriental Carpets;" Nov. 21, Betty Ring on "Embroideries: The Forgotton Documents of Education;" Feb. 14, 1987, Mary Anne Butterfield on "Care of Textiles: Mounting, Display & Storage."

St. Paul: The Weavers Guild of Minnesota offers "Interim," and intensive fiber arts program, January 5–23, 1987. For information: Weavers Guild of Minnesota, 2402 University Ave., St. Paul, MN 55114.

MISSOURI

Fayette: The Weavers' School provides an intensive weaving experience for those interested in exploring beyond the four shaft loom. Classes include: Introduction to Complex Weaves, The Weaving and Finishing of Coverlets, and The Drawloom. Samples are woven on eight shaft jack looms and Glimakra countermarche looms with draw attach-

ments. Students live inexpensively at the school for 2, 3 or 5 day classes with the option of remaining longer for individualized instruction or project weaving. Classes are restricted in size to insure maximum individual progress. For information: Madelyn van der Hoogt, The Weavers' School, Route One, Fayette, Missouri 65248. (816) 248-3462.

OREGON

Portland: Oregon School of Arts and Crafts will offer fiber classes during its fall 1986 term, September 29–December 6, 1986, For information: Oregon School of Arts and Crafts, 8245 S. W. Barnes Rd., Portland, OR 97225. (503) 297-5544.

PENNSYLVANIA

Philadelphia: The Philadelphia Guild of Handweavers will sponsor "Time Saving Techniques for the Handweaver," and "Multi-Harness Weaving: The Basics," workshop and lectures by Peggy Osterkamp, November 4, 5, 6, 1986. For information: Christeen Brady, 524 Prescott Rd., Merion, PA 19066. (215) 664-3283.

TEXAS

Houston: Contemporary Handweavers of Houston will sponsor the workshop "Time Saving Techniques for the Handweaver," January 16, 17, 18 and the lecture "Multi-Harness Weaving: The Basics," January 15, 1987. Both by Peggy Osterkamp. For information: Sandy Van De Berg, 11325 Sharpcrest, Houston, TX 77072, (713) 879-1120.

AUSTRALIA

QUEENSLAND

Brisbane: The Australian Flying Arts School announces a new Weaving Correspondence Course, written by Janet De Boer, and sponsored by the Crafts Board of the Australia Council. For information: The Coordinator, Correspondence Courses, Australian Flying Arts School, c/o Brisbane CAE (Kelvin Grove), Victoria Park Road, Kelvin Grove Q 4059.

TRAVEL

Mexico: "The Unexplored Corners of Mexico," led by Dr. Gary Ross, April 11–18, 1987. For information: Holbrook Travel, Inc., 3540 N.W. 13th St., Gainesville, FL 32609 (904) 377-7111.

Nepal and Northeast India: Global Views Tours presents "Behold the Jewel in the Lotus," a tour of artisans and Buddhist culture, November 1–23 (Part I) and November 22–December II, 1986 (Part II). For information: Global Views, R.R. 3, Spring Green, WI 53588.

New Guinea: "New Guinea: The Art of Weaving, Primitive Art and Exotic Photography," led by Dr. Brian M. du Toit, August 1–17, 1987. For information: Holbrook Travel, Inc., 3540 N.W. 13th St., Gainesville, FL 32609, (904) 377-7111.

Japan: A two-week study tour, November 8–22, 1986 will provide a unique opportunity to learn Kasuri, Japanese ikat weaving, at the Kawashima Textile School in Kyoto, Japan. For information: Masako Sharpe, Skyland Tours, 1157 Melville St., Vancouver, British Columbia, Canada V6E 2X5. (604) 294-5671, 669-2521.

Morocco: Craft World Tours offers a Craft Tour to Morocco, November 15–29, 1986, led by the directors of CWT, Tom Wilson and Sherry Clark. For information: Craft World Tours, 6776 Warboys Road, Byron, NY 14422. (716) 548-2667.

Scandinavia: Join Joanne Tallarovic on a "Scandinavian Arts Tour," June 11-July 2, 1987. One highlight of the tour is the opportunity to weave at the Glimakra Loom Factory. For information: Flagstaff Travel, 508 North Humphreys, Flagstaff, AZ 86001 (602) 774-9104.

Senegal and Mali: Dr. Fred Smith will lead a study tour of West Africa, December 27, 1986-January 17, 1987. For information: Billie Foreman, Mercury Travel Bureau, Inc., 131 Endicott Arcade Bldg., St. Paul, MN 55101. (612) 227-8217 or 1-800-435-5633.

British Isles: Marolyn Downing of the International Design Center will lead a craft tour to Ireland and England, April 22–May 6, 1987. For information: Schilling Travel, 722 Second Ave. S., Minneapolis, MN 55402-2464. (612) 332-1100.

The Arctic: Holman Eskimo Co-operative presents "1987 Arctic Experience for Spinners and Dyers," June 30–July 7 or July 7–July 14, 1987. For information: Wendy Chambers, 21 Boxwood Cr., Whitehorse, Yukon, YIA 4XB Canada. (403) 633-2530.

PUBLICATIONS

Reviews

WEAVING RAG RUGS: A WOMEN'S CRAFT IN WESTERN MARYLAND Geraldine Niva Johnson

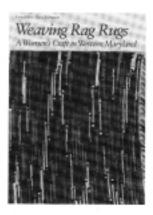
Knoxville: The University of Tennessee Press, 1985, 196 pp., 85 photographs, 27 in color, ISBN 0-87049-451-1, \$27.50.

This volume provides a colorful account of a strong weaving tradition which continues today in western Maryland. Geraldine Niva Johnson has extensively researched the history of rag rug weaving in this geographical area. At first her studies focused on all types of rug production: braided, hooked, crocheted, and woven. The final study was limited to 25 rag rug weavers living and working in various communities.

Three distinct groups emerged: the Amish worked around Gortner, weavers of German heritage in Garrett County, and those of Scottish descent—some of whom had worked in the textile mills—near Georges Creek. She started her project in conjunction with the Maryland Folk Life Survey in 1974 and 1975 using the techniques of oral history and a constantly changing questionnaire. These tools were supplemented with field observations, photographs, sketches, and tape recordings made during periodic visits to the region from 1974 to 1983.

Chapter 1 is devoted to the history and geography of the region and how these factors have affected the economy. Chapter 2 is an in-depth study of one rug weaver, her method of rag preparation, weaving equipment, and process of rug making. The succeeding three chapters document the three groups of weavers. Chapter 6, "The Unfinished Rug," is a general history and commentary as well as a summary of the author's findings. "Rag Rugs may not be the most elaborate and complex of American crafts, but as one rugmaker said, 'they are my legacy-my legacy to my children. ' We are all her children in one sense, for her rugs, and the forces that helped to create them, are a part of our legacy as

Extensive notes on each chapter and a carefully annotated bibliography are included in the appendix as well as a glossary of terms and an index. The bibliography is divided into two categories: "Regional Studies" and "Folk Art, Folk Craft, and Women's Studies." Sources for weaving references are contained in the latter listing. One senses the author's total dedication to the project. Her expertise in writing and in research techniques has







produced an intimate portrait of each craftswoman with a clarity and charm which make this an extremely readable and absorbing study. The weavers chosen are described in loving detail; their backgrounds have been thoroughly studied. However, this is not an instruction manual for the rag rug weaver. Although technical data is included, it is not always complete. Full information on loom types, winding of the warp, dressing of the loom, alternate methods of rag preparation. and the weaving process must be found elsewhere. Weaving Rag Rugs is instead a warm portrayal of each weaver's methods and motivations, her attitude toward her craft and her pride in her work.

Janet Meany & Paula Pfaff

RAG RUG WEAVES: PATTERNS FROM SWEDEN Jane Fredlund and Birgit Wiberg translated by Inga Krook

Stockholm. LTs förlag, 1986, 60 pp., 40 color plates, 6 black and white iliustrations. ISBN 91-36-02415-5. \$14.00 paper plus \$2.00 postage and shipping. 1986. U.S. distributor: Glimakra Looms in Yarns, Inc., 19658 Eighth St. East, P.O. Box 1271, Sonoma, California 95476.

This English translation of the Swedish book, Trasmattvävar. Mönster från föreningen Hälsingeslöjd m fl., is a welcome addition to the rag rug weaver's library. A short history chronicles the evolution of the rag rug in Sweden from its beginnings as a bed cover in the early 18th century to a more recent role as protector of the linoleum floor. There is a brief section devoted to rag rug weaving techniques with diagrams and black and white photographs. The remainder of the book (38 pages) contains a collection of typically Swedishrag rug designs. Complete weaving instructions are presented alongside of a color photograph of each rug. The patterns are

from the Hälsinge Handcraft Association in Söderhamn, from Kalmar, and from the Handcraft Association of Stockholm County. Unfortunately the book contains no index, bibliography or footnotes, and there are minor errors in translation and spelling, but these problems do not detract from the quality of this fine publication. The beautiful striped patterns are an inspiration to all rug weavers.

Janet Meany & Paula Pfaff

LACE AND LACEY WEAVES Mary E. Snyder

Revised and enlarged. 533 North Adams St., McMinnville, Oregon 97128: Robin and Russ Handweavers, 1986. 00 pp. \$8.50.

This year, an expanded edition of Mary E. Snyder's 1960 book, Lace and Lacey Weaves, has been published by Robin and Russ of McMinnville, Oregon. This new book brings the list of titles published by Robin and Russ to fifty-four. Many readers may be unaware of the contribution made by Russell Groff (the "Russ" of Robin and Russ) to the field of fiber art publishing. Since Snyder's book is but one of many specialized weaving books Groff has kept before the handweaving public, permit me to digress for a moment on the subject of Groff's efforts.

Groff has made a career out of publishing, co-publishing, and reprinting out-of-print or hard-to-locate books, many of them from abroad. According to Groff, at times it has taken him more than fifteen years to get rights to a book he has considered worthwhile. He has embraced obscure topics that larger publishers have shied away from, and he has steadfastly worked to keep prices on his titles low.

The legacy to the current generation of weavers falls into three areas. First, Robin and Russ have published reprints of scholarly classics such as Studies in Primitive Looms by H. Ling Roth, The Warp-Weighted Loom by

Marta Hoffman and A Tailor's Pattern Book by Juan de Alcega, first published in 1539! The second area includes scores of bobbin lace books, totally unavailable in this country ten years ago. One, A Guide to Lace-Making is a reprint of a series of lessons for the British version of the Girl Scouts, the Girl Guides. Good, solid books on the craft of handweaving comprise the third group. These books are not the expensive, full-color, flashy ones to which we have grown accustomed since the late 1970s, but whatever these books lack in fancy presentation, they more than make up for in the years of experience and hands-on wisdom they contain. Books of this type range from basics like Dressing the Loom by Ida Grae to Sixteen-Harness Patterns: the Fanciest Twills of All by Irene Wood.

It is into this last category of basic books that Lace and Lacey Weaves falls. If you are a harness-loom weaver determined to fully understand your craft, this thorough survey of loom-woven laces is for you. As Snyder herself notes on page 46, "By going through this course the weaver will emerge with a new understanding of woven lace. . . . " The relationships of Bronson Lace, Bronson Spot, Swedish Lace, Barleycorn, Huck, Huckaback, Mock Leno and myggtjäll (Swedish mosquito netting) to one another will be evident. Further, the range of fabrics possible in these lacey weaves—from airy curtains and soft baby blankets to dense upholstery—is impressive.

The author, Mary Snyder, is an experienced teacher and she built her book around a workshop format. This format could be followed by guild study groups or by weavers at home. The 86 projects (up from 47 projects in the original edition) are woven in sample form. There are both 4- and multiple-harness drafts included. Those less disciplined might not choose to go through the course as outlined. Instead, this book could be used as a resource, like to many others in the Robin and Russ line—as a source of inspiration in planning projects.

Sue Baizerman

UNLIKE THE LILIES: DOUKHOBOR TEXTILE TRADITIONS IN CANADA Dorothy K. Burnham

Royal Ontario Museum, 1986, 101 pages, ISBN 0-88854-322-0 paper \$24.95

Dorothy K. Burnham is a noted textile historian, so it was with great pleasure that I began reading her newest book. I knew two things about the subject: that the Doukhobors emigrated from Russia to Canada at the end of the last century seeking religious freedom, and that these people were of particular interest to social historians because they had remained somewhat isolated and therefore relatively unaffected by the diverse Canadian influence which immediately surrounded them. Dorothy Burnham realized that these

same conditions had also protected a rich textile tradition.

In the preface of this book the author states that a review of the published material relating to the Doukhobors revealed that there was little specific information about their textiles. She soon learned that "those who brought the techniques from Russia had almost vanished, and the succeeding generation was getting on in years. Time was running out. If firsthand information was ever to be gathered, it had to be soon."

With the assistance of a travel grant from The Explorations Program of the Canada Council, Ms. Burnham visited many Doukhobor communities during the summers of 1983 and 1984. She gathered information about their textiles from the actual people or the children and relatives of the individuals who had created and maintained those traditions. The results of these interviews and further research have been brought together in this volume which also gives descriptions of the various weaving techniques, the unique costumes, and the great variety of household goods used by the Doukhobor, including pile rugs.

As with Ms. Burnham's other books, people other than historians will be pleased with the detailed information relating to process as well as specific objects. Many spinners

netted interlocking heddles. The discussion on clothing deals less with construction than with use of material and style changes that have taken place. Attention is given to such costume accessories as mittens, socks, slippers, shoes, aprons, yests, caps and kerchiefs.

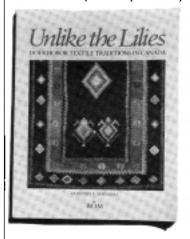
The chapter on household linens describes their diversity and use and contains a threading draft and weave diagram of an openwork linen tablecloth. However the author cautions us in this section that although the Doukhobors were considerably more self-sufficient than most of the other western settlers, when affordable, commercial materials were purchased. The women would often embroider or add special edgings to these pieces.

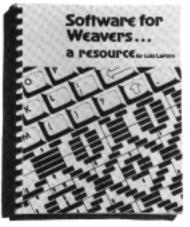
The last chapter on beds and bedding held the greatest surprise. Would you believe hand knotted pile "rugs" were made in western Canada during the second and third decades of this century!

For the whys and wherefores, you must read the book. As well as gaining new respect for all textile traditions, you will come away with a sense of awe for a group of very impressive people.

Lotus Stack

Lotus Stack is Curator of Textiles at the Minneapolis Institute of Arts.





used paddle-shaped wool combs, grobupmla. which became part of the distaff when the fiber had been carded. Flax preparation is also discussed in detail. The chapter on spinning illustrates the Russian type vertical spinning wheel, but also shows later models made in Canada which are more horizontal in form and have a large wheel. Burnham tells of "an aptitude for making do with whatever was available. . . . Several people told of bicycle wheels being attached to spindles. One spinning wheel . . . was cut from solid plywood, with the parts made from shiny aluminum bits and pieces. Another rather futuristic spinning wheel, which functions efficiently, was made of metal pipe and the wheel from an old sewing machine."

The chapter on weaving includes advice from the weavers on the use of the raddle, how to make a reed and the method of tying

SOFTWARE FOR WEAVERS . . . A RESOURCE

Lois Larson

25 Montcalm Ave., Carnrose, Alberta, T4V 2K9 Canada: published by the author, 1986, 85 + pp. spiral bound, \$15.00 + \$2.50 postage and handling (Canadian money order).

The computer can be a useful tool for weavers because of its quick calculations, its ability to do graphed drawdowns, and even its power to manipulate the harnesses of a loom. A great deal of software is now available to weavers. What does each program do? Which is good for which specific purpose?

Lois Larson has compiled a reference book to help the fiber person interested in exploring the use of the computer. The book, Software for Weavers . . . a resource, is a compendium of software programs which are available in 1986.

The first part of the book is set up with lists of software available for each specific computer. Each entry gives the title of the software program, where it is available, what equipment the program needs to function, the cost, and finally a description of what the program is designed to do.

There are 24 pages devoted to the software available for the Apple computer, with approximately thirty-five programs discussed. The TRS 80, the IBM, and the Commodore also have many programs available, but all computers for which software has been developed are included in this section of the book, including the Dec. North Star, and Timex Sinclair. In all, fifteen computers are listed.

The second part of the book consists of fifty-six sample printouts. These show graphically the end products of the programs—the hard copy. This section of printouts illustrates whether the program seems to do what you want it to do.

The next section of the book is a comparison chart of the programs, again organized according to the computer for which the program was written. This is helpful because important questions such as the size of the graphic display, availability of color and the options for display are all answered.

A list of eighteen free programs follows. These have been published in various magazines and the sources are cited. With this information, we can type in the programs ourselves, creating our own disks. This section is a welcome addition and a nice idea for weavers who wish to experiment with different types of programs.

Finally, a list of addresses for sources and a complete glossary and index complete this book.

As Ms. Larson points out, the only way to really learn if a software program is right for you is to "work and experiment with it yourself over a period of time." Her resource book does not evaluate the programs in any way. Instead she has compiled in one volume the information necessary to make educated decisions on what might work for you and what is currently available on the market.

The text includes software from Canada that is not always advertised in magazines in the U.S. One limitation of any book dealing with computers and computer software is the fast pace of change in the field, but the weaving software industry seems to have slowed down a bit. Good programs that do what is needed already exist on the market and these are included in this book. The range of computers covered is helpful for those people whose computer is not used just for weaving. For the person who is trying to decide which computer to purchase, this reference guide is helpful because you can see what the different software options are. For guild and personal libraries, Software Weavers . . . a resource is an important ad-Mary Skoy

Mary Skoy is a Minneapolis weaving teacher and computer enthusiast.

News

PRINT

THE JOURNAL FOR WEAVERS, SPINNERS & DYERS, has a new format. It has gone from a small half-page sized, black-and-white format to a full-size quarterly publication with color. Feature articles cover a range of subjects from sheep-raising to ethnic textiles. News items and announcements, technical notes, book and exhibition reviews are regular features.

The Journal is published by the Association of Guilds of Weavers, Spinners & Dyers in England. This organization has 92 member guilds in England, Ireland, Scotland, Wales, South Africa, Australia and New Zealand. Subscriptions are £6.50 per year plus postage. For information contact The Journal for Weavers, Spinners & Dyers, Association of Guilds of Weavers, Spinners & Dyers, BCM 963, London WCIN 3XX, England.

Bizarre Butterfly Publishing in Phoenix, Arizona publishes LACEMAKING TODAY, an international newsletter for lacemakers and related craftspeople edited by Judy Green Davis. First published in 1984, this newsletter appears 6 times per year. Subscriptions are \$10/year. Bizarre Butterfly also announces the publication of Olive and Harry Linder's most recent book, HANDSPINNING FLAX. This paperbound volume is a comprehensive guide for the craftsperson who spins flax. 80 pages. \$8.95 plus tax and shipping. For information contact Bizarre Butterfly Publishing, 1347 E. San Miguel, Phoenix, AZ 85014 (602) 266-2426.

Dover has now published BOBBIN LACE: An Illustrated Guide to Traditional and Contemporary Techniques, by Brigita Fuhrman. This is an unabridged republication of Bobbin Lace: A Contemporary Approach, first published by Watson-Guptill in 1976. 160 pages. Paperbound. \$7.95.

MINNESOTA ARTISANS' DIRECTORY OF RETAIL OUTLETS is now available from WEDCO. WEDCO is a private non-profit corporation in St. Paul, Minnesota that helps women become economically self-sufficient through business ownership. The directory was created to help artisans locate their target markets. Available from WEDCO, Suite 315, 1885 University Ave.,

W., St. Paul, MN 55104. (612) 656-3808. \$3.00 plus \$2.00 postage and handling.

Nine Press announces **THE BASKETMAK-ER'S ART**, edited by Rob Pulleyn. Showcasing contemporary basketry, the book includes an introduction by Shereen LaPlantz and Lillian Elliot. 168 pages. Hardbound. \$26.95.

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Errata

The following shops were inadvertently omitted from our Directory of Museums, Shops and Galleries in our Southwest issue, Vol. XI, No. 1:

Ortiz Handoven Originals 727 Tijeras NW Albuquerque, NM 87102

Weavers Warehouse 1780 Menaul NE Albuquerque NM 87107 Arizona Weaving & Knitting Studio 3620 N. Scottsdale Rd. Scottsdale, AZ 85251

And
The Wool Warehouse which was listed, is a defunct restaurant!

THE WEAVER'S MARKET CLASSIFIEDS

The Weaver's Market classified advertising rate is .75 per word, \$15.00 minimum. Deadline for the winter issue is November 30. Pre-payment must accompany classified ads. Send copy to: The Weaver's Market Classifieds, c/o The Weaver's Journal, P.O. Box 14238, St. Paul, MN 55114. For information on display ad rates, call Mary at (612) 646-7462, or write to the address above.

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FIBRE FORUM is the tri-annual magazine of the textile arts for Australia. Subscriptions in 1986 are \$16 in the U.S.A. and \$20 in Canada; includes color. Subscribe through R. L. Shep, Box C-20, Lopez Island, WA 98261—or through The Textile Booklist, P.O. Box 4392, Arcata, CA 95521. Fee should accompany subscription.

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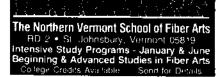
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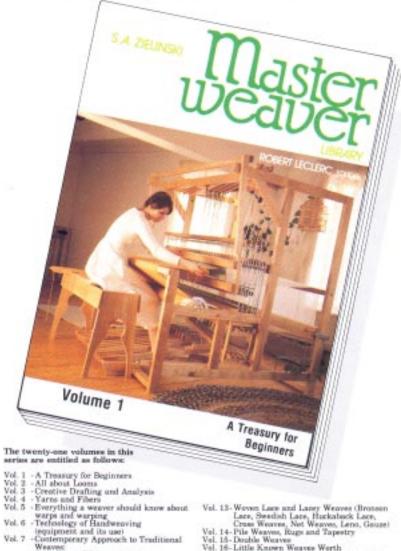
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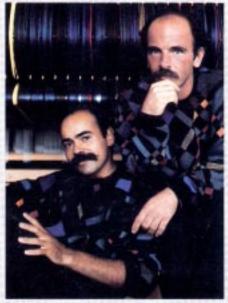
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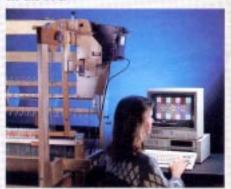
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