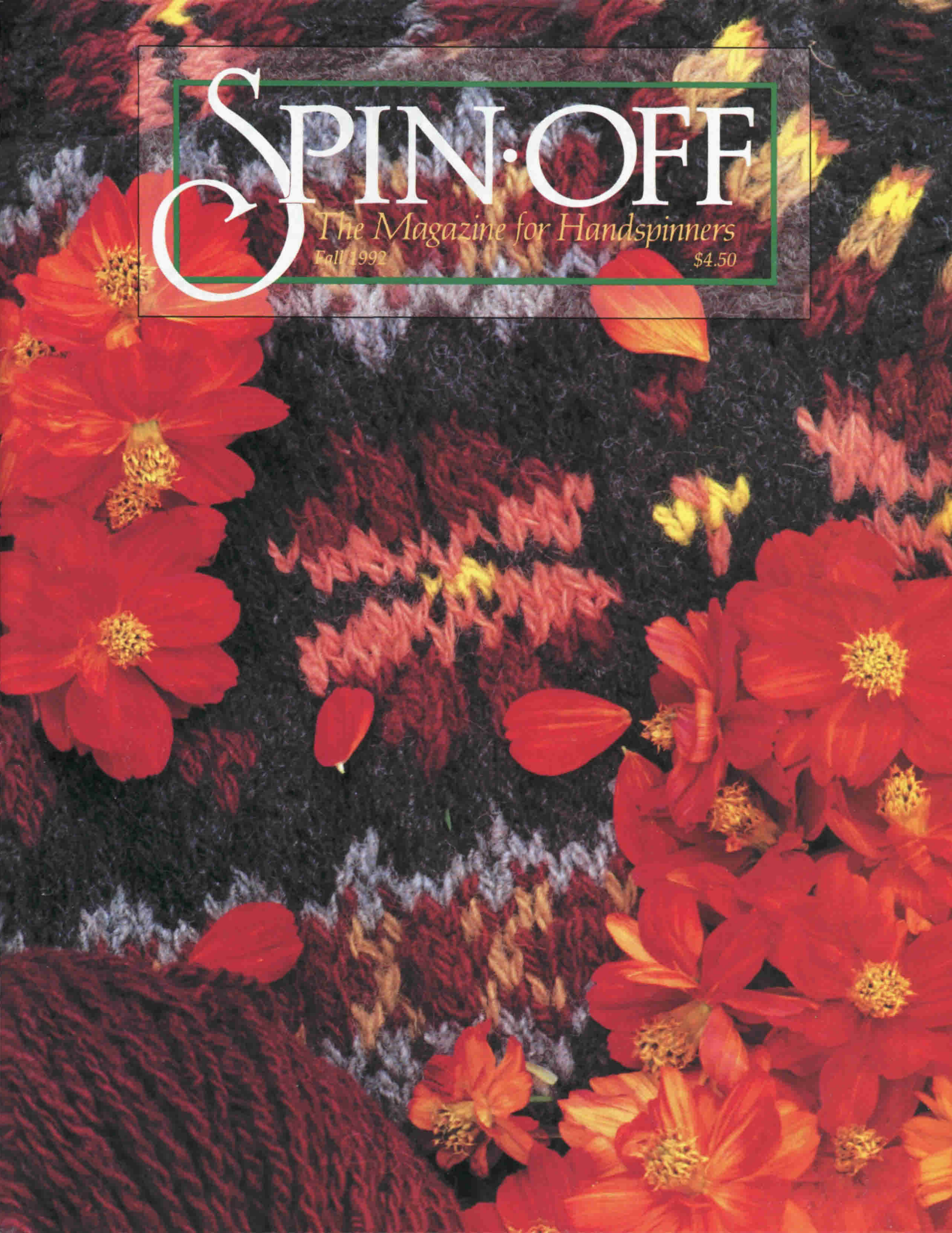
SPIN·OFF
The Magazine for Handspinners
Fall 1992
$4.50

SPIN·OFF

The Magazine for Handspinners

Volume XVI
Number 3
Fall 1992

Spin·Off Book of World Records . . . 39

Projects

Departments

Cover: *Laura Demuth, of Decorah, Iowa, used natural-colored and plant-dyed fleece to make this sweater. The flowers are* Cosmos sulphureus *(use like coreopsis). For more inspiring ideas about natural dyeing, see pages 30, 36, and 54. For a treat with chemical dyes, see page 60. Photo by Dave Rusk.*

Editor's Page

We work here daily, making *Spin-Off* the best magazine within our power, hoping to meet everyone's needs perfectly . . . ah, impossible! But underlying our efforts is a deep belief that the act of spinning (like other creative, life-affirming efforts) benefits both the person who spins and the world we live in. Because creativity begins with the imagination, even *thinking about spinning* has this positive effect. Consequently, if what we offer here inspires, assists, broadens, or focuses your efforts—or spurs your dreams—then *Spin-Off* is doing its job. If what we put together at a given point in time is not useful for your efforts . . . then just keep spinning, and our most profound goal rests fulfilled.

Allen H. Eaton, in *Handicrafts of the Southern Highlands,* frames similar ideas most eloquently. Here are some fragments from his preface.*

The time will come when every kind of work will be judged by two measurements: one by the product itself, as is now done, the other by the effect of the work on the producer. When that time comes, the handicrafts will be given a much more important place in our plan of living . . . for unquestionably they possess values which are not generally recognized. . . .

In all gains to society, especially material gains, there are bound to be certain losses. Part of the price paid for our present civilization is a loss of the creative element in much of the world's work. . . . The need of an outlet for the creative impulse is universal. . . . The effort to make a useful object pleasing to the eye or touch gives the craftsman an understanding of the age-long struggle to bestow on objects of daily use that quality that renders their ownership one of life's little events. . . .

From such personal experience the worker in handicrafts will wish for others the privileges which have meant so much to him; and he will ask himself if there are not ways by which the sense of beauty could be extended from the somewhat narrow fields of art to the broader field of human relations. And he comes to see that to ask the question is in part to answer it. . . .

[H]e realizes that art is just the best way of doing a thing that needs to be done—the expression of beauty within limitations. Our efforts within the crafts are *. . . indications . . . of the need to find beauty, not only in the things we make and use but in the relations we sustain one to another.*

If the beauty we find in "life's little events" shines through the work of our hands and warms the "relations we sustain one to another," then we—and all around us—are nourished.

DEBORAH ROBSON

*Originally published in 1937 by the Russell Sage Foundation. New York: Dover, 1973. Pages 21, 25–27.

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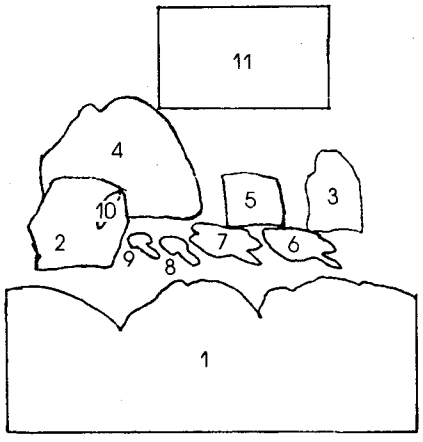

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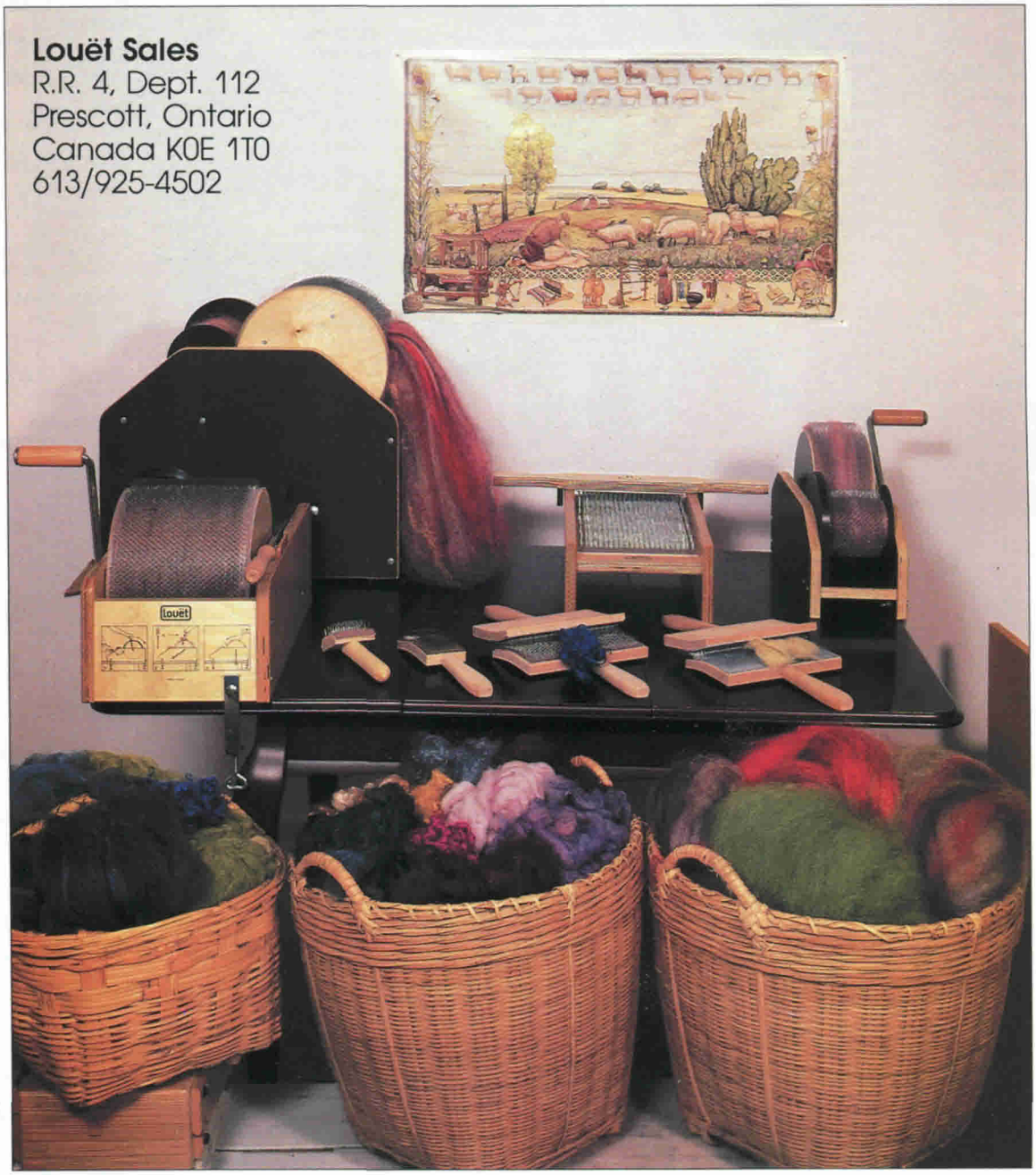

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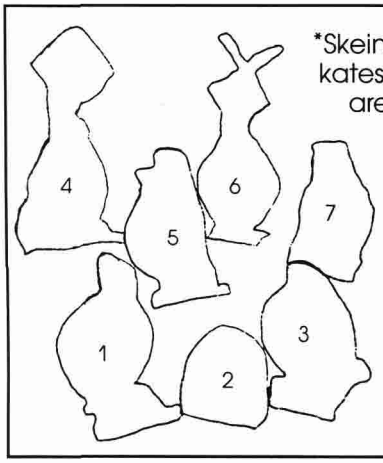

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Letters

Dear *Spin·Off,*

The Winter 1991 issue of *Spin·Off,* with my article about the dye shed, has the perfect title—about efficient equipment from salvaged materials. This all turned itself into a cottage industry, and as I look around, most of it has been recycled from one source or another.

The dye vats are still going strong, with rainbows of colors coming from them and usually some sort of plant or other dye stewing. We have found ourselves inventing all sorts of crazy things, and have become quite good at scrounging materials to fill this need. Not that we're inventors—in fact, far from it—but we have discovered that as we grew (with more sheep, more wool, more carding, and the list goes on), it became necessary

One tends to fall into a crack when you're too big for most drum carders and have outgrown the kitchen sink for washing . . . but have not reached the woolen mill stage.

An old metal building on skids has been recycled into a wash house. We plumbed into our existing hot water and lined the building with tubs, and a washer to extract water following the final rinse.

I now wash six or seven fleeces a day, instead of one. We use drying racks made from scrap wood and wire, suspended by ropes. They double as lambing pens in the spring. We have lined the walls of the garage (now the carding room) with recycled plastic awnings to control the humidity; this modification became necessary when we purchased a sample carder from a woolen mill.

And the list goes on.

Never in our wildest dreams did we imagine all this when we innocently purchased those five little sheep! We continue to learn, to be challenged (sometimes awed), sometimes overwhelmed, and most of all we try to keep a sense of humor.

Chores await and I must be off. Keep those terrific magazines coming.

—Francelle Robinson, Berthoud, Colorado

Dear *Spin·Off,*

You should know that your review has resulted in twenty-seven orders for copies of our monograph, *Seventeenth Century Knitting Patterns* [Summer 1992]. More than half of the orderers seem to need to explain why they want the book. No one has come flat out to say that they like flat caps or thrum caps. Are we on the cutting edge of a new fashion rage? Thank you anyway.

Our treasurer's job will be a little easier if the checks are made out to The Weavers Guild of Boston.

—Andrew Staley, Weavers Guild of Boston Publications, PO Box 517, Saunderstown, Rhode Island 02874

Dear *Spin·Off,*

Greetings from Nottingham, England! This is to let you know that *The Spinster's Almanack* is still going, indeed thriving, in its eighth year. It has come to our notice that we have lost a number of our U.S. subscribers due to the prohibitive cost of having a bank draft made out in pounds sterling. The last thing we want to do is lose our many transatlantic contacts, so I am pleased to announce that from now on we will receive subscriptions in *dollar bills* (not checks).

The cost is £7.00 surface mail or £8.50 air mail. We trust you to find out the nearest exchange rate in dollars. Please add an extra $2 to cover exchange at our end. This should work out more reasonably than before.

All subscriptions and so forth to Jane Gray-Wallis, 3 Peel Villas, Querneby Road, Mapperley, Nottingham NG3 5HZ.

—Rowena Edlin-White, Nottingham, England

Editor's note: Our research indicates that there is no U.S. law or regulation at this time prohibiting the sending of currency to Great Britain, except that postal regulations require that currency (and other negotiable items) be sent in a registered letter-package. The cost is $4.40 for registration, plus postage (probably a minimum of $.95). This is likely to still be much less expensive than other alternatives.

Your editors are eager to hear from you. Please send your letters and comments to "Spin·Off Letters," 201 East Fourth Street, Loveland, CO 80537.

Additions and Corrections

Another source for flax-processing tools!

If the Summer 1992 issue got you enthusiastic about flax, you can also obtain a complete set of flax-processing equipment from *John Meck.* Meck's workshop can provide a flax break, a bench for mounting the break, a scutching board that fits on the break, a scutching knife, and any—or all—of four grades of hackles. For more information, write to PO Box 756, Cornelius, Oregon 97113.

Varieties of flax seed

Mary Chase writes to say that it's difficult to trace the actual source of flax varieties, which are often developed in one country and sold through another. 'Natasja' is probably from Holland, often grown in France, and 'Ariane' and 'Viking' are French. She also sends word of additional varieties: 'Nynke,' 'Saskia,' 'Belinka,' 'Marina,' 'Laura,' and 'Opaline.'

A note on centering OXO patterns

Janice Keller, of Carbondale, Illinois, writes:

"After I stopped staring at the beautiful photographs of my sweater in the Spring 1992 issue, I began to skim through the article and my eye was drawn immediately to the note on how to center the 36-stitch OXO pattern on the body of the sweater (page 95). I don't know why this suddenly leaped out at me, but I realized that the note only accounts for centering *five* patterns on the *front* of the sweater.

"Although I refer the reader to Alice Starmore's book, both in this note and at the end of the article, I wonder if a

more Corrections . . .

(continued from page 9)

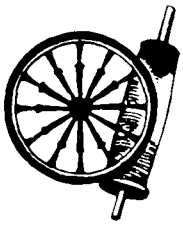
correction might be helpful. The note should read: *The 36-stitch OXO pattern is repeated 11 times around the body of the sweater. In order for the pattern to be centered on the front and the back, work the last 9 stitches of the pattern on the first 9 stitches of the round, work 10 repeats of the pattern, and then work the first 27 stitches of the pattern on the last 27 stitches of the round.*

"I hope that your readers will not be confused by the error. Perhaps if anyone is interested in making a Fair Isle pullover, they will consult Alice Starmore's book, which clearly describes the centering of an uneven number of pattern repeats."

Fluorescent whitening agents—NONE!

Pat Slaven's "What's in the Wash?" (Summer 1992, page 109) discussed the effect of *fluorescent whitening agents (FWAs)* (found almost ubiquitously in commercial detergents) on handspun fabrics. The newsletter of our local natural foods store recently contained an article on Bio Pac cleaners, which are supplied in bulk for packaging at the point of sale in recycled containers. The article mentions that these products do not contain optical brighteners, for a variety of reasons, and observe that one's laundry will be "clean, but not 'whiter than white.' " Other spinners may be as heartened as we were to learn that there is at least one cleaning agent

—continued on page 117



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see page 4

Spinners' Connection

by Ann Klinect

Oh, so much to share with you! As I lay in bed, recuperating from foot surgery, reading through your wonderful newsletters and being totally comforted by my cat, I blessed each of you for being part of that very special group known as spinners. I often think of something Priscilla Gibson-Roberts said years ago: "Have you noticed that the few spinners you really don't want to associate with are like a bit of chaff in fleece? Just enough to make you appreciate the rest of the fleece!"

One of my dreams is for spinners to establish regional groups, which will then form an international spinners' organization. Do those of you who already participate in larger groups realize how fortunate you are? Our recent Northwest Regional Spinners Association conference gathered well over two hundred spinners in one location. And as I read about the Northeast Handspinners Association conference, the Southwest Regional Spinners Retreat, and other exciting events, I imagine the pleasure of having access to guest instructors, which local groups would probably not be able to manage, and to the camaraderie of the conference.

A toast to all who put forth the extra effort that makes these occasions happen . . . and, to the rest of you, a challenge! See if other spinners in your area might be interested, at first, in an informal retreat. Then build on that start and see if a regional conference can happen in your area.

Because many of you are involved in historical demonstrations, I'd like to pass on information about a fascinating catalog I recently ordered after seeing it mentioned in a guild newsletter—at $2, I considered it a bargain, because it offers reproduction shoes, clothing, and patterns, as well as books, fabrics, findings, and a lot of other goodies: Amazon Vinegar and Pickling Works Drygoods, 2218 East 11th Street, Davenport, Iowa 52803.

A reminder: send me an SASE (business-sized envelope, 4⅜" × 9½", with 2 ounces' worth of postage) and I'll send you a selection of newsletters from my files. **All mail and newsletters for this column should be sent to Ann W. Klinect, 7410 77th Avenue SE, Snohomish, Washington 98290.**

Participants in the **Fifth Annual Southwest Regional Spinners Retreat** (New Mexico) celebrated the "year of the bunny," with a variety of workshops to select from.

The newly organized **Johnston Merino Flock** (Ohio) meets at the Piqua Historical Area and enjoys demonstrating for visitors. Their name comes from early settlers who had a flock of Merino sheep and were very much involved in the spinning and weaving of both wool and flax.

It's always intriguing to see how information travels. The **New York City Spinning Guild** reprinted a letter from *Organic Gardening* on how to prevent slugs from feasting on flowers and veggies: circle the planting area with grease wool that is too grungy to spin. The suggestion came originally from Washington state. (Slugs won't travel over the wool barrier, and—because of the natural oils—the wool doesn't mat down and remains effective for two or three years.)

At **Cherry Valley Country Spinners** (New York) members bring fiber items to sell at guild meetings, and the proceeds benefit the guild—mostly going to finance the newsletter.

A member of **Peachtree Spinners** (Georgia) recommends that traveling spinners carry a tackle box equipped with an extra drive band, scissors, oil, hex wrenches, Scotch tension line, headache and allergy remedies, band aids, sunscreen, safety pins, crochet hooks, pens, and quarters for telephone calls.

The same group recently held a second installment of "Spinning 201": a hands-on session identifying a large variety of sheep wools, plant fibers, and exotics. Instruction covered the properties of the fibers, their suitability for various projects, and their performance in burn tests.

Spinners are using computers more and more. Many newsletter editors would be lost without their trusty silicon secretaries. Several of you are also accessing CompuServe and Fibernet and sharing information from these sources through your newsletters. The **Blacksheep Handspinners Guild Newsletter** (New York) reports that CompuServe Craft Forum spinners fielded a team at the Maryland Sheep and Wool Festival's sheep-to-shawl contest. Team members from Hawaii, Texas, and the Northeast met for the first time at the competition site!

Jan Beasley, of Ocala, Florida, would like to contact other spinners in her area to see about organizing a spinners' group. She can be reached at 3901 NE 22nd Court, 34479.

Members of the **Illinois Prairie Spinners** brought samples of unusual wools to a meeting for a fiber exchange.

The **Old Fort Weaving and Spinning Guild** (Arkansas) presented a program on photographing fiber art, coordinated by a professional photographer who discussed techniques as well as props.

Whitewater Spinners and Weavers (Wisconsin) brought balls of leftover yarn and spread them out on the floor, then swapped back and forth until they had appropriate quantities and types to make Kaffe Fassett–style projects.

At the end of the meeting year, **San Juan County Textile Guild** (Washington) held a program based on the idea that there is no such thing as "ugly yarn," just inappropriate uses. Members put samples of "problem" yarn in paper bags, each labeled with fiber content and other comments. Each person selected a bag, took it home, and "loved"

—continued on page 15

Books from Interweave Press

From the interesting story of how rabbits had a part in the naming of Spain to her original design, Charisma, a handspun sweater of pure angora, Erica Lynne has written a useful book that reads like a conversation with a well-informed friend.

—Spring Valley Knitting Club

Angora
A Handbook for Spinners

Erica Lynne

If you've always wanted to spin angora but have been afraid to try, or if you've always wanted your own fiber source—all year long—***Angora: A Handbook for Spinners*** is THE book for you. From raising these furry wonders successfully (we're talking about one or two rabbits) to harvesting their precious downy fiber to spinning one-of-a-kind yarns, you'll learn all you need to know about angora. Also included are Erica Lynne's inspiring and elegant patterns for sweaters, shawls, caps, and mittens.

8 x 9¼, paperbound, 120 pages, b&w photographs and illustrations throughout.

#597.....$14.95

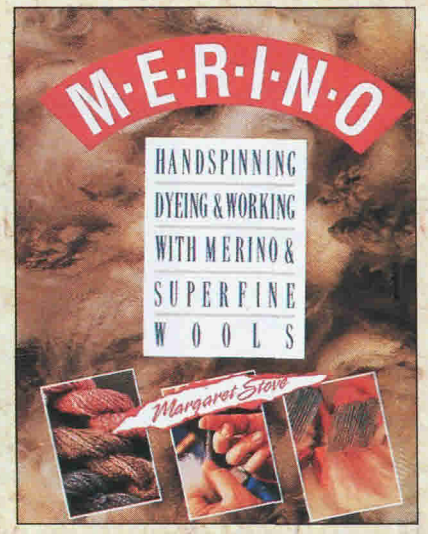
Handspinning, Dyeing, and Working with Merino and Superfine Wools

Margaret Stove

World-renowned handspinner Margaret Stove's book on spinning Merino and other fine wools contains everything we've been waiting for: Margaret's techniques for washing, spinning, dyeing, and blocking—along with many of her special patterns for knitting and crocheting shawls, baby garments, and more. If you're interested in working with fine wool (and what spinner isn't?), you'll want Margaret's insights and guidance to ensure your success.

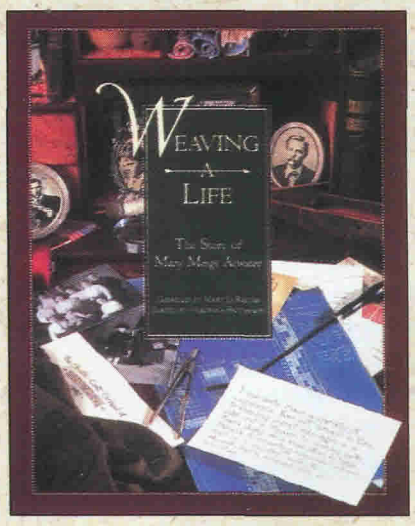
7⅜ x 9¾, hardbound, 112 pages, color and b&w photos throughout.

#721.....$21.00



Looking over old records the other day, we were surprised to find that we've published more than sixty books in the past decade. We never quite intended to do so many, but when a fine manuscript comes along, one that you know your readers will use and enjoy, it's hard to say no. We're featuring some of these books—both old and new—in this special advertising section. For a more complete listing, please drop us a postcard requesting an up-to-date catalog, or check at your local weaving shop.

—Linda Ligon, publisher



*Weaving a Life**
The Story of Mary Meigs Atwater

Compiled by Mary Jo Reiter; edited by Veronica Patterson

From her years as an art student in Paris at the turn of the century—to the day she became a "walking arsenal" to ferry guns across the Mexican border—to the start of her handweaving business in Basin, Montana: Mary Atwater left provocative records of a woman's life in America. ***Weaving a Life*** combines biography, autobiography, and photographs to tell the striking story of this influential American handweaver. Atwater herself wrote vivid memoirs of the first 40 years of life. Her later years are re-created from correspondence, the monthly bulletins of her handweaving guild, and reminiscences of the people close to her. A fascinating read.

7x9¼, 188 pages, 30 b&w photos.

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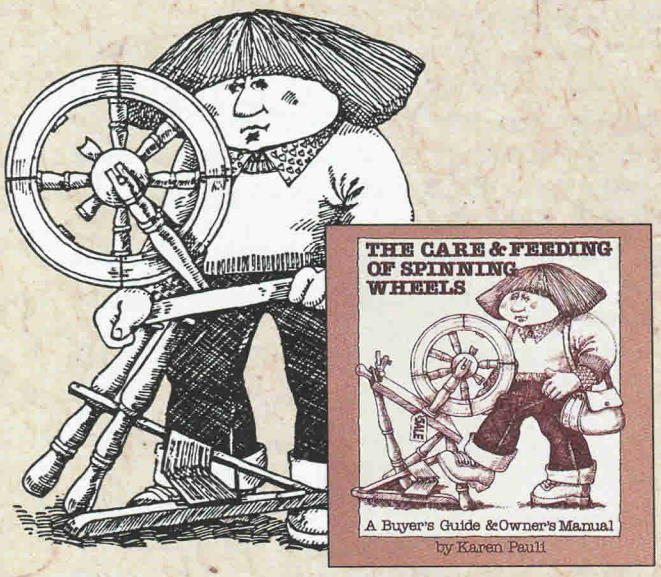
To order: If you don't have a local supplier who can provide you with our books, use the handy order form opposite. It lists all the books shown in this section as well as others that we offer. And don't overlook the magazine subscription information on the reverse.



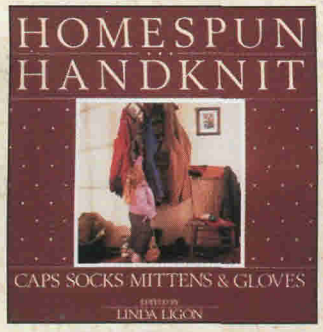
The Care & Feeding of Spinning Wheels

Karen Pauli

A "buyer's guide and owner's manual" for selecting and restoring old wheels and keeping new ones in good running order. Special chapters on troubleshooting, lubrication, traveling with a wheel, and more—all profusely illustrated in black and white—show you how.

8½ x 9, paperbound, 84 pages, b&w illustrations throughout.

#470.....$7.50



Reading through this seductive book resembles passing a day with a roomful of competent and friendly knitters, all producing small, cosy, rewarding examples of handknitting, and all of us knitting and chatting at once.

—*Elizabeth Zimmermann*

Homespun, Handknit Caps, Socks, Mittens & Gloves

edited by Linda Ligon

If you're one of those spinners who likes to spin a little of this and a little of that, you'll find this book a fine source of patterns for small projects. It includes favorite designs, both easy and hard, from fifty experienced spinners and knitters, including Rita Buchanan, Priscilla Gibson-Roberts, Jackie Fee, and more. There are great mittens using "beginner" yarn, an exquisite baby set of fine angora blend, and all kinds of caps, socks, mittens, and gloves in between.

8½ x 9, paperbound, 160 pages, color photos and b&w illustrations throughout.

#577.....$15.00

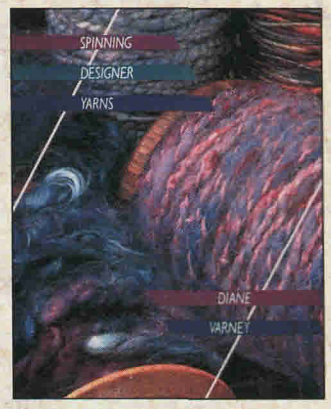
Hands On Spinning

Lee Raven

Lee Raven has taken an intelligent and helpful approach to every facet of fiber preparation and twist insertion in this unparalleled introduction to handspinning. Also included are simple but attractive projects for using handspun yarn. Even experienced spinners will find much that's useful in this informative guide.

8½ x 11, paperbound, 120 pages, color photos and b&w illustrations throughout.

#575.....$8.95



Spinning Designer Yarns

Diane Varney

Designer yarns—tweedy, bumpy, kinky, shaggy, loopy, stylish—are fun to spin, and ***Spinning Designer Yarns*** tells you how. Written for beginning and intermediate spinners (or advanced ones with a yen for something new), this book explores the world of supersoft luxury fibers, textured effects, and dyepot miracles.

7¼ x 9, paperbound, 96 pages, color photos and b&w illustrations throughout.

#580.....$12.00

A Weaver's Garden

Rita Buchanan

This book has so much to offer, it's hard to know where to begin. How to grow and use your own cotton, flax, hemp, moth repelling herbs, fuller's teasels, soapwort, lavender. Historical and cultural information on dozens of other plants that have been used in the traditional textile crafts for centuries. Beautiful illustrations, inspiring color photos. A chapter on growing dyeplants and converting them into a complete spectrum of lively, fast colors that surpasses anything we've seen in print.

6 x 9, hardbound, 240 pages, color photos and b&w illustrations throughout.

#573.....$16.95

it until it became something wonderful to share at the first meeting of the next year.

The president of **East Penn Fiber Guild** (Pennsylvania) found that allocating just ten minutes a day to spinning in her calendar book made it possible to complete projects. Putting an activity on a calendar tends to make it more important!

Nutmeg Spinners Guild (Connecticut) utilized member talents by having four "learning centers," featuring skills such as wool combing, basic spinning tips, elementary knitting, and button-making. Spinners also described their projects, instead of just displaying them—much more interesting!

As a way to encourage member participation, the **Rhode Island Spinning Guild** asked each person to submit at least one one-ounce skein and a 6" × 6" swatch of the same yarn for an upcoming show.

Fredericksburg Spinners and Weavers Guild (Virginia) took part in the Colonial Craft Days at George Washington's birthplace this summer.

North Country Spinners (New Jersey) are making a card catalog of members' books that are available for others to borrow; the catalog is available at each meeting, but the books don't have to be constantly stored or transported.

The **Maine Spinner's Registry** reviewed a book called *A Midwife's Tale: The Life of Martha Ballard, Based on Her Diary, 1785–1812,* by Laurel Thatcher Ulrich (New York: Vintage, 1990). The book is a commentary on textile production within the family and small community, but also addresses the internal conflict Martha Ballard faced as a midwife, healer, wife, and mother. Few women of her time were literate, and even fewer took the time to record the basics of their lives. To quote the review, "the issues are timeless and the state of women [is]

—continued on page 17

much the same."

To cope with scheduling conflicts, the **Suncoast Fiber Guild** (Florida) holds general meetings only twice a year. In between, members participate in study groups, and rely on newsletters for commuications.

Guild Registry

New Listings

GEORGIA

Savannah. Handweavers and Spinners of the Savannahs, Jean Biehn, Route 1 Box 307, Clyo 31303.

KENTUCKY

Mount Sterling. Appalachian Fiber Crafters Guild, Anne Brown, 4034 Grassy Look Road, 40353.

MICHIGAN

Hillsdale and Lenewee Counties. Patricia Forgét, 6891 North Meridian Road, Addison 49220.

MISSOURI

Saint Louis area. Saint Louis Spinners, Petra Lau, 100 Creek View Drive, Saint Charles 63304.

OHIO

Mansfield. Malabar Farm Spinning and Weaving Guild, Sara Rickel, 1217 Michael Drive, 44905.

Piqua. Johnston Merino Flock, Vicky Branson, 9845 North Hardin Road, 45356.

SOUTH CAROLINA

South Carolina/Georgia. C.S.R.A. Fiber Arts Guild, Micki Getson, Route 1 Box 32R, Old Stage Road, Edgefield 29824.

TEXAS

Houston. Contemporary Handweavers of Houston, PO Box 820803, 77282.

WISCONSIN

Fox Valley. Fox Valley Spinning Guild, Deb Lueders, 8197 South Oakwood Avenue, Neenah 54956.

Osceola. North Country Spinners and Weavers, Diane Moore, 9860 230 Street W, Scandea 55073.

Trempealeau. Winona Spinners and Weavers, Ann Prochowicz, 901 East Third Street, 54661.

ENGLAND

Bedfordshire. Bedfordshire Guild of Weavers, Spinners and Dyers, Martina Waters, 126 Wilsden Avenue, Luton, Bedfordshire, LU1 5HR, England.

NETHERLANDS

Zelhem. Werkgroep N. K. Wolspinnen, F. J. Wolsink, Wisselt 75, 7021 EH Zelhem, Netherlands.

Changes

CONNECTICUT—Eastern Connecticut. Madley Spinners, Charis Amalfi, 57 Lebanon Road, Lebanon 06249 (new contact).

GEORGIA—Northern Georgia/Western North Carolina. Folk Fiber Group, Martha Owen, Route 2 Box 248A, Murphy, North Carolina 28906 (new contact).

GEORGIA—South Carolina/Georgia. C.S.R.A. Fiber Arts Guild, Micki Getson, Route 1 Box 32R, Old Stage Road, Edgefield, South Carolina 29824 (new address and area designation).

IDAHO—Idaho/Washington. Friendship Spinners, Route 4 Box 124, Oldtown 83822.

ILLINOIS—Champaign/Urbana. Champaign-Urbana Spinners and Weavers Guild, Cindy Ruesink, 2040 County Road 125 E, Mahomet 61853.

INDIANA—Fort Wayne. Flax and Fleecers Spinning Guild, Ellen Franken, 10640 Brandywine, 46845 (new contact).

INDIANA—Indianapolis. Bo Peep's Lost Sheep, Marilyn Spurgeon, 2500 West 42nd Street, 46208 (new contact).

MICHIGAN—Almont. Ewenique Friends, Sandy Rooney, 73320 Church Street, Armada 48005 (new contact).

MINNESOTA—Minneapolis/Saint Paul. Minnesota Knitter's Guild, PO Box 75184, Saint Paul 55175 (new address).

NORTH CAROLINA—Durham. Piedmont Hotwheels Handspinners Guild, Marie A. Crock, 623 Infinity Road, 27712 (correct ZIP code).

NORTH CAROLINA—Western North Carolina see **Northern Georgia.**

OHIO—Lorain County. Lorain County (LOCO) Spinners and Weavers, Pat Geisler, 1999 West Capel Road, Grafton 44044 (new contact).

PENNSYLVANIA—Lancaster. Lancaster Spinners and Weavers Guild, Julia Snader, 1543 Dunmore Drive, 17602 (new contact).

PENNSYLVANIA—Southwestern Pennsylvania. Fibers Guild of Southwestern Pennsylvania (delete; mail returned).

TEXAS—Kingwood. North Harris County Weaver's Guild (guild no longer in existence).

VERMONT—Rutland. Spoon Mountain Spinners, Jeanne E. Robbins, 19 Rae Terrace, Poultney 05764 (new contact).

WASHINGTON—Eatonville. Mount Rainier Spinners and Weavers, Robin Griffin, 3812E 276 Street, Spanaway 98387 (formerly The Northwest Firehall Fiber Gang; change name and contact).

WASHINGTON—Yakima. Sheep to Shuttle Art Guild, Dotty Swank, PO Box 9963, 98909 (new contact).

ENGLAND—Bristol. Avon Guild of Spinners, Weavers and Dyers, June Corbett, 34 Ridgeway Road, Long Ashton, Bristol BS19 9ES, England (new contact).

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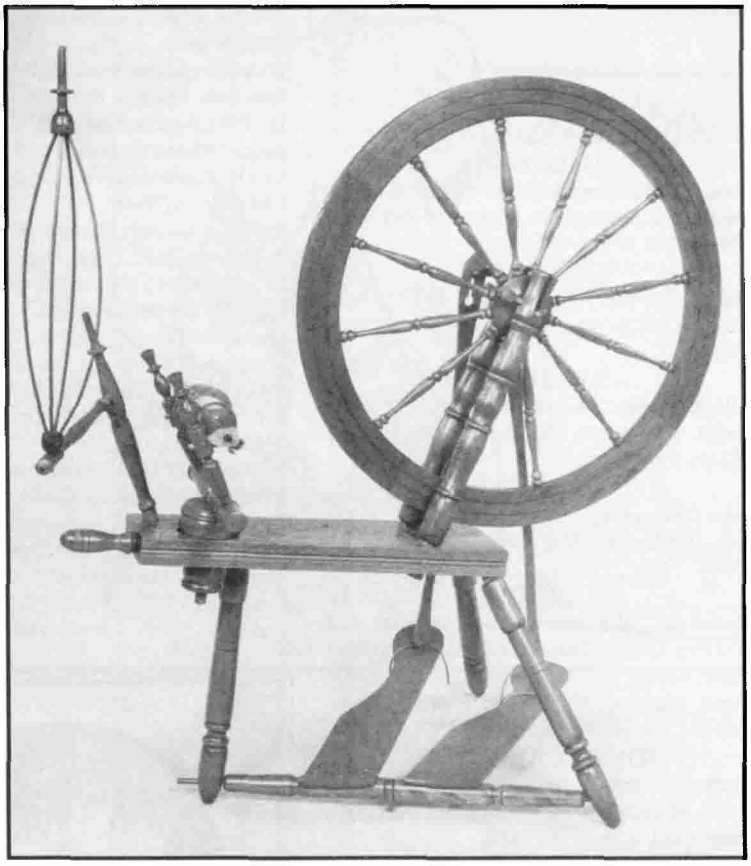

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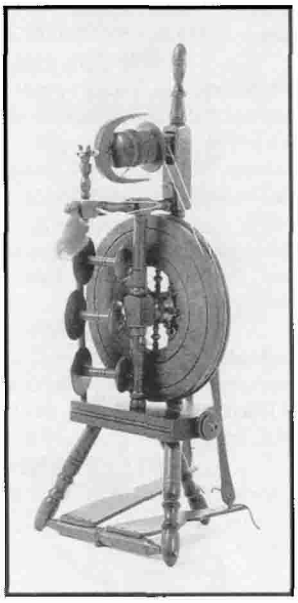

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Books

A Shetland Knitter's Notebook

Mary Smith and Chris Bunyan

Lerwick, Shetland, Scotland: The Shetland Times, 1991. Softbound, 122 pages, £6.95. ISBN 0-900662-73-5.

Northern knitting has been rediscovered in a big way in recent years, and that's fine with me, because it leads to books like this.

If you're looking for ready-to-knit patterns and bright colors, look somewhere else. This is truly a notebook of history, styles, folklore, and design components from a knitter's paradise.

Mary Smith has pulled together many fascinating elements of Shetland life that didn't make it into her earlier book, *A Shetland Pattern Book* (1979), and they are highlighted by excellent black-and-white photographs by Chris Bunyan. In talking with islanders about their knitting and traditions, Smith was shown early knitted pieces and patterns, and even a 1908 knitwear catalog which demonstrates the vast array of fine goods produced in the islands, bound for Edinburgh to be snatched up by Britain's upper classes.

Smith devotes another chapter to Fair Isle, carefully pointing out that the Prince of Wales' famous Fair Isle jumper (which led to the turn-of-the-century craze) was actually knitted on the Shetland mainland and not on Fair Isle.

Other chapters cover other, less well-known islands, including Unst, the most northerly island, best known for cobweb shawls, and the Skerries, a group of three islands with their own distinctive, color-patterned pullovers. The islands of Fetlar and Yell also have unique "looks." It's interesting to notice the Scandinavian influences here.

I especially like the knitting superstitions Smith collected, including, "If someone enters the room quickly when you are laying up a jumper then it will be quickly finished." I also like that she covers the whole range of knitting in the islands—knitting to keep the family warm, and knitting to sell to put food on the table. She also notes the use of handspun, as well as of knitting machines (introduced in the 1930s), both important parts of the Shetlands' economy.

If you're still looking for a little practical information, you won't be disappointed. There are six traditional lace patterns, including a 20-row (!) cat's paw and over 50 pages of graphs for Fair-Isle–type designs. The combinations are endless, with 17 star patterns, nine pages of "old patterns" from an early pattern book, and a whole slew of various designs and patterns taken from knitting Smith was shown in the islands. She generously includes graphs for many of the photographed sweaters, to save you straining your eyes trying to count stitches.

A small, modest-looking book, *Notebook* is one of the best I've seen for covering a wide range of information on a long and distinguished tradition of exquisite knitting. After I went through a two-month correspondence with someone at the *Shetland Times*, Meg Swansen's Schoolhouse Press began to carry this book (US$16.50; 6899 Cary Bluff, Pittsville, Wisconsin 54466), so you can obtain a copy a bit more easily than I did!

—Deborah Pulliam

Spindle Stories: World History Units for Middle Grades—Book One

Lyn Reese

Berkeley, California: Curriculum Resource Project, 1990. Spiralbound, 104 pages. Available from Women in the World Curriculum Resource Project, 1030 Spruce Street, Berkeley, California 94707. (415) 524-0304. ISBN 0-9625880-0-8.

Are you looking for stories to teach your children or students about the role of women in ancient cultures? Do you want to teach about needlework as an art form for women? Have you been asked to teach an enrichment class about the role of needlework in history? Women in the World Curriculum Project has published just such a resource in this book, and the title suggests that further units will follow.

This volume contains units on Pompeii during A.D. 79; Florence, Italy, during the Renaissance years of the 1500s; and West Africa and the Sudan during the sixteenth century and today. Each unit centers on the life of a pre-teen girl during its time period. The units stress the roles of women and their rights in society, the political structure, economic life, and religious institutions. Each section ends with engaging discussion questions, vocabulary, a worksheet, and a map activity. There are also lists of articles about real women who existed in these times, and of nonfiction resources for more background reading.

These units are very appealing to teachers who are trying to include women in history. So much of what has been written in traditional textbooks stresses what men have done to help their countries. The African story in this book, "Gifts for Queen Amina," shows a child as the heroine who saves the queen from her enemies.

The discussion questions use the highest levels of thinking. From the story, "The Needle and the Brush," one question asks students to "select some descriptions of Florence that show that she was a true city of the Renaissance." This requires them to do research to learn what the Renaissance was, then to categorize descriptions which match their definition. Another question from the same story asks, "In the past when it was difficult for women to become artists, writers or musicians, what other ways were open for them to express their creativity?"

This is an excellent chance to reflect on how in all cultures and ages, women—who were expected to make bowls, clothing, blankets, and other utilitarian items—have added their distinctive designs to allow pots, flower arrangements, jewelry, quilts, and gowns to express their creativity.

Teachers who are interested in whole language will find these units an excellent resource. Research skills will be developed as students answer the discussion and worksheet questions. Social studies map skills—reading a legend, following routes, and drawing conclusions—apply to each story. For example, in the Pompeii story, "Nothing Lasts Forever," students are asked to conclude whether there were lots of entertainment places to visit in Pompeii, and whether men or women had more bath houses. Speech skills are developed in interviews, and as students are asked to debate whether the Renaissance was a new age for women. Writing skills come into play when students answer questions and keep journals.

Whole language teachers are looking

for literature which can teach concepts needed in nonfiction-based subjects, such as social studies and science. This is an excellent collection of fictional accounts which teach cultural facts and concepts. "Nothing Lasts Forever" conveys scientific information about the eruption of Pompeii and introduces archaeological theories formed from the artifacts left behind.

I highly recommend the use of *Spindle Stories* by parents, by teachers of world or art history, in a human rights course, in a biography unit, or for the teaching of short enrichment classes. Students will be fascinated by the women of these long-ago days.

—Margie Caswell, Riffenburgh School, Fort Collins, Colorado

Editor's note: Thanks to Margie Caswell for reviewing Spindle Stories *from the perspective of an experienced and creative teacher. These tales and their supporting materials indicate exciting movement in a needed direction in education.*

At the same time, this presentation of complex, wide-ranging material has not yet been completely refined. In a related phone call, Margie mentioned her concern about a statement that Pompeii had been buried in "lava and cinders," when her research indicates that it was the absence *of lava in the town itself that resulted in the preservation of so many intact remains. My own reading stopped completely when I reached a sentence in the Renaissance unit about a woman who "owned her own spindle, warp and loom." And the entire effort—while simply and well laid out, continually interesting, and easy to read—would benefit from a close proofreading.*

In context, these problems are minor. The young women portrayed have an unusual degree of freedom in their societies, because they are at the upper edge of childhood and are not yet as restricted as adult women. At the same time, they perceive their coming adulthood and the changes it will require. Their perspective is uniquely valuable.

Textile activities provide a delicate subtext for the young women's activities, and brief mentions could be expanded into creative projects or practical demonstrations. The possibilities include spinning, weaving, dyeing (including the manufacture and use of indigo), lace-making, raising of silkworms, and embroidery.

There's a wealth of material and a good attitude here, which could be used in many different ways to ease and enrich the presentation of our crafts to the younger generation.

Helpful Hints from Harry

Harry P. Linder

Sun City, Arizona: Sun City Handweavers and Spinners Guild, 1991. Softbound, 54 pages, $9.95 plus $2.50 postage. Available from SCH and SG Monograph Project, 10638 Brookside Drive, Sun City, Arizona 85251.

For some of us weavers, beginners especially, the cross in the warp is "the cross we bear." But the Spanish word for warp cross is *corazon* which means heart—the cross is the heart of the warp. Thinking about it this way, one can acquire a deepened respect for the purpose of the cross. Harry Linder has ways of looking at the details of weaving (he calls them "pertinent details") that makes them contributing elements in the process of weaving instead of hurdles we must jump.

This booklet is a compilation of articles Harry wrote for the Sun City (Arizona) Handweavers and Spinners Guild. The topics span easy ways to make a weaver's knot, how to use twining as a rug finish, doubleweave hems as an alternative to fringe, treadling "tromp as writ" from an overshot draft, good ways to start and join wefts, tie-on and tensioning methods, weaving gadgets that make life easier, and fixing knots in the warp.

After more than 30 years of weaving, a weaver develops habits, methods, and attitudes toward work. Harry shows us good ways to work, small acts that add up to smooth functioning, and reliance on your own head and common sense instead of conventional wisdom. These are good things to know which come from Harry's experience of doing, and especially his habit of thinking while doing. As Harry frequently replies to a hesitant weaver, "Why not try it and find out?"

The proceeds from the sales of this publication go to the Harry and Olive Linder Scholarship Fund sponsored by the Arizona Federation of Weaving/Spinning Guilds for college-level fiber arts students.

—Jean Scorgie

The Story of Silk

Dr. John Feltwell

New York: St. Martin's Press, 1991. Hardbound, 233 pages, $24.95. ISBN 0-312-05772-5.

This clearly written and attractively illustrated book presents a variety of information about silk: the historic Silk Road and the introduction of silk from China to Europe and England, King James I's efforts to establish silk industries in England and in Jamestown, Virginia, historic and modern silkworm production, the biology of the Bombyx silkworm and other silkmoths, natural dyes used on silk, how silk is reeled in factories, silk weaving as a cottage industry in eighteenth-century France, the Huguenots (French Protestants) and the silk industry, historic and contemporary silk mills in England, and the silk industry today around the world. There's also a glossary and an extensive bibliography.

Two long chapters deal with mulberry trees, whose leaves are the silkworm's preferred food. Clearly the author has a special fondness for these trees. He has compiled a surprising number of literary and historic references to mulberries and has traveled to locate and photograph venerable specimens. He develops the thesis that "men of the cloth" were in fact "men of the silken cloth," based on his observation that mulberries are most frequently found in association with churches, ecclesiastical dwellings, and monasteries, although he acknowledges that it is difficult to find evidence that the cathedral trees ever supported a local silk industry.

One chapter relates the traditional popularity of silk clothing among the royalty, including a detailed description of Lady Di's wedding gown. Another lists specialty uses for silk: in surgical sutures, racing bicycle tires, parachutes, military maps, and ladies' make-up—"Helena Rubenstein, for instance, advertises that its products contain 1 per-

cent hydrolysed silk to give the make-up a suspicion of sparkle"!

What's missing from all this, though, is any detailed description of and appreciation for silk fibers and silk fabrics. There's no comparison of different forms of silk, no description of spinning silk nor of silk yarns, and no account of weaving or knitting silk. I was disappointed and puzzled by this—it's as if the book tells the story of silk without ever addressing the tactile and visual qualities of the fiber itself. Clearly the author isn't a spinner! According to the book jacket, he is a naturalist and wildlife photographer who has restored a house in the Cevennes formerly used for rearing silkworms, and who keeps silkworms and grows mulberry trees.

This book won't answer any of your spinning questions, but if you are interested in silk, it will provide several evenings of good reading enlivened by many fine photographs and illustrations.

—Rita Buchanan

Tapestry Crochet

Carol Norton

Saint Paul, Minnesota: Dos Tejedoras, 1991. Softbound, 116 pages, $18.95. ISBN 0-932394-15-9.

Remember the brightly colored shoulder bags and purses that were part of yesterday's alternative clothing ensemble? While Carol Norton was a Peace Corps volunteer in highland Guatemala, she was intrigued with the crocheted shoulder bags that were part of the Mayan Indian man's traditional outfit—the only item not made by women. She started to work in the tapestry crochet technique, exploring its design potential in a large self-portrait as well as in functional pieces.

Tapestry crochet forms a sturdy texture in two or three colors. It is worked at a tight tension that hides strands of unused colors which are carried within the row of stitches. The materials are simple—crochet cotton or heavy rug wool and a sturdy crochet hook. Norton starts with the basics of crocheting with either the right or left hand. Her explanations are very clear and they are accompanied by explicit drawings.

Because the finished stitches appear to be slightly angled, Norton developed graph paper to facilitate designing; the elements of the grid look like rounded shingles or overlapping bird feathers. The graph comes in different proportions, corresponding to the number of colors used, because carrying more colors makes taller rows.

Though the work traditionally is done in the round, Norton uses two methods to work flat—working in the opposite direction across the row or working with the other hand. Several projects lead you through different aspects of increasing complexity toward designing your own projects. The idea of tapestry crochet is very simple, and this book gives you the explicit details that ensure immediate success in accomplishing it.

—Jean Scorgie

A Celebration of Hand-Hooked Rugs

edited by the staff of Rug Hooking *magazine*

Harrisburg, Pennsylvania: Stackpole Books, 1991. Hardbound, 58 pages, $16.95. ISBN 0-8117-1867-0.

This book was the center of attention at a recent spinners' group meeting. It features 24 award-winning rugs in a variety of designs—floral, figurative, geometric, and abstract. Some are sophisticated, others folksy. Some use bright colors boldly, others achieve very subtle transitions from one soft shade to the the next. Almost all of these rugs were made with strips of dyed woolen fabric, but you could easily adapt the design and color ideas to rugs made with handspun yarns. Most rug-hookers use Cushing "Perfection" or Pro-Chem dyes and do several dilutions and overdyes to achieve a wide range of shades; a spinner could easily blend dyed fibers to spin a yarn palette.

For more information, *Rug Hooking* magazine (PO Box 15760, Harrisburg, Pennsylvania 17105; $19.95 for 5 issues/year) has how-to articles on hooking, profiles of contemporary "hookers," and ready-to-use designs. Its advertisers list hooks, backing fabric (usually fine Scottish burlap, linen, or cotton hopsacking), edge-binding tape, portable laptop frames, and other supplies.

—Rita Buchanan

Sweaterscapes of the North Country

Lynne and Douglas Barr

Camden, Maine: Down East Books, 1991. Spiralbound, 72 pages, $16.95. ISBN 0-89272-310-6.

The designs of the eight sweaters contained in this book are typical scenes that one might find in paintings at a sidewalk art festival on a summer's day in Maine. There is a covered bridge, a downhill skier, a lighthouse, and more. Each sweater is designed to be knitted at a gauge of 4 to 5 stitches per inch, a gauge that is well within the reach of an average spinner.

The sweaters are charted in detail, with the scenic design carried from the front of the sweater to the back. In several cases one could choose to use just the front design or just the back . . . or parts of the scenes. Use your local copying machine and move parts of sweaters around on the full stitch-count grid provided. Do be careful of how you place the design elements if you are knitting for an amply shaped person.

The designs and grids are an ideal starting place for a person who is hesitant to draw. With each sweater requiring from four to fifteen colors—a considerable expense when buying commercial yarns—they become an ideal format for the handspinner who also uses dyed fibers. The color and texture of handmade yarns can add depth and interest to these scenes, and will improve their quality over that of the samples, which were worked in commercial yarns. If a sweater requires fifteen colors, why not use twenty or more? The sweater "Autumn Road" suggests the use of ten colors and could easily be enhanced by the use of extra shades and textures.

All of the sweaters are knitted in stockinette stitch; some areas of the sweaters could also be enriched by the use of textured stitches. The sleeves are knitted in solid colors, but creative knitters could carry a scene onto them instead.

The knitting notes are solid and are presented well—from basic how-to-do intarsia knitting, through short-row wrapping on the neckline, to weaving in ends on the inside and picking up stitches at the neckline for ribbing.

more Books . . .

These notes are presented with large, clear, step-by-step photos. And there are special notes for machine knitters.

I see this book as a starting place for handspinners and knitters who want to expand on an idea and make a unique sweater. I see the potential here for sheep in fields, textured fall forests, and mountain retreats knitted in the special colors, textures, and stitches that only handspinners can envision and create.

—Rachael H. Emmons

The Surface Plane

Martha Boles and Rochelle Newman

Bradford, Massachusetts: Pythagorean Press, 1992. Softbound, 292 pages, $32.95. ISBN 0-9614504-2-8. Available from Pythagorean Press, PO Box 162, Bradford, Massachusetts 01835-0162.

The Surface Plane is the second in a series of four volumes on *The Golden Relationship: Art, Math, and Nature* co-authored by an artist and a mathematician. Both authors see nature as a role model, and mathematical relationships as an underlying structure for achieving effective artistic expression. While the first volume in this series, *Universal Patterns*, dealt with three-dimensional or sculptural space (see review in the Fall 1991 *Spin·Off*), this volume focuses on practical ways to organize two-dimensional space, the chief domain of weaving, knitting, quilting, cross-stitch, and painting. The goal is to give two-dimensional designers the skills to be able to turn a blank piece of paper into an exciting pattern arrangement found in nature.

The material is divided into six chapters, each of which deals with a different starting point for designing: The Grid, Symmetry, The Circle in the Plane, Tiling the Plane, Fractals, and The Pliable Plane. I was particularly excited about the chapter on fractals, which are finally explained in terms that can be generally understood.

Within each chapter, the authors show various ways in which the simplest shape can be manipulated, rearranged, and expanded to make complex designs based on a particular concept.

—continued on page 24

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(continued from page 22)

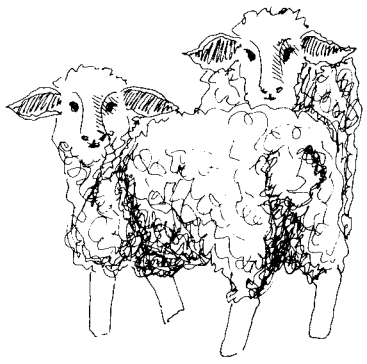
Although mathematical arrangements underlie the material, an understanding of mathematics is in no way necessary to appreciate the myriad ways in which one can turn a simple shape into a complex and pleasing repeatable pattern. The goal is not to teach mathematics, but to open up our options for designing on a flat surface.

The book is profusely illustrated with photographs of the various patterning methods in nature and in other works of art. The authors give precise step-by-step instructions for making a flat surface plane come alive with pattern. Many well-developed figures demonstrate how to put the thought process into action. After a thorough introduction to a patterning concept, each chapter offers problems to reinforce the learning process and proposes projects as starting points for artistic expression; I can see any one of these suggestions resulting in a host of future weavings or knitted designs. Chapters end with recommendations for further reading on the topic.

Approximately one-fifth of the book is devoted to appendices. Answers to the chapter problems appear here. For mathematicians, the appendices include more detailed explanations of the underlying properties, proofs, and geometric formulas; for artists and designers, the appendices include art materials and techniques as well as fourteen different grid templates which can be copied for designing.

I highly recommend this book as an excellent resource for any artist seeking ways to expand the methods of designing patterns for a flat surface.

—Donna Sullivan



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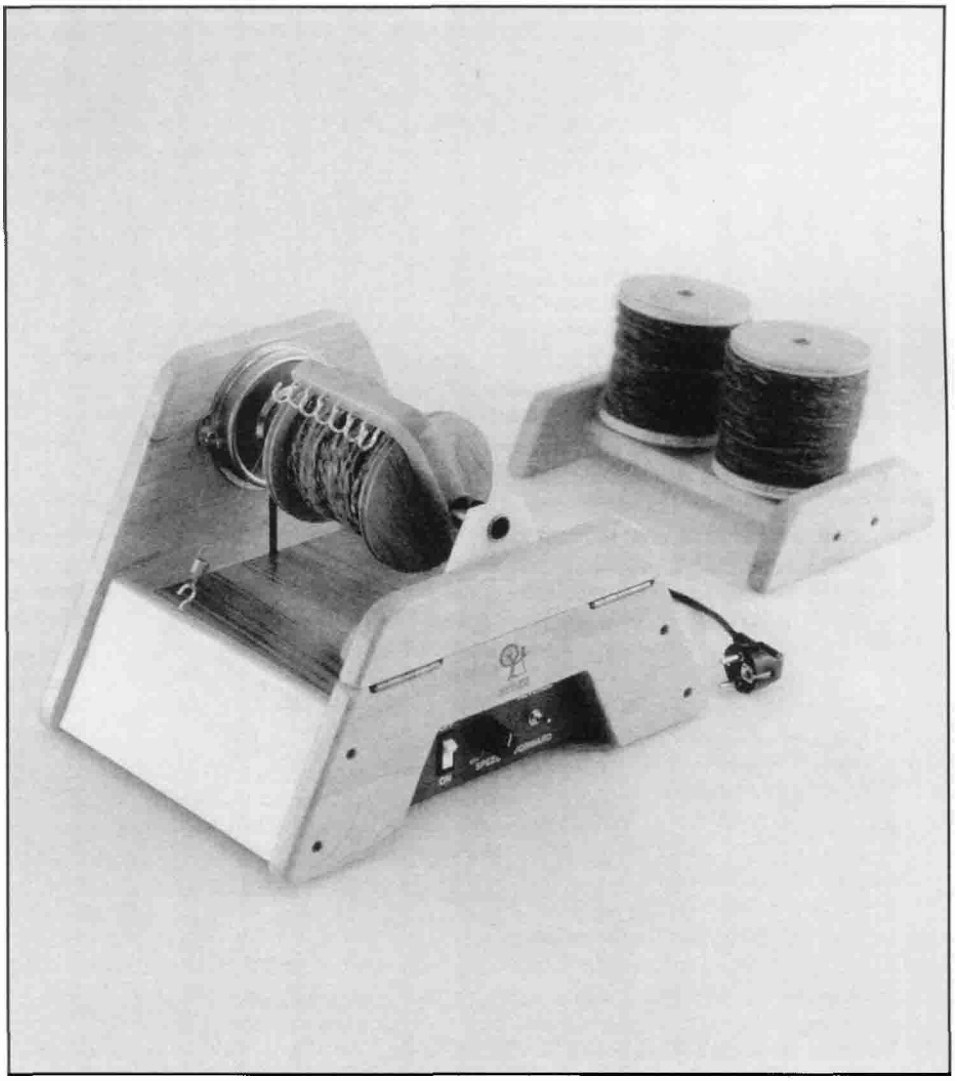

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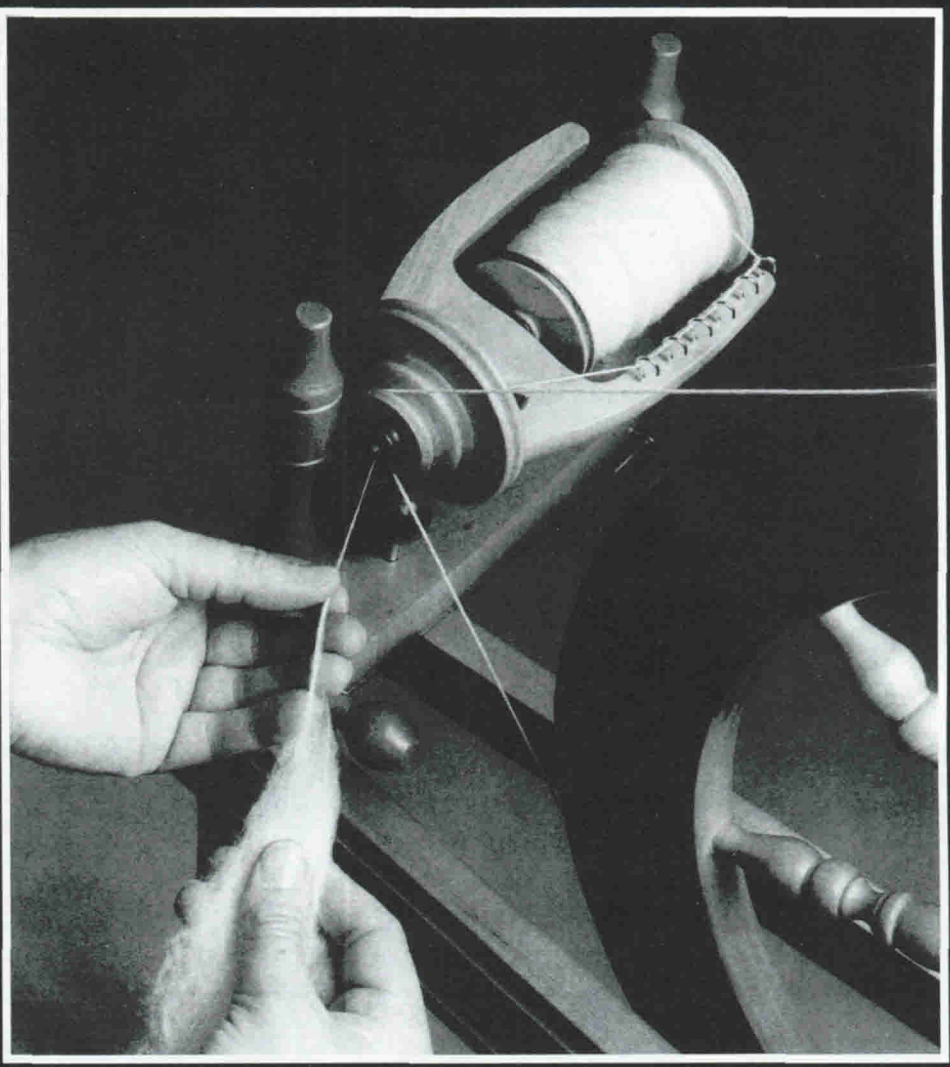

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A Caucasian-Style Cut Pile Rug

by Charles Black

A short history

My hands-on involvement with Oriental rugs began several years ago when I purchased an old Kazak from a local antique rug store. The rug was not expensive (by old rug standards), partly because it had several silver-dollar–size holes, and I bought it with the provision that the restoration expert in the shop give me some lessons in rug repair. In the course of the tedious and slow work on that and several other old rugs, I was struck by the thought that making a new rug must be faster and more interesting than spending hours on a few small inches of restoration.

It only took running across Gordon Scott's *An Illustrated Guide to Making Oriental Rugs* in our local library to get me started on the path that led to the rug shown here. My first small samples utilized commercial yarns for warp, weft, and pile, but the results of these attempts—plus continuing studies of old and not-so-old genuine Oriental rugs—led me quickly to realize that the only way to fully realize my aim to reproduce the quality and feeling of a good old rug would be to have complete control of the materials—to produce handspun warp and weft yarns, and to use the traditional natural dyes on high-quality, worsted-spun wools for the pile. With the goal of rug weaving in mind, I took up wool combing, spinning, and dyeing.

Armed with a deadly looking new set of English-style wool combs, Peter Teal's excellent book on wool combing, a new Ashford Traveler spinning wheel I put together from a kit, ten pounds of Border Leicester wool from Oregon, and various natural dyes gathered from several sources, I set to work. I still take out my first-spun skein of yarn for comic relief, although when, after several days of work, I realized I'd spun less than 1 percent of the pile yarn needed for a small rug, I didn't feel like laughing! That was about two years ago, and after a couple of false starts and a good deal of experimenting with spinning, dyeing, and weaving samples, I sat down shortly after Christmas 1990 with my new Schacht wheel and began in earnest.

The design

My first love in both collecting and making rugs remains the Caucasian village products, which in the best instances show a good sense of overall drama and care in design, but allow for improvisation at the loom, and contain bright contrasting colors from natural dyes.

I chose to do a simple large medallion design, and for this rug I used several published illustrations from the rug and textile journal *Hali* and from books on Caucasian rugs. I sat down with these photographs, a magnifying lens, and a large sheet of graph paper with ten divisions to the inch, the density that I planned to use for the rug knots. The choice of this design was partially governed by its simplicity—I wanted to avoid many small or complicated elements, since referring to a cartoon while working can be a major component of the time spent. This type of design would be called a Fachralo Kazak in the rug trade, and the Lori Pembak medallion is the simplest and most degenerated form of a type present in rugs dating back to the late eighteenth century. It may picture a totemic figure which at one time represented pairs of crested birds or animals facing one another.

Chuck Black knew the style of rug he wanted to make. He spun and dyed Border Leicester and wove the knotted-pile rug shown opposite in a total of about 500 hours.

This rug (like most Oriental rugs) consists of repeating units which are generally symmetrical, so for the border of this piece I only needed to carefully plot out about ten inches of pattern, which would then be repeated. Likewise I only had to plot out roughly one quarter of the medallion, and figure its general spacing in the field.

One measure of the skill and care in different village weavings is the way in which turns in borders are resolved. In the simplest case, the pattern simply cuts off when a border changes from horizontal to vertical, and a separate beginning of border in the new direction is begun. In the most thoughtful cases, however, border turns are planned, and occasionally new and playful elements are introduced at the corners to help the resolution, which certainly adds to the design interest of the rug. This "leaf and wineglass" border had an obvious and simple resolution, and the size and spacing of the medallion were planned with the proper outcome of the border elements in mind. By the time I had gotten through the body of the rug to the top turn I was off by a few rows, but I stretched the top unit of the border by a few rows of knots without detriment to the design.

This rug (like many others) has certain elements which are "fixed" and others which can be varied. The fixed elements are the repeating units of the border, the white/red color combination of the inward-facing "wineglasses," the structure of the medallion, and the positions of the eight "cross" elements. The variable elements in this case were the colors and combinations of the remainder of the border elements, the colors of the crosses in the guard stripes, and the color combinations of the field crosses.

I invested various degrees of planning into the variation of these elements. In most cases, I simply attempted to avoid colors or color combinations I had already used, driven somewhat by a desire to see how serendipitous color combinations worked together: I'm still studying these aspects. I initially had planned a very restrained use of ornaments in the field, but by the time I got up to the medallion I was bored with all the white space, so I took some stars, birds, and esses from that first fateful Kazak and filled in the empty space between the medallion and the field edge as I went along.

The materials: yarn

I had worked with several kinds of fleeces by the time I started this project, and I decided that I would use Border Leicester wool, because of its character and its ease in preparation. I washed the fleeces in hot water and soap, then moistened the individual locks with olive oil and water and opened them with a dog comb before pulling them through a diz into a top. For the warp I tightly Z-spun singles at a low drive ratio to about 4500 yards per pound, the most painstaking spinning for this project. These singles were tightly S-spun into a three-ply yarn at about eight or nine twists per inch, then washed and stretched on a frame to dry. This gave a hard, dense yarn of 1500 yards per pound with relatively few protruding fibers—an important consideration when changing the shed hundreds of times! I used a combination of dark gray and white singles, resulting in a barber-pole–striped yarn. Warps so constructed are frequently found in Oriental rugs, and I found that it is easier to pick out pairs of warps for tying knots when they are composed of contrasting colors, rather than of a single solid color. The weft was loosely plied from two singles of the above weight. For the white and dyed colors of the pile I spun the Border Leicester to about 1600 yards per pound on a high drive ratio and loosely two-plied these at between two and three twists per inch—just enough to hold together as I tied knots. For the black in the rug I used a very black, fairly fine, young Lincoln–cross ewe fleece.

The materials: dyes

One of the most interesting aspects of my involvement with wool has been the rich and vivid colors which can be achieved with natural dyes. This rug presents a fairly comprehensive review of my experiments to date. The colors are mostly traditional, and were done following instructions published in the last decade in several sources.

My madder reds were more orange than I liked, so I overdyed them with cochineal to produce the main deep ruby red (a warm dark orange-red did show up in the top border, when I ran out of this red). My three dyeings of red show up as *abrash* (the rug-trade name for variations in color

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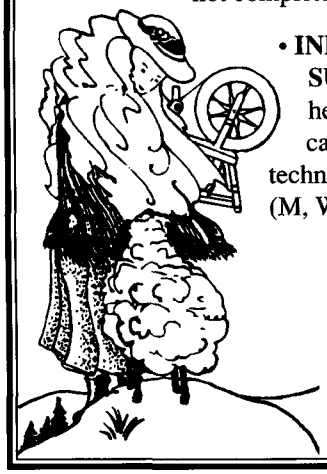

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due to different dye lots) in the medallion.

The two shades of blue are vat-dyed indigo. Some of the dark blue was dyed as yarn and some was dyed in the wool and then spun. There is one different dark blue, made with indigo dissolved in concentrated sulfuric acid according to nineteenth-century recipes, post-mordanted with copper sulfate.

The yellow is mostly made with wild fennel, a common California-introduced weed. A few knots of weld yellow made it in at the top, since my weld plants grew large enough to use only as the rug was nearing completion.

The light and dark greens are indigo over fennel, and the light and dark browns are black walnut husks. The sherbet orange in the lower left wineglass is from olive leaves, whose yellow was contaminated because I did not not wash my madder pot well enough between dyebaths. The black is black wool, overdyed with dark indigo or just used naturally.

The loom and rug weaving

I followed the instructions in Dr. Scott's book to make my loom from 2 × 6 redwood left over from my back deck. The only components I had to buy were the threaded steel rods and nuts used to tighten the warp after the loom is strung. The looms described by Scott or by Orlo Duker in his cut-pile rug weaving video may seem complicated at first glance, but they are actually very simple rigid frames on which to hang your warp. Some day I hope to try the nomad-style loom—two straight boards fixed on the ground with wooden pegs! Besides the loom, the only equipment needed is a small knife to cut the yarn as the knots are tied (I found a small carbon steel blade with a dull hooked end most useful for picking out pairs of warps), a beater (or *daftoon*) for beating down knots and weft, a small animal flea comb for combing out knots, and offset scissors for trimming down the pile.

The daftoon is probably the most difficult item to acquire in the United States. I obtained a small Turkish model which a friendly rug store owner was willing to let me borrow. It had obviously never been used before, as the steel blades were still sharp enough to cut warp threads on gentle beating. A little sanding took care of this problem. I have made suitable daftoons from two dollars' worth of twenty-gauge carbon steel cut into ¾″ × 10″ strips, fastened together at one end with ¼″ bolts and fanned out on the other end.

Stringing the warp is a critical step in rug weaving. Care in maintaining even tension and even spacing is most important, as I soon found out: I had to keep improvising shims to tighten groups of warp ends. I strung my warp at 20 threads per inch (because each knot is tied around two threads, this gives 10 knots per inch), and strung a total of 640 threads (317 knots across, plus three groups of two threads on each side for a selvedge). Stringing the warp and tying heddle threads took about ten hours. Using either Scott's or Duker's method results in a continuous band of warp connected at the beginning edge to a stick. Warps are tightened to near–guitar-string tension by one of two methods, and loosened at intervals to move the rug around the loom to keep the working edge in a convenient location.

I started out with several shots of weft, then began the knots. It usually took about 40 minutes to tie one row of knots, place two shots of weft, beat the weft and knots down, comb the knots out, and trim the pile.

I usually put in one row of knots in the morning before work, and aimed for three or four rows in the evening. On my longest day, I tied fourteen rows, or 4438 knots. I found I worked best sitting on a cushion on the floor working with my hands at chest level, adding cushions as I worked to maintain this position, until I moved the rug around the loom and regained my starting position.

I finished the rug three months and one week after tying the first row of knots, taking out one week for vacation, and two to spin and dye more wool, for an average of five rows, or about 1600 knots, each day. Using a single color and aiming for speed, I could tie about 15 knots per minute at best. I timed a Turkish rug maker in the DeYoung Museum in San Francisco during the VI International Conference on Oriental Carpets who tied 38 knots in one minute! A typical count for a worker in Turkey or India for one day's work is between 10,000 and 12,000 knots.

My rug contained a total of 128,385 knots, and was small and not unusually fine. A more typical 3′ × 5′ rug might con-

After his rug was completely finished, Chuck Black decided that the hand was not correct and the pile needed to be shorter, so he trimmed it.

tain 220,000 knots, which at 10,000 knots per day would take about a month for a professional (or between 6 and 7 months for me).

I had left the pile of the rug fairly long—about 5/8 inch. When I took the rug off the loom, I realized from its handle that this was much too long, given that I was aiming for the feel of a genuine Azerbaijan short-pile rug. I washed the rug and stretched it out to dry, then with great trepidation took my electric hair clippers and attacked the pile, cutting it almost down to the knot collars. This was a very onerous task, and involved the trauma of seeing lots of wonderful, colored wool being thrown away. The final results would have been better if I had carefully trimmed the pile to the correct length as the work progressed—I clearly cut too low in places. However, the design emerged with greater clarity, and the handle of the rug became more cloth-like, and I am not ashamed of the first real rug from my loom. The total time required for the project was about 500 hours—140 to spin the yarn, 60 for dyeing, warping the loom, and finishing, and 300 for knot tying. ❖

Charles Black, who is a professor of biology at San Diego State University, wrote us about his rug, saying "I only began spinning about a year ago, and to date I've never watched any one else spin—I pretty much taught myself." We predict that other spinners will be watching him spin now. . . .

Resources

Duker, Orlo. *Cut Pile Rug Weaving* (video). Petaluma, California: Victorian Video Products, 1986.

Scott, Gordon W. *An Illustrated Guide to Making Oriental Rugs.* Seattle, Washington: Pacific Search Press, 1984.

Teal, Peter. *Hand Woolcombing and Spinning.* Dorset: Blandford Press, 1976.

Bright Backyard Dyes

by Laura Demuth

These are the colors that appear on the cover. All quantities are in reference to one pound of wool.

Yellow from weld leaves. *Use alum premordant.* Gather and chop one peck of leaves; place them in 4 gallons of cold water, bring slowly to a boil, and simmer 45 minutes. Strain out leaves, and add wool (a small amount of washing soda added to the dyebath produces a brighter color). Simmer for 30 to 60 minutes (longer is darker), stirring frequently.

Dark red from cosmos flowers. *Use chrome premordant.* Tie the wool in a string bag to keep it clean of flower parts. Gather one peck of flowers and place in 4 gallons of water with wool and a small amount of washing soda. Bring slowly to a boil, and simmer 20 minutes.

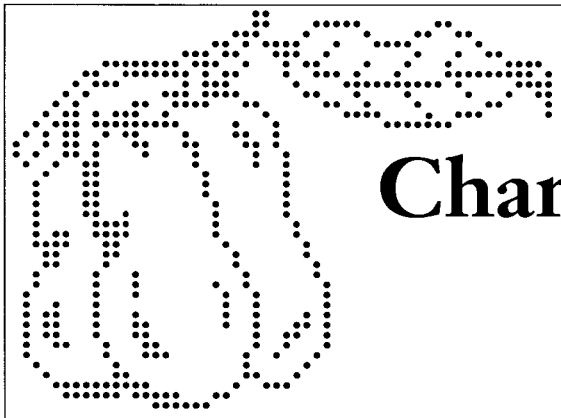
Pink or red from madder roots. *Use alum or chrome premordant.* Gather and wash ½ pound roots, then crush them in a blender. Soak roots overnight in 4 gallons of water. Add wool; raise dyebath to 190°F (alum) or 140°F (chrome) and hold at that temperature for 60 minutes.

Tan from sumac berries. *Use alum premordant.* Soak 1 pound of mature, dry, staghorn sumac berries in 4 gallons of cold water overnight. Bring to a boil and simmer 45 minutes. Strain out berries and add wool. Bring slowly to a boil and simmer 60 minutes.

Laura Demuth, of Decorah, Iowa, specializes in using the resources of her surroundings.

Basic mordanting instructions appear in many natural dye books; Laura's reference is *Growing Herbs and Plants for Dyeing,* by Betty E. M. Jacobs (Mountain View, Missouri: Select Books, 1977), pages 114–15. For the alum premordant, use 4 ounces of alum and 1 ounce of cream of tartar. For the chrome premordant, use ½ ounce of chrome and ¾ ounce of cream of tartar.

To conclude any dyebath, remove from heat and let cool to lukewarm. Rinse the wool until the water is clear. Roll the wool in a towel to remove excess moisture, and allow the wool to dry in the shade.



The Tomato Factory presents ~

Charts For Color Knitting

A creative knitters' source book from the personal collection of Alice Starmore

Alice Starmore is famous as a designer, teacher, and master of knitting technique. She is a constant traveller - "a knitting gypsy" is how she describes herself - and over the last twenty years she has amassed a substantial collection of charted patterns for color knitting. This is the source material that Alice uses in her work as a designer and author.

Charts For Color Knitting is a choice selection from that source material, arranged into four sections :

- A selection of old traditional knitting patterns from Europe, Russia and South America.

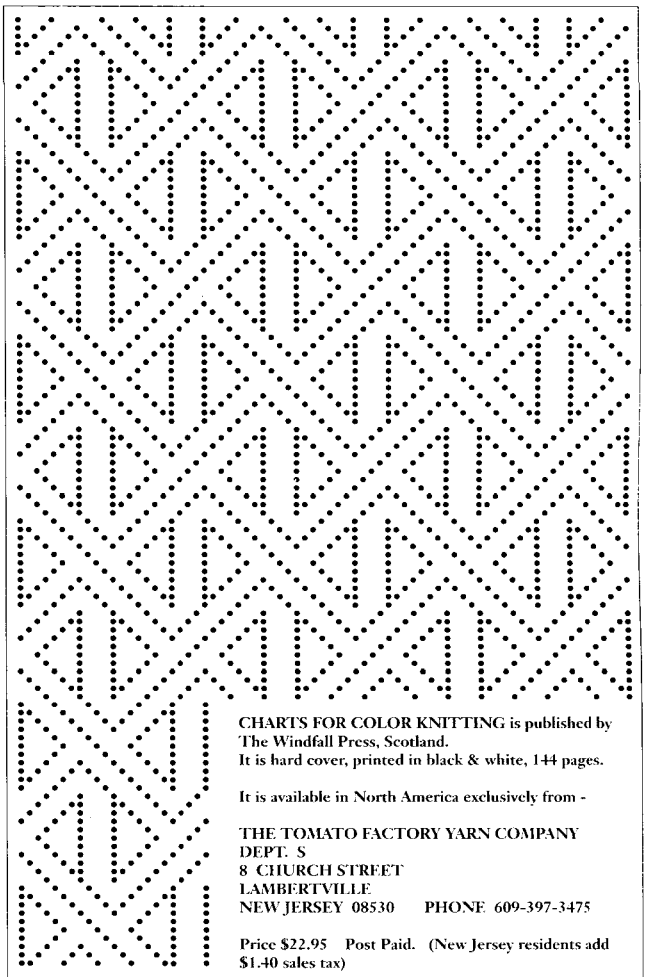
- A collection of patterns which Alice has derived or adapted from textiles and other artwork, including Japanese porcelain and Celtic metalwork.

- A range of Alice's own patterns, either inspired by nature, by land and seascape, or taken from the 'inner landscape' of abstract geometry.

- A technical chapter in which Alice gives a clear explanation of how to work with patterns and incorporate them into your own designs.

There is a wealth of material for knitters of all levels of ability. Beginners can use a single pattern to personalise an existing design, while experienced knitters can combine patterns, or adapt them to their own requirements. Just as many traditional knitting patterns have been developed through the ages from a variety of textile sources, so these charts can be used in a variety of fabric media - in weaving and embroidery as well as in hand and machine knitting.

Charts For Color Knitting is attractive to look at, but above all, it is a book to be used - with pleasure and with pride in the task in hand. Within its pages, fiber artists will find an extensive resource to aid creativity and produce a stunning end result.



CHARTS FOR COLOR KNITTING is published by The Windfall Press, Scotland.
It is hard cover, printed in black & white, 144 pages.

It is available in North America exclusively from -

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Spin-Off BOOK OF World Records

Linda Mercer, of Boise, Idaho, sent in her mohair skein with apologies and trepidation. (The skein is soft, silky, and wonderful to hold.) She spun it on an Ernest Mason chair wheel, using a year's growth of kid mohair from her own goat, Matilda. She washed the fiber and then pulled each lock across a stationary hand card. Linda made a two-ply skein, and calculated her singles at about 28,000 yards per pound; our numbers came up at 28,225.42 yards per pound, for a new record.

Linda's letter tells a lot about the process of spinning to break a record. Here are some excerpts:

I am almost embarrassed to send the enclosed skein. It certainly did not turn out the way I envisioned it! However, it has been a challenging learning experience, and I am very curious to know where I rank in the record book. I have been spinning a good number of years and have done a lot of experimenting. I thought this would be a "snap" to grind out. Ha! I have learned things I would never have learned. I am left with at least a year's more experimenting to answer my new questions and to learn the techniques needed to make a skein I am comfortable with.

Since I generally ply all my yarns, I long ago decided that if I ever did this spinning, a very fine, two-ply yarn would be most useful to me. Did I ever set myself up for a frustrating experience! I did get down to a reasonable diameter of yarn over a year ago, but life got in the way and I didn't get a full ounce spun—but I thought I had the technique. When life settled back to its usual uproar, I once again got busy.

This skein does not have nice, smooth strands (there are little, fat places), but toward the end I could definitely see an improvement in my spinning. Alas, it was too late to start over so I plugged along. Plying went along with some breaks and drifting apart that weren't really a problem. Once skeined off, I decided to wash the skein because I know Matilda has more luster than the skein demonstrated. At least on this point I was right!

Strange things happened with the washing. I got a skein of novelty yarn! I re-wet the skein and tensioned it as I re-skeined. The yarn was delicate enough that it often drifted apart or just plain broke, but the tension straightened most of the kinks.

But what had happened in the first place? I suspect that I stretched the fibers unevenly as I spun the singles and they simply relaxed to their normal length with the washing. I also may need to learn a different method of plying. I plan to run some experiments to see if my guesses are valid.

The challenge turned out to be quite the adventure!

If you'd like to get into the act next year, send us a skein weighing at least one ounce by June 15, 1993 (we'll return it after judging). Keep in mind that we equalize entries for moisture level before weighing them; most samples lose between 2 and 3 grams (about 1/12 of an ounce) in the process. Wind your skein evenly and tie it securely, but don't strangle it. Include your name and address; the type, source, and preparation of your fiber; the type of wheel or other spinning device you used; and the category you wish to enter (we reserve the right to re-categorize). Entries should be addressed to *Spin·Off* Book of World Records, 201 East Fourth Street, Loveland, Colorado 80537.

NEW RECORD SET FOR MOHAIR!

WOOL
Steve Buchanan, 1990, Watertown, CT. 93,551.11. *Sharlea top; flyer-and-bobbin wheel (Schacht).*

COTTON
Celia Quinn, 1981, San Francisco, CA. 83,023.427. *Sea Island cotton; charkha wheel.*

FLAX
Sharron Reese, 1985, New Carlisle, IN. 41,756.44. *Flyer-and-bobbin wheel (antique Picardie wheel).*

SILK
Lee Raven, 1981, Berkeley, CA. 98,819.0. *Bombyx top; charkha wheel.*

ANGORA
Jonnie Vaughan Southworth, 1990, Stanton, KY. 38,881.11. *English angora, flyer-and-bobbin wheel (Wool House Classic/Country Craftsman combination).*

MOHAIR
Linda Mercer, 1992, Boise, Idaho. 28,225.428. *Kid mohair; flyer-and-bobbin wheel (Ernest Mason chair wheel).*

OTHER PROTEIN FIBERS
Sammy Eber, 1987, Columbia, MO. 19,808. *Camel down.*

OTHER CELLULOSE FIBERS
Kim Degner, 1991, Augusta, GA. 19,791.083. *Ramie; flyer-and-bobbin wheel (Ashford Traditional with high-speed flyer).*

A Cap and Mittens from Wales

by Eira Hughes

THIS IS AN excellent way to use scraps of wool left over from a large project, or even dyeing samples. The basic stitch comes from Elizabeth Zimmermann's book, *A Knitter's Almanac.* It is one of my favorite patterns, because you can play around with it to get several different interesting effects. This little project has slightly emptied my bit bag and will keep a dear little granddaughter warm during our cold, damp British winters.

Because this idea is suitable for the use of bits, the basic pattern is written for two colors—"white" (or MC) and "blue." You'll see from the picture, however, that I worked the ribbing in white, then used two light grays for the main color for half the cap, then switched back to white to finish—and put a gray pom-pom on top.

With MC cast on a multiple of 6 sts; the number of stitches at your gauge should make enough fabric to reach comfortably around the recipient's head (I used 102 and the MC was white . . . for a while). Mark first stitch. Rib 10 rows. Work slip stitch pattern over 4 rows, as follows: *Row 1:* K1 blue, k2 white. *Row 2:* M1 white, SSK blue, k2tog blue, M1 white, k2 white. *Row 3:* * Go behind the first blue st, k the second st, k first st and slip both off needle, k4 white *, repeat from * to *, end with k3. *Row 4:* K2tog (a white and a blue), M1 white, SSK blue, k2 white. (Trust me!) *Row 5:* K1 blue, k1 white, M1 white, k1 blue, k2 white. *Rows 6–9:* same as first row. Repeat rows 1–9 twice more, then repeat rows 2–5.

Decrease for crown, as follows: *Row 1:* K2tog white, k1 blue, k2 white, k1 blue, repeat to end of row. *Row 2:* K one row, keeping pattern correct. *Row 3:* SKPsso in blue, k1 white, k1 blue, k1 white, repeat to end of row. *Row 4:* K, keeping pattern correct. *Row 5:* SKPsso in blue, k1 blue, k1 white, repeat to end of row. *Row 6:* K, keeping pattern correct; break off blue. *Row 7:* SKPsso, k1, repeat to end of row. *Row 8:* Knit. *Row 9:* K2tog to end of row. Break off wool, thread through sts, and pull tight. The cap can be finished off with a pom-pom.

I made matching mittens by using my favorite knitting pattern and working a traveling-stitch pattern along the backs in blue. ❖

Eira Hughes readily admits that quilting is her serious vocation, and spinning is her recreation.

Resource

Zimmermann, Elizabeth. *A Knitter's Almanac.* New York: Charles Scribner's Sons, 1974.

Abbreviations

k2tog	knit two stitches together
MC	main color
M1	make one stitch
st	stitch
SKPsso	slip one stitch, knit one stitch, pass the slipped stitch over the stitch just knitted
SSK	slip two stitches knitwise, one at a time; insert left needle back through these two stitches in knitting position and knit them off together

Eira Hughes put some handspun scraps to good use in this set for her granddaughter.

The fiber we call cashgora can vary greatly in size, diameter, and crimp. It falls between cashmere and mohair—a broad territory! The numbers here refer to the sample notes.

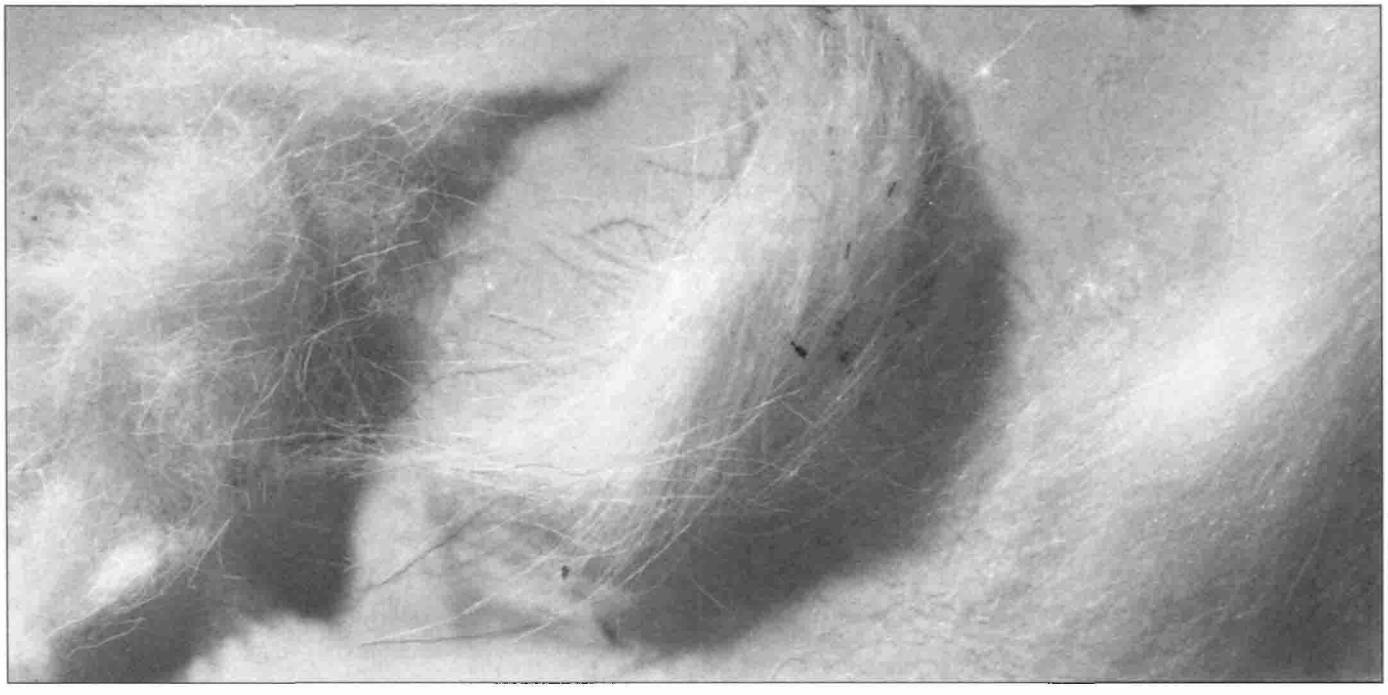
ELEGANT AND APPROACHABLE Cashgora

by Jane Fournier

THE NAME *cashgora* actually describes a fiber, rather than a particular animal. The goats that produce this silky, soft fiber can come from many parts of the world and from different genetic backgrounds, but there is really no "cashgora" breed of goat. Cashgora-producing goats are double-coated; that is, they produce an outer coat of coarse, stiff hair and a downy undercoat of much finer, softer fibers. While Cashmere goats produce the finest down, there are other goats which grow an undercoat which is slightly coarser and more variable than cashmere; this is the fiber that we know as cashgora. The animals themselves may be older cashmere-producing goats whose fiber has grown coarser with age, double-coated goats which have always produced down in the cashgora range, or crossbred animals, such as the Angora × feral goat offspring which are raised in Australia and New Zealand for cashgora production. The annual yield of usable down fiber per goat varies greatly among individual animals, ranging from less than 4 ounces (100 g) to as much as 14 ounces (400 g).

As the name suggests, cashgora exhibits characteristics that fall somewhere between those of the down of the Cashmere goat and mohair, the fleece of the Angora goat. Cashgora generally has a mean, or average, fiber diameter between 18 and 22 microns—coarser than cashmere but finer than kid mohair. Fiber length averages between 3 and 4 inches. Actual fiber lengths, fiber diameters, and the amount of crimp will probably vary considerably even within the fiber collected from a single animal. While only a little coarser than cashmere, cashgora is more like mohair in style. It has smooth fibers, very little crimp, silky handle, and a beautiful soft luster. Natural grays and fawns are possible, but the majority of the fiber available is white.

Cashgora is available to handspinners in three different forms: shorn fleece, combed or brushed fiber, and commercial preparations. *Shorn fleece* is mostly guard hair with the finer undercoat mixed in, leaving the spinner the laborious but not impossible task of separating the down from the hair. Iris Dozer, in her article, "From the Woolcombers Bench: Cashgora," gives some excellent suggestions for using wool combs



Left to right: shorn fleece, brushed or combed fiber, and commercially dehaired cashgora.

for the job. *Combed or brushed fiber* is collected by brushing the animal and has a much higher proportion of down than the shorn fleece. However, there is still a considerable amount of guard hair to be removed by hand. If time is precious, *commercially dehaired cashgora* may be the best solution, and it is now readily available from a number of fiber suppliers.

Working with cashgora

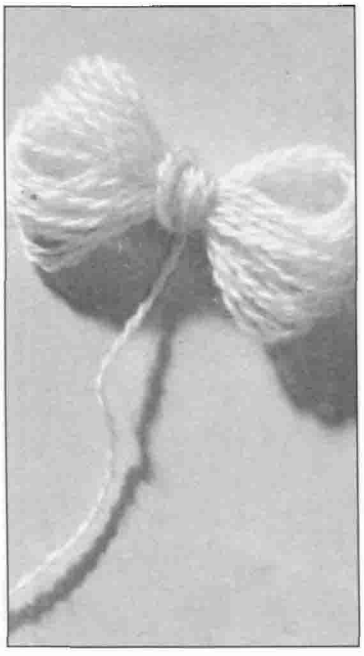
Like most other fibers, cashgora comes in different grades and qualities. When selecting fiber, check the length, the softness, and the range of fiber diameter to ensure that the particular batch is appropriate for your project. If you are considering commercial top or sliver, also check for an unacceptable amount of guard hair left behind from the dehairing process. This may have to be removed by hand as you spin or, if left in, will detract from the softness of your finished piece.

Cashgora is very much like fine kid mohair to work with. The smooth fibers are very slippery and slide past one another even when firmly twisted. The shorter the fiber length, the more twist will be needed to make a stable yarn that won't pull apart under tension. If you're using fleece or combed fiber, very little preparation is required once the guard hair has been removed. Spin straight from the mass of fiber, or hand-card lightly on fine cards for a smoother yarn. I used a commercial preparation for all the samples shown here and merely tore the top into lengthwise strips and fluffed the strips before spinning. In an effort to make the yarn lighter and fluffier, I lightly recarded the top into rolags for the yarn used in samples 1 and 2. I suspect that the net result of this extra effort was actually minimal (once the yarn was washed and made up into the swatch), because cashgora fluffs under almost any circumstances. It is much more important to make certain that the yarn is sound and sufficiently twisted.

Because the fiber is so slippery, fine, even yarns will last and wear better. Thick yarns and slubs shed fibers easily as they are rubbed or worn. For a sturdy, heavier-weight yarn, try using more plies rather than thicker singles. To protect the warp yarn in sample 2 from fluffing, abrasion, and stretching, I sized it with gelatin. I am convinced that, if untreated, a soft two-ply like this would have produced broken warp threads.

In sweater-weight yarns, cashgora can be dense and inelastic. For this reason, I chose to blend it with wool for sample 3. The medium Merino adds loft and body to the yarn while allowing the cashgora to create a silky halo of softness on the surface of the fabric. Cashgora is also more expensive than most wools, and blending helps stretch a modest quantity a little further. Sample 4 also suggests an economical use for this fiber: a pure cashgora three-ply yarn can be used to make a luxurious trim, collar, or finish, rather than a whole garment. This is a firmly twisted, sturdy, lustrous yarn suitable for knitting, weaving, and a variety of other techniques.

For samples 1 and 2: a fine, balanced two-ply.



YARN DETAILS AND FABRIC DESIGNS

Samples 1 and 2

Yarn: Both samples use the same yarn, a fine, balanced two-ply. I recarded the commercially prepared top on fine handcards and spun from the rolags with a long supported draw. I finished this and all the yarns with a hot water wash but no blocking. Approximately 20 wraps per inch, 20° angle of twist, and 2,300 yards per pound.

Swatches: Sample 1 is knitted on size 1 (2.25 mm) needles in a Shetland lace pattern called "Leaf" from Sarah Don's *The Art of Shetland Lace* (London: Bell & Hyman, 1981).

Sample 2 is an eight-shaft huck lace fabric using the same two-ply for both warp and weft. I sized the warp yarn with gelatin before winding it but did not treat the weft. The hot water and detergent finishing wash completely removed the gelatin.

LEAF PATTERN

Multiple of 8 stitches plus 1.

Row 1: K1, *yo, k2, (sl1, k2 tog, psso), k2, yo, k1; repeat from * to end.

Row 2 and all even-numbered rows: Knit.

Row 3: K1, *k1, yo, k1, (sl1, k2 tog, psso), k1, yo, k2; repeat from * to end.

Row 5: K1, *k2, yo, (sl1, k2 tog, psso), yo, k3; repeat from * to end.

Row 7: K2 tog, *k2, yo, k1, yo, k2, (sl1, k2 tog, psso); repeat from * to last 2 sts, (sl1, k1, psso).

Row 9: K2 tog, *k1, yo, k3, yo, k1, (sl1, k2 tog, psso); repeat from * to last 2 sts, (sl1, k1, psso).

Row 11: K2 tog, *yo, k5, yo, (sl1, k2 tog, psso); repeat from * to last 2 sts, (sl1, k1, psso).

Row 12: Knit.

Repeat rows 1 to 12.

Sample 3

Yarn: A medium Merino fleece chosen for its excellent loft gives this blended yarn its special character and color. I flick carded the Merino locks and then drum carded the two fibers together in a 55% cashgora/45% Merino combination. The batts were mixed and recarded three times on a fine drum for an even blend. I pulled strips of batt into a roving and used a short backwards draw to spin the yarn. Plying was an even three-ply. Approximately 11 wraps per inch, 26° angle of twist, and 1,000 yards per pound.

Swatch: The sculptured lace pattern was knitted on size 6 (4 mm) needles to a pattern from the book *Crucci Original Knits,* Volume 34 (New Zealand: Crucci Wools).

SCULPTURED LACE PATTERN

Multiple of 10 stitches plus 2.

Row 1 (right side): K1, *yo, k8, k2 tog; repeat from *, end k1.

Row 2: P1, *p2 tog, p7, yo, p1; repeat from *, end p1.

Row 3: K1, *k2, yo, k6, k2 tog; repeat from *, end k1.

Row 4: P1, *p2 tog, p5, yo, p3; repeat from *, end p1.

Row 5: K1, *k4, yo, k4, k2 tog; repeat from *, end k1.

Row 6: P1, *p2 tog, p3, yo, p5; repeat from *, end p1.

Row 7: K1, *k6, yo, k2, k2 tog; repeat from *, end k1.

Row 8: P1, *p2 tog, p1, yo, p7; repeat from *, end p1.

Row 9: K1, *k8, yo, k2 tog; repeat from *, end k1.

Row 10: P1, *yo, p8, p2 tog tbs; repeat from *, end p1.

Row 11: K1, *(sl1, k1, psso), k7, yo, k1; repeat from *, end k1.

Row 12: P1, *p2, yo, p6, p2 tog tbs; repeat from *, end p1.

Row 13: K1, *(sl1, k1, psso), k5, yo, k3; repeat from *, end k1.

Row 14: P1, *p4, yo, p4, p2 tog tbs; repeat from *, end p1.

Row 15: K1, *(sl1, k1, psso), k3, yo, k5; repeat from *, end k1.

Row 16: P1, *p6, yo, p2, p2 tog tbs; repeat from *, end p1.

Row 17: K1, *(sl1, k1, psso), k1, yo, k7; repeat from *, end k1.

Row 18: P1, *p8, yo, p2 tog tbs; repeat from *, end p1.

Sample 4

Yarn: I spun the smooth singles from strips of top using a short backwards draw and made a balanced three-ply yarn. The yarn is smoother and more firmly twisted than the two-ply, making it less vulnerable to abrasion and more lustrous in appearance. Approximately 13 wraps per inch, 24° angle of twist, and 1,000 yards per pound.

Swatch: This is a very simple edging crocheted on a size E (3.5mm) hook. The pattern comes from *Crocheting Edgings,* edited by Rita Weiss (New York: Dover, 1980).

CROCHETED EDGING

Make a chain slightly longer than desired length.

Row 1: Sc in 2nd ch from hook and in each following ch across. Ch 4, turn.

Row 2: 3 tr at base of turning ch, holding back on hook the last loop of each tr; yarn over and draw through all loops on hook (cluster made), ch 7, make a 4-tr cluster in same place as last cluster was made, *skip 6 sc, in next sc make two 4-tr clusters with ch 7 between. Repeat from * across. Turn.

Row 3: In each loop make (3 sc, p) 3 times and 3 sc. Fasten off.

Jane Fournier, currently of Washington, D.C., was seen at the Maryland Sheep and Wool Festival this spring collecting wonderful fibers to explore for us.

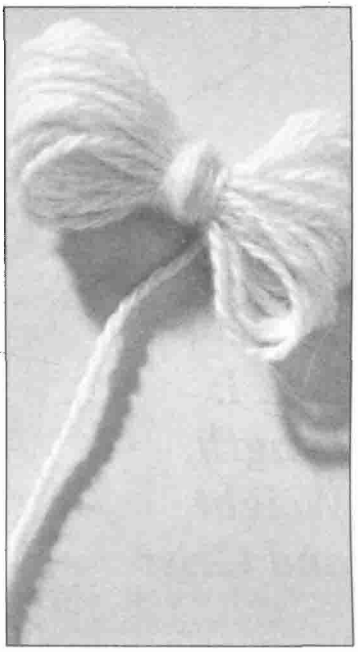
Resources

Dozer, Iris. "From the Woolcombers Bench: Cashgora." *Spin·Off* 10, no. 2 (Summer 1986): page 39.

Feldman-Wood, Florence. "Australian Cashmere and Cashgora." *Spin·Off* 9, no. 1 (Spring 1985): pages 42–43.

_____. "Spinning Australian Cashmere and Cashgora." *Spin·Off* 9, no. 4 (Winter 1985): pages 40–41.

Presser, Fran. "A Closer Look at Cashgora." *Spin·Off* 10, no. 4 (Winter 1986): pages 49–52.



For sample 3: a blend of 55% cashgora and 45% Merino spun to an even three-ply.

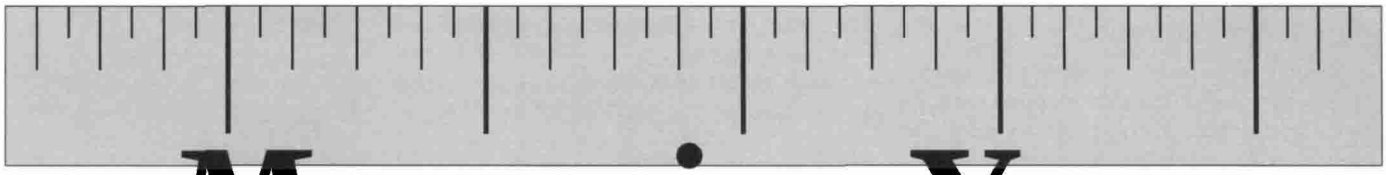
For sample 4: a smooth, sturdy three-ply.

Knitting abbreviations

k	knit
p	purl
k2 tog	knit two stitches together
p2 tog	purl two stitches together
yo	yarn over the needle (makes a new stitch)
sl1	slip one stitch
psso	pass slip stitch over
tbs	through the back of the stitches

Crocheting abbreviations

ch	chain
sc	single crochet
tr	treble crochet
p	picot: ch 4, sc in 4th ch from hook



Measuring Yarn

Part I: Length, Weight, and Grist

by Rita Buchanan

I USED TO SPIN happily without ever counting or measuring anything, and my yarns hung together anyway. Of course, they did! For thousands of years, beautiful yarns have been spun by spinners who couldn't count and didn't have rulers or scales. The lovely textiles in museum collections prove that you can spin perfectly well without fussing about wraps per inch or yards per pound. Tradition, experience, and intuition have guided many spinners toward exactly the right yarns for their fibers and projects.

But now I do measure my yarn, and I have to acknowledge how much measuring has improved my spinning. Measuring helps me compare and evaluate and understand different yarns. It feeds my curiosity. And measuring helps me plan knitting or weaving projects. Before starting something big, I measure to estimate how much yarn I will need and to check how much I have.

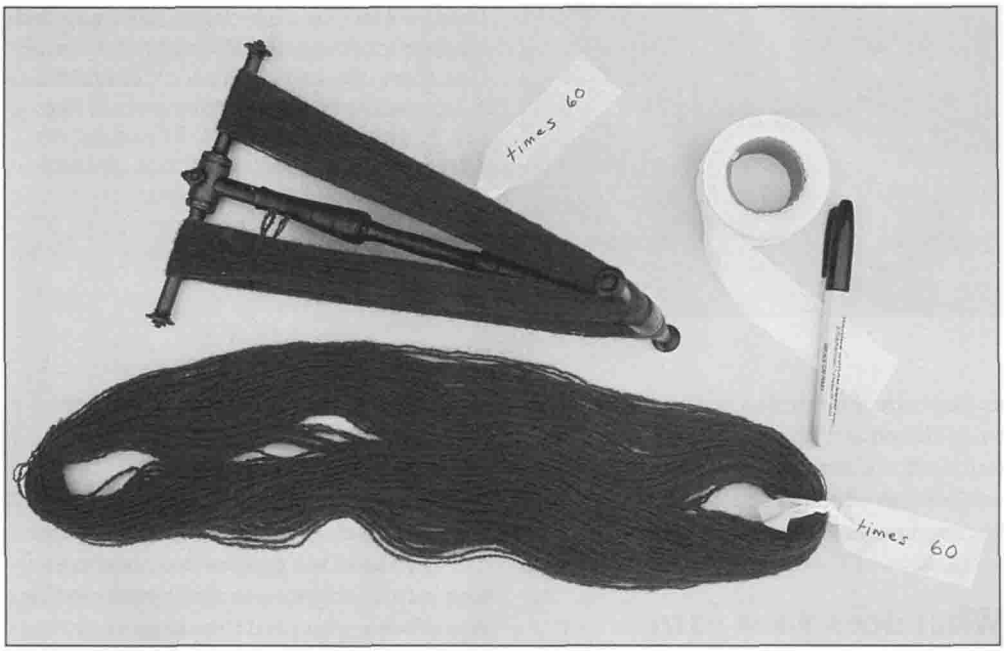
Measuring is also a tool for communication. Once upon a time, spinners lived in communities where everyone spun the same kinds of fibers into the same kinds of yarns, for generation after generation. It was easy for these spinners to agree on the meaning of terms like *fine yarn* or *tight twist*. By contrast, most contemporary spinners work in relative isolation. We don't often see and handle each other's skeins. Some of us meet now and then at guild meetings and conferences, but much of our communication is through publications like newsletters and *Spin-Off*. Because we're separated from each other, and also because we're working with many different fibers and making many different yarns, modern spinners don't share a common vocabulary. Terms like *fine yarn* and *tight twist* mean different things to different spinners.

Where words are imprecise, numbers can clarify. Measuring yarn and using numbers can help spinners share their ideas and experiences, *if* we can agree on what measurements are important and how to take them. My impression from talking to spinners around the country is that there's a lot of confusion and frustration about why and how to measure yarn. I don't have the final word on all this, but I'd like to discuss some of the problems and opportunities as I explain how measuring fits into my spinning routines.

A plea for common sense

First, let's all remember the nature of yarn. Yarn is not like wood or metal. Yarn is stretchy, shrinky, squishy, springy, squiggly stuff. Two carpenters can measure a board to the sixteenth of an inch and get the same answer. Two machinists can measure a metal fitting to the thousandth of an inch and get the same answer. But if two spinners measure the same piece of yarn, their answers may differ by an inch or more. Try this at a guild meeting: take a piece of yarn that you measure to be one yard long. Have everyone else measure it, and see what they think.

When measuring yarn, I think it's best to say "about" or "between" and to use rounded-off numbers. You just can't be precise when you're measuring something changeable. Remember this when using pocket calculators. Calculators don't have any common sense and don't know a thing about yarn. When a calculator gives you a silly number with too many digits, it's up to you to use your good judgment and round off that number into something that makes sense. Don't believe your calculator if it says you have exactly 128.963 yards of yarn. If you were to roll that yarn down the sidewalk and measure it with a yardstick, there's no way you'd come out with a measurement like 128.963 yards. You might say it's "about 130 yards," or "be-



How long is a skein of yarn? That depends on when and how you measure it. These are two skeins of the same yarn, and both have 60 strands.

The skein under tension on the niddy-noddy is 45 inches around; that figures out to 75 yards. Just removed from the niddy-noddy, the relaxed skein is about 38 inches around; that figures out to about 63 yards. After washing, these skeins shrank to about 35 inches around, or about 58 yards long.

Skeins usually get shorter when you take them off the niddy-noddy or reel, so it's a good idea to wait and/or wash them before you make a final measurement. The washable plastic tape used to label these skeins is called flagging tape, *and is sold at lumberyards or building suppliers.*

tween 125 and 130 yards." That's as accurately as you can measure yarn. The right answer isn't the number with the most digits, it's the number that most honestly describes what you're measuring.[1]

How long is your yarn?

I usually measure the length of a skein of yarn by counting the number of strands and multiplying by the skein's circumference. Counting the strands is easy. You can pick through a skein and count up to several hundred strands in a few minutes, or you can count the number of turns while winding the yarn onto a reel or niddy-noddy. Some skein reels have built-in counters. I usually try to count while I'm winding a skein, and before I forget, I write that number down. I use waterproof magic marker on plastic tape to make skein labels that can go through a washing.

Measuring the circumference of a skein is tricky. One approach is to measure the circumference of your reel or niddy-noddy. This is especially tempting if it measures exactly 1 or 2 yards. You'll want to jump to the conclusion that any skein you measure on that reel measures 1 or 2 yards. Indeed it does, *while the yarn is still under tension on the reel.* But what happens when you remove the skein? It relaxes and gets shorter. How much shorter? That depends on the yarn. It might get a little shorter, or it might get a lot shorter. Do this yourself: the next time you take a skein off the reel or niddy-noddy, wait a few minutes and try to put it back on again. Tight fit, isn't it? In fact, you may be unable to replace it.

And what happens when you wash the yarn? Chances are it will get shorter yet. It's not uncommon for a skein to shrink 20 percent with washing. Even if you stretch or block a skein as it dries, it will probably end up shorter than the circumference of the reel.

So the length of a skein of yarn depends on when and how you measure it. For the purposes of communication, it would help if more spinners stated whether they measure length under tension or relaxed, and before or after washing. Otherwise, who knows what you're talking about?

I can't tell you how many times I've made vests instead of sweaters, or afghans instead of blankets, because I used to measure my yarn on the reel and base my planning on that yardage. Now I usually measure skeins twice—once when I take them off the reel, and again after washing them. I do this out of curiosity, to observe and compare the shrinkage of different kinds of yarn. But the after-washing measurement is the one I rely on when I figure how much yarn I have and plan a project. After washing and drying a skein, I measure its circumference to the nearest inch,

[1]My college statistics professor was adamant on this point. He would score an answer wrong if it wasn't rounded off appropriately.

Using a kitchen scale (left) works a lot better than guessing about weight. It tells that these skeins weigh about 13 ounces. A laboratory balance (right) does better yet. It weighs this skein at 31 grams. There are 28 grams in an ounce, so the equivalent is 1.1 ounces.

multiply by the number of strands, divide by 36 to convert from inches to yards, and round off the answer. By measuring washed yarn, I'm not fooled into thinking I have more yards than I really do.

What does your yarn weigh?

As tricky as it is to decide on the length of a skein of yarn, its weight is even more elusive. This is partly a matter of having the right tool. When I first started weighing my yarn, I used a kitchen scale calibrated in ounces and pounds. Weighing small quantities of yarn on a scale like that is a judgment call—it's hard to tell if you've got 5 ounces or 6, or maybe just 4.

An ounce of yarn is no trifling amount; it's actually quite a handful. It's okay to have that much yarn left over from a project, but I wouldn't want to run short by so much. To measure more confidently, I bought a laboratory balance that is calibrated in grams. There are 28 grams per ounce (454 grams per pound), so measuring in grams is much more precise than measuring in ounces. Measuring to the gram is certainly close enough for practical purposes. One gram of common knitting yarn is only two to three yards—a fraction of what you need to make any project.

I'll interrupt here to say that a gram balance is one of the handiest tools a spinner can have. I use mine many times a week—to weigh out fibers I'll blend by carding together, to divide fiber in halves or thirds for spinning 2 or 3 plies, to weigh dyestuffs and fiber for dyeing, to see how much yarn I've spun in an evening, to compare how much fiber or yarn I have in different colors, to divide yarn in half for knitting two sleeves or socks the same, or to weigh a finished article and estimate how much fiber or yarn I'd need to make something similar. A balance can cost $100 or more, but it's worth every penny. To shop for one, check the Yellow Pages under "Laboratory Equipment and Supplies" or send

How accurate are different scales? The kitchen scale (left) can miss by as much as an ounce, the weight of the large skein shown beside it. The gram balance (center) can miss by a gram, the weight of the smaller skein. The electronic balance (right) is accurate to 1/100 gram, the weight of the short piece of thread.

Any fiber, like this green wool, can be spun into yarns of different grists. In general, thicker yarn means fewer yards per pound, and thinner yarn means more yards per pound. Here the thicker yarn (lower left) measures about 900 yards per pound, the middle yarn measures about 2300 yards per pound, and the finer yarn measures about 8300 yards per pound.

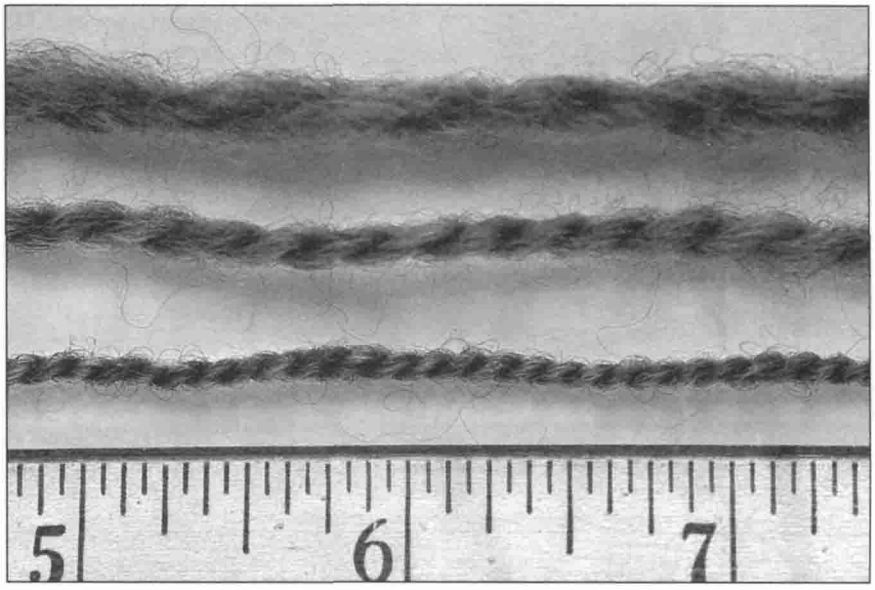
for a catalog from the Edmund Scientific Company, 101 E. Gloucester Pike, Barrington, New Jersey 08007. I've also heard you can get great deals at police auctions on used balances confiscated in drug raids.

Last year I got serious and talked myself into buying an electronic balance that's calibrated to 1/100 of a gram. Now I could measure yarn with real precision! But the joke is on me. It's fascinating, but utterly impractical, to weigh skeins of yarn this precisely. What I have learned is that wool, cotton, silk, and other natural-fiber yarns can gain or lose a few percent of their weight from one hour to the next, because of changes in the weather. In foggy or rainy weather, yarn absorbs moisture and gets heavier. On bright, sunny days, it dries out and gets lighter. Of course, I knew that fibers are absorbent. But if I hadn't weighed the same skeins time after time, I never would have believed that yarn could gain or lose so much, so fast. Using the more precise tool just pointed out the difficulties of measuring something that continually changes.

The moral of all this, as I said earlier, is to use the words "about" and "between" and to round off your numbers. A skein of yarn that weighed 98 grams yesterday may weigh 102 grams tomorrow. Either way, it's "about" 100 grams.

Two common questions: (1) How much weight does raw fiber—wool fleece, rabbit combings, dog brushings, ginned cotton, unbleached flax, and so on—lose when you scour away the dirt, dust, grease, wax, and other unusables? That depends on the fiber. Weight loss in scouring can be less than 5 percent or more than 30 percent. (2) Does dyeing yarn add appreciably to its weight? Not really. Dyeing with natural or synthetic dyes can add a few percent to the weight of yarn, but it's almost impossible to distinguish this amount from normal variation due to moisture uptake.

And one tip: after washing or dyeing yarn, be sure it is thoroughly dry before weighing it. Wool, in particular, *feels* dry before it *is* dry. Test for dryness by sealing



It's risky to compare yarns solely on the basis of grist. For example, all three samples of this wool yarn measure about 500 yards per pound. But the top sample is thicker because it is very loosely twisted and plied. The middle sample is intermediate. The bottom sample is thinner because it is twisted and plied tightly enough to pack the fibers firmly together.

the yarn in a clear plastic bag and putting it in the sun. Excess moisture will show up right away as condensation on the inside of the bag. If this happens, remove the yarn immediately and let it continue to dry.

Measuring grist in yards per pound

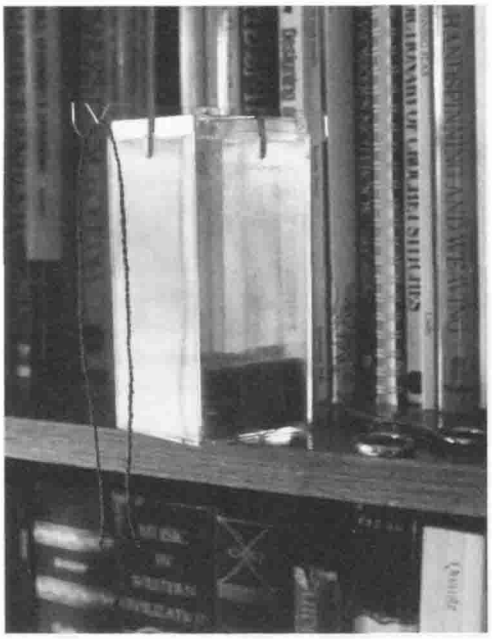
Grist is a measure of how far you've elongated a mass of fibers. Most contemporary American spinners, knitters, and weavers figure grist in yards per pound. To understand grist, imagine starting with a pound of wool. You could spin it into 100 yards of very thick yarn, or 1000 yards of medium yarn, or 10,000 yards of finer yarn. The grists of these yarns would be 100 yards per pound, 1000 yards per pound, and 10,000 yards per pound.

The numbers become more meaningful by comparison with other examples. It's uncommon to find yarn as thick as 100 yards per pound; mill-prepared slivers or tops of wool, mohair, silk, cotton, and so forth, generally measure between 40 and 120 yards per pound. Most of the knitting yarns described in a recent issue of *Knitter's* magazine have between 1000 and 1500 yards per pound; the lowest has about 600 and the highest about 2000 yards per pound. The weaving yarns described in a recent issue of *Handwoven* range from 480 yards per pound (for a rug) to 8400 yards per pound (for a summer blouse). Common sewing thread has about

Using a McMorran balance

A McMorran balance comes in a clear plastic box that serves as its base. Set the box on the edge of a table or shelf. The balance bar is the notched plastic piece with a metal pin through it; it is stored in the box when not in use. Position the balance bar on top of the base, with the ends of the pin resting in the small notches in the base. Be sure that the balance bar pivots freely, and that the notched end extends over the edge of the table.

The McMorran balance works with any kind of yarn, and the process and goal are always the same—to determine what length piece of yarn will bring the balance bar to rest in a horizontal position. To do this, cut a sample of yarn and hang it over the notch. It's a good idea to start with a sample long enough to pull down the notched end—if your first sample isn't long enough, try a longer one. Then use scissors to trim away the bottom ends of the yarn, snipping evenly off both ends of the strand, and keep trimming until the bar levels up to a horizontal position.



Take the trimmed sample and lay it against a ruler or yardstick to measure its length in inches. That number, multiplied by 100, equals the number of yards per pound. For example, 7.5 inches would be 750 yards per pound, 16 inches would be 1600 yards per pound, 22.5 inches would be 2250 yards per pound. (If you are more comfortable with metrics, McMorran balances gauged to work with metric measurements are available.)

The balance is most useful for common yarn sizes. It's tricky to balance very short pieces of yarn in the notch, so the bottom limit is about 300 to 400 yards per pound. At grists higher than 10,000 yards per pound, you think twice about sacrificing so much yarn (100 inches or more) to the measuring process. (But if you do decide to measure fine yarn, you don't have to go to the roof of the tallest building in town—you can fold the yarn back and forth over the notch.)

Deciding on the length of the sample is usually a judgment call. Do your best and round off. And it's always a good idea to take samples from different parts of the yarn and average the numbers to determine the average overall grist.

14,000 to 15,000 yards per pound. Record-setting fine handspun yarns have come close to 100,000 yards per pound. There are 1760 yards in a mile.

Fortunately, you don't need to spin a whole pound of yarn before you can measure its grist. You can calculate grist on the basis of a single skein, or by measuring a small sample with a nifty tool called a McMorran balance. (McMorran balances cost less than $20 and are available from most spinning and weaving suppliers.) Weavers, in particular, often use the McMorran as a shortcut to figure the yardage of unlabeled cones, balls, or skeins. They determine the grist of a sample, weigh all the yarn, and multiply grist by weight to find the total yardage. For example, if the sample's grist is 1200 yards per pound and you have about 1½ pounds, you have a total of about 1800 yards.

As a spinner, I most often use the McMorran when I'm starting a project. I measure a sample of yarn, and use that to estimate how many yards I would end up with if I spun all my fiber at that grist. As I spin, I may measure samples from time to time to make sure I'm keeping on track. How close is close enough? I'm delighted if I can stay within 10 percent, more or less, of the target grist. Usually I don't do that well.

Variation from yard to yard within a skein is less of a concern than variation from one skein to the next. After spinning several skeins for one project, I almost always take the time to determine the length and weight of each skein and compare their grists. Again, I hope to be within 10 percent, more or less, of the target. I recently spun and plied five skeins for a vest, and took them to a workshop to see if other spinners could arrange them in order of grist. Not one spinner in the group could sort out skeins that ranged from about 1350 to 1600 yards per pound. They couldn't tell which was which.

But does variation of that degree show up as thin or thick areas in the knitting? Yes, if you know what you're looking for and the knitted fabric is solid-color stockinette stitch. Where the knitting is complicated by color variation or textured stitches, 10 percent variation in the yarn's grist is virtually imperceptible.

In a general way, knowing a yarn's grist tells you something about its size. Fewer yards per pound means thicker yarn. More yards per pound means thinner yarn. But stating the number of yards per pound doesn't tell you whether a yarn is wool or cotton, dense or puffy, singles or plied, or anything else—and all those factors make a *big* difference in how a yarn looks, feels, and performs. It's risky to compare different yarns solely on the basis of grist. I have measured the grist of hundreds of different yarns, handspun and commercial, and I still get surprised by yarn's diversity.

You can't determine grist just by looking at a yarn. You have to measure it. Spinners (myself included) often err by hoping that two yarns have similar grist just because they look about the same. For example, you might spin a two-ply silk yarn at 1000 yards per pound, and use 4 ounces of that yarn to knit a scarf. So then you buy 4 ounces of alpaca and spin what looks like similar yarn, to knit another scarf. Chances are the alpaca scarf will come out short, because—even though it looks like the silk yarn and knits at the same gauge—the alpaca yarn may yield only 750 yards per pound.

On the other hand, especially with crimpy wool, two or more yarns can have the same grist but look and feel quite different, depending on how much they have been twisted. The less twist, the thicker and puffier the yarn. The more twist, the thinner and denser the yarn. Looking at twist and yarn diameter gives us two more ways to measure and describe our yarns. But we've got enough to think about now, and I'll write about those measurements in another article. ❖

Figuring the grist of yarn in a skein

First determine the length of the skein and weigh it.
Then, if you weigh in ounces, use this formula:

(length in yards ÷ weight in ounces) x 16 = grist in yards per pound

If you weigh in grams, use this formula:

(length in yards ÷ weight in grams) x 454 = grist in yards per pound

Rita Buchanan, of Watertown, Connecticut, alternates quiet time at home—thinking, spinning, writing, gardening—with forays into the world—thinking, looking, teaching, learning. All photographs by Rita Buchanan.

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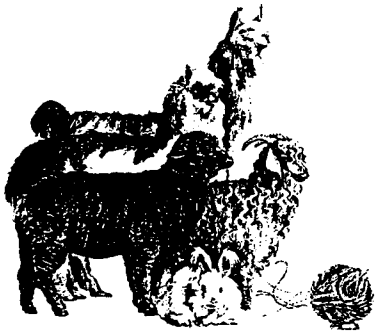

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Fiber, how do I love thee? Let me count the ways. . . .

by Jody Nankivell Herriott

TO THE UNINITIATED, my head must seem to be filled with fluff. I spend hours (days, months) making things which can be made much faster by machines. And I'm always bringing home another bag of fiber, when I haven't even used up what I already had! So I ask myself why.

First, I love seeing my shelves filled with bags of gleaming silk, soft Merino, and luxurious angora. I think this satisfies my packrat instincts. Before I even decide what to create with a fiber, I love to feel and stroke it. I admire its perfection, the beauty of its form, its color. Sometimes I almost don't want to change that beauty by spinning it. I hesitate to use it because I may not have found its ultimate purpose. And yet, if I don't use it, it will just sit there and grow old—or feed the moths. Besides, then I'll feel guilty the next time I find some wonderful fiber, and I won't be able to justify bringing it home.

When I do begin to work with a fiber, I discover new levels of enjoyment—the fluffy softness of a carded batt of wool, the perfection of a rolag, the sense of accomplishment in a basket full of rolags. Or perhaps the blending of a group of fibers so that each enhances the others to produce an exotic batt of rare appeal.

And then there is more! As I spin, I experience the feel of the fibers sliding through my fingers, the sense of "rightness" as they seem to flow into yarn. I love to watch how the colors change and interchange from a variegated roving, how the fibers in a blend intermesh and arrange themselves. Periodically, I have to stop and simply admire a length of yarn, or the accumulation of yarn on a bobbin.

If I plan to ply the yarn from a ball, using the ball winder shows me another dimension. The bobbin unwinds, and I watch the shifting shapes as the mounds of yarn shrink. As the growing ball whirls, it appears to glow—almost to be a living entity. When I stop, the criss-crossing strands of yarn appear in a new relationship, intriguing me further.

While plying, I watch the whole tactile structure of the yarn change. It becomes much more than just two yarns twisted together. I choose the character given it by how tightly I ply. I watch the shifting interaction between the plies as different areas of the two strands encounter each other.

I even enjoy my skeins. The yarn is brought into full view and can be experienced as a whole for the first time. Washed and dried, the fibers are allowed to fluff and relax into a more perfect union. The yarn can be seen, handled . . . known more fully. At this point, I often feel that I would be content to hang the skein around my neck and call it complete! But then there is so much more—knitting, weaving, or otherwise transforming the fiber into an even greater creative being.

So when someone asks why I spend so much time making things I could buy at a store, I know I really couldn't. What could a store possibly sell me that contains so much enjoyment? ❖

Jody Nankivell Herriott, of Burns, Oregon, shares her pleasure in fibers through her work, her writing, and her business—Wooly & Wilds.

A Lichen Dye Primer

Karen Leigh Casselman

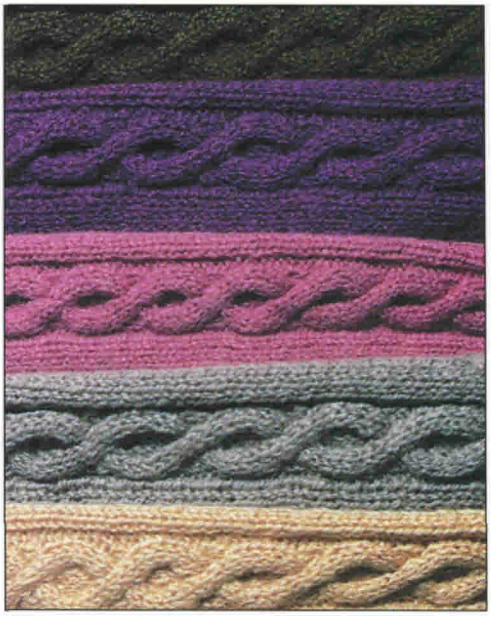
Above: Large jars make suitable fermentation vats for AFM lichen dyes, which age three months or longer.
Below: The violet and rose mohair samples show typical low-pH orsallia shades; the green was dyed with wild aster.

FOR CENTURIES, fabulous gold, brown, blue, pink, purple, red, and orange textile dyes have been made from lichens. These leafless plants are unique biological combinations of fungi and algae. Lichens grow on trees, rocks, soil, cemetery stones, and even buildings. Most lichens will give a dye, but because some are scarce, the trick is to find an abundant lichen that gives a color you like.

There are two main categories of lichen dyes. Boiling water method dyes (BWM) are made from crumbled lichens and water, heated until the dye pigments are extracted. Typical BWM colors include yellow, orange, gold, brown, and rust. In ammonia fermentation method dyes (AFM), lichen pieces, ammonia, and water are aged to produce spectacular shades of purple, fuchsia, magenta, and lavender. A jam jar makes a suitable vat. In addition, one type of AFM dye, made from *Xanthoria* spp., is oxidized in sunlight to produce an ephemeral shade of blue.

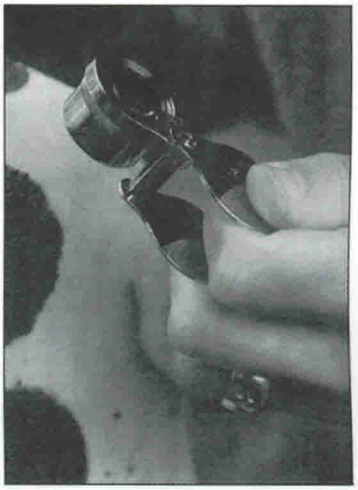
Parmelia generally forms bluish-green crusts on bark or stone, and *Xanthoria* is the bright orange crust you've seen covering cemetery stones. *Lasallia* appears as a dark gray, dimpled disc on boulders near lakes, along the coast, and in the mountains. But many lichens look alike. The only equipment you need to learn how to tell *Hypogymnia* from *Xanthoparmelia* is a field guide and a magnifying lens, and experience.

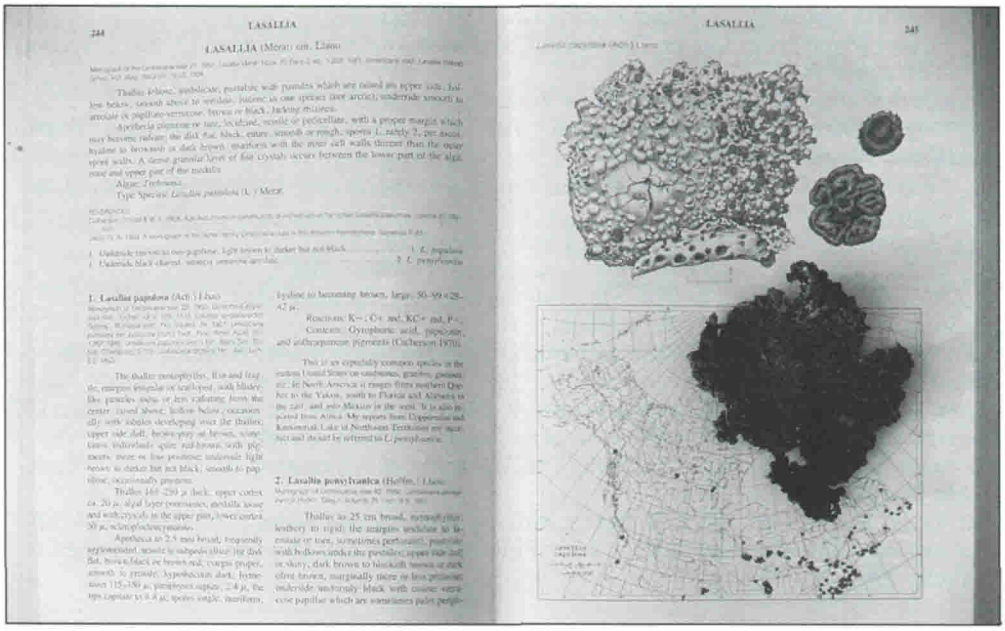
There are several widely used American books on lichen identification, but try to find a field guide specific to your region (see the chart of books). Craft suppliers, wilderness outfitters, and university bookstores carry a type of hand lens which botanists, geologists, and jewelers call a *loupe*. A ten-power (x10) lens is recommended.



To begin, make an investigative foray to the local cemetery, check the woods near your summer cottage, or look for lichens at construction sites and in woodlots (see warning on page 57). Once a "weedy" (abundant) lichen is spotted, identify the species. **Try to determine relative abundance before you collect some for that first dye test.**

Late fall and winter are the best times to collect lichens. Because there is little competition from foliage, lichens are eas-





Top: Five plant-dyed vests. The rose vest required one ounce of prepared orsallia dye; the purple vest required three ounces of the same dye.

Above: A hand lens makes it easier to distinguish between similar lichens.

Left: Modern field guides, like Thomson, illustrate lichens and show the range of each species. Lasallia papulosa *is shown here.*

Lasallia, *a C+ lichen, turns red when tested with bleach. The white area is the medulla.*

ier to spot and the damp weather makes them easier to remove. Lichens swell when moistened with dew, rain, or snow, and can be slipped off rocks and bark using a tool such as a sandwich spreader or an old grapefruit spoon. Be careful not to damage stonework when removing lichens in cemeteries.

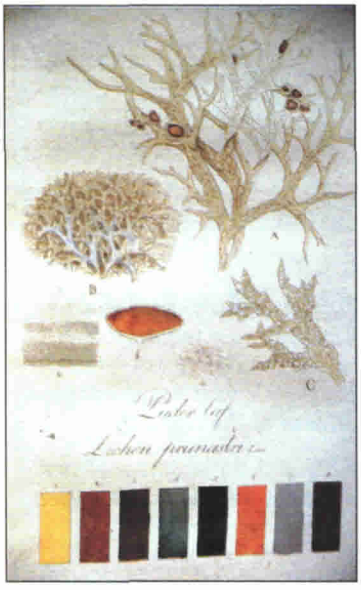
A simple test with household bleach (Clorox) or household lye (liquid Drano) tells which dye method to use. First, scrape off a bit of the lichen's upper surface (the cortex) exposing the medulla. Apply a drop of bleach with a cotton swab. If the medulla immediately turns red (a C+ reaction), use the AFM dye method. If you get no reaction, repeat the test in a new spot, using lye instead of bleach (do not mix the lye and bleach together!). A K+ yellow reaction, also referred to as C-, indicates the lichen is suitable for the BWM process.

Start with a small dye test using a handful of lichens and a few grams of yarn or fleece. A knitted or woven sampler makes an effective permanent record of your first lichen dye tests.

BWM lichen dyes require no mordants. Instead, manipulate dye techniques to achieve color variation. For example, BWM lichen dyes can be presoaked for several days or a week before the dyeing begins. With the *contact* method of BWM dyeing, lichens and fiber are processed at the same time. Some dyers add a few drops of vinegar to speed extraction of the dye acids. Several lichens may be combined in one BWM bath to produce a variety of colors.

AFM dye baths are generally made with a combination of lichens (see *orsallia*, on page 58). Vinegar and salt will change the dye color and improve fastness. First test dye bath pH, using litmus paper. For a redder AFM shade, add vinegar until the pH reads about 7. For a more intense AFM purple, do not add vinegar; add more dye liquor to the bath, until the pH is above 9. A spoonful of salt, added to AFM dye baths as they are heated, may increase fastness. ❖

Karen Leigh Casselman lives in Cheverie, Nova Scotia. She has studied lichen dyes for twenty years, and has given workshops and lectures in four countries. A revised edition of her first book, Craft of the Dyer, *is underway, and Karen has completed a study of historical dye lichens. She is a research associate in natural history at the Nova Scotia Museum, Halifax.*



An 1805 Scandinavian book written by Westring, who was royal physician to the Swedish court, included many recipes still in use today. This page gives sample dye colors from Evernia.

Resources

Bolton, E. M. *Lichens for Vegetable Dyeing*, 2nd. ed., K. L. Casselman and J. B. Holloway, eds. McMinnville, Oregon: Robin and Russ, 1991.

Brodo, I. M. *Lichens of the Ottawa Region*, 2nd. ed. Ottawa: Ottawa Field Naturalists and National Museum of Science, 1988.

Brough, S. "Dye Characteristics of British Columbia Forest Lichens." *Syesis* 17 (1984): pages 81–94. Victoria: British Columbia Provincial Museum, 1984.

Casselman, K. L. "Cemetery Lichen Dyes." *Shuttle Spindle and Dyepot* 22, no. 3 (Summer 1991): pages 32–33. Handweavers Guild of America.

___. "Color Magic from Lichen Dyebaths." *Shuttle Spindle and Dyepot* 17, no. 2 (Spring 1986): pages 74–78.

___. *Craft of the Dyer.* Revised ed. New York: Dover, 1993.

___. "Dyes: Conservation and Education." *The Occasional* 13, no. 1 (1992): pages 13–16. Halifax: Nova Scotia Museum.

___. "Eighteenth Century Dye Manuals." *Ontario Weavers and Spinners Bulletin* 33, no. 2 (Summer 1990): pages 4–5.

___. "Lichen . . . Dyes." *Heddle* 6, no. 4 (July/August 1990).

___. *Lichens and Dyes: An Historical Sourcebook.* Forthcoming.

___. "Searching for Eileen Bolton." *Journal for Weavers, Spinners and Dyers* 163, no. 2 (Summer 1992): pages 21–23. London.

Hale, Mason E. *How to Know the Lichens*, 2nd ed. Dubuque, Iowa: William C. Brown, 1979.

Ligon, Linda. "On the Rocks."*Handwoven* 9, no. 5 (November/December 1988): page 107.

Richardson, D. H. S. *The Vanishing Lichens.* Newton Abbot: Charles and David, 1975.

Thomson, J. *American Arctic Lichens: The Macrolichens.* Irvington-on-Hudson: Columbia University Press, 1984.

Vitt, D. H., J. E. Marsh, and R. B. Bovey. *Mosses, Lichens and Ferns of Northwest North America.* Edmonton and Seattle: Lone Pine Publishers and University of Washington Press, 1988.

Testing Lichens

Scrape off a bit of the lichen's upper surface, exposing the medulla. Apply a drop of bleach or lye to the medulla with a cotton swab.

Household lye	Household bleach
K+ yellow reaction	C+ red reaction
= BWM dye	= AFM dye

The basic types of dyes from lichens

Dye type	Color range	Timing	Some lichens used
BWM	yellow/brown/ orange/rust	a "ready-made" dye (2 days)	*Hypogymnia physodes, Parmelia, Platismatia glauca, Xanthoparmelia taractica*
AFM	red/purple	vat ages at least 10–12 weeks before the dye is used*	*Actinogyra muehlenbergi, Lasallia papulosa, Umbilicaria mammulata*

BWM = boiling water method dyes
AFM = ammonia fermentation method dyes
*Cudbear and orchil are generally aged only 3 weeks.

Directions for dye tests

BWM (boiling water method)

1. Select an abundant and common lichen, and gather 1 cup (250 ml) of lichen particles.
2. Place lichen pieces in a small dyepot, in water to cover.
3. Enter a few grams of wet yarn (or fleece, in a mesh bag).
4. Bring dyepot to a bare simmer and heat from one to several hours. Cool dyepot and contents overnight.
5. Repeat step 4.
6. Remove the fiber from the bath the next day. Rinse in cold water.

AFM (ammonia fermentation method)

1. Same as step 1 at left.
2. Put lichens in a glass jar with a lid. Combine equal amounts of water and ammonia. Pour this solution into the jar until the lichens are barely covered. Leave 2 inches (5 cm) of "head space" and do not add yarn.
3. Replace lid and shake jar vigorously several times a day for two weeks, then daily for another ten weeks—even longer is better.
4. Strain off the liquid into the dyepot, and dilute dye with 1 quart (1 liter) of water.
5. Proceed as in steps 4 through 6, at left.

WARNING

Increasingly, *all* types of flora are subject to environmental stresses, such as pollution. In Europe, lichens are still harvested commercially. *Evernia prunastri* is used to scent cosmetics, from hair preparations to potpourri.

Dyers are a danger too, if they over-collect lichens! Some lichens are potentially endangered, and others are classified as "rare," so **dyers must collect with care.** When possible, remove lichens only from sites where they are already subject to potential destruction (for example, woodlots and construction sites). **Think conservation!**

Lichen-based dyes

Although dye names are confusing, traditional and modern lichen dyes differ only in ingredients and in the variety of methods used. Modern dye books and old manuals mention *crottle, cudbear, orchil, orsallia,* and *Tyrian purple.* These are simply historical and geographical dye variations. The following chart will help clarify lichen dyestuffs and their components.

*Karen combines three lichens to make a dye she named orsallia. The two on the left are right-side up (*Actinogyra *on top, and* Lasallia *below), while the third lichen is upside down, to show the black lower cortex (*Umbilicaria, *on the right).*

Dye name	Type	Ingredients	Period of use
crotal, crottle, *etc.*	BWM	*Parmelia omphalodes, Parmelia saxatilis*	ancient to modern
cudbear	AFM	*Ochrolichia tartarea* and *Lasallia pustulata*	1758 to mid-1900s
orchil, archel, *etc.*	AFM	species of *Roccella*	ancient (Bronze Age) to modern
orsallia	AFM	combination of *Actinogyra, Lasallia,* and *Umbilicaria*	modern North America
Tyrian purple	AFM	*Murex* molluscs and *Roccella* lichen combined	c. 2000 B.C.E. to Roman heyday

A microscope is used to study lichens in museum collections. This is Karen Casselman in the natural history lab at the Nova Scotia Museum, Halifax.

Lichen conservation: an historical footnote

Dyers are also advised that lichens purchased in bulk could be any plant material whatsoever. That's what happened in Scotland 200 years ago.

To keep cudbear factories operating at full production, lichen gatherers took so many plants that the lichens never recovered. Unscrupulous collectors, desperate for raw materials, bastardized cudbear by substituting the wrong plants.

The famous red Scottish lichen dye deteriorated in quality, and the demand for it plummeted. Because the rural highland economy of certain regions was tied to the success of cudbear, families for whom the lichens were the main source of income suffered. The result was catastrophic.

Nature requires time to replenish its resources. So learn to identify those few lichens you need for your dye test, collect them conscientiously, and practice conservation. **Avoid buying or selling dye lichens.**

Books on lichen identification

Author	Book	Region/Country
Brodo	*Lichens of the Ottawa Region*	central Canada
Hale	*How to Know the Lichens*	U. S. (except Alaska/Hawaii); southern Canada
Thomson	*American Arctic Lichens: The Macrolichens*	northeastern and north central U. S.; all of Canada, including the arctic
Vitt, Marsh, and Bovey	*Mosses, Lichens and Ferns of Northwest North America*	northwestern U. S. and northwestern Canada

Make it first, dye it later

Custom-colored scarves and hats

by Ruth Fortune

I LOVE TO COMBINE bright colors in my spinning, knitting, and weaving, and am always looking for new ways to use color in the items which I make and sell. For years, the color came first: I would dye multicolor rovings or paint the spun yarns with dye before weaving or knitting. Recently, inspired by hand-painted silk scarves, I've tried a new approach. I weave or knit with white yarn (mostly wool and/or mohair, and not always handspun), and then dye the finished pieces.

This method offers many new design opportunities. So far I've dyed shawls, scarves, knitting bags, and hats, but you could easily do mittens, socks, baby blankets, or other articles. Here's how to do it.

Equipment. You'll need one or more stainless steel or enamel pans about 12 by 18 inches and at least 2 to 3 inches deep, large plastic ovenproof bags (the kind used for roasting turkeys, etc.), a screen or wire rack, a spoon or chopstick, measuring spoons and cups, a dust mask, and rubber gloves. Remember to set aside special equipment that you use *only* for dyeing, not for cooking.

Preparation. Any item to be dyed must be thoroughly clean. It's a good idea to wash it first to remove any traces of grease or dirt. Rinse well in clear water and wring out excess moisture before dyeing.

Opposite: A hat and two scarves dyed after they were made. Try Ruth Fortune's technique on baby blankets, mittens, socks, bags . . .

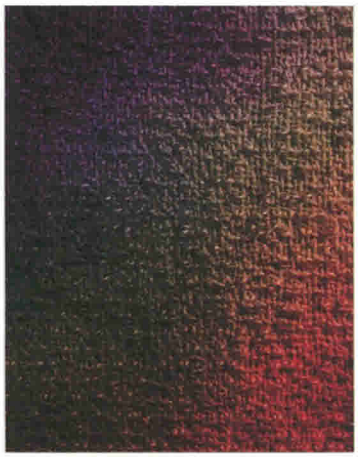
The dye process

I've had good results with both Cushing and Procion WF dyes. They require slightly different methods.

With *Cushing dye,* place the thoroughly wetted article in the pan and sprinkle it with rows of dye powder, leaving about 2 inches between colors. Use your dye spoon or stick to gently push the dyes down into the fabric. Seal the pan in a roasting bag, place it in a 350° F oven, set the timer for 15 minutes, and heat some water to a boil. (Following package directions, add common table salt to the water for dark colors.)

When the timer rings, remove the pan, unseal the bag, and very carefully pour the hot water along the powdered dye lines. You'll have better control if you pour the water from a small pan or cup. Do the lighter colors first, then the darker colors. Use the spoon or stick again to push the dyes down into the fabric. Reseal the bag and put the pan back in the oven to bake for between 30 and 40 minutes more. Remove the pan from the oven and let it cool to room temperature. Then wash the article in warm water with soap or detergent, rinse in clear water, and dry.

With *Procion WF dye,* follow the package directions and mix the dye powder with warm water and white vinegar (5% acidity) in a small plastic container. Place the dampened, folded article on a screen or wire rack over the sink or outdoors where drips won't matter. In a steady stream, pour the dye over the item. Pour enough to penetrate the fabric, but not so much that the dye spreads more than 2 or 3 inches wide. Don't leave space between the colors with this process. Use a spoon to press the dye down into the fabric. After waiting a few minutes for the dye to soak in, transfer the article to the baking pan with gloved hands. Proceed as with the



A shawl . . .

Cushing method: bake for 15 minutes at 350° F, add boiling water and vinegar, then bake for between 30 and 40 minutes more. Cool, wash, rinse, and dry.

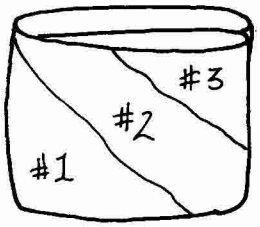
Tips and techniques

- Don't go overboard with too many colors. It's best to begin with only two or three. You can try using more later.
- Fold scarves, blankets, and so forth, with the fringe evenly distributed inside.
- Lay hats in a flat beret position, or elongated like a stocking cap.
- Try soaking the article in a pale dyebath first, before applying the main color patterns. That way, if the dye doesn't spread or penetrate thoroughly, the remaining background will be colored, rather than plain white.
- You'll come up with all sorts of patterns on your own, but the sketches shown here represent a few that I've used. Have fun! ❖

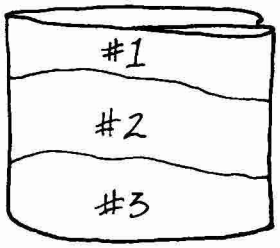
Fiber artist Ruth Fortune started spinning and weaving about ten years ago. She sells her yarns, weavings, and handknit sweaters through the League of New Hampshire Craftsmen shops, at crafts fairs, through yarn shops, and by mail order. Her own shop in Warner, New Hampshire, is named "Ruth's Wheel of Fortune." What else could a person with a name like that, who started out spinning, call her shop?

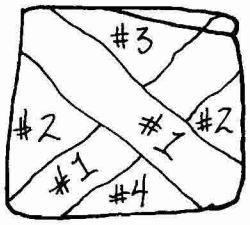
Some color patterns for applying dye

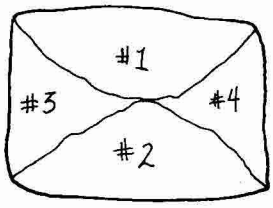
On scarves or blankets . . .

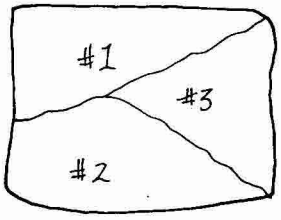


fringe inside, evenly distributed

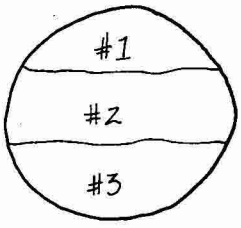




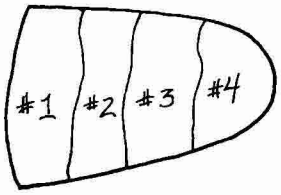




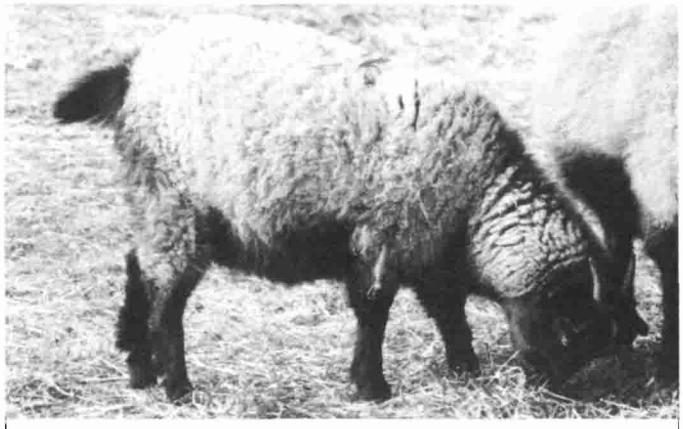
On hats . . .



beret



watch cap



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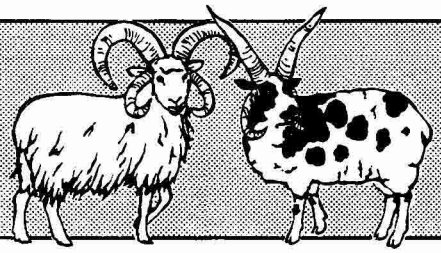

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The Indian Head Spinner

its development and strengths

by Priscilla A. Gibson-Roberts

There are times that I am utterly amazed at the comments I hear about my Indian head spinner (sometimes referred to as a bulk head or country spinner). They range from "What do you want with *that* old thing?" to "I would think you would want a more *traditional* wheel," and "All you can do on there are those old *junk* yarns like the sixties." Seldom do I hear "Wow, you have an Indian head spinner!"—although, more frequently I hear a note of longing as someone says, wistfully, while viewing one of my handknits, "Sure wish I could spin *that* kind of yarn!"

Let me respond to those questions and statements in order. (1) I want "that old thing" so I can produce high-quality bulky singles for knitting wonderful thick, warm, comfy sweaters and vests, plus some really outstanding boot socks. (2) I do have what most would consider a "more traditional" wheel (in my case, a lovely, handcrafted Norwegian in cherry); but I also cherish my *very traditional* black walnut Indian head "spinning machine" (using the terminology of the Salish Indians). (3) As for the only yarns from this type of spinning wheel being "junk yarns"—yes, junk yarns were turned out on them in the sixties, but this had nothing to do with the quality of the wheel, but rather depended on the expertise of the spinner. It takes tremendous skill and control to consistently produce an even bulky yarn—a skill few handspinners possess with the current vogue for fine yarns. (4) Why so little awe for my wonderful spinning machine? Because few spinners today have any concept of its historical significance, much less the skills to use it. (5) But finally, more frequently, I hear rumblings from the masses of a desire to develop the skills for producing "lopi"-

Salish Indian woman, seated on a folded, handwoven Salish mountain-goat–hair blanket, spinning. She is rotating a large, old-style handspindle to put twist in her yarn. Instead of using an overhead tension ring, she probably looped prepared roving over the back of a chair—an adaptation common after the coming of Europeans. Circa 1915; photo courtesy of the Royal British Columbia Museum, Victoria, British Columbia.

A large, traditional, hand-carved wooden spindle whorl—called a **sul'sul'tin***—from Vancouver Island. Courtesy of Nora George, Westholme, British Columbia, 1986; photo by John VanSant Roberts.*

type yarns for knitting bulky sweaters. And, I have to admit, this is music to my ears after hearing the refrains of (1), (2), and (3) for such a long time!

But I digress from my purpose in this personal reverie. If the Indian head spinner is to be accorded its proper place in the spinning world, handspinners must understand both its history and how to use it. For me, it is always easiest to begin with the historical roots, culminating with the role in today's world.

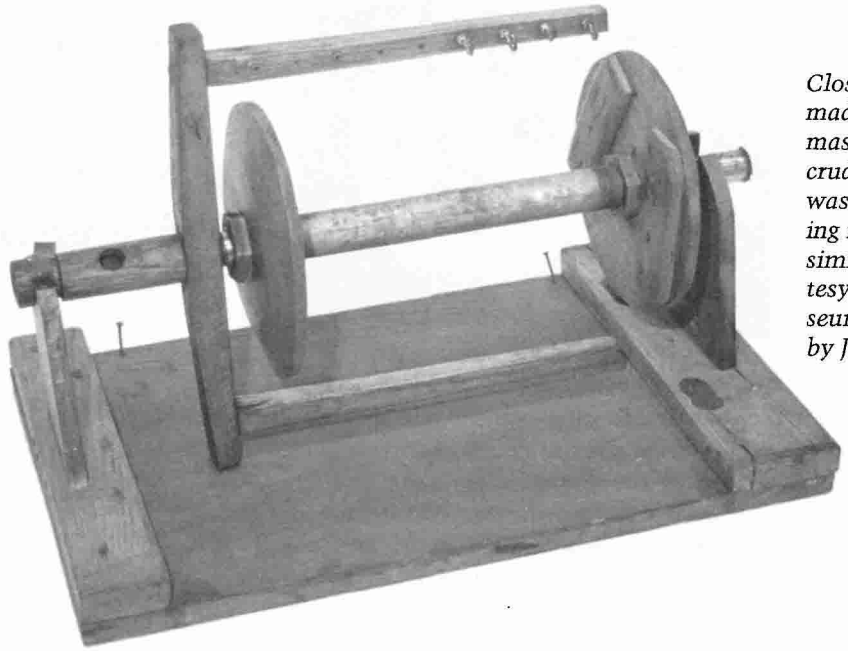
Early Salish spinning

The Indian head spinner is firmly rooted in the fiber-working traditions of the Coast Salish Indians of the Pacific Northwest. To understand how such a "spinning machine" came into being, we must look at the long-established textile traditions of these people.

The Coast Salish, whose ancestral tribal lands encompassed the lower reaches of the Fraser River, spreading north along the coast and over to the eastern portion of Vancouver Island in British Columbia, then south into Washington to encircle Puget Sound and most of the Olympic Peninsula, are fiber workers of long standing. While other coastal tribes wove mats and baskets, the Salish expanded their skills to include the spinning of yarn and the weaving of blankets. As is true of all early spinners, their tool was the hand spindle. But both their hand spindle and their spinning technique were unique.

The hand spindle itself was massive when compared to those of most other cultures. The length of the spindle ranged from 36" to 48", while the whorl was typically 7" to 8" in diameter. Not only was the size of the whorl unusual, so was its

Salish Indian woman spinning. The spindle has been lifted so she can wind the yarn onto the shaft for storage. As the yarn winds on, new roving is drawn forward, elongating in the process, and is positioned for the next round of spinning. Photo courtesy of the Royal British Columbia Museum, Victoria, British Columbia.



Close-up of an early Salish spinning head, made of wood and galvanized pipe. Of massive proportions and somewhat crudely constructed, this spinning head was designed to mount on a treadle sewing machine base. Later models were of similar size, but more finely crafted. Courtesy of the Royal British Columbia Museum, Victoria, British Columbia; photo by John VanSant Roberts.

placement. A spindle of such proportions obviously requires some support, so one would expect the whorl to be located toward its base, as is the case with Navajo spindles. But the Salish chose to locate the whorl much higher on the spindle, and the spindle was supported by both hands. With both hands involved with manipulating the spindle, an auxiliary means for providing tension for elongation of the fiber supply was required. This was provided by a tension ring; the only similar system in spindle spinning was found among the ancient Egyptians, where one person operated multiple drop spindles.

The fibers utilized were principally from the mountain goat, laboriously collected from spring molt or pulled from the pelts of animals slain for food. The fibers were scarce, and were therefore often augmented with plant fibers and, in some cases, with dog hair. The fibers were hand teased, then turned into rovings by rolling the fibers along the thigh by hand. The roving was extended by adding new fibers, then rolled into balls prior to the actual spinning process.

The prepared roving was threaded through a suspended overhead tension ring and attached to the spindle at the upper face of the whorl. The spinner sat on the floor with the butt of the spindle in one hand, supporting the spindle just below the whorl with the other hand. With the spindle held at an angle, twist was inserted with a tossing motion of the hand at the whorl. A Z-twist resulted from tossing the spindle to the left, an S-twist from tossing to the right. The direction of the twist could also be altered by tossing the spindle toward or away from the body, because the Salish, unlike the Navajo, attach no symbolic significance to the directional turn of the spindle.

The quality of the yarn largely depended on the initial preparation of the roving, because the twist would be evenly distributed only in a consistent roving. When sufficient twist had been inserted into the section of roving between the tip of the spindle and the tension ring, the spindle was shifted into a vertical position and the yarn was wound on. In the process of winding on, more roving was drawn through the tension ring, and was elongated as it passed through the orifice. Yarns spun in this manner were used in weaving blankets which, in turn, were of paramount importance to the culture. Studies have indicated that the singles were spun S, then plied Z. All the yarns used in the blankets were bulky two-plies.

The demise of traditional ways

In the 1820s, the native people entered a new era. The Hudson's Bay Company established trading posts in the region, altering the old ways. The spinner-weaver

soon found her skills in little demand, as the plentiful salmon could be exchanged for equally plentiful trade blankets.

But at the same time settlers arrived from Scotland and the outlying islands. With them came their European textile traditions and, of equal importance, a dependable supply of fibers from their flocks of imported sheep. For the first time, the Salish were exposed to the spinning wheel, knitting needles, and an ideal fiber—wool.

Knitting skills came readily, both through formal instruction at the mission schools and by association with and observation of the immigrant knitters. But old spinning skills had to be adapted for the new fiber. The hand spindles became smaller and lighter; the tension ring was abandoned. With the introduction of chairs, a spinner now sat, rotating the spindle below the whorl on her thigh, manipulating the fiber supply with her free hand. Without the need to weave blankets, the yarn was used for knitting socks and caps, and later long underwear for fishermen. An interesting point: the knitting yarns were all singles, still a heavyweight to bulky yarn, but never plied.

The birth of the "spinning machine"

This newfound craft of knitting, combined with the spinning of woolen yarns, proved vital to survival. No longer free to live off the land, unable to compete in an imposed foreign social order, the natives found a market for their handcrafts, including knitwear. But the acquisition of even subsistence payment required tremendous production. Having observed the use of the spinning wheel among the Europeans,

Indians of the Koksilah Reserve displaying their handcrafts. At center right, the Indian head spinner is of the earlier style, mounted on a sewing machine treadle base. The bulky yarn thus spun is in the foreground. Often, the whole family was involved in the production of their traditional sweaters and other knitwear. Courtesy of the British Columbia Provincial Museum, Victoria, British Columbia.

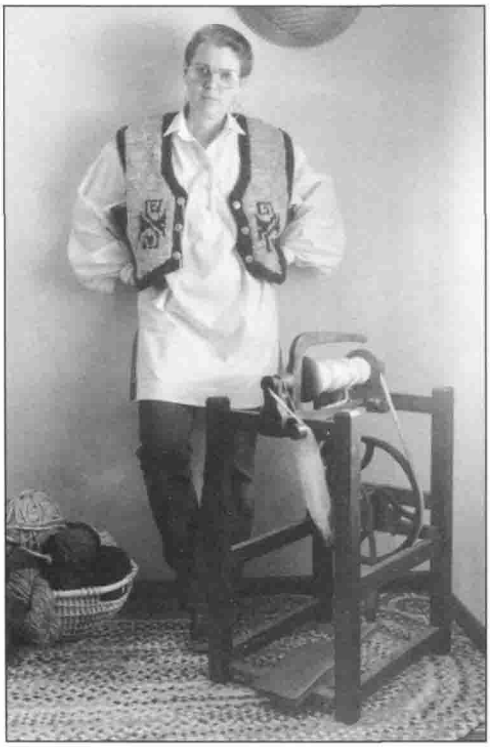
Indian craftsmen soon were experimenting to create a similar machine to produce the kind of yarn desired by their spinner-knitters. By the 1890s, the Salish had created a spinning machine suited to their particular needs: production of a bulky singles yarn.

The earliest Indian head spinners were massive bobbin-flyer assemblies, often crudely constructed, mounted on sewing machine treadle bases. This adaptation was bobbin lead: the treadle wheel directly powered the bobbin, and there was a brake on the flyer. These bobbin-lead spinners, with a low whorl-to-wheel ratio, were characterized by a strong draw, and were thus capable of producing a bulky yarn with relatively low twist.

On these early spinning machines, the spinner was unable to sit facing the orifice. Therefore, many craftsmen improved the original model. By building a specific base and placing the wheel at the back, they could position the orifice at the front. Then the spinner could spin more comfortably for extended periods. However, Salish spinner-knitters now use this style of treadle spinning machine only for demonstrations of their craft. For production, they have motorized the traditional spinning heads, most often fitting them out with sewing-machine motors—although a few have resurrected old washing-machine motors for the task! And yes, native knitwear is still in demand, especially the popular Indian sweaters, often referred to as Cowichan sweaters in deference to their origins among the knitters of the Cowichan Band of the Coast Salish Indians.

Until the 1960s, no craftsmen outside of the indigenous Indian population were known to produce this type of spinning wheel. With the resurgence of interest in fiber arts in the '60s, many non-Indian craftspeople copied the Indian head spinner commercially in the United States, Canada, and Great Britain. The quality of the wheels was varied, as were their makers. But the non-Indian spinners of the era never fully understood the concept of this design nor developed the skills in its use. The resulting yarns were often poorly made and the wheels were soon in disfavor, replaced with the more traditional European-style wheel that easily produces finer yarns.

Today, few high-quality Indian head spinners are being commercially produced. Yet, for those interested in the "lopi"-type yarn, this is the ideal piece of equipment! In a future article, we shall examine how to use this "spinning machine" and look at projects ideally suited to the yarns it produces. ❖



Priscilla Gibson-Roberts, of Lakewood, Colorado, specializes in traditional spinning and knitting techniques. She is shown at left with her prized Indian head spinner, made by Thomas Ricci, a non-Indian craftsman from the United States. Its bobbin will hold more than two pounds of yarn. Yarns typically produced on this wheel are in the basket at the left, and the author is wearing a vest she made which displays a pattern motif of Salish origins. Photo by John VanSant Roberts.

Further Reading

Buxton-Keenlyside, Judith. *Selected Canadian Spinning Wheels in Perspective: An Analytical Approach.* Ottawa: National Museum of Man, 1980.

Gibson-Roberts, Priscilla A. *Salish Indian Sweaters: A Pacific Northwest Tradition.* Saint Paul: Dos Tejedoras Fiber Arts Publications, 1989.

Kissell, Mary Lois. "A New Type of Spinning in North America," *American Anthropologist*, Vol. 18 (1916), pages 264–70.

Lane, Barbara. "The Cowichan Knitting Industry," *Anthropology in British Columbia*, Vol. 2 (1951), pages 14–27.

When the MOUNTAIN OF WOOL Gets Too Big

A Spinners' Guide to Processing Services

by Deborah Pulliam

SO THE MOUNTAIN of unwashed fleece is growing. First it was one fleece, a bargain you couldn't resist. Now you've got a carton/closet/room full and it haunts your dreams at night. What will you do?

If you always card by hand, you may be in trouble. If you have a drum carder, you can make a little headway. But there are many people out there, all over the country, just waiting to take care of your fleece and send it back to you ready to spin. Maybe you should consider that route.

Where do you begin? Start by asking friends if they have used a processing service. Were they pleased with the results? Also ask your favorite fiber suppliers. Many businesses deal with mills, either to get their own fleece processed or to purchase wool for resale. Following personal recommendations can be a quick and easy way to find a processor you like, but remember to take everything you hear with a grain of salt—someone may complain bitterly about receiving poor batts, but are you sure they sent nice fleece to start with?

The best approach is to do your own homework, asking questions and gathering information. There are dozens of processors listed in the directory which starts on page 73, and surely there are others that we haven't heard about yet. Don't let geography limit your decision. UPS and the postal service can handle packages of wool. If you have a special fleece, it may be worth your while to send it to a mill that can handle it exactly the way you want.

Once you have some names of processors, write or call for information. Most mills can send you a brochure that will answer some of your questions about their services. But there are still other questions to ask yourself.

What kind of wool do you have?

Many processors know what their machinery can handle best, and work accordingly. Some do not handle the longer wools, because the fibers would wrap around the drums of their equipment and become hopelessly entangled. Others do not have fine enough cloth to card finer wools without leaving neps and lumps.

If you're not sure how to describe your wool, send a small sample and ask if the processor can handle it. Mill owners usually know from experience what they do best. For example, Bob and Sue Salsbury of Black Ram started by carding their own fleece and then began processing for other people. "We have handled all kinds, but we like fine wools," Bob says. "We raise Corriedales, and we process all our own wool."

How much wool do you have to send off?

This can narrow the field for you right away. Green Mountain has the largest minimum quantity of the mills we talked to (one hundred pounds). Taos Mountain requires "about five pounds, or one fleece."

Some of the smaller processors will take as little as a pound.

How well skirted and sorted is your fleece?

If you have several similar fleeces, you can get them all carded together. But if there is better wool in one area of each fleece, is it worthwhile to sort that out and card it separately? Only you can determine how you want the wool handled, but it's up to you to make your decision clear. Most processors don't want to make judgment calls on how to sort your fleece, or to second-guess how you will use it. If you want fleece carded in separate lots, sort it into separate bags and label them.

Green Mountain Spinnery, probably the largest of the small custom carders we talked to, doesn't like to get involved with sorting and grading. "We sort to remove contamination, or wool that's too long or too short, but we prefer not to do grading," says founder David Ritchie. "That's something for spinners to decide. If they bring it in personally, I'll help them. But how can I be sure what I do is what they would do?"

How dirty or greasy is your fleece, and how do you want it scoured?

Some mills accept only washed wool, some only grease wool. Mill practices for scouring vary widely, so this is a particularly important place to ask questions if you have any doubts. The processors we talked to scour with hot water and some type of detergent. None of them use any form of carbonizing or harsh chemicals for custom processing, but be sure to ask.

You may want to scour the wool yourself at home. By taking on this task, you can treat the wool the way you want and save some money. Walker Pond Carding Mill will wash in hot water, Dawn, and Calgon, but advises customers to send clean fleece. "We're encouraging people to do their own washing, on our instructions," says co-owner Sara Christy. "They save almost half the cost of processing, and it relieves our septic system."

But all processors, knowing what grease can do to a carding drum, reserve the right to rescour. "We accept washed fleece if it is absolutely lanolin-free," Bob Salsbury says. Otherwise, "I call the customer and make them wash it again, or charge them and wash it myself."

Do you want fibers blended?

Most mills are happy to do this, and can save you hours of work. But be sure you know what you want, and let them know. Many mills have large machinery that does a very thorough job of blending. One or two passes through the carder will blend the variations of fibers and colors within a single fleece. These mills can also combine fibers such as wool and mohair, if you ask.

What if you want some variation in the final product—a rainbow batt, or variegated sliver, or a two-color sliver? These preparations may require special handling. Be sure you know what you want, and determine that the processor can make it, before it's too late.

Do you prefer roving or a batt?

You also need to decide what kind of preparation you want. Some mills can only supply batts. Others give you a choice of batts or roving. Be sure you're clear about what they'll be sending you.

The size and shape of spinning batts depends on the amount of wool and the kind of carder. Robert Donnelly of Taos Mountain Woolworks uses a 60-inch wide carder to produce four- to five-pound "freeform batts." Other suppliers make batts as small as pillows or as large as quilts. Large batts are either folded or rolled for shipping. For spinning, just tear off smaller chunks or strips.

One caution on ordering batts: make sure you specify batts for spinning, not for quilting. Quilt batts are a great use for extra wool, but to make them hold their shape, the wool is treated more harshly than it would be for spinning batts.

Roving or sliver can be as thick as your thumb or as thin as a pencil. These preparations are usually rolled into balls, or they may simply be coiled or folded. Ask processors what they supply. Offer to pay for a sample and see if you like spinning it.

Do you mind if the mill uses oil on your fleece?

Many mills spray the wool lightly with oil, to cut down on static electricity and control the fibers. The sooner you spin oiled wool after you get it back from the mill, the pleasanter the spinning and nicer the results. Washing the yarn in hot water and detergent removes the oil and leaves the wool soft and clean. Unfortunately, oiled fiber gets sticky or stiff over a period of time. The longer you wait, the harder and less fun it is to spin. Heating old fiber in the sun or next to a radiator helps soften the oil a little, and it still washes out after you've spun the yarn. But it's best to spin oiled wool promptly. Not all mills use oil, so be sure to ask, if you anticipate a delay between processing and spinning.

How much time can you allow for processing?

Time may be a factor if you're in a hurry to start a particular project. Be sure to ask about turnaround time, if it's not stated in the processor's advertisements or brochure, and don't forget to add time for shipping both ways.

Green Mountain has a turnaround time of between six and eight weeks; Taos, only two weeks (which Robert expects to reduce to one week). Walker Pond's turnaround varies considerably, because they work in sequence, starting with white, then doing light and dark natural-colored wools, and finally dyed wools, before cleaning the carder and starting again with white.

How much will it cost?

Prices vary among processors and also depend on what services you're asking for and what quantities are involved. Generally, processing costs are figured on a per-pound basis, but some mills weigh the wool you send in and others weigh the finished batts or roving. Be sure to ask, and compare prices accordingly.

If you have more wool than you need (be honest, now), you might ask if the mill will allow a trade. In other words, you might let them keep some of your fleece to help offset the bill for scouring and carding the rest of it.

Is the wool really worth carding?

Now that you know what you need and want, consider what you're asking. Don't set yourself up for disappointment by asking for the impossible. If you simply want to get all the raw fleece out of the house, and to get it back in carded form, send it off. But will the results be worth spinning? This is the question that many spinners refuse to face. Remember the saying, "garbage in, garbage out." Don't expect a mill a make a miraculous transformation of poor fleece into beautiful roving.

Most mills rightfully reserve the right to refuse fleece, although the major reason for this is moths in the wool. Don't pass on your problems! "We'll make an attempt with most anything else, but we always return wool with moths," says Bob Salsbury. Walker Pond sends moth-infested wool back, or throws it away, with your permission.

If you have a fleece that you really love, but it's full of chaff or mud, don't give up right away. A challenge may be just what a larger mill wants. Washing is magic, and a second pass through the carder may eliminate a lot of chaff. If the fleece has good strong fiber, ask around before you abandon it.

What if you have problems?

The most commonly cited problems with processed wool are: (1) harsh treatment that tore and broke the fibers, (2) incomplete carding that left lumps and snarls, (3) trash and wool from a previous batch contaminated your wool, (4) the carding oil stiffened because you let the wool sit around too long before spinning it, and (5) the wool got compressed and stale, because you mistreated it and/or let it sit around too long.

If you did everything as you should (remember that torn fibers could result from your supplying a weak or tender fleece), you have every right to complain about the first three problems, and you should. Good business owners always want to hear about complaints directly, and will deal with them appropriately. Feedback, both good and bad, is important for everyone.

As for complaints 4 and 5, keep in mind

that sending off your two tons of fleece is not a cure-all. You still have to spin it up. In general, the sooner you spin it, the better. Freshly carded fleece is a joy to feel and deal with, so dive in!

Deborah Pulliam, of Castine, Maine, spent a chunk of time pulling the material in this section together, in response to reader requests for information about commercial carding. Her own work and thoughts have been presented in various guises in recent issues of Spin·Off*—from letters to book reviews to feature articles.*

Custom Wool Carders

When you'd rather be spinning than carding, read our "Spinner's Guide to Processing Services," take the time to ask questions and send samples of your wool for evaluation, and learn how to use the help custom processors offer. These custom wool-processors responded to a request for information on their services which was placed in the Fall 1991 issue of *Spin·Off.*

Arachne's Obsession, 704 Radcliffe Drive, Davis, California 95616. (916) 758-4488. *Contact: Katie Farmer.*

Bartlettyarns, Inc., Box 36, Water Street, Harmony, Maine 04942. (207) 683-2251. *Contact: Russell Pierce.*

Beau Monde, Route 30, Box 687 (N. Rupert), Pawlet, Vermont 05761. (802) 325-3645.

Big Creek Farm, Route 5, Box 101-B, Ellijay, Georgia 30540. (404) 635-2034. *Contact: Dell Brown.*

Blackberry Ridge Woolen Mill, 3776 Forshaug Road, Mt. Horeb, Wisconsin 53572. (608) 437-3762. *Contact: Anne Bosch and Marc Robertson.*

Carolina Homespun, PO Box 687, Pleasant Garden, North Carolina 27313. (919) 674-1190. *Contact: Merike Saarniit.*

Cross Creek Valley Wool Mill, RD 2, Avella, Pennsylvania 15312. (412) 587-3222.

Deer Isle Wool Carding Company, Reach Road, Deer Isle, Maine 04627. (207) 348-2283. *Contact: Pauline Boyce.*

Down Yonder Farm, 811 Lipscomb Grove Church Road, Hillsborough, North Carolina 27278. (919) 732-7254. *Contact: Peter Kramer and Susan Gladin.*

The Ewe's Cottage, PO Box 672, 484 Horsethief Road, Roundup, Montana 59072. (406) 323-1708. *Contact: Adele Dallard.*

Fingerlakes Woolen Mill, 1193 Stewart's Corners Road, Genoa, New York 13071. (315) 497-1542. *Contact: Tim Horchler.*

Frankenmuth Woolen Mill, 570 South Main Street, Frankenmuth, Michigan 48734. (517) 652-8121. *Gary and Carol McClellan.*

Genesee Woolen Mill, S40 W28178 Hwy. 59, Waukesha, Wisconsin 53188. (414) 521-2121.

The Good Shepherd Woolworks, PO Box 21, Carmen, Idaho 83462. (208) 756-3881. *Contact: Elizabeth Ellis.*

Gravel Hill Farm, Route 1, Box 121A, Kampsville, Illinois 62053. (618) 653-4309. *Contact: Alice Schumann.*

Grav's Beechmount Studio, RR #2, Bancroft, Ontario K0L 1C0, Canada. (613) 332-2329. *Contact: Ingeborg and Fritz Grav.*

Green Mountain Spinnery, Inc., Box 54, Putney, Vermont 05346. (802) 387-4528. *Contact: David Ritchie.*

Heart's Ease Farm and Fibers, 3012 Sutton Road, Lapeer, Michigan 48446. (313) 797-4155. *Contact: Viki Clark.*

Inda Farm Enterprises, 26336 Crow Road, Eugene, Oregon 97402. (503) 345-9498. *Contact: Jean Inda.*

The Joyful Carding Company, HC80, Box 703, Piedmont, South Dakota 57769. (605) 787-5415.

La Terre Benie, RD 5 Weast Road, Schenectady, New York 12306. (518) 864-5885. *Contact: Etienne Ableman.*

Liberty Ridge Romneys, RD 1, Verona, New York 13478. (315) 337-7217. *Contact: Sunny or Tom Bixby.*

Loose Ends Fiberworks, 30781 Fox Hollow Road, Eugene, Oregon 97405. (503) 343-6596.

Mellow Acres, 7512 Lackey Road KPN, Vaughn, Washington 98394. (206) 884-9009. *Contact: Becky and Joe Scellato.*

Milagro Wools/Taos Mountain Woolworks, Box 327, Arroyo Hondo, New Mexico 87513. (505) 776-2925. *Contact: Robert Donnelly.*

Natural Fiber Producers (NFP), 1890 St. George Road, Danville, California 94526. (800) 875-WOOL. *Contact: Bonnie Medina.*

Ohio Valley Natural Fibers, 8541 Louderback Road, Sardinia, Ohio 45171-9603. (513) 446-3045. *Contact: Kent and Ginny Ferguson.*

Springwater Farm, Box 1122, 26040 S. Warnock Road, Estacada, Oregon 97023. (503) 630-3626. *Contact: Tamarra Piccolo.*

Sullivan's Springwater Spinoffs, 26045 S. Warnock Road, Estacada, Oregon 97023. (503) 630-4520. *Contact: Kathleen Sullivan.*

Susan's Fiber Shop (formerly McFarland's Custom Carding), N250 Hwy. A, Columbus, Wisconsin 53925. (414) 623-4237.

Tally Ho Natural Coloured Wools, Raes Junction, R.D. Dunedin 9021, Otago, New Zealand. *Contact: Don and Janet Peel.*

Walker Pond Carding Mill, RR 1, Box 24, Brooksville, Maine 04617. (207) 326-4649/4530. *Contact: Sara Christy and Gail Disney.*

Warm and Wooly Natural Fibers, 3947 Norway Court, Pulaski, Wisconsin 54162. (414) 822-8282. *Contact: Elaine McNamara.*

Wausau Woolen Company, 408 South 4th Street, Wausau, Wisconsin 54401. (715) 848-9293. *Contact: Dale Zietlow.*

Wilde Yarns, PO Box 4662, 3737 Main Street, Philadelphia, Pennsylvania 19127. (215) 482-8800.

Wildflower Exotic Fiber Processing, 6010 260th Street E., Graham, Washington 98338. (206) 847-0113. *Contact: Rawna Gillette.*

Woodland Woolworks, 17340 NE Woodland Loop, Yamhill, Oregon 97148-8420. (503) 662-3641. *Contact: Charlie and Melda Montgomery.*

Wool Scouring Co-op/Yolo Wool Products, 9 East Main Street, Winters, California 95694. (916) 795-4229.

Zeilinger Wool Company, 1130 Weiss Street, Frankenmuth, Michigan 48734. (517) 652-2920. *Contact Kathy and Gary Zeilinger.*

A Glossary of Carding Terms

batt: Prepared wool which has been carded and left in a large sheet, usually the width of the carding cylinder.

breast works: The first set of three cylinders in a large carder, which takes the wool from an apron feed or table and breaks up large clumps.

breaker: A full set of carding cylinders (main, workers and strippers, fancy and doffer). One carding train usually has two or three breakers, with increasingly fine carding cloth.

carbonizing: Heat and chemical processing of fleece to remove burrs and vegetable matter.

doffer: The final cylinder on a breaker, which removes the carded fleece from the main cylinder.

fancy: A cylinder covered with very long carding teeth, which lifts the carded wool to the surface of the main cylinder. The only cylinder to actually make contact with the main.

needle stick: A very fine comb, handheld, used to remove carded wool from early cards.

ring doffer: The final cylinder, covered with alternating strips of very narrow carding cloth and blanks, which divides the carded web into long, continuous slivers.

roving: Prepared wool which has been carded, drawn, and drafted slightly, with a slight twist.

sliver: Prepared wool which has been carded and gathered into a loose, soft, untwisted strand, usually about the thickness of a thumb.

strippers: Smaller cylinders which work in pairs with workers, and which pull the wool up from the main to the workers.

top: Prepared wool, specifically for worsted spinning. All the short fibers (noils) have been removed by combing rather than carding.

workers: The cylinders which actually card wool in combination with the main cylinder.

Moving from Hand Cards to Industrialization

by Deborah Pulliam

WHILE THE INDUSTRIAL world races nonstop toward the twenty-first century, technology changes almost daily. Although some say it's not an improvement, new ideas in computers have changed the way almost everything is done. But not wool carding.

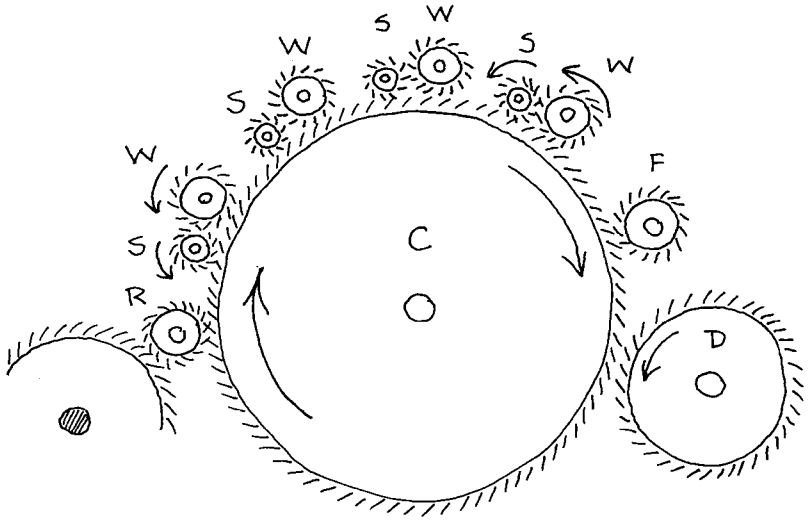
In the late eighteenth century, two brothers, John and Arthur Scholfield, sons of an English clothier,[1] came to America and, over the course of several years, revolutionized wool carding—no minor feat in a world which used thousands of yards of woolen cloth every year.

What makes the Scholfields' work so amazing at the turn of the twenty-first century is that the machines they designed and created for wool carding have continued to do their work with few substantial changes. Power for the equipment has changed, of course, from water to steam and electricity, and frames are now generally made of metal instead of wood. But the basic principles perfected and disseminated by the Scholfields are still in use.[2]

Wool fleece, washed and usually picked, is brought up to the carder on an *apron feed* (in the nineteenth century, this was changed to a vertical feed that also partially picks the wool) which delivers the fleece to the *breast works*, a small set of carding cylinders. An *angle stripper* takes the fleece from there to the *main cylinder*, where it is carded back and forth from the main cylinder to a series of *workers*, which work in pairs with *strippers*. A *fancy*, the only cylinder which actually touches the main, has longer wire teeth on a slightly larger cylinder than is used for workers and strippers. These longer teeth pull the fleece up from the main so the *doffer*, another larger cylinder, can remove it. A *comb plate* (which looks more like a knife blade) moves rapidly up and down against the doffer as it turns, removing the carded wool completely.

The Scholfields' machines produced wool *slivers* by running the carded web under a fluted wooden cylinder, which rubbed the wool into individual pencil slivers as long as the width of the carder, as

C main cylinder
W workers
S strippers
F fancy
D doffer
R roller



This diagram is patterned after information found in Cyclopedia of Textile Work, *vol. 2,* Woolen and Worsted Yarn Preparation *(Chicago: American Technical Society, 1914).*

[1]The person who finished wool cloth.

[2]Five wooden-frame, 24-inch, single-cylinder Scholfield carding machines are still known to exist. Two (one batt mill and one sliver mill) are in daily operation, and a third is in storage, at Old Sturbridge Village in Massachusetts; another is on display at Greenfield Village, Dearborn, Michigan; and the last is in the Museum of American History of the Smithsonian Institution, Washington, D.C., but no longer on display. All were probably built by Arthur in Pittsfield, Massachusetts, except for the one at Greenfield Village, which curators think was built by John.

opposed to a continuous roving.[3]

But where did the Scholfields get their ideas? They didn't invent the carding machine, they simply made it widely available in New England.

Until the mid-eighteenth century, hand cards were the only way to process fleece for woolen spinning. These tools haven't changed much since then, although early cards were always flat, with the wires placed in leather pads by hand.

In 1748, Lewis Paul patented two machines in England. The first amounted to sixteen left-hand cards, long and narrow, mounted on a board. The board was moved horizontally by a treadle, and a right-hand card was controlled by the operator. A hand-held *needle stick,* which resembled a very fine comb with needle-like teeth, was used to remove the fibers from each of the sixteen cards. This was not a great improvement over standard hand cards, but the second machine Paul patented contained the seeds of the technology we use today.

For his second machine, Paul thought to mount the sixteen cards not on a flat board, but in parallel on a cylinder. A frame under the cylinder, lined with similar cards, worked against the primary cylinder as it was turned by a windlass. A lever lowered the frame so the carded wool could be removed, again by a hand-held needle stick. This was not terribly efficient, but Lewis Paul had invented a mechanical carder.

Another patent, granted in 1748 to Daniel Bourn, utilized four carding rollers, although the carded wool still had to be fed and removed by hand. It wasn't until 1772 that John Lees of Manchester added the apron feed.

In 1775 Richard Arkwright patented both stripper rollers and a doffer comb, a version of Paul's needle stick, so fibers could be removed mechanically.[4] (James Hargreaves also claimed to have invented the two improvements, but Arkwright beat him to the patent.)

Together these two improvements made the carder a truly practical invention. Arkwright also added a funnel and two rollers after the doffer to produce a continuous sliver of carded cotton, but it wasn't until 1826 that John Goulding, an American, perfected and patented a way of doffing a continuous sliver of wool suitable for woolen spinning.

After arriving in Massachusetts, the Scholfields set themselves up with a spinning jenny and hand loom (of John's construction) in 1793 near Bunker Hill. Through their landlord, Jedediah Morse, they were introduced to a wealthy group in Newburyport interested in setting up a new mill.

In 1794, in a Newburyport stable, the brothers built a 24-inch–wide carding machine with one cylinder. The group was impressed and organized a company, with Arthur as overseer of carding and John as overseer of weaving and agent for buying raw wool. The resulting company had water-powered double carding machines, spinning and fulling machines, and hand-powered looms. The Newburyport Woolen Manufactury was in full operation within a year.

In 1799 the brothers found a valuable waterpower site in Connecticut and set up their own mill. Arthur finally married in 1801, sold his interest in the mill to John, and moved to Pittsfield, Massachusetts, where he built a carding machine and set up a mill. John and his sons continued to work at several sites in Connecticut.

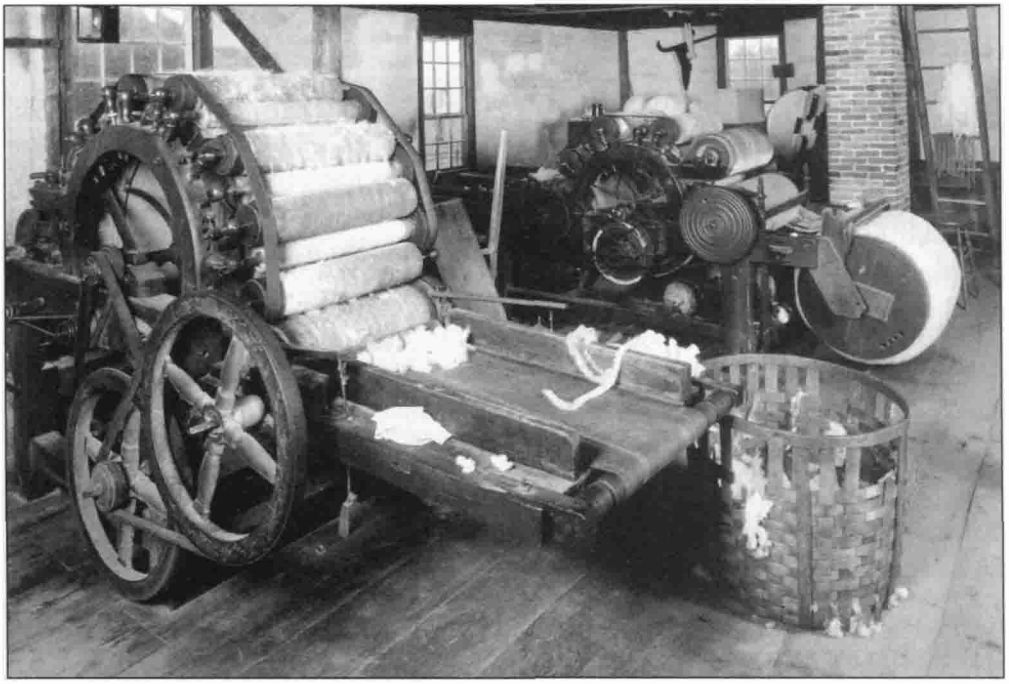
Arthur's work in Massachusetts was popular. Mechanically carded wool was easier to spin than hand-carded wool, and it produced a lighter yarn. Soon Arthur was manufacturing carding machines for sale, in addition to carded wool. He first advertised the machines for sale in September 1803.

By May of the following year he was advertising that he had machines for sale "upon a new and improved plan," and also offered plans and instructions to those who wanted to build their own equipment. By 1806 production of machinery was taking up his time, and he quit carding. Soon his machines were in use all over New England.

Once Arthur began marketing his machines they spread quickly. Despite the considerable skill required to build them,

[3]Today's table-top drum carders usually work on a simplified version of the system, including an apron feed (in the form of a metal feed tray), a main cylinder, and one worker cylinder. Instead of having a fancy to lift the fibers off and a doffer to pull them away, the operator pulls the batt from the drum by hand.

[4]Arkwright's doffer comb was a flat blade with a serrated edge, rather than needle teeth.



Carding mill interior, with Scholfield carder. Old Sturbridge Village photo B23700 by Henry E. Peach; used by permission.

they were in great demand. The 1810 United States census reports 1776 carding mills in the country, with 413 in New York state. By 1820 there were 1200 in New York state alone. Between 1800 and 1830, about thirty shops were building carding machinery.

Every town with a good water supply had a carding mill, it seems. Usually the mills ran on a barter system, with rates set by the town, which also monitored service. Farmers could bring in the annual clip, have it carded, and take it home to wives who would spin it for home use as well as for a little extra cash.

Other improvements were made at the beginning of the nineteenth century. The set composed of the main cylinder, workers and strippers, fancy, and doffer was known as a *breaker*. A second, and later, a third, breaker was added to improve the finished product. Carding cloth on the additional breakers was generally finer, to improve the sliver.

In 1826 John Goulding combined three inventions and patented the Goulding condenser. Cylinders covered with alternating narrow strips of card clothing and blanks, called *ring doffers*, divided the web from the main cylinder into flat strips of sliver. Each strip was drawn through a *spinning trumpet*, which made it round and more stable. The endless slivers were then wound onto bobbins.

The endless slivers, as opposed to the 24-inch ones, were essential to the developing woolen industry, since piecing the smaller slivers was labor-intensive in a factory setting and slowed down the spinning process.

In New England especially, textile production moved into factories early in the nineteenth century, and home production slowed down or ceased as the century wore on. One by one, the small carding operations closed down as wool production became more centralized in the large mill cities.

Carding machinery got larger and heavier, but the basic principles, so well practiced by the Scholfields and contemporaries, never changed. ❖

Resources

A Dictionary of Textile Terms. New York: Dan River, 1980.

Gross, Laurence F. "Wool Carding: A Study of Skills and Technology." *Technology and Culture* 28, no. 4: pages 804–827.

Homespun to Factory Made: Woolen Textiles in America, 1776–1876. North Andover, Massachusetts: Merrimack Valley Textile Museum, 1977.

Macaulay, David. *Mill.* Boston: Houghton Mifflin, 1983.

Rogers, Grace L. "The Scholfield Wool-Carding Machines." *Contributions from the Museum of History and Technology,* Bulletin 218, Papers 1–11: pages 3–14.

An ancient spinning tool:

the epinetron

by Stephenie Slahor

In ancient Greece and Rome, the making of cloth and textiles was considered one of the tasks a girl needed to learn so that she could provide herself and her family with clothing and other essential items. Wool, linen, silk, and cotton were all used; wool was probably the most common fiber because of its availability and its ease of working.

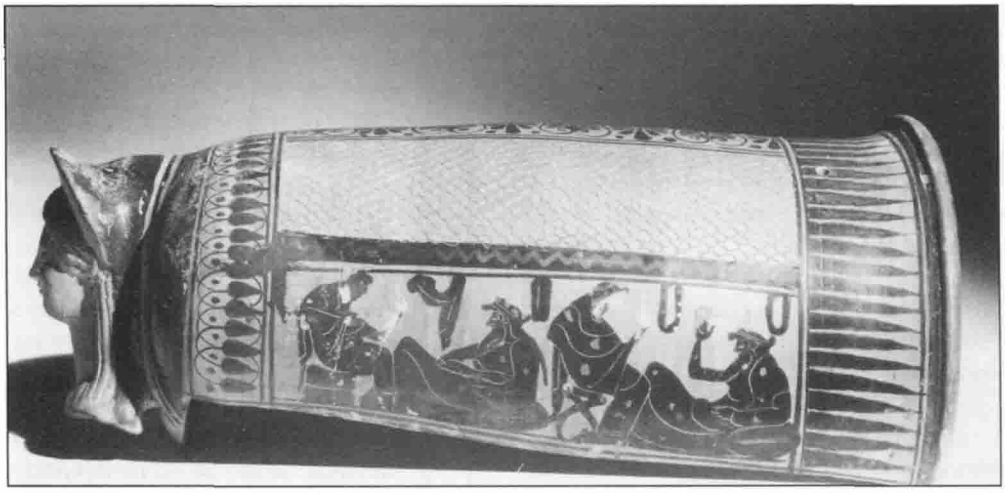
The fleece was removed from the sheep and then cleaned and dyed. The fibers were combed with wool combs and spun using a distaff and drop spindle. Then the yarn was woven on an upright loom which held the warp suspended from a crossbar and held in place by weights. Archaeologists have learned that the Romans also used a type of upright loom which stretched the warp between upper and lower crossbars.

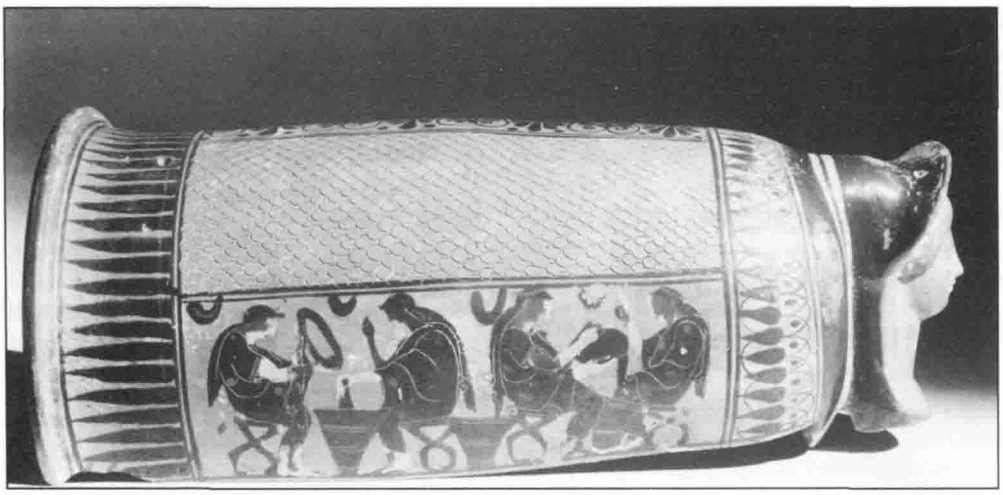
Much of the work of determining how all this was done occurs not through archaeologists' actual findings of old tools, but in studying the processes of spinning and weaving as depicted in ancient wall murals and on vases and other items. Very few textiles have lasted through the ages, but some of the items used in spinning and weaving have. One example is a Greek "thigh protector," or *epinetron.*

The wool was prepared by rolling the strand on the thigh. Epinetrons saved the skin and clothing from constant contact with the rolling wool; their ends were closed, to fit on the knee. These tools were often decorated with scenes of women preparing wool, and sometimes were decorated or grooved in such a way as to allow the hanging of the completed roves of wool.

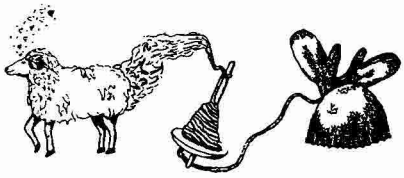
Working wool and other fibers is certainly much easier these days, but the ancients had a few ideas to systematize and ease the process of making cloth! ❖

Dr. Stephenie Slahor lives in Palm Springs, California, and is "a regular at the British Museum."





An epinetron, *or thigh protector, from the Townley Collection at The British Museum. Each side has different figures worked in black; the tool was made in Athens about 500–480* B.C.E. *Photos courtesy of The British Museum, London.*



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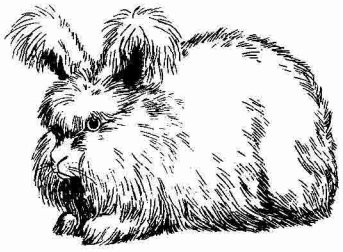

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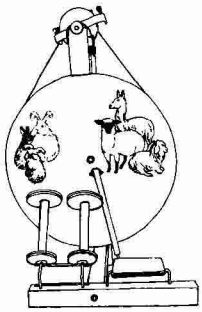

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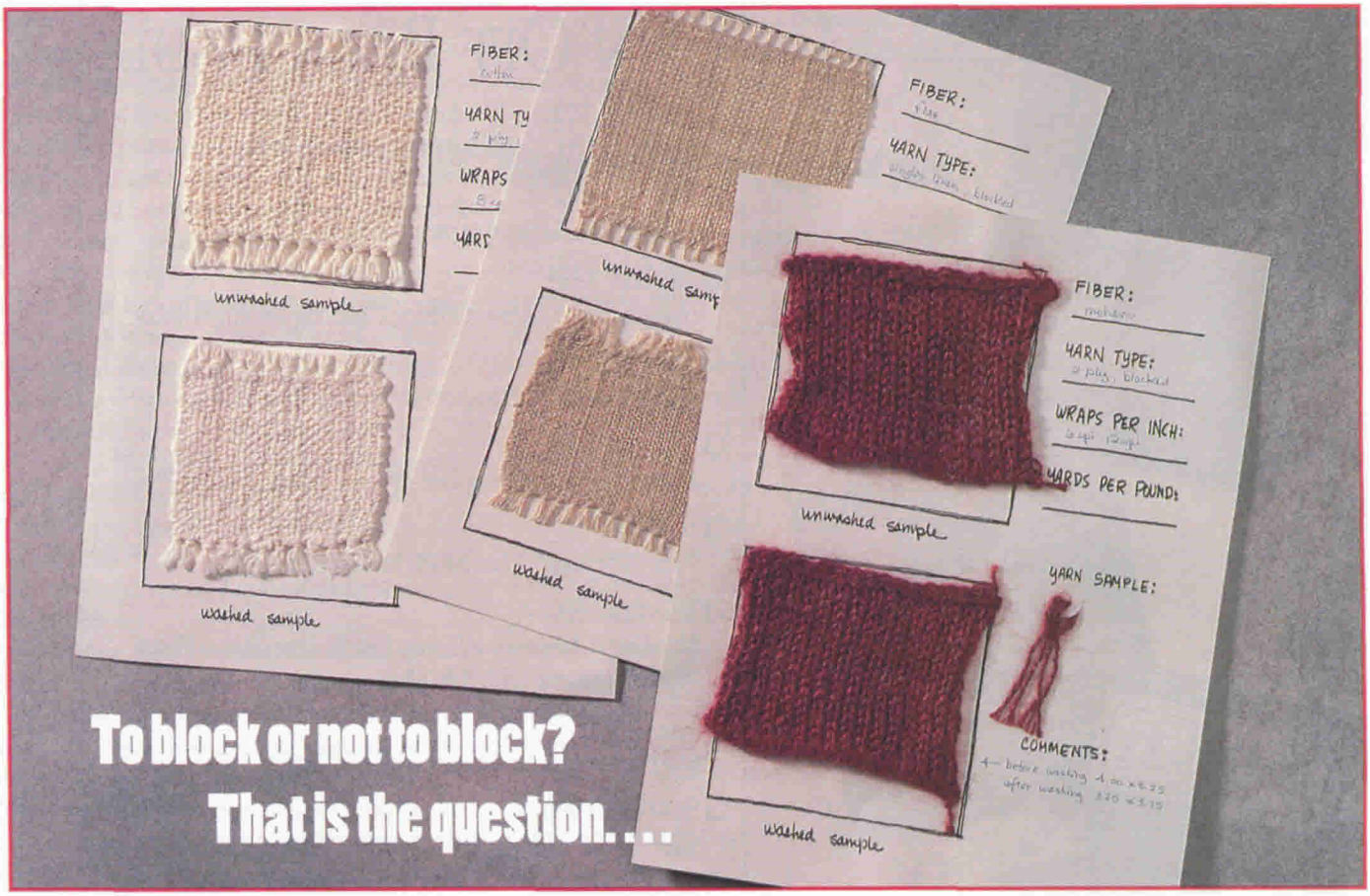

by Julie Owens

MANY YEARS AGO I started raising sheep. One thing led to another and I started spinning. Then I joined a spinning guild whose membership included several well-known teachers of spinning and weaving. I've subsequently come to the conclusion that most spinners are strongly opinionated, but in those early years I was confused that various instructors could differ so greatly in their opinions and techniques. I settled on a course of trying all the different suggestions and deciding what worked best for me in any given situation.

One subject that especially concerned me was the best way to finish handspun yarns for knitting and weaving. I canvassed my spinning friends, including those instructors I knew, on their approaches to blocking (which means wetting or washing handspun yarn, then drying it under more or less tension). Some were adamant about never blocking. One stated that she "blocked the living daylights out of all her handspun yarns." Yet another said that she blocked yarns if she had the time, but didn't if she was in a hurry.

Finally I gained an opportunity to address the question, "to block or not to block," thanks to a grant from the Portland Handweavers Guild. The goal of my study was to determine the effects that blocking handspun yarns under tension had on finished products, both woven and knitted. To do the study, I spun two skeins each of 56 types of yarn, and wove or knitted a total of 224 swatches. Making, measuring, and comparing all those swatches taught me that there's no single answer.

Blocking affects different yarns in different ways, and has different consequences depending on your end product. You still have to sample . . . there's no way around it. But making the swatches was a wonderful learning experience, and it certainly has helped me judge the suitability of a given yarn for a particular project.

Exploring a variety of fibers

Although my first love is wool, I also wanted to experiment with other possibilities. I ended up spinning yarns from nine

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different fibers.

Wool. Because of my preference, I jumped into this portion of the study eagerly. My sheep are mostly Romney and Romney crosses, so I have the most experience with medium to coarse wool with little crimp. To contrast with that, I included Suffolk-type wool (medium fibers with moderate crimp) and Merino wool (fine fibers with lots of crimp). Before spinning, I washed the wool and dyed some of it, then hand-picked and teased it and fed it through a drum carder.

Mohair. I used a kid mohair fleece, which I washed twice in hot (140° F) water and Wisk detergent, rinsed, dyed, then washed and rinsed again. I added fabric softener to the final rinse to control static electricity as I teased and carded the silky fine fibers.

Bombyx silk. I purchased bricks of bombyx silk from several sources and was amazed at the variation in quality. One supplier explained that bricks come in different grades. Premium-quality bricks are most consistent in fiber length, making it easier to spin a smooth yarn. Bricks containing chunks of shorter fibers are likely to spin into slubby yarn.

Silk noil. Previously, I had spun silk noil blended with wool, but never alone. To prepare it for spinning, I knew the drum carder was out . . . noil just sticks to the feeder drum and doesn't transfer to the large drum. Instead, I just fluffed up a clump of noil by hand and spun it from the mass. It made pleasantly lumpy fine yarns with lots of little dark flecks.

Cotton. I never used to enjoy spinning cotton, but felt it was necessary to include it in this study. In the process, I learned a great deal about cotton and about myself. I tried several different types of cotton and a variety of spinning preparations, and settled on using Acala cotton that I hand-carded and made into slender, firm, rolags (called punis) before spinning.

After spinning, the yarns were wound on perforated PVC spools and boiled for one hour to set the twist. Then I washed, rinsed, and dried the cotton yarns the same way I did all the other yarns.

Ramie. I used ramie roving, spun it dry, and set the twist by boiling, as I did the cotton. This produced delightfully lustrous, bright white yarns.

Flax. I'd never spun flax before and was surprised at how much I enjoyed it. I purchased line flax in strick form, mounted it on a distaff, and wet-spun it.

Spinning different types of yarn

I spun the fibers into yarns of different weights, both as singles and two-ply yarns, using less or more twist. I explored more of these options with wool than with other fibers. For example, I created twelve very different yarns from one fleece by spinning a soft-twist singles and a high-twist singles; a soft-twist two-ply and a high-twist two-ply; all in fine, medium, or bulky weights. Where I felt the fiber was totally unsuitable for a particular type of yarn, I didn't spin that sample. For example, I didn't bother with a soft-twist fine singles cotton yarn.

I made two skeins of each type of yarn, washed them in 90° F water and Wisk laundry detergent, and rinsed them in water of the same temperature. I dried one skein of each pair flat on a screen, and the other under high tension on a yarn blocker.

Sampling with the yarns

I wove two plain-weave swatches from each skein. I didn't use any sizing on the warps, because it would have masked the behavior of the yarns. However, some of these yarn types would benefit from sizing—it would make them stronger and easier to handle.

I knitted two swatches from each skein that I judged to have potential for knitting wearing apparel. I used a knitting machine to ensure that tension and stitch size remained the same from swatch to swatch.

I labelled all the swatches as I completed them. After they were all finished, I lightly steamed (but didn't press) them, not touching the swatches with the iron itself, just giving them several "shots" of steam. Then I mounted half of the swatches (one of each pair) in notebooks.

The other half of the swatches were subjected to three washings and rinsings in 90° F water, again using Wisk laundry detergent, then air dried. I lightly steamed them, taking care to avoid distortion, and mounted them in the notebooks next to their unwashed companions.

Conclusions

■ In general, the knitted swatches changed more with washing than the woven swatches did. I attribute this to the undulating and twisted path yarn takes in knitted work, compared to the straight grid of yarn paths in weaving. Also, several of the knitted swatches grew wider and shorter upon washing. Wool with definite crimp is less prone to this type of distortion than inelastic fibers, such as cotton. Remember that different wools have more or less crimp, and react accordingly.

■ Of the twenty-two knitted comparisons, five samples from blocked yarn shrank less, nine shrank more, and eight shrank about the same amount as samples from unblocked yarn. I attribute this to the individual fibers in each yarn wanting to go back to their original form—more or less straight but relaxed. For example, wool fibers blocked under tension have a lot of the crimp stretched out. This straightening is not permanent. When exposed to steam or water, the fibers resume their shorter, crimped, form.

■ Of the thirty-four woven comparisons, eleven samples from blocked yarn shrank less, ten shrank more, and thirteen shrank about the same amount as samples from unblocked yarn. However, these results are complicated by the fact that I used different tensions on different warps. For example, the blocked singles were far stronger than unblocked singles. I used very low tension on the unblocked warps to reduce breakage; even so, the unblocked mohair singles tended to slide apart, and the unblocked silk noil was so weak and broke so often that I ended up with a very small swatch.

■ To predict what will happen with your yarn, make sample swatches. For knitting, I recommend working a five- or six-inch-square swatch, washing and drying it two or three times and measuring your pattern gauge from the treated swatch. Weavers, too, need to make generous-sized swatches, and to full and finish them prior to doing a project.

■ Skeins of blocked yarns look more uniform and attractive than unblocked yarns, so for sales, commissions, and gift yarns, I suggest blocking. ❖

Julie Owens raises sheep, teaches spinning and dyeing, and makes knitted and woven goods for galleries and individuals.

Two spinners experiment

Playing with CASHMERE

Kaye Collins

See related article on page 91.

EARLY THIS YEAR, I was asked to spin some samples of commercially prepared cashmere and share my comments. I was delighted, because spinning fine fibers—and especially sampling them—is one of my favorite pastimes.

I first encountered commercially processed cashmere a little over a year ago, when I was in a group which toured a cashmere goat farm about an hour from my home in Colorado. At the farm, I bought fiber and couldn't wait to get home to spin it. I was grateful that the washing, dehairing, and carding had already been done, so I could get right to the fun part—the spinning. So I had a pleasant basis of comparison and a little experience with cashmere when the new sample packet arrived.

It contained two types of commercially prepared fiber: a creamy-gray batt and a darker gray roving. I immediately began to spin and sample.

Because of my previous experience, I knew a fine yarn would be most appropriate. Because the fibers were a mere one inch long, I planned to use a great deal of twist. So I set up the high-speed bobbin on my Ashford double-drive wheel. The resulting ratio was 21:1.

The creamy-gray batt. I separated two-inch sheets from the loose batt and pre-drafted them into thin rovings. The fibers were not perfectly aligned—which actually made the spinning go more smoothly. I made a two-ply fine yarn, a three-ply sportweight yarn, and a three-ply fingering weight yarn.

The softness was unbelievable. The fiber was very light, and only slightly fuzzy, unlike angora rabbit and dog down (which are some of my favorite fibers). I was especially impressed by the natural sheen. Only a few guard hairs remained in the fiber, and I could easily pick these out of the spun yarn.

Later I learned that this fiber was in the fineness range that allows it to be called *cashmere.*

The darker gray roving. The roving was quite dense, and I pulled the fibers apart sideways, then tore off a small strip, and pre-drafted the result. This fiber had less crimp and the fibers slid past each other very easily. Again, the staple length was short—between 1 and 1½ inches.

I kept the 21:1 ratio on my wheel and used a controlled short draw. I spun from the point of twist and did not finger-in the twist, because I wanted my yarn to stay as airy as possible. I envisioned a good knitting yarn that would display the softness and lightness of this exotic fiber. This yarn was less elastic than the creamy-gray yarns.

This fiber turned out to be technically *cashgora,* being slightly coarser than the cashmere.

Kaye Collins learns about cashmere at the source. Photo by Lee Collins.

What about blends . . . ? I also experimented with blending, and produced a 50/50 mix of cashmere and fine wool. Using cotton carders, I combined the fibers and formed a rolag, which I predrafted. This was easiest to spin using a longer draft; my yarn was not as shiny or soft as the 100 percent cashmere yarn, but was more elastic. This might be good for ribbings and cuffs, where elasticity is important.

Next I used the fine carders to blend the cashgora with some chinchilla-colored angora rabbit. The colors of the two fibers matched. The angora was hand plucked, with a 4-inch staple length. I pre-drafted a rolag, and was able to spin with a longer draw and less twist, because of the added staple length. This yarn was lighter and fluffier than the pure cashgora; at the same time, the color, sheen, and elasticity remained about the same. The angora added strength, and made the cashgora easier to spin without compromising what I think is its dominant feature: softness.

Knitting. Both fibers required close attention and high twist in the spinning, but the luxurious yarns were worth the effort. Only after sampling did it become clear that I preferred the three-ply fine yarns for knitting. I decided that a medium-weight yarn would be heavy enough to sag if made into a sweater or vest, and also would be very—too?—warm.

The singles for the fine three-ply yarns were spun Z at 14 twists per inch and measured 30 wraps per inch. They were plied S, to balance. The finished yarn measured about 125 yards per ounce, and in stockinette stitch worked up at 6 stitches per inch on size 3 (3.25 mm) needles.

Concentrating on the three-ply, fingering weight yarn, I found a lacy pattern for a baby bonnet. The first bonnet I knitted was not to gauge, and was not working well. I found another pattern and began again. The finished bonnet from this pattern required less than 1 ounce of yarn, but the lace pattern needed more attention than I usually invest!

Learning more. In March, I attended a workshop on cashmere held at another cashmere farm—still in Colorado, but a little farther afield. This extremely informative one-day event covered cashmere and cashgora goats, and the cashmere industry.

It was wonderful seeing all the different goats, and the young kids playing in the crisp mountain air. We hand-combed fibers directly from the animals, and I spun samples. The cashmere we combed was too full of debris to spin; I strongly preferred working with commercially processed fiber.

On the other hand, the cashgora had a long staple—over 4 inches—and contained few guard hairs. I was able to take out most of the guard hairs by combing the fiber on five-row wool combs. The remaining hairs could be removed by hand, although this is a lengthy process. The fiber spun easily, although the guard hairs compromised the character of the yarn.

My conclusions? Cashmere is a fascinating fiber, and commercially prepared cashmere and cashgora are superior spinning materials. Their fineness and short staple will encourage even a reluctant spinner to make her finest yarn yet.

Kaye used a three-ply, fingering weight yarn to knit this cashmere baby bonnet.

Maggie Putnam

WHEN I WAS offered a chance to work with some locally grown cashmere, I jumped. What spinner could pass up an opportunity like this? Cashmere is a wonderful fiber, but expensive enough that I have only worked with it a little.

When the fiber arrived, I compared it with some cashmere I had bought years ago. The old batt was soft—but full of dander and guard hair. There were two types of fiber in the new samples; both were clean, and had only a few guard hairs.

Before I started to spin, I gave my Schacht wheel a tune-up. I cleaned and oiled it, and set it in single-drive mode so I would have the lightest possible tension acting on the short, delicate fibers. I also installed a half-full bobbin, to avoid the jerkiness that sometimes occurs when spinning a fine yarn onto an empty bobbin.

The gray-beige combed preparation. One sample had been combed. I learned later that this was cashgora. The fibers were about 2 inches long when held under tension, were quite soft, and had a nice sheen. However, the combed preparation was very dense, and when I tried to predraft the fibers I couldn't make an even roving. So I divided this sample into two batches and experimented.

First, I peeled narrow strips off the top and spun them with a supported long draw. My yarn had about 12 twists per inch, and measured about 40 wraps per inch. After letting the yarn "rest" on the bobbins overnight, I plied the singles, washed the yarn, and let the skein dry without blocking.

Next, I ran the same fiber through my cotton carders, to see if I could loosen the mass and get more air into my yarn. After making rolags, I spun a yarn in the same size as the previous experiment, so I could compare them.

Both yarns are soft and lustrous, and have little elasticity. Although the difference is slight, I prefer the carded yarn because it is a little softer.

The creamy-gray carded preparation. This was a lighter fiber, with fibers slightly over an inch long—it turned out to be cashmere. The fibers spun efficiently from the carded mass, without further manipulation. They drew out nicely, and I had only a few slubs caused by shorter fibers.

I spun long draw, making a yarn with the same amount of twist as the first yarns. It measured about 42 wraps per inch. I plied, washed, and dried the yarn in the same way.

This yarn was soft and fuzzy, again without much elasticity. I compared this yarn to some commercial cashmere yarn: mine was softer, fuzzier, and more lustrous.

Weaving. A scarf seemed like an appropriate use for this yarn. I made two samples, looking for a nice, lightweight fabric.

For the first sample, I wrapped a ruler with the pure cashmere yarn and estimated a balanced sett at 10 ends per inch. Because I wanted to try both plain weave and twill, I decided to sett the actual warp at 12 ends per inch. For variety, I added three strands of the first cashgora yarn at intervals. In the weft I used mostly the cashmere yarn, with a little of the first cashgora yarn as a border.

The yarn was slippery, and I had to take care to keep a balanced beat. I wove for a while in plain weave, then switched to a 2/2 twill. The fabric looked very loose, and I was afraid that I had not sett the warp closely enough. After washing the sample and pressing it lightly, I decided the plain weave section was boring and did not show off the cashmere yarn. I preferred the twill section, which emphasized the sheen and softness.

For the second sample, I switched to a Merino warp. I spun the Merino to the same size as the cashmere, but after the twist had been set it looked slightly thicker. I wrapped a ruler to estimate a balanced sett, and again settled on 12 ends per inch for a 2/2 twill. I threaded to a Dornik twill.

For weft this time I began with the cashmere, which seemed to be swallowed up by the loft of the Merino. So I switched to the second cashgora yarn. For this warp, the cashgora was a more appropriate weft. When I washed and pressed this sample, the wool fulled substantially, making a denser fabric than the first—and the

sample was wonderfully soft.

A comparison of the two woven samples increased my appreciation for the cashmere. A scarf woven like the first sample would be sheer and almost lighter than air—a truly elegant accessory. One woven like the second sample would be thicker, and would feel buttery and silky at the same time—this would be the scarf you would choose to stay cozy.

I really can't decide which sample I like the best, so I guess I'll have to get enough cashmere to weave two scarves. ❖

Kaye Collins, of Fort Collins, Colorado, got started spinning with the raising of a lamb which then provided her with a fleece, and you can imagine the rest of the story. Along came angora rabbits. A few years later, she began to work with a lot of dog down, particularly from Samoyeds. In addition to running her in-home business, Fiber to Fabric, Kaye teaches spinning and weaving, writes, and does custom spinning, specializing in one-of-a-kind items made from her clients' animals' fiber.

Maggie Putnam, who completed Part I of the Handweavers' Guild of America's Certificate of Excellence in handspinning last year, teaches spinning regularly in Boulder, Colorado. She says she's made every mistake in the book at least three times; that's how she learns. And her pile of started projects is much bigger than her stack of finished projects, because "trying things is so much fun!"

Resources

Buttons and Bows. Brunswick volume 904. Pickens, South Carolina: Brunswick Worsted Mills, 1990.

CASHCO Goats America, 1901 Arapahoe, Longmont, Colorado 80501. Bronwyn Schuetze and Jill Darrah.

Cashmere America, PO Box 1105, Castle Rock, Colorado 80104. Terry Sim.

Dooling, Ann. "Cashmere comes to Pioneer Mountain." *Spin·Off* 14, no. 2 (Summer 1990): pages 26–27.

Feldman-Wood, Florence. "Cashmere goats come to America." *Spin·Off* 13, no. 2 (Summer 1989): pages 65–66.

___. "Continuing adventures with cashmere and cashgora." *Spin·Off* 13, no. 2 (Summer 1989): pages 67–69.

1. *Cashgora*
2. *Cashmere*
3. *Cashmere two-ply*
4. *Cashgora two-ply, from fiber recarded on cotton carders*
5. *Cashgora two-ply, from strips pulled off top*
6. *Plain weave sample, predominantly cashmere*
7. *Twill sample, Merino warp with cashmere (light) and cashgora (dark) weft*

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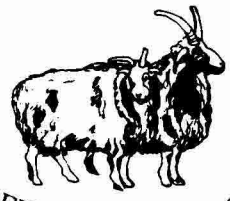

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Update on American Cashmere

by Bronwyn Schuetze and Terry Sim

Pure *American* cashmere is rare in the textile world. The first Australian cashmere goats imported into the United States arrived in Colorado in 1986. Although there are now about three hundred cashmere growers across the United States, less than one percent of the total world cashmere clip is produced on this continent.

Cashmere in general is a warm, very soft, and luxurious fiber. It has a fiber diameter of between 14 and 20 microns. Naturally occurring colors in pure cashmere include white, light gray, soft brown, light brown, medium brown, and dark brown. According to a major U.S. cashmere processor, Forte Cashmere Company, in Rhode Island, American cashmere in particular has a unique handle, with above-average length and a distinctive sheen.

Because the 1992 clip is expected to be less than 500 pounds, the quantity available is limited.

America's cashmere growers have formed a national cooperative to explore the potential of their fiber, and to market it directly to handspinners, weavers, and knitters. The long name for this group is the American Cashmere Goat Marketing Co-operative, and its business title is Cashmere America. The cooperative's members are currently learning how best to classify and process their fiber, and also how to market it. They are concentrating on dehaired cashmere and cashgora in both roving and batt form, and are also making a cashmere/wool top. As part of the effort to refine its product, the cooperative has supplied several handspinners with samples and asked for their opinions of the fiber and its preparation.

In general, the carded batt appears to be simplest to spin, although some spinners may want to separate it into layers. The roving (¾ inch in diameter and dense) drafts unevenly unless it is loosened before spinning. One suggestion is to divide the roving into foot-long sections and open it out lengthwise.

To prepare yarn for knitting, the following finishing process has been used successfully. Soak the skeins in very warm water with a little Ivory Liquid for about twenty minutes. Then rinse the yarn three times, using water of the same temperature. Roll the skeins in a towel to remove excess moisture and hang them to dry. ❖

Bronwyn Schuetze is a co-owner of CASHCO Goats America, which is located on a ranch in Longmont, Colorado. With encouragement from an Australian friend who got the cashmere business going in Australia, Bronwyn imported the first goats into the United States about seven years ago. This is her first experience with livestock and with fiber. She and CASHCO's other owner, Jill Darrah, were responsible for over 1200 goats after this year's kidding.

Terry Sim, from Victoria, Australia, spent the last eight years grading and marketing cashmere in Australia. He met Bronwyn at an international seminar on cashmere, and was recruited to come to the United States to establish the cooperative venture of Cashmere America. His responsibilities include grading and marketing the American clip and educating growers.

A CHALLENGE IN PURPLE

Q: What can 200 creative spinners do with 200 identical bags of fiber?
A: 200 different things! Do your own thing, and share your results with fellow spinners through *Spin-Off* magazine. Use these fibers any way you please—some, all, or combined—and send your resulting piece to Interweave for a celebration of diversity and unlimited possibilities.

Warning

When I am an old woman I shall wear purple
With a red hat which doesn't go, and doesn't suit me,
And I shall spend my pension on brandy and summer gloves
And satin sandals, and say we've no money for butter.
I shall sit down on the pavement when I'm tired
And gobble up samples in shops and press alarm bells
And run my stick along the public railings
And make up for the sobriety of my youth.
I shall go out in my slippers in the rain
And pick the flowers in other people's gardens
And learn to spit.

You can wear terrible shirts and grow more fat
And eat three pounds of sausages at a go
Or only bread and a pickle for a week
And hoard pens and pencils and beermats and things in boxes.

But now we must have clothes that keep us dry
And pay our rent and not swear in the street
And set a good example for the children.
We will have friends to dinner and read the papers.

But maybe I ought to practise a little now?
So people who know me are not too shocked and surprised
When suddenly I am old and start to wear purple.

—*Jenny Joseph*

At SOAR '91, in Potosi, Missouri, a theme developed. Jenny Joseph's poem came up at the beginning of the conference; this was the year of the purple sweatshirts; and the final gathering ended with the distribution of packets of hand-dyed fiber (the coloring of which reflected, in part, the staff's familiarity with this particular poem), containing the challenge outlined on the opposite page.

What did we get back?

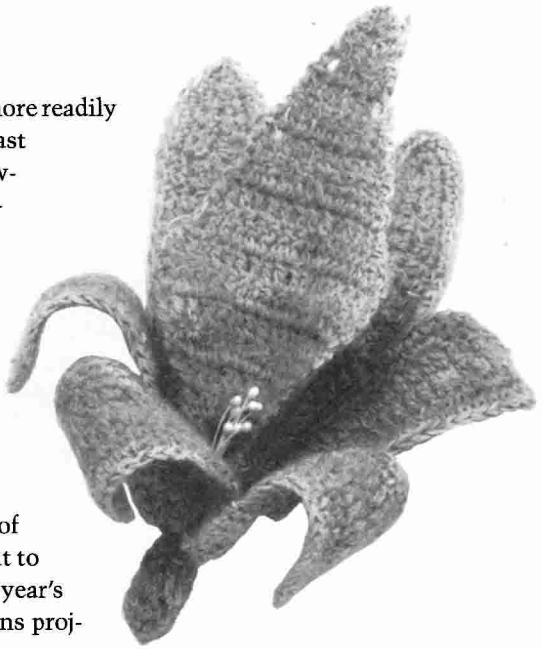
A celebration of the diversity of spinners which exceeded our wildest imaginings: in skill levels, in form, in creative use of the fibers. In turn, the Interweave staff was challenged to find a way to present the wonders that arrived in brown wrappers in our mailbag. Here they are, for your enjoyment and inspiration.

We also received comments on the spinning process, from the farthest reaches of our community. We've included some of the spinners' words, in part for our usual purpose of getting at how (and why) the things we do get done. But in putting these words together it becomes clear that spinners (and all creative people)—no matter how experienced—face the same questions and uncertainties each time they embark on a new project. Those new to a craft often think that at some magic point decisions become obvious and nothing goes wrong.

As long as the work is breaking new ground—in skill requirements, vision, materials—the questions and the processes for resolving them remain the same. Yes, the fingers become more adept, the eyes and sense of touch can more readily evaluate the fiber, the bank of past information is richer. Mostly, however, experience brings less resistance to the taking of risks: for example, when Sammy Eber dunked an entire, almost finished, vest project in a dyebath, or when Lorie Cobb decided to make a playful experiment with *handspun* mop yarn.

So here's a bunch of us, with projects to share, from all walks of the spinner's life. In case you want to join the fun, see page 111 for next year's adventure. A ★ by an entry means project instructions are included.

Iris Thomason



Iris Thomason

Shown on This Page and Opposite

Pansy napkin ring and orchid brooch
by Iris Thomason
Cheshire, U.K.

Dark and light shades were spun separately, then two-plied. The crocheted flowers were taught to sit up correctly by fabric stiffener bought in Saint Louis.

★ Shimmering scarf
by Pat Wagner Thompson
Houston, Texas

I had a lot of fun with the SOAR challenge, and I learned *a lot!*

Yarns: Challenge silk and Merino, blended ⅓ to ⅔ and spun (two-ply), at 3350 yards per pound—129 yards for warp (43 ends) and 75 yards for weft, a total of 204 yards; challenge Merino at 100% (two-ply), at 3350 yards per pound—33 yards for warp (11 ends); Treetops Colour Harmonies in silk, "English Country Gardens" (two-ply)—132 yards for warp (44 ends) and 105 yards for weft, a total of 237 yards.

Warp: 95 ends, including floating selvedges, 3 yards long.

Sett: 16 ends per inch in a number 8 reed, sleyed 2 per dent.

Draft: Eight-shaft straight draw, treadled as a broken twill. The draft is shown on the next page.

Finishing: Hand washed in Orvus paste.

Opposite: Pat Wagner Thompson's scarf is shown, along with the original contents of a challenge pack (upper left)—as well as samples of the silk Pat added.

Shrinkage was 26% in width, 8% in length. The fringe was twisted with 4 ends per group, twisted together in two groups of 2, then overhand knotted at the ends and trimmed.

Resource

Alderman, Sharon. "A Matter of Twill." HANDWOVEN 3, no. 1 (January/February 1992): pages 36–39.

SHOWN ON PAGE 95

★ Soft woven wool scarf, with warp stripes

by Cynthia Williams
Houston, Texas

SOAR is a wonderful experience: new friends, great teachers, inspiration, encouragement, support . . . HOMEWORK?!? On the last day in Potosi, we were all given baggies of fiber and told to make something. With some 150 or so spinners, Deb and Dale wanted to see 150 different answers to the challenge by March 1.

Now I ask you, red and lavender? Obviously, something had to be added. And I had some lovely white Targhee. . . .

If you're like me, you procrastinate. I walked past that baggie of fiber every day. Finally, I told myself to spin the fiber and see what the yarn said to me. Both wool and silk spun comfortably at a fairly fine grist. I wound up with two-ply yarns that measured about 24 wraps per inch.

I decided to make a woven scarf, either striped or plaid, with white as the background color . . . but the loom I wanted was at the Houston Livestock Show and Rodeo. In time, I had red and lavender yarn, an empty loom, and no white yarn spun.

Fortunately, the deadline was extended by a few weeks. I knew I could not get enough white yarn spun in time, but I had been spinning some black New Zealand Corriedale. As luck would have it (or because I was spinning from habit), its grist was comparable to that of the challenge yarns. I also liked the way the colors intensified on the dark background. I planned a black and lavender scarf, with fine red lines in the black areas.

But I can't leave anything simple. I wanted to use a twill, but also wanted a reversing warp- and weft-faced effect. Unfortunately, my loom is four shafts and direct tie-up. Because I didn't have time for pick-up, I needed a loom-controlled weave.

Marguerite Porter Davison's *A Handweaver's Pattern Book* contains an idea based on jeans twill—2/1 and 1/2—which I had been wanting to try (Swarthmore, Pennsylvania: Marguerite P. Davison, 1975; page 31, a variation of "Twill Blocks #2"). I designed the fabric so that the face of the twill and its direction change with the color. The black and red are weft-faced when the lavender is warp-faced, and vice versa. The resulting effect is not as strong as I wanted it to be, but the subtle shadowing effect where the twill changes is quite pleasing.

Finished size: 11½" by 74" (29 × 188 cm), plus 5" (12.5 cm) fringe at each end.

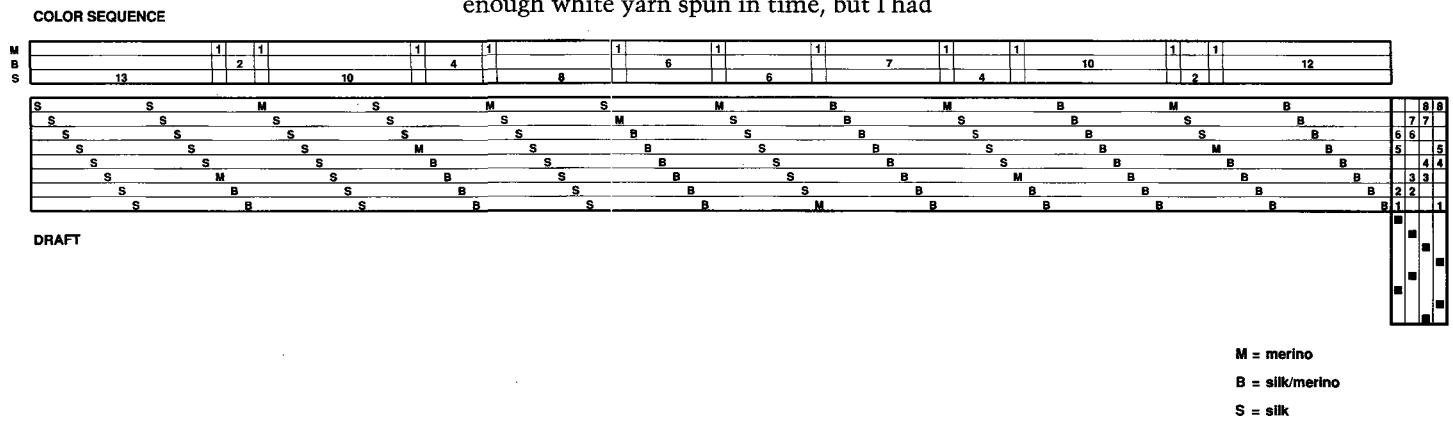
Yarns: Challenge silk, about ⅓ ounce, spun into a two-ply yarn at about 2700 yards per pound—57 yards; challenge Merino, about 1⅓ ounces, spun into a two-ply yarn at about 3000 yards per pound—250 yards; black Corriedale, spun to about 2700 yards per pound—500 yards.

Warp: 152 ends, including floating selvedges, 3 yards long.

Sett: 12 ends per inch; 12½" (32 cm) wide in reed.

Draft: On opposite page.

Weaving: The main body of the scarf is the A treadling, with stripes of the B trea-



Pat Wagner Thompson's scarf (pages 92–93), weaving draft and color sequence.

dling. I used 10″ (25 cm) of the A treadling, 16 shots of B, 12 shots of A, 16 shots of B, then 10″ (25 cm) or so of A for about half the scarf. For the second half of the scarf, I treadled mostly A, adding a double stripe of B about 10″ (25 cm) from the end.

Finishing: Machine-fulled, using Orvus paste, and hung to dry. The fringe was twisted with 8 ends per group, and trimmed to about 5″ (12.5 cm) long.

Alpaca-blend mittens

by Carol Rhoades and
Donna Coates Rogers
Austin, Texas

We went to SOAR '91 together and so thought it was appropriate to pool our resources and talents for the challenge. We wanted to use all three fiber samples, and to make something useful and patterned.

Donna, who has the color expertise, proposed that we make a clearer difference between the two purples in our packets by lightening one and darkening the other. We dyed white alpaca with Gaywool "Hibiscus," and blended it 50/50 with the lighter purple, using a drum carder. We blended the darker purple with black alpaca and a white alpaca, dyed with Gaywool "Violet," in proportions of 50/25/25. These we turned into two-ply yarns.

We hand carded the silk, using cotton cards, and made a three-ply yarn. We ended up with the following amounts of yarn: light purple, 1¾ ounces or 164 yards; dark purple, 1¼ ounces or 122 yards; rose silk, ½ ounce or 100 yards.

We chose the pattern called "little slants and pegs," from *Foroysk Bindingarmynstur* (Faroese knitting patterns), by Hans M. Debes (Torshavn: Foroyskt Heimavirki, 1969; page 43). Carol knitted the mittens on double-pointed needles in sizes 1 (2.5 mm) and 3 (3.25 mm).

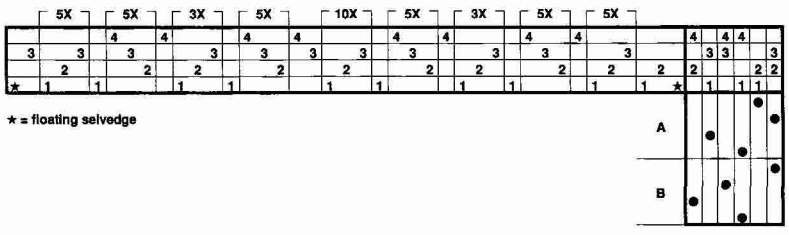
We didn't have time to think of another project for the leftover yarns—8 yards of light purple, 90 yards of dark purple, and 70 yards of rose silk—but we should be able to make another wearable!

1. *Cynthia Williams, scarf*
2. *Carol Rhoades and Donna Rogers, mittens*
3. *Joan Marsland, beaded hat*
4. *Lucy Dietrich, tam*
5. *Nory Young, necklace*
6. *Susan Conover and Shirley Conover, scarf*
7. *Kathryn Ross Chastant, headband*
8. *Carole Adams, child's hat*

COLOR SEQUENCE

lavender		16		16		16		16			
red	2		2		2	2		2		2	
black	12	4	4	4	12	4	12	4	4	4	12

center



Cynthia Williams' scarf (pages 94–95), weaving draft and color sequence.

1. *Gisela Evitt, afghan*
2. *Susan Bloom, purple woman doll*
3. *Anne Campbell, neckwarmer*
4. *Anne Brooks, coiled basket*
5. *Eira Hughes, tam*
6. *Mary-Stuart Reichard, glasses case*
7. *Verna V. Friedrichsen, glasses case on a string*
8. *Ellen Minard, miniature sweater, hat, and scarf*

Small beaded hat
by Joan Marsland
Middlewich, Cheshire, U.K.

Here is the challenge fiber duly made up. I used all the pink silk for the little hat and had just 8 inches left. *(Editor's note: See also Joan's sachet, page 103.)*

Tam with pom-pom
by Lucy Dietrich
Cedar Rapids, Iowa

The shape of this tam came from *Knitted Tams*, by Mary Rowe (Loveland, Colorado: Interweave, 1989). All the yarns were two-ply, with each fiber spun separately and plied on itself. Three colors were acquired by separating the Merino into its lavender and "navy" components and working with these in distinct batches. There were 64 yards of the silk yarn, 86 yards of the navy, and 92 yards of the lavender.

Necklace
by Nory Young
Leesburg, Florida

This is a neatly bound bundle of two-ply yarns—some all wool, some wool/silk, some with a fine, iridescent, magenta strand added. The necklace is secured by a barrel clasp.

Wool scarf with silk trim
by Shirley Conover and Susan Conover
Aurora, Ohio

Susan Conover and I each spun our yarn, and I knitted the scarf. The stitch pattern for the body came from *Treasury of Knitting Patterns* by Barbara Walker (New York: Charles Scribner's Sons, 1970; page 185). It is a *half herringbone faggot* or *faggoting rib stitch*, worked on a multiple of three stitches. Each row is the same, and is a repeat of the following sequence: k1, yarn over, k2tog. The edges are crocheted.

Ear warmer with knitted loops
by Kathryn Ross Chastant
River Ridge, Louisiana

The base yarn is a two-ply made from the purple Merino. The accent yarn is a two-ply, made from one ply each of the Merino and the rose silk. The band is a k2, p2 rib. Cast-on was done with the wool/silk, and then came a half-inch of solid purple. Three "stripes" of silk/wool were added at half-inch intervals, incorporating knitted loops about an inch long. The final silk/wool stripe is just that—it doesn't have the loops. After a final half inch of purple, the band was bound off.

Editor's note: This looks great on! And it's very stretchy and soft.

Child's cap with ear flaps
by Carole Adams
Belchertown, Massachusetts

The Merino and silk were spun two-ply and used to make the heart pattern, borders, and crown design of the cap. I used a white Romney for the background color.

SHOWN ON PAGE 96

Soft afghan
by Gisela Evitt
Stanford, California

I'm sure you were not aware of how BIG the challenge was for me—to have

one of my most-favorite people handing out my least-favorite colors! So step one was to disguise the purple (but it was wonderful to spin!). I spun the roving side-by-side with locks of kid mohair, dyed in a range from pale pink through rose, lavender, and deep violet. I plied the resulting singles with itself—Bill, my husband, gave me most of his bagfull, too. Now I had 318 yards, still very purple but improving.

Next, I spun more of the dyed kid mohair side-by-side with black Cormo—this was fun, because each length was different. I enjoyed the spinning so much that I ended up with enough yarn to make the warp for an afghan. The weft is handspun singles from a very dark sheep.

I scattered the challenge purple in twill bands, mixed with the Cormo/kid mohair yarn, alternating these with tabby bands composed entirely of the dark Cormo/kid mohair.

The silk I spun and plied with itself, and it awaits another project. Thanks for the fun!

Purple woman doll
by Susan Bloom
South Lyon, Michigan

As I looked around at the purple SOAR sweatshirts in the last gathering, I was reminded of one of my favorite poems—and when I received the challenge yarn, I knew immediately that it wanted to be a "purple woman."

I carded all the fibers together and used them for the skirt of a doubleweave doll (look, ma, no seams!). The rest of the doll is commercial and handspun oddments, stuffed with black wool.

Neckwarmer with silk tassel fringe
by Anne Campbell
North Wales, U.K.

This is worked in a Shetland lace pattern called "New Shale," from Sarah Don's *The Art of Shetland Lace* (London: Mills and Boon, 1980), pages 110–11. The lightest purple is incorporated as a subtle stripe at one end.

Coiled basket
by Anne Brooks
Castleton, Vermont

This is a coiled basket, made with handspun wrapped around a linen core. Thanks for the fun!

Tam
by Eira Hughes
Merseyside, U.K.

I spun some of the silk with lots of twist, and made the Dorset-button earrings *(shown on page 104)*. Then I carded the two fibers together and tried to spin the result finely, remembering Jane Fournier's class. I knitted the tam and made another pair of earrings to match.

Needlepoint glasses case
by Mary-Stuart Reichard
Louisville, Kentucky

Worked on 10/inch canvas, with a diamond-and-square pattern, folded. Lined with delicately patterned pink cotton to match the dyed silk.

Doubleknit glasses case on a string
by Verna V. Friedrichsen
Wilton, Connecticut

Here is my answer to your challenge—have you figured out that it's a spectacle pocket? Since joining the reading-glasses club, I've used such a holder for my glasses, and they are always near my eyes while being protected from scratches.

I spun the fibers finely, and tried to keep the two sets of yarn at similar diameters. I ended up with about one-third as much silk as wool, so the inner layer of the case and the background of the outer layer are wool, patterned on the outside with the silk.

For the cord, I round-braided four strands of the yarns together, then took each braid as a strand to make a twisted rope. I sewed this to the outside edges of the case and tied the result in an overhand knot at the bottom edge.

Miniature sweater, hat, and scarf
by Ellen Minard
Norwich, Vermont

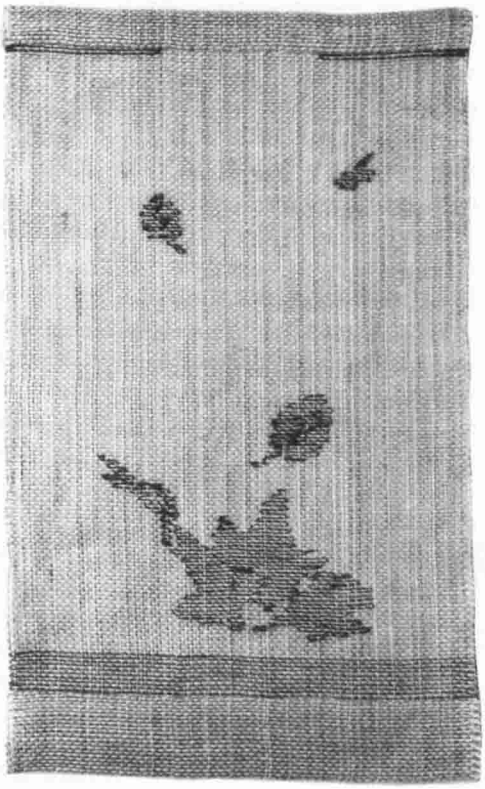
I needed a lot of thought to decide what to do with the small amount of fiber. Then one of the newsletters from the New Hampshire spinning guild contained a pattern for a miniature sweater, and the connection hit. I knew I would need a fairly fine yarn, but I wanted to use both fibers in the sweater, so I planned a three-ply yarn containing two plies of wool and one of silk. The finished yarn has a 30° angle of twist and 4 twists per inch; it measures 15 wraps per inch, and 800 yards per pound.

I set the twist in warm water and hung the skein to dry. The sweater was knitted on size 1 needles (2.5 mm). When the sweater was finished, I had enough yarn left to make the hat and scarf, although I used a two-ply all-wool yarn for these.

Transparency with SOAR logo
by Brenda Ewell
Wembley Downs, Western Australia

The leaves are falling, not completely fallen as in the official format for the SOAR logo—and the logo has been reversed. Remember that I view things the opposite way around from the other side of the world!

The warp is a combination of 16/2 and 16/1 linen from Blomquist of Sweden in white and taupe. The weft is 16/1 linen in white. The leaves were inlaid with the SOAR fibers.



Brenda Ewell

"Mirror, mirror, on the wall, Hang me up so I won't fall."
by Lorie Cobb
Aurora, Oregon

Cotton base: Navajo three-ply from hand-carded ginned cotton.

Silk and wool blend: For the knitted lace "dress," hat, and ribbon, three-ply yarn made using a plying template and worked on size 1 (2.5 mm) needles.

Wool: Two-ply yarn knitted on size 00 needles (2 mm) for the flowers and ribbon, and crocheted into a chain for the braid of the sleeves.

Linen: For knitted lace nosegay, two-ply bleached flax worked on size 00 (2 mm) needles.

Ramie: This is the hand-dyed green, woven on wire to make the leaves.

Lorie Cobb

Flower transparency
by Vicki Rigel
Plympton, Massachusetts

The warp is linen, and the weft is a combination of linen (for ground weft and leaves) and the SOAR fibers.

Bobbin lace bookmark
by Jeannine Glaves
Tulsa, Oklahoma

I made this bobbin lace bookmark from the silk in the SOAR challenge pack. Thanks. . . .

SHOWN ON PAGE 101

Baby mittens
by Toni Trudell
Hingham, Massachusetts

I intended to felt these little mittens, but they *would not* felt. The soft Merino makes the body of each mitten, and the silk became a braided string and the flower embroidery.

Baby sweater
by Mary Lou Holmes
Jenkins, Missouri

I received my fibers late, and the

question of what to do with them was already urgent. But news of a new grandbaby on the way inspired me. I slightly blended the gorgeous silk with the equally beautiful Merino and began to spin. The silk shone through the Merino, just the way I wanted it to.

Ultrasound showed that the baby would be a boy, and even in this liberated day, lavender and pink didn't seem appropriate. But I had received some navy alpaca as a door prize at SOAR, and I had a bit of wonderful Corriedale roving I was saving for a special project.

The baby was born in April, so I made the sweater to fit him next winter—in navy blue and white, with a little luxurious lavender spiced with hot pink!

Silky bear with sweater, mittens, scarf, and hat
by Barb Getty
Medina, Ohio

Hi, my name is Bear, and I have met the challenge—a few days late, but better late than never. The original spinning was intended for a woven scarf, but after much procrastination it was decided that Bear would be dressed. Not being a knitter, this was a fun project.

Vicki Rigel

Little girl's smock-vest
by Jan and Trudy van Stralen
Prescott, Ontario

SOAR '91 was special to us because Jan, after all these years of being exposed to spinners and weavers, took to spinning with gusto. At the Saturday spin-in, Jan Louët showed him what was involved, and the rest is history.

When the SOAR challenge was given to us all, we decided to pool our resources. We spun the challenge fiber on our Louët S-90 wheels, and then Trudy crocheted a little vest for darling Kim, who is an important member of the family. We find that our garment is a good example of the values SOAR has stood for over the years: sharing, learning, resourcefulness, and imagination.

Baby booties
by Lila Gehner
Illinois City, Illinois

These are knitted with a two-ply that combines the wool and silk in the foot area, and a two-ply of just the wool in the cuffs. The gathering strings at the ankles include a strand of each yarn, twisted together.

Mini-tam
by Chris Hunsburger
Independence, Missouri

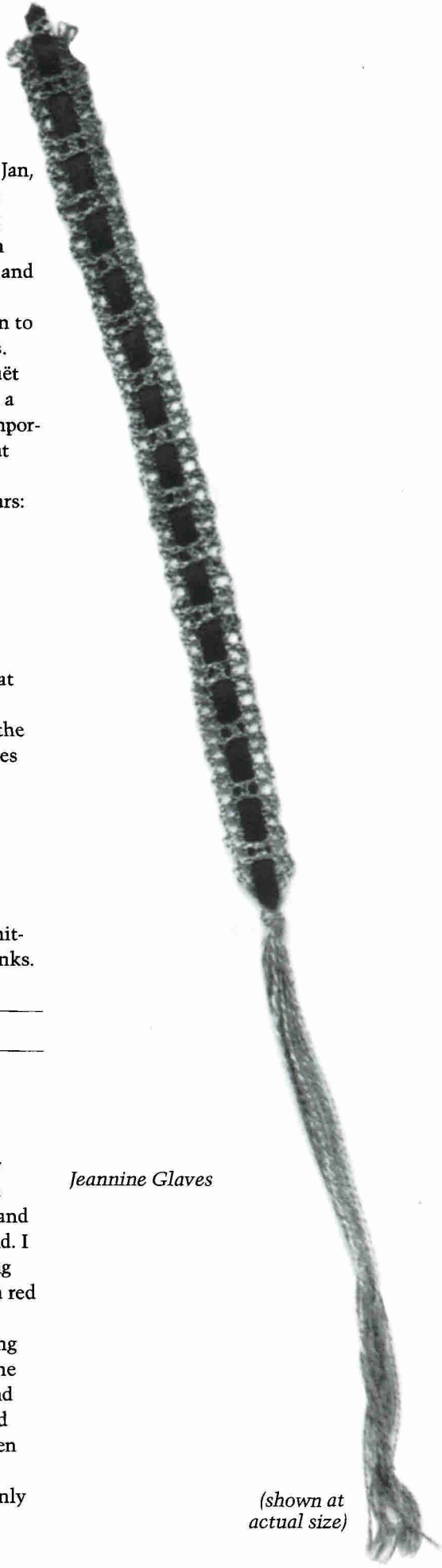
I love to spin and am a beginning knitter (as you can see from my tam!). Thanks.

SHOWN ON NEXT PAGE

Striped tam
by Jodie Aves
Albuquerque, New Mexico

Last October as we sat visiting after SOAR, I thought of a purple hat with a pink silk, eight-ply, cabled yarn band, and beads dangling on the fringe of the band. I imagined myself as the woman growing old, wearing a purple hat (rather than a red one), doing outrageous things.

Part of the challenge has been getting my brain and tools together to make the hat, in the midst of unpacked boxes and plaster dust. I spun some logwood-dyed fleece, hoping it would be enough, when plied with the purple, to make a hat. When the time came to knit, I could only find double-pointed needles in various



Jeannine Glaves

(shown at actual size)

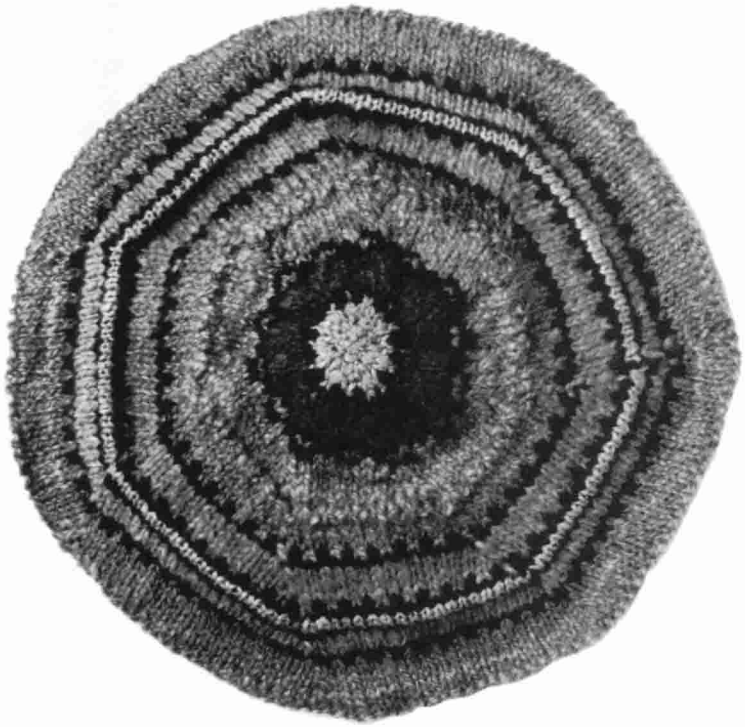
sizes, and the notebook with the hat pattern was in a box 300 miles away.

Scratch plan A. Rip out and start over. Plan B . . . RIP.

February arrived, and I had promised to keep company with a 2½-year-old for a week. Still, I wanted to meet the challenge. So I gathered the balls of yarn that had appeared as the boxes were unpacked. The concept of spin-for-the-project no longer applied. I chose colors and wrapped them around a ruler to gauge their size. I crocheted some of the pink to make it heavier, so it would match the other yarn. I doubled the dark brown.

Then I stuck the yarns and unmatched needles in a tote and flew off. People on the plane asked lots of questions, and were intrigued by my explanation of the challenge. My work looked strange by the time it grew to seven needles' worth of stitches.

However, because both the child and continuing pain in my hands limited the time I could knit, the tam was not finished in time for the deadline. So I have done an outrageous thing and sent it unfinished. This was a *great* idea. What will you do to top it?



Jodie Aves

SHOWN ON PAGE 102

★ Diagonal top

by Nancy Young
Goshen, Massachusetts

I studied the challenge fibers from time to time, but couldn't decide what to do with them. Then a friend made some color suggestions, which were the only push I needed. I still wasn't sure what I would make, but I spun up all the package fibers and started on some others. I overdyed spun yarns, dyed and spun Merino, and spun batts made in Deb Menz's workshop. Each new skein suggested another. Instead of an inset in a top, I would make a bodice . . . no, a whole top. (At this point, I decided to dye a soft mill end I had on hand to use as the warp.)

I have always loved stripes, and a picture of a top with diagonal lace stripes stuck in my mind. I went looking for it, and found it was a Virginia West design for making a top with a minimum of cutting (HANDWOVEN, May/June 1991, page 90). I made it in muslin first, then warped my new (used) loom and started to weave, changing colors at random. I had so much fun watching the fabric grow that I wove the warp off in a couple of sittings.

Then I fulled the fabric lightly, put several rows of tiny machine stitches where cuts would be made, took a deep breath, and cut a hole for the neck. What a relief when I pulled it over my head and could see that it was going to be lovely!

After more stay-stitching, I made the rest of the cuts, turning edges back and stitching them down. Then, influenced by Anita Mayer, I stitched the fabric together by hand and covered the lines of machine stitching with leftover silk. I added a waistband to the original design, and changed the collar. When it was done, I could hardly stop looking at it and touching it!

Before starting this project, follow the diagrams on page 102 to make a muslin sample to be sure the finished top will fit you. The directions here make a small size, using a 30" × 50" (76 × 127 cm) rectangle, plus 8½" (21.5 cm) for a collar and waistband. To make the body and sleeves longer as well as fuller, increase both sides of the rectangle evenly—say, to 35" × 55" (89 × 140 cm). You can experiment with

pieces of paper first—say, 3 × 5, 3.5 × 5.5, or whatever. Just keep your loom width in mind.

Warp: The total length of warp required is 903 yards. I used three strands held as one, consuming 2709 yards of 16/2 worsted wool at about 4200 yards per pound. Each strand was dyed a separate shade of purple/magenta.

Weft: 673 yards of assorted two-ply yarns at about 15 wraps per inch. I mixed silk, silk/Merino, Merino/angora, and pure Merino, in shades of red, magenta, and purple . . . with one skein of variegated turquoise/yellow/green. Some yarns were single-color and others were blended or variegated.

Draft: Four-shaft straight draw, treadled throughout for a 2/2 straight twill, with random weft stripes.

Sett: 10 ends per inch.

Width in reed: 34½" (87.5 cm), allowing for 15 percent shrinkage and pull-in.

Warp: 345 ends, including floating selvedges, 3 yards long (which includes 28" loom waste and 20 percent for shrinkage and take-up).

Weaving: Start new stripes and work the ends back in on alternating sides, so the weft does not build up unevenly. Make sure the selvedges are neat, because they will show.

Finishing: Machine stay-stitch both ends of the fabric and then lightly full by hand in warm, sudsy water. Roll the cloth in a towel, squeeze out the excess water, and dry flat. I fulled my fabric for about 4 minutes, then measured it to make sure it had not shrunk more than I wanted (a minimum of 30" × 50", or 76 × 127 cm). Then I fulled it for another 3 minutes. Lightly steam the fabric before it is completely dry.

Assembly: Stay-stitch both sides of all cutting lines before cutting. Cut off the material for the collar and waistband. Then fold the edges of the main rectangle under and stitch them down.

Find and mark the center of the neck and pin the neck pattern in place; you can draw a neck pattern from the sketch here, or use a neckline from a commercial pattern. Open the fabric and cut the neck. Try it on to make sure the hole goes over your head easily, then fold under the raw edges and stitch them down. Try it on again.

Following the diagram, and using one strand of a matching thread, sew the butted edges of the side seams together neatly. Since these seams do not receive any stress, it's more important that they be invisible than that they be extremely strong.

1. *Toni Trudell, baby mittens*
2. *Mary Lou Holmes, baby sweater*
3. *Barb Getty, silky bear outfit*
4. *Trudy and Jan van Stralen, little girl's smock-vest*
5. *Lila Gehner, booties*
6. *Chris Hunsburger, tam*

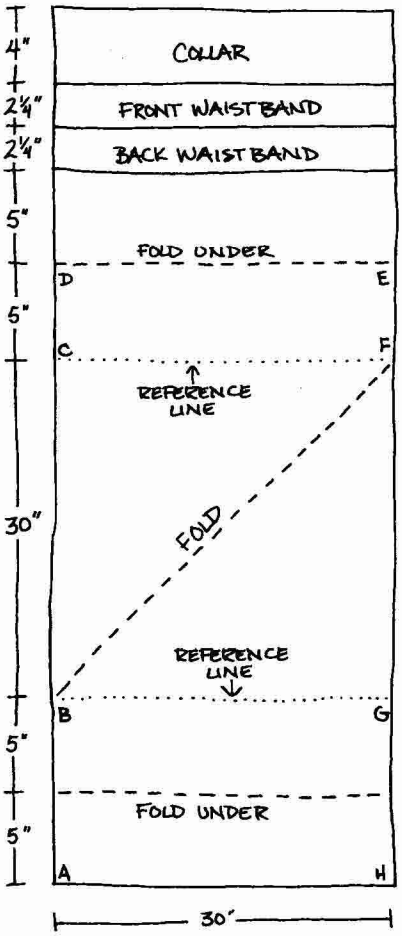
Mark 17" (43 cm) down from the shoulder seam. At this point, the fabric should be 17" (43 cm) across as well. Cut off the points.

Cut the material for the collar-and-waistband and cut it into three strips, two 2¼" (5.75 cm) wide and one 4" (10 cm) wide.

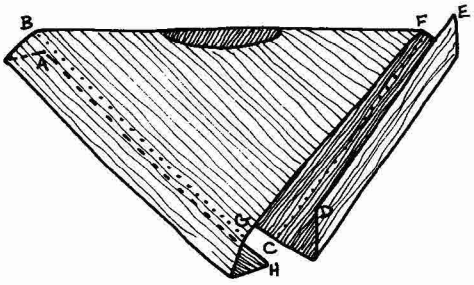
The collar piece is the wider one. Measure its length against the neck opening and cut it to fit. Turn the edges under and stitch them down. Machine-stitch one edge of the collar to the inside of the neck opening, starting at the center back. Then fold the collar to the outside so that it covers the seam and stitch it in place by hand. Stitch together the ends of the collar by hand.

Nancy Young

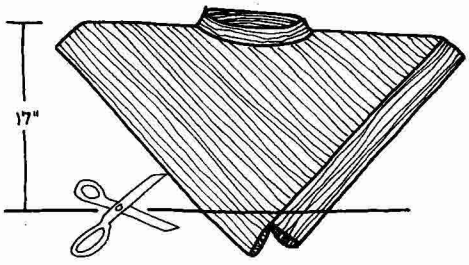
Fabric plan



Assembly

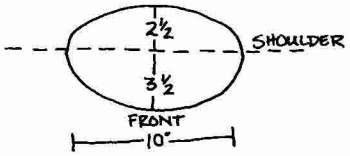


Seam edges AH to BC and DE to FG.



Mark and cut waist. Add collar and waistband as explained in text.

Neckline plan



The narrower pieces are the front and back of the waistband. Measure them against the bottom edge of the body and cut them to size. Turn under their edges and stitch them down. Join the two waistband pieces to the body by hand, butting the edges together; start at the side seams and stitch them in place as you stitched the side seams. Join the back and front of the waistband together.

The final step is to cover all the machine stitching, where the edges were turned under, with couched threads. Lay a piece of the weft over the stitches and secure it by working a zigzag stitch by hand, using a piece of warp thread which will blend into the fabric.

The weft is all handspun, using your fibers and others. The warp is hand-dyed commercial yarn. It is all a combination of Merino, silk, and angora. The shape is Virginia West's and the rest was inspired by your colors. I started out to make something small, but as new possibilities came to me, the project grew and grew.

SHOWN ON THIS PAGE

Plaid scarf
by Sharon Rapp
Champaign, Illinois

I had finished before the deadline, but wasn't pleased with the results. I guess we can learn from our mistakes.
Ed. note: And not be too critical of our work! The lovely color play and delightfully well-twisted fringe in this scarf shouldn't be missed!

Spinner doll
by Janet Povlock
Unadilla, New York

This is the "spinner" character from the Mon Tricot *Nativity Scene* pattern booklet (Debar-Reims, France, December 1977, no. 23). The wool for the face and hands and the flax for the hair came from Rita Buchanan's workshop.

Woven scarf with glitter
by Susan Crawford
Rialto, California

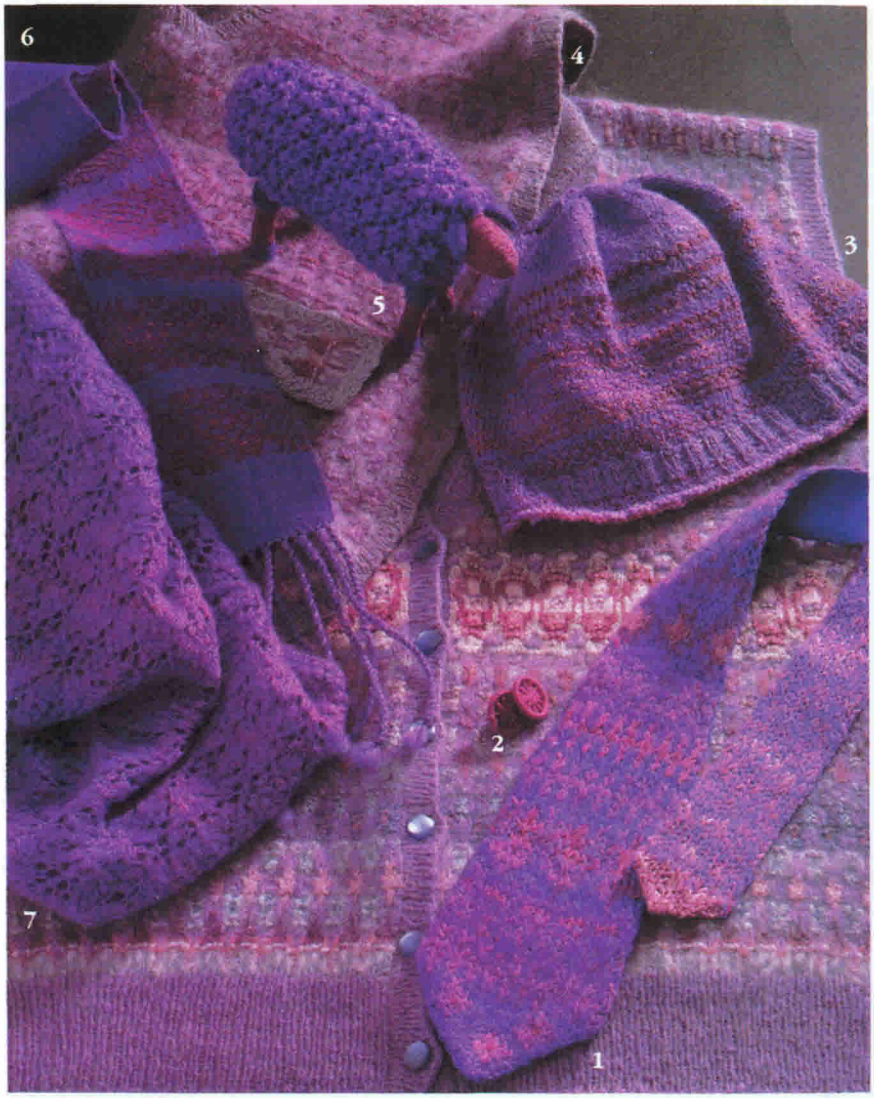
When I arrived home, I placed the challenge fibers in a prominent location and played with them a lot. Finally, I decided to make the loveliest yarn I could think of and to worry about the finished product later.

The first sample was fun and looked good—but wasn't structurally adequate. To make it, I plied together the wool, silk, and metallic yarn, pushing up both the silk and the metallic to make little knots; I then wrapped this with more metallic yarn. The metallic components made little "eyelashes," and the knots did not stay in place.

It took a lot more work with the little gray cells to come up with a yarn structure that really worked. On my second try, I plied all three elements together, but pushed up *only* the silk to make the little knots, then wrapped them with the metallic. Some of the finished yarn consists of the three plies; because I ran out of silk, some is just wool and metallic.

I decided to make a scarf and warped my loom with the special yarn and some

1. *Sharon Rapp, plaid scarf*
2. *Janet Povlock, spinner doll*
3. *Susan Crawford, scarf with glitter*
4. *Bill Evitt, felted möbius scarf*
5. *Marian White, rope belt*
6. *Joan Marsland, sachet*
7. *Norma Lou Shearer, "hug-me-tight"*



1. *Judy Cavell, tie*
2. *Eira Hughes, earrings*
3. *Stephenie Gaustad, cap*
4. *Sammy Eber, vests (shown with small undyed sample)*
5. *Gwen Hewey-Parsons, "Petunia"*
6. *Peggy Church, overshot band*
7. *Mary Crisp, cowl*

odds and ends. Then I needed to find the perfect weft. Wool deadened the warp, mohair overpowered it, and ribbon was too flat. Finally, a light lavender shimmery commercial yarn seemed to work, with metallic accents.

Felted möbius scarf
by Bill Evitt
Stanford, California

Is there a contest category for stretching the challenge fiber to go the farthest? The idea came from Elizabeth Zimmermann's *Knitting Around, or Knitting without a License* (Pittsville, Wisconsin: Schoolhouse Press, 1989), pages 54–55. Fiber was the challenge purple, supplemented with white Merino and a variegated cashmere/Merino blend.

Rope belt
by Marian White
Asheville, North Carolina

This is made from two-ply yarns, some made of Merino alone and some combining the Merino and the silk. One end is knotted; the other was finished with lots of tiny, four-strand round braids, made from the separated plies worked back on themselves and then secured with wrapping. The belt ties around the waist with a loose overhand knot.

Sachet pillow
by Joan Marsland
Cheshire, U.K.

The sachet is filled with homegrown lavender and the green ribbon was part of my door prize from the hat parade.

★ "Hug-me-tight"
by Norma Lou Shearer
Berwick, Maine

When I brought my SOAR challenge fibers and my SOAR door prize to a guild meeting for show and tell, I realized they went together! The door prize consisted of 8 ounces of "Pink Lady," from Scottish Hills Fiber Works in Anderson, Indiana. I mixed the challenge fibers with part of the pink wool and spun my usual lumpy, bumpy yarn and knitted this shrug, or "hug-me-tight." If course, I ran out of yarn before it was as wide as I'd have liked, but it still fits a small person.

The pattern evolved from several sources after a nursing home resident asked for "something to keep my shoulders warm and not slide off." So far, I have not knitted two alike. Some have stripes or patterns, some are knitted straight from cuff to cuff, and some are solid-color. Sometimes they have narrower or wider collars or wristbands. There are lots of possibilities. And the lady at the nursing home loves hers!

This is made of two pieces, woven together at the center back. It requires between 10 and 12 ounces of worsted-weight yarn. I use knitting needles in size 8 (5–5.5 mm): double-pointed and 16″ circular, plus 12″ or 14″ straight needles (optional). I also use markers and a tapestry needle.

Start at the cuff by casting on 32 sts, divided 12–12–8. Join and knit 10 rounds of k2, p2 ribbing. Continue to work rounds

in circular format, changing to a circular needle when necessary and placing a marker at the beginning of the round when you do.

Rounds 11 and 12: Knit around.

Round 13: *K1, inc 1 in next st, repeat from * around.

Rounds 14 and 15: Knit around.

Round 16: *K2, inc 1 in next st, repeat from * around.

Rounds 17 and 18: Knit around.

Round 19: *K3, inc 1 in next st, repeat from * around.

Round 20: Knit around.

On the next row, begin to work back and forth to make the opening; change to straight needles when the opening is wide enough, if you want to.

Row 21: K2, p76, k2. Don't forget to turn and go back on the next row, instead of working in the round.

Row 22 and all even rows: K across.

Row 23: K4, p72, k4.

Row 25: K6, p68, k6.

Row 27: K8, p64, k8.

Row 29 and subsequent odd rows: K10, p60, k10.

Knit until the rectangle measures between 15 and 20 inches long, beginning at the cuff, and end with a purl row. Save stitches on scrap yarn and knit a second piece in the same way. Graft or weave together the open stitches at the center back.

Resources

West, Virginia. *Weaver's Wearables.* Baltimore, Maryland: Virginia West, 1980.

Picken, Mary Brooks. *Sewing Simplified.* Greenwich, Connecticut: Fawcett, 1953.

SHOWN ON PAGE 104

Knitted tie with silk lining

by Judy Cavell

Romulus, Michigan

I *was* challenged, after my experience with Deb Menz's approach, to see how many colors I could get by blending—I got seven, and used the five that were distinguishable. It was great fun to do this tie.

★ Earrings

by Eira Hughes

Merseyside, U.K.

The first Dorset buttons were made in the late seventeenth century. I made these button earrings to go with my tam (on page 96). The basic instructions are shown below.

"Toasty-ears" watch cap

by Stephenie Gaustad

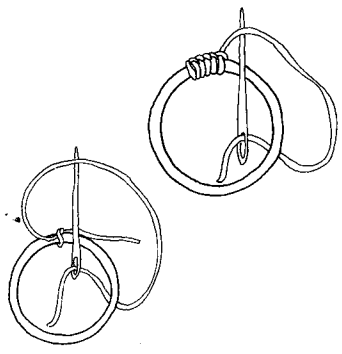
Jackson, California

The silk is a two-ply at 3500 yards per pound (7000 yards per pound as singles). The wool is a two-ply at 1550 yards per pound (3100 yards per pound as singles).

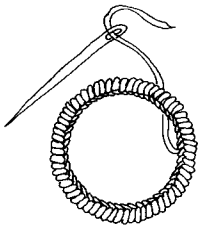
Abbreviations

inc	increase
k	knit
p	purl
st	stitch
sts	stitches

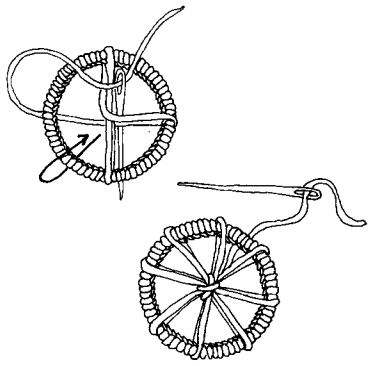
Eira Hughes' Dorset button earrings



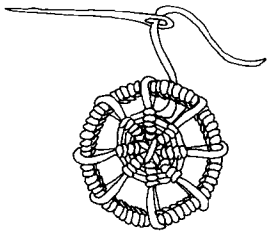
1. Start with a sturdy ring, preferably made of metal or bone. Take a long piece of yarn—you won't be able to add more later. Tie the yarn to the ring and work buttonhole stitches around the ring to cover it; work the first few stitches over the tail of the yarn, to secure it.



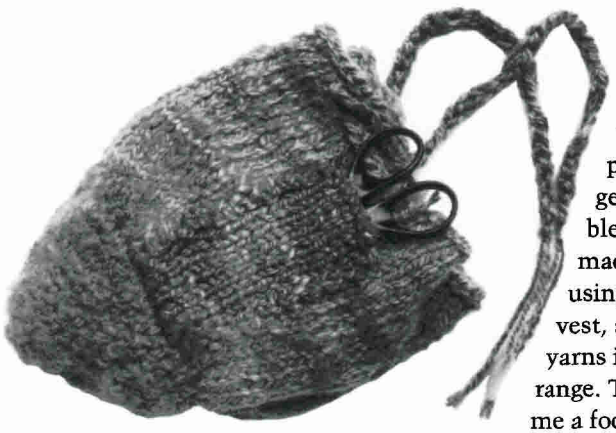
2. When the ring has been completely and tightly covered, slide your needle through the first stitch to complete the circle. Turn all the stitches so the ridge is on the inside.



3. Make the spokes by taking the yarn to the back of the ring, down to the bottom, and then up in front. Keep the yarn centered within the ring. Make more spokes in the same way, then secure the spokes by making a cross stitch over their middles.



4. Fill in the button by working the back stitch in a circular pattern over the spokes, keeping the thread evenly tensioned. End by stitching a couple of times into the center back of the button.



Sabina Duke

Two vests on a single theme

by Sammy Eber
Columbia, Missouri

After leaving SOAR '91, I was enthusiastic about the challenge of making a project with the fiber that had been passed out. The colors made this especially exciting for me. They were a medium-value purple in the wool, and a dark-value magenta in the Bombyx silk top. All summer I had been working on a vest that was purple, lavender, and magenta, with silk and silk-blend yarns. When I had made those yarns, I envisioned using a lot of colors in that vest, so I had several prepared yarns in the purple/magenta range. The challenge fibers gave me a focus for my next project.

Since the sample consisted of about 1½ ounces, I would dye more fiber and combine it with the purple to use as the background. The silk, and the remaining yarns from the other project, would go into the patterning. I especially enjoy working with blends which include angora, so I planned to dye more wool top and angora.

The weekend after SOAR, I was scheduled to demonstrate spinning for two days. I thought that if I could get the fiber ready, I could use that time to spin my yarn. I used to dislike demonstrations, because I felt I was wasting spinning time. Once, however, when I was desperate to finish a project, I spun the yarn during a demonstration. I explained to the observers that the fibers and colors I was using were not appropriate for the time period I was portraying—and was surprised to discover that this generated a lot of interest! I now look forward to demonstrating. I spun the 8 ounces of prepared fiber with a Z twist at 5000 yards per pound, and two-plied it to make a balanced knitting yarn.

When I gathered all the yarns, there were not enough in light values, so I prepared more wool/angora blend yarn to be dyed in paler shades. I also found several fibers dyed in blues, which I blended with white angora and white silk to make a textured light blue yarn.

Previously, I had knitted a vest using a pattern from *Bohus Stickning*, a Swedish knitting book, and I wished then that I could try different color combinations.* I knitted a swatch using the purple yarn for the background and the lighter yarns for pattern. It turned out okay, so I decided to cast on and knit the front. Somewhere between the swatch and casting on, something changed: the background became light blue and the pattern became purple. After a few inches, I discovered that the vest would be too wide, so I put the extra stitches on a holder and continued.

The people I work with told me they didn't like the blue as well as the purple swatch, so I cast on with purple and started another vest. I worked on this, alternating purple and a medium blue in the background—but it looked too striped.

At this point, I thought I should quit experimenting and finish something, so I took one stripe out of the purple vest and continued with it. All went well, and after the front was finished I made the back on my knitting machine.

Since I still had a few weeks before the deadline, I thought I might also complete the blue vest. Unfortunately, I ran out of blue yarn and didn't think I had time to spin more yarn for the front as well as enough yarn for the back—so I stopped working on the blue vest again.

Instead, I put ribbing on the purple vest and started looking for buttons. A slight extension of the deadline allowed me to consider finishing the blue vest after all!

I dyed more waste silk in blue, and began to blend the fibers I thought I had used in the original blue yarn: wool, waste silk, cut Bombyx top, and white angora. The fibers were such different lengths that they would not card together and I finally became discouraged and spun them anyway. The yarn was just a bit darker than the original—I wished I had added more white.

Time was running short. I decided to stay home by myself and work on the vest all weekend. On Saturday, I started early and spun the last 600 yards of yarn for the back of the vest (1200 yards of singles, plied). I was not happy with the yarn, and

*See the cover of the Winter 1990 issue of *Spin·Off*, and pages 82–84 of the Spring 1991 issue. *Bohus Stickning* is by Ulla Haglund and Ingrid Mesterton (Utgiven av Foreningen, Bohus Stickning, 1980) page 41.

wondered what it would look like if I dyed it. I still had little tabs on the front of the vest, with the extra stitches on holders, so I cut them off and dyed one as a test. The results were promising, so I overdyed the vest front and all the remaining yarn with magenta.

Everything turned out better than I had hoped. The overdyeing brought the colors closer together in value and made the design more subtle. The various fibers in the yarn for the back took up the dye differently, making a heathered yarn that blends nicely with the colors in the front.

As soon as the yarn dried, I made the back. Because I had just finished the other vest, I remembered all the things I wished I had done differently—and made corrections, so the second vest fits better than the first. I also like it better.

When I returned to work on Monday, I was ready to work the ribbing. My coworkers were amazed at how the vest looked. They couldn't exactly remember the old color, but liked the new one better.

Now that I have three vests in the same pattern, in various colors, I will go on to something else. My family teases me about always making busy little patterns in rows, so maybe I will do something else entirely.

Editor's note: Sammy reports that her husband, Jerry, another SOAR regular, wanted to make a felt hat with his fibers, but the wool would not felt. If she had known sooner, she would have used his fiber, too!

Petunia, the pink and purple sheep
by Gwen Hewey-Parsons
Shawnee, Kansas

Please meet Petunia, my pink and purple sheep. I have made a number of knitted sheep in the last year, inspired by Jan Messent's *Wool 'n Magic,* and this seemed like a good idea for the small amount of fiber. Hope you like her. The challenge was fun. Happy spinning.

★ Overshot band
by Peggy Church
Dunstable, Massachusetts

Well, that was a challenge all right! I understood that we could add to our bundle of fiber, but as time crept ahead the vest idea I originally imagined got tossed out. So I stuck to what you gave us, and that itself was a challenge. I started out to make a ladies' version of a man's tie, but could not stretch things far enough, so I adapted the design to make a band to tie onto my hair.

The overshot design is "Mariner's Pride," from an Estes miniature overshot book. I used a dummy warp, so there was *no* loom waste. My 1½-yard warp (stretched on the frame) relaxed to about 36 woven inches, plus a generous fringe which I twisted, using four strands in each group, and secured with overhand knots. I brushed the end of each fringe bundle to make a puffy tassel effect.

This was a great idea, and I hope you do it again.

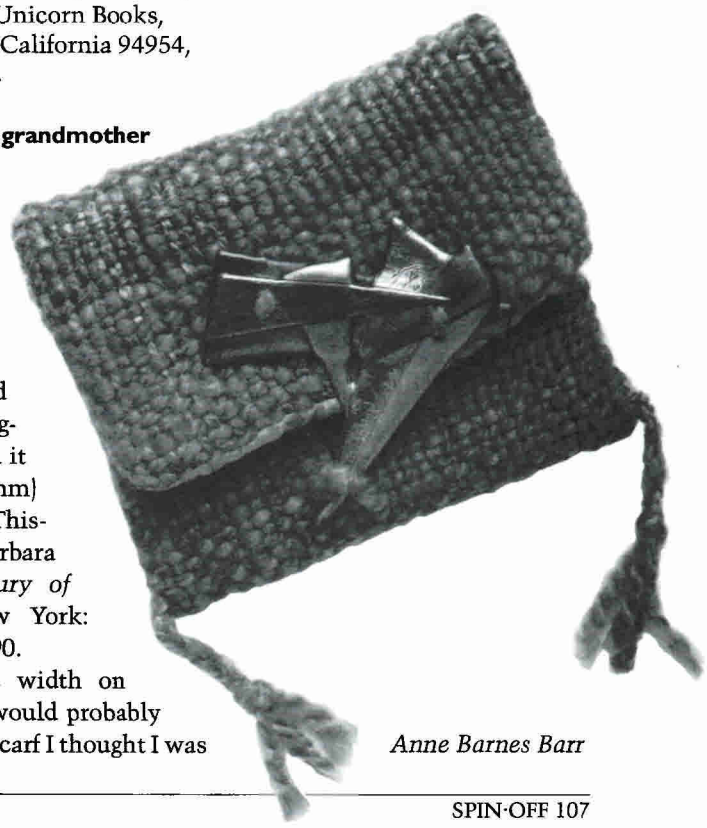
Woven dimensions: 3" × 35⅞".
Finished dimensions: After washing, 2¾" × 35¼".
Warp: 92 yards of dark purple two-ply Merino. Warp is 1½ yards long, measured under tension, with 61 ends sett at 15 ends per inch.
Draft: On next page.
Weft: 88 yards of bright purple two-ply Merino for tabby weft, and 32 yards of raspberry two-ply silk for the overshot pattern weft.

Resource:
Estes, Josephine. *Original Miniature Patterns for Handweaving.* Self-published, 1958. Available from Unicorn Books, 1338 Ross, Petaluma, California 94954, for $8.95 plus postage.

Cowl for a tiny Victorian grandmother
by Mary Crisp
Stone Ridge, New York

Sometimes things work, and sometimes they don't. Because I wanted to play with my new drum carder, I blended all the fibers and spun a two-ply, fingering-weight yarn, and knitted it up on size 0 (2.25 mm) needles. The pattern is "Thistle Leaf," from Barbara Walker's *Second Treasury of Knitting Patterns* (New York: Scribner's, 1970), page 290.

Working at half the width on needles one size larger would probably have been better for the scarf I thought I was



Anne Barnes Barr

knitting. *C'est la vie!* It was fun, and the first bit of lace knitting I've tried beyond a sample square. I plan to wear it as a neck warmer, because the color exactly matches the lining of my new coat.

SHOWN ON PAGE 106

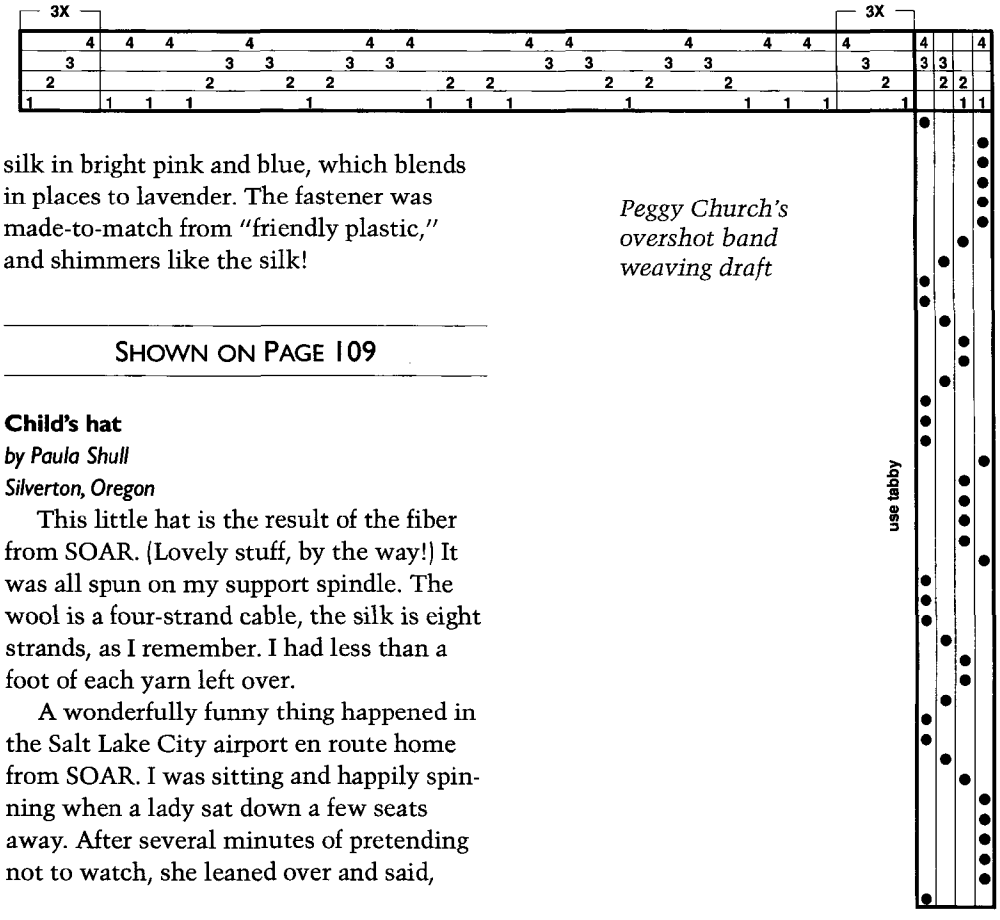
Small pouch with scissors pocket
by Sabina Duke
Sidney, New York

In the midst of carpentry work (creating a fiber room of my own), I managed to uncover my challenge packet and to create a *small* project pouch—complete with scissors pocket and a handle, to hook onto one of Noel Thurner's waisthooks (from Norsk Fjord Fiber).

SHOWN ON PAGE 107

Little purse
by Anne Barnes Barr
Louisville, Kentucky

The fibers were spun to a medium singles, then two-plied and woven into a small bag. The bag was lined with dyed silk in bright pink and blue, which blends in places to lavender. The fastener was made-to-match from "friendly plastic," and shimmers like the silk!



Peggy Church's overshot band weaving draft

SHOWN ON PAGE 109

Child's hat
by Paula Shull
Silverton, Oregon

This little hat is the result of the fiber from SOAR. (Lovely stuff, by the way!) It was all spun on my support spindle. The wool is a four-strand cable, the silk is eight strands, as I remember. I had less than a foot of each yarn left over.

A wonderfully funny thing happened in the Salt Lake City airport en route home from SOAR. I was sitting and happily spinning when a lady sat down a few seats away. After several minutes of pretending not to watch, she leaned over and said, "Does that thing have a motor in it?"

Unfelted headband
by Claire Minard
Norwich, Vermont

Enclosed is a headband made from your beautiful fleece, which had been tortured. First I tried to felt it, and it wouldn't. So I started spinning—great stuff. Then I Navajo-plied—wonderful. Then I started to knit an Aran-pattern hat. There was not enough yarn, and what I had was too heavy.

So I unknitted and unplied. I decided to knit a tiny baby's cap. The colors didn't look right, so I unknitted again. The yarn was losing its twist and looked worn—tragic. So here is a humble headband.

Sorry to treat such a beautiful fleece in this manner. But the lessons I learned I will remember: think about colors and appropriate use of weights.

Editor's note: And isn't it amazing what handspun yarn will tolerate! One of my favorite sweaters is made of yarn that's about fifteen years old, and was used in one sweater for six years before I ripped it out, changed it from a two-ply to a four-ply, and reworked it in a com-

pletely different style that has been going for nine years so far.

Brooch and earrings
by Jane Plass
Villa Park, Illinois

This is my response to the challenge. This project was lots of fun, and very different from most of my projects. It was inspired by the colors.

I used only the red-violet silk. The singles were spun in the Z direction at approximately 16 twists per inch, at a grist of about 64 wraps per inch—about 5600 yards per pound. I then three-plied the yarn in the S direction, at about 5 twists per inch and 26 wraps per inch, for a finished weight of 1825 yards per pound. I spun the singles on my new Reeves Norwegian wheel, purchased during the last twenty minutes of the commercial exhibits at SOAR! I plied the yarn on my Schacht.

I wove the fabric on a small frame loom, using a weaving needle to form the shed. With a warp sett of 16 ends per inch, I used a weft of Reptile Glacé, a plastic "fabric," in a color called "Violet Prism," which has iridescent shades of yellow-green and red-violet. The 2/2 twill emphasizes the iridescence, so the brooch looks different when viewed from varying angles.

Ski band
by Carol Schumacher
Houston, Texas

I was going to add a design in duplicate stitch, using the silk, but I decided I love this as it is. To make the four-ply yarn I used to knit it, I cabled together a two-ply yarn from space-dyed wool in shades of turquoise and light purple, and a very lightly plied two-ply from the purple Merino.

Belt with spangles
by Helen Currie Caire
Pass Christian, Mississippi

Enclosed is my response to your challenge. I spun the wool and silk separately and then plied them together. I made the belt on the inkle loom; it closes with Velcro. I concealed the opening with what looks like a buckle—I made the spangled rectangle by needle-weaving on cardboard. It was fun!

1. *Paula Shull, child's hat*
2. *Claire Minard, unfelted headband*
3. *Jane Plass, brooch and earrings*
4. *Carol Schumacher, ski band*
5. *Helen Currie Caire, belt*
6. *Deb Menz, color study*
7. *Gina Hills, mohair headband*
8. *Stacy Creamer, garter stitch headband*
9. *Shannon Stoney, helmet*
10. *Cathy Wissehr, angora-lined headband*

Color study
by Deb Menz
Middleton, Wisconsin

I have to admit I added a few colors, but the things I added also came from SOAR—spun during the demonstrations I gave. This tapestry was woven on a small frame loom, which went with me while I was on the road teaching. I sewed the finished weaving to the silk background, then quilted, beaded, and embroidered until it looked "done." The design was a color study—more like playing, really.

Curly mohair headband
by Gina Hills
Tulsa, Oklahoma

I was in desperate need of a warm headband for a ski trip, because I am a novice skier and wanted to look better than my skill level. I sorted through all my fibers,

looking for the right companions for the creamy purple wool and the elegant silk in the SOAR teaser.

First I found mohair locks, which I corespun loosely around cotton crochet thread and then plied with the silk. This became one side of my reversible headband. I constructed the interior out of three-ply variations composed of the SOAR wool, the silk, and my own angora. The knitting was simple—I worked a k2, p2 rib in the round, and finished off by weaving the edges together.

So, there you have it—I definitely made a fashion statement on the slopes, and I didn't even fall much.

Garter stitch headband

by Stacy Creamer
New York, New York

I knitted a headband with the pink and purple goodies handed out at SOAR. I used the two fibers to make a spiral novelty yarn. The silk is the core, and the purple top became the outer strand that spirals around it. I worked the band in garter stitch, and crocheted the edge using yarn spun from the purple alone.

Seriously warm helmet

by Shannon Stoney
Cookeville, Tennessee

I didn't send this earlier, because I was wearing it a lot on my runs. But now spring peepers are peeping and roses are leafing out, so I guess I can part with it.

The purple Merino was so soft that I wanted to make something for my neck. I needed a garment to keep me warm on bike rides—one that would fit under my bike helmet. This works great and stays put.

I drum-carded the pink silk with cochineal-dyed Shetland. Because it wasn't as soft as the Merino, I wanted to use it higher up, where my skin isn't so sensitive. When I ran out of SOAR fibers, I used Shetland dyed with indigo, cochineal, and osage orange, blended with natural gray, white, and black.

For knitting, I used directions from one of Elizabeth Zimmermann's newsletters, but left off the visor. The hem around the face hole is white Merino.

Thanks for the lovely wool and silk. It was very sensuous to work with, and this helmet has probably kept me from getting sore throats from invasion of wind, as the Chinese say.

Resource

Zimmermann, Elizabeth. *Spun Out #8.* Pittsville, Wisconsin, Schoolhouse Press, 1979. Available for $1 plus postage from Schoolhouse Press, 6899 Cary Bluff, Pittsville, Wisconsin 54466.

Angora-lined headband with hearts

by Cathy Wissehr
Jackson, Missouri

I had intended to make a pair of mittens, but didn't have enough yardage (no thanks to my dog, Kodi, who ate about 18 inches of roving while I answered the phone one day). While watching cross-country skiing on the Olympics, I decided to make this headband. I wanted to line it with angora from my rabbits, for extra warmth and softness and to protect the "floating" yarns from excess wear.

This project was a lot of fun and I really enjoyed working with these fibers.

SHOWN OPPOSITE

Knitter's essential bag

by Selma Miriam
Westport, Connecticut

This little bag was made in homage to the greatest spinner of all by an admirer who has frequent need for tools such as are found inside. I do wish I had made the bag half again as big, since there was plenty of yarn left over. I spun the yarns fine, to imitate Arachne, and then Navajo-plied each color separately.

The large spider in front is from Barbara Walker's *Charted Knitting Designs: A Treasury of Knitting Patterns* (New York: Macmillan, 1982), though I did not use the twist stitches called for. Instead, I knitted in the Austrian method, which preserves knits and purls as the stitches travel, and twists the facing knit stitches on every row, resulting in superior definition of the pattern.

The web on the back and the flap is my own design, and is only partially successful, I think.

SPIN·OFF CHALLENGE

We know that not everyone can get to SOAR, for many reasons. And we'd like to share the fun. So we have asked Deb Menz to dye a set of fibers for a *Spin·Off* Challenge. The colors and fibers will be different from those in the SOAR group.

There are 250 packets available at cost for readers who would like to try their hands at this. If more than 250 of you respond, packets will be sent according to postmark (and, if necessary, a drawing), and payment will be returned to those whose requests arrive too late. Send your request for a challenge packet with payment of $6.50 (check or credit card information; postage is included) to *Spin·Off* Challenge, 201 E. Fourth Street, Loveland, Colorado 80537.

Completed projects are due at *Spin·Off* by **April 1, 1993.** If you keep track of your process, techniques, and pattern development, please send full notes with your project. We will need to feature selected work and will *not* be able to include all the pieces we receive, but everything will be acknowledged and will be returned when we have finished with it.

Selma Miriam

Calendar

TO ENTER

✓ **District of Columbia (Washington)**/open. Wonderful Wearable Art '92, juried exhibition and sale, Nov. 13–15. Send SASE to Wonderful Wearable Art, PO Box 7517, Silver Spring, MD 20910. (202) 686-4588.

✓ **Illinois**/open. If the Art Fits, Wear It, fashion show of one-of-a-kind artwear, Oct. 24 in Chicago. Slide deadline (up to 3 ensembles) Sept. 10. Prospectus: SASE to Textile Arts Centre, 916 W. Diversey Pkwy., Chicago, IL 60614. (312) 929-5655.

✓ **Kansas**/regional. Kansas Fiber Directions, Jan. 16–Feb. 28, 1993, at Wichita Center for the Arts, 9112 E. Central, Wichita. Present or former residents of KS, OK, MO, CO, NE; slide deadline Sept. 16. Contact Kathy Losee, 2424 Governeour, Wichita, KS 67226. (316) 683-8514.

✓ **Nevada**/open. Fiber Celebrated '93, juried exhibition in conjunction with Intermountain Weavers Conference, July 1993, in Las Vegas. Entry deadline Mar. 1, 1993. Prospectus: send address and a first-class stamp to Teresa Kennard, 5816 Reiter Ave., Las Vegas, NV 89108.

✓ **New York**/open. Northeast Regional Natural Colored Wool Growers Assoc. sheep show, Oct. 18 in Rhinebeck, in conjunction with the New York State Sheep and Wool Festival, Oct. 17–18. Entry deadline Sept. 15. Contact Becky Holberton, c/o Asbornsen, PO Box 26, Stuyvesant, NY 12173. (518) 758-7970.

✓ **Pennsylvania**/open. Fiberart International '93, juried show at Pittsburgh Center for the Arts. Slide deadline Feb. 12, 1993. Prospectus: LSASE to Lee Rinehart, 4608 Carroll St., Pittsburgh, PA 15224, or call Patricia Kennedy-Zafred, (412) 733-5986.

✓ **Washington**/regional. Fiber Spectrum 1992, juried fiber show at Washington State Historical Museum, Tacoma, Nov. 1–29. Cash awards; residents of WA, OR, ID, MT, AK, BC, AB. Prospectus: Roberta Lowes, 11922 "A" St., Tacoma, WA 98444. (206) 531-3257.

✓ **Washington**/regional. Fabulous Frippery Fashion Show, July 15–17, 1993, in conjunction with Fiber Fanfare in Seattle. Open to residents of AK, ID, MT, OR, WA, Yukon, BC, AB, SK. Entry deadline Mar. 1993. Prospectus: SASE to Fiber Fanfare Fashion Show, Fina Gelfand, 2810 W. Crockett, Seattle, WA 98199. (206) 285-0890.

FESTIVALS AND GATHERINGS

✓ **Colorado,** Sept. 12–13. Meeker Classic Sheepdog Championship Trials, Craft Fair and Wool Festival, Meeker. $10,000 purse for sheepdog trials. Competitors from across the country. Contact: Patti McGraw, (303) 878-3207/5510.

✓ **Illinois,** Oct. 17. Bishop Hill Spin-In, Blackhawk East College, Kewanee. Program: Hazel Carter, "Shetland Lace." Contact: Carla Greby, 327 McKinley, Kewanee, IL 61443. (309) 852-3165.

✓ **Indiana,** Oct. 10. A Gathering of Fiber Friends at Wells Community Cultural Center, Lafayette. A day of sharing; exhibit continues through Oct. Information: SASE to Peggy Coffey, 6531 S. 750 West, Russiaville, IN 46979.

✓ **New Hampshire,** Sept. 12. Wool Day, demonstrations and sales at Canterbury Shaker Village, 288 Shaker Rd., Canterbury, NH 03224. (603) 783-9511.

✓ **New Hampshire,** Nov. 6–8. The Gathering, workshops sponsored by the Northeast Handspinners Assoc. at The Lower Shaker Village, Enfield. Registration packet: send SASE with 52 cents postage to Diane Trussell, RFD 1, Box 3370, Solon, ME 04979. (207) 643-2540.

✓ **New Jersey,** Sept. 26–27. Harvest Sheep and Wool Festival at Salem County Fair Grounds, Rte. 40, Woodstown. Shows, sales, demonstrations. Contact Edie VanValkenburg, (609) 769-1526.

✓ **New York,** Oct. 17–18. 13th Annual New York Sheep and Wool Festival at Dutchess Co. Fairgrounds, Rte. 9, Rhinebeck. Shows, sales, demonstrations, contests. Contact Paula Lasseur, RR 1, Box 62 A, Amenia, NY 12501. (914) 373-9658.

✓ **Oregon,** Oct. 2–4. Textile Festival, exhibits, demonstrations, and sales at Mission Mill Village, 1313 Mill St. S.E., Salem, OR 97301. (503) 585-7012.

✓ **Pennsylvania,** Oct. 10–11. Harvest Festival includes spinning demonstrations, at Quyiet Valley Living Historical Farm, 1000 Turkey Hill Rd., Stroudsburg, PA 18360. (717) 992-6161.

✓ **Texas,** Nov. 7. Fall Festival of the Arts at Hill Country Arts Foundation, PO Box 176, Ingram, TX 78025. (512) 367-5121.

✓ **Texas,** Nov. 21–22. Third Annual Kid 'n Ewe Fiber Fair in Goldthwaite.

✓ **Vermont,** Sept. 12. Vermont Sheep Festival and Sale at the Vermont Technical College Farm in Randolph Center. Workshops and demonstrations of fiber crafts and sheep management; marketplace offering handcrafted wool products, woolcraft supplies, sheep supplies; private treaty sheep sale. Hours: 9–5.

✓ **Virginia,** Oct. 10–11. Fall Fiber Festival at the James Madison Home, Montpelier. Sheep dog trials, colored wool sheep show, craft and animal shows, tours, demonstrations. Contact Dan Hershey, (804) 985-7083 (eves).

✓ **Wisconsin,** Sept. 26–27. Wisconsin Spin-In. Guest speakers are Rita Buchanan and Priscilla Gibson-Roberts. Holiday Inn S.E., Madison. Contact Michelle Zahn, (414) 386-2565.

✓ **Australia,** Queensland, July 16–18, 1993. Fibreworks Fair '93 at The Australian Woolshed, Ferney Hills, Brisbane. Contact The Queensland Spinners Weavers and Dyers Group, PO Box 362, Toowong, Qld. 4066, Australia.

CONFERENCES

✓ **California,** Mar. 10–14, 1993. Earth Spirit 1993, biennial conference of the Assoc. of Southern California Handweavers in Riverside. Contact Jo Anderson, 26335 Potomac Dr., Sun City, CA 92586. (714) 672-4435.

✓ **California,** Apr. 16–18, 1993. Weave Me a River, 39th Annual Conference of Northern California Handweavers at Sacramento Community Convention Center, 13th and J Sts., Sacramento. Contact Registrar CNCH 93, 20 Fairview Cir., Chico, CA 95928.

✓ **Iowa,** June 3–6, 1993. Midwest Weavers Conference in Cedar Falls with Randall Darwall, speaker. Exhibits, workshops. Contact Virginia Cleaver or Karen Kitchen, 111 Main St., Cedar Falls, IA 50613.

✓ **Nevada,** July 29–Aug. 1, 1993. Expanding Horizons: Craft as Art, Intermountain Weavers Conference in Las Vegas. Workshops, seminars, fashion show, exhibits. Ramona Sakiestewa, keynote. SASE to Sandy Gillies, 42 North 300 East, Cedar City, UT 84720. (801) 586-5289 (eves).

✓ **Pennsylvania,** Sept. 11–14. Fiber Focus II, workshops by Celia Quinn, Sigrid Piroch, Sharon Alderman, Donna Sullivan, Karen

more Calendar . . .

Page. Touchstone Center for Crafts, PO Box 2141, Uniontown, PA 15401. (412) 438-2811.
✓ **Texas,** Apr. 30–May 2, 1993. Fiber Fiesta, biennial conference of Contemporary Handweavers of Texas at San Antonio. Fashion show, exhibits, seminars by Sharon Alderman, Madelyn van der Hoogt and others. Contact Joy Morgan, PO Box 160734, San Antonio, TX 78208-2934. (512) 492-9163.
✓ **Washington,** July 11–17, 1993. Fiber Fanfare 1993, biennial conference of the Assoc. of Northwest Weavers' Guilds in Seattle. Information: Fiber Fanfare, PO Box 1153, Woodinville, WA 98072.
✓ **Australia,** Sept. 25–28. Fun With Fibre '92. Exhibits, sales, fashion show, and workshops sponsored by Canberra Spinners and Weavers at Narrabundah College, Jerrabomberra Ave., Narrabundah A.C.T. Contact Barbara Stanilewicz, 16 Durville Crescent, Manuka, ACT 2603, Australia. Phone 06-295-8694.

EXHIBITS, SHOWS & SALES

✓ **Arizona,** Feb. 20–May 9, 1993. Contemporary Navajo Weaving: The Gloria F. Ross Collection at the Heard Museum, Phoenix. Contact Denver Art Museum, 100 W. 14th Ave. Pkwy, Denver, CO 80204.
✓ **California,** Sept. 11–Oct. 4. Los Angeles County Fair. Wool show, contests, shows, sales, demonstrations. Bldg. 4, 1101 W. McKinley Ave., Pomona, CA 91768. (714) 623-3111.
✓ **California,** Sept. 26–27. Quilts and Threads. Sales, shows, and demonstrations sponsored by Mother Lode Weavers and Spinners at Mother Lode Fairgrounds, Sonora. Information: PO Box 902, Twain Harte, CA 95383. (209) 586-1721.
✓ **California,** Nov. 1. Southern California Handweavers' Guild show and fashion show at Veterans Auditorium, Overland Ave. and Culver Blvd., Culver City. Information: Sue Campbell, 823 W. Ave., J-12, Lancaster, CA 93534. (805) 948-7178.
✓ **Florida,** Dec. 13–Jan. 24, 1993. International Tapestry Network Exhibit II at Philharmonic Center for the Arts, 5833 Pelican Bay Blvd., Naples. Contact Christine Laffer, ITNET, 1933 O'Toole Ave., #A-102, San Jose, CA 95131. (408) 922-7240.
✓ **Illinois,** Oct. 17. Celebration of L.A.C.E. Lace exhibit, sales, demonstrations at Scottish Rite Cathedral, 915 N. Dearborn St., Chicago. Contact Kendra Goodnow, 22 N. Washington St., Westmont, IL 60559. (706) 963-7169.
✓ **Illinois,** Oct. 18. Juried fashion show of one-of-a-kind wearables at The Fine Line Creative Art Center, 6N158 Crane Rd., St. Charles, IL 60175. (708) 584-9443.
✓ **Illinois,** Nov. 7–8. Spin Me a Yarn, Weave Me a Tale. Show and sale by North Shore

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more Calendar . . .

(continued from page 114)

Weavers' Guild at Women's Club of Wilmette, 930 Greenleaf Ave., Wilmette. Information: Norma Bellin, (708) 491-9551.

✓ **Indiana,** Sept. 26–27. Chautauqua of the Arts at Lanier State Historic Site, Madison. Contact Dixie McDonough, 1119 W. Main St., Madison, IN 47250. (812) 265-5080.

✓ **Indiana,** Oct. 17–18. Interwoven Expressions. Sale by Duneland Weavers' Guild of Northwest Indiana at Marc T. Nielson Interiors, 734 N. Suman Rd., Valparaiso. Information: Jacque Gaddy, (219) 369-9453.

✓ **Indiana,** Nov. 27–28. Winter Art and Craft Fair at Seasons Lodge Conference Center, State Rd. #46 East, Nashville. Contact Brown County Craft Guild, PO Box 179, Nashville, IN 47448, or call Kathleen Sullivan, (812) 988-2596, or Joan Haab, (812) 988-7920.

✓ **Massachusetts,** Oct. 3–4. Festival of Shaker Crafts and Industries at Hancock Shaker Village, jct. Rtes. 20 and 41, PO Box 898, Pittsfield, MA 01201. (413) 443-0188.

✓ **Michigan,** Nov. 20–21. Fibers and Beyond. Jackson Handweavers Guild sale at Ella Sharp Museum, 3225 4th St., Jackson. Contact Mary Smith, 1010 Cook Rd., Litchfield, MI 49252. (517) 542-2533.

✓ **Michigan,** Nov. 20–21. Weavers Guild of Kalamazoo sale and exhibit at Kalamazoo Valley Community College, 6767 W. O Ave., Kalamazoo. Information: (616) 342-4102.

✓ **Minnesota**, Oct. 2–3. Fiber/Metal '92. Juried exhibition and sale of contemporary, traditional and ethnic fiber and metal arts at Fine Arts Bldg., Minnesota State Fair Grounds, St. Paul. Send SASE to Fiber/Metal '92, Sandra Stephens, 16029 Baywood Ln, Eden Prairie, MN 55346.

✓ **Missouri,** Nov. 13–15. Annual sale by Weavers' Guild of St. Louis at Des Peres City Hall, Manchester at Ballas Road, just off 270. Information: call (314) 421-1844 or Valerie Puntney, 508 Springdale Dr., Belleville, IL 62223. (618) 235-0531.

✓ **New Hampshire,** Oct. 10–11. 9th annual Wool Arts Tour, self-guided tour of area sheep farms and wool studios. Map: Anne Hennessey, RR 2, Box 324, Antrim, NH 03440. (603) 588-6637.

✓ **New Jersey,** Nov. 13–15. Focus on Fiber. Annual show and sale by the South Jersey Guild of Spinners and Handweavers at Barclay Farmstead, Cherry Hill. Includes displays and demonstrations. Information: Mille D'Addario, (609) 662-0984.

✓ **Pennsylvania,** Nov. 20–22. Handweavers Guild of Bucks County 15th annual show and sale at the Memorial Bldg., Washington Crossing Historic Park, Rte. 32, Washington Crossing. Reception Nov. 19, 7–9 p.m. Contact Linda Harkness, (609) 448-0764 or Wanda Moore, (609) 883-1366.

✓ **Virginia,** Sept. 27. State Fair Llama Fleece Show and Sale in Richmond. Information: LSASE to B. Robertson, Railside Farm, 114 Gwathmey Rd., Ashland, VA 23005. (804) 798-1959.

✓ **Wisconsin,** Oct. 30–Nov. 29. Rags and Riches. Wisconsin Handweavers 42nd annual exhibit and sale at the Charles Allis Art Museum, Milwaukee. Fashion show Nov. 1.

✓ **United Kingdom,** Oct. 10–25. A Goodly Yarn. National exhibition by the Association of Weavers, Spinners and Dyers at Ingatestone Hall. Contact Vicky Thomas, Rawlins, 137 Main Road, Danbury, Chelmsford, Essex CM3 4DL. (0245) 413833.

INSTRUCTION

✓ **Indiana,** Nov. 6–7. Spinning Silk for a Project with Sammy Eber, at the Central Indiana Eye Institute, Kokomo. SASE to Peggy Coffey, 6531 S. 750 West, Russiaville, IN 46979.

✓ **Kansas,** Oct. 2–4. Workshops and lectures by Anita Luvera Mayer, in Historic Fort Scott. Contact Victorian Promenades, PO Box 491, Fort Scott, KS 66701.

✓ **New Hampshire,** Oct. 25–26: Felted mitten and boot workshop with Beth Beede. Oct. 31: Pro Chem dyeing workshop. The Fiber Studio, PO Box 637, Henniker, NH 03242. (603) 428-7830.

✓ **New Mexico,** Sept. 14–19: Free cochineal dyeing workshop with Zapotec Indian Isaac Vasquez in Albuquerque (contact Wright's Indian Trading Post, (505) 883-6122). Additional workshops Sept. 21–26 in Santa Fe (contact Hughes House, (505) 982-4890) and Sept. 28–Oct. 3 in Taos (contact La Unica Casa, (505) 758-3065).

✓ **New York**, Sept. 26: Easy Ikat and Other Dye Methods with Valerie Bealle. Dec. 5: Weaving with Handspun and Vegetable Dyed Yarns with Rita Buchanan. By the New York Guild of Handweavers at the School of Visual Arts, 214 E. 21st St., New York City. Contact: Norma Baum, (212) 989-5057.

✓ **North Carolina,** Sept. 13–19: The Art of Handmade Felt with Dale Liles. Nov. 1–7: Creative Spinning with the well-travelled spinster, Persis Grayson, and Martha Owen, resident spinner. At the John C. Campbell Folkschool, Rt. 1, Box 14A, Brasstown, NC 28902. (800) 562-2440.

✓ **Pennsylvania,** Oct. 10–11. Designing Yarns with a Drum Carder with Sue Beevers, Pottsville. Sponsored by Fiber Friends. Registration: Kathryn Otto, PO Box 424, Jonestown, PA 17038.

✓ **Tennessee,** Oct. 17. Handspinning workshop with Marney Blair Olson. Additional classes throughout the year in traditional crafts sponsored by Historic Rubgy, Rugby Commissary, PO Box 8, Rugby, TN 37733. (615) 628-5166.

✓ **Texas,** Oct. 15–17: Spinfest with Mabel Ross. Oct. 19–21: Knitting multicolored ethnic sweaters with Priscilla Gibson-Roberts. Weaving workshops also scheduled. Hill Country Arts Foundation, PO Box 176, Ingram, TX 78025. (512) 367-5121.

✓ **Vermont,** June 1993. Intensive weaving instructors' course at Fletcher Farm Craft School, Ludlow. 14-day sessions; Rachael Emmons, instructor. Send SASE to Ervin Henecke, RD 2, Box 33, Crown Point, NY 12928.

✓ **Virginia,** through Oct. Weekend classes in spinning, dyeing, knitting. Wool and Wabbit Spinning Farm, Rt. 1, Box 778-A, Bassett, VA 24055. (703) 629-4372.

✓ **Wisconsin,** Sept. 13–18: Spinning Designer Yarns with Franie Philps. Additional workshops in weaving into October at Sievers School of Fiber Arts, Hershey Rd., Washington Island, WI 54246. (414) 847-2264.

TRAVEL

✓ **Scotland,** Fall 1992. Needlecraft tour with Claire Bryant. Castle accommodations; includes weaving and spinning demonstrations, classes. SASE to Claire Bryant, PO Box 706, Aberdeen, NC 28315.

Calendar events of special interest to spinners are printed free of charge as a service to our readers. Please send your event information at least 10 weeks prior to the month of publication to "SPIN·OFF Calendar", 201 East Fourth Street, Loveland, CO 80537. Listings are made on a space-available basis. While we try to include as many events as possible, we cannot guarantee that your listing will be included.

more Corrections . . .

(continued from page 10)

available (and may be more) which will leave untouched the subtle natural colors of our yarns.

Extra photo credits

We have some additional notes from Florence Feldman-Wood about "Tracking Down More Moving Spindle Wheels" in the Summer 1992 issue. The photo of Mark Ware's wheel, on page 97, was taken by Mark Ware. The photo of the Breidenbaughs' wheel, on page 99, was taken by Valerie Breidenbaugh.

Guidance for gleaners

We received a note from Marilee Rockley, of Two Rivers, Wisconsin:

"We who are collecting plant materials for any purpose must always ask permission before gathering on public or private property. And, at all times, we must respect the balance of nature and take only from what is abundant, and not too much even of that.

"Please remind your readers to be responsible and ecology-minded when gathering plants for their dye projects."

Correct gauge

In Shirley Browsky's "Wool/Mohair Felt" (Spring 1992, page 87), the gauge for the *hat* is: on size 11 (7–7.5mm) needles, **2½ stitches/inch** (10/10 cm) and **4 rounds/inch** (15.5/10 cm).

Product News

by Sharon Altergott

Pat Green Carders, Ltd., has announced a new model in their Five-Star Deluxe drum carder series—*Deb's Delicate Deluxe.* This design, suggested by Deb Menz for her color workshops, features a fur drum and a special pulley for a slower infeed, to promote efficient blending of delicate fibers and dyed color effects. This model will also accommodate other Pat Green drums. See it at Soar '92 in October, write to 48793 Chilliwack Lake Rd., Sardis, B.C., V2R 2P1, Canada, or phone (604) 858-6020.

The Good Shepherd, owned and operated by Carolyn Partridge of South Windham, Vermont, specializes in hand-dyed, carded batts of wool and special fiber blends. The Good Shepherd also offers custom fiber preparation and design, including dyeing and blending, and takes pride in strict attention to detail. You're guaranteed the return of your own fleece when you send your fiber for preparation. Look for The Good Shepherd at Soar '92, or write for samples and a price list at $5; send a SASE for a price list only: RFD Box 192, Old Cheney Rd., South Windham, VT 05359, or phone (802) 874-4182.

Ertoel International (a division of Mountain Looms Co., Ltd.) is now producing a *Multiple Spindle Automated Spinner* for the spinning cottage industry. This machine matches the production volume of the ten-drum model 500 electric carder (which processes 10 to 20 pounds per hour, depending on the fiber). The first spinner/carder is scheduled to be installed in North America by September. For more information, call Larry or Sheila Sutherland at (800) 665-2779.

Norsk Fjord Fiber's owner, Noel Thurner, is offering two new spinning tools: a hand-turned diz and the *Pris-pad,* to facilitate drawing top through a diz. The diz is handcrafted by a local woodworker for creating pencil-thin, easy-to-spin top from wool combs. It's available in a variety of native woods. The *Pris-pad,* named for its designer, Priscilla A. Gibson-Roberts, attaches to a loaded Viking wool comb so that you can either spin or draw from it. It comes in maple, cherry, oak, or walnut. Each diz or pad is $19.50, plus $3.50 shipping and handling. For more information, contact PO Box 271, Lexington, GA 30648, or phone (new area code) (706) 743-5120.

Moonpie Designs carries hand-held wool combs from Maxon Woodworks. Handmade from native cherry, they have single rows of precision-ground stainless steel tines which stay sharp. Also new are two knitting design books by Deborah Newton: *Sweater 101* and *Designing Knitwear.* Contact Moonpie's owner, Kristen Slade, at PO Box 391, Underhill, VT 05489, phone (802) 899-5403. ❖

Classifieds

NOTICES

TO PLACE A CLASSIFIED AD for the next issue, send your ad along with payment eight weeks prior to the month of publication. Only $1.25/word ($25 minimum) or $45/col. inch (camera ready). **Payment must accompany ad.** VISA/MC accepted with account number and expiration date. Send to **Interweave Press, Spin·Off Classified Ads,** 201 East Fourth Street, Loveland, CO 80537.

CARDING: $2.75/LB. Clean weight. Ashford dealership. Send SASE to **The Joyful Carding Co.,** HC80 Box 703, Piedmont, SD 57769, or call (605) 787-5415 or 923-1535.

CUSTOM FIBER PROCESSING. Call or write for free brochure. **Inda Farm Fiber Factory,** 26336 Crow Road, Eugene, OR 97402. (503) 345-9498.

HANDSPINNING. MOST ANIMAL FIBERS. Small quantities (under 5 lbs.) preferred. SASE for price list and sample. **Upward Call,** PO Box 1084, Belle Mead, NJ 08502-6084.

NZ NATIONAL WOOLCRAFTS FESTIVAL, WELLINGTON 1993—May 14–17, 1993, Victoria University, Wellington. Guest exhibitions include: *The Coptic Tapestries,* Classes: *Tapestry Weaving, Felt Making, Fashion Shows, Action Competitions.* Guest Tutors: Archie Brennan, UK; and Beth Beede, USA. Wide range of accommodations. For more information contact: **The Secretary, Jim Drummond,** PO Box 5160, Wellington, New Zealand.

SALE OR TRADE: Regular male llama, 1½ years, half Bolivian, good conformation, white with red spots, $800 or good loom. **Pam Unruh,** (316) 722-7409. Wichita, KS.

TAOS VALLEY WOOL MILL . . . New scouring and custom carding service. Lowest rates, conscientious handling. SASE for price list, PO Box 374, Arroyo Hondo, NM 87513. (505) 776-2925.

THERE ARE 12 RETAIL SALES OPPORTUNITIES for Gaywool Dyes available in the following states: North and South Dakota, South Carolina, Louisiana, Hawaii, Alabama, Arizona, Arkansas, Delaware, Kansas, Kentucky, and Mississippi. If you are interested in being a retailer for Gaywool, write to **Gaywool Dyes,** 26434 189th Ave. S.E., Kent, WA 98042. (206) 631-7364, fax (206) 631-7364.

WHITE ROSE CASHMERES, imported and domestic stock. Bucks, does, kids. Quality fleece. Request sales list **Gina Hagis,** Rt. 1 Box 181, Fries, VA 24330. (703) 744-7363.

EQUIPMENT

ACTIVELY SEEKING FOR PURCHASE at reasonable price an Obadiah Tharp "Sarah" Great Wheel in excellent condition with a double skeiner for plying. Drive wheel must not be warped! Call **Sue** at (602) 483-6282.

AWESOME BATT PRODUCERS. FRICKE 600 series extra heavy duty double-wide motorized carders. You can always pay more, but you can't buy better. Send $.52 SASE for catalog: **Fricke Enterprises,** 8702 State Road 92, Granite Falls, WA 98252. (206) 691-5779.

CARDING VERSATILITY with our interchangeable drums for all wools and exotics. **Motorizing Unit** available. **New Triple Picker** for fantastic opening of wool, mohair, and specialty fibers. We pay duty and freight. Phone for details or write for free brochure. **Patrick Green Carders, Ltd.,** 48793 Chilliwack Lake Rd., Sardis, BC, Canada V2R 2P1. (604) 858-6020.

FOR SALE—S-10 Louët, wool winder, extra bobbin $220, Ertoel electric spinner, carrying case $230, Ertoel drum carder $250. All spinner owned, in excellent condition. Please inquire at (203) 684-5235, ask for **Inge.**

FRICKE CARDERS—Chain drive drum carders. Metal and wood frames; motorized and manual models. *Only carders guaranteed for life in writing.* Choice of card cloth includes special *"Slicker Licker".* Wool and Cotton hand cards. All items made in USA. Send long $.52 SASE for catalog: **Fricke Enterprises,** 8702 State Road 92, Granite Falls, WA 98252. (206) 691-5779.

KOA FROM HAWAII: Beautiful handmade spinning and weaving tools. 9" niddy noddy makes 36" skein, $25. More. Free catalog: **Walter Von,** 2104 Wilder Ave., Honolulu, HI 96822. (808) 947-3034. CIS 70324-731.

LOOM: 56" MACOMBER—four-harness, sectional beam, bench, $1700. Reeds $50. Tension box, shuttles, swift, yarns, negotiable. (609) 696-0073 (6pm–9pm).

MECK ENGLISH FLAT COMBS and Russian type paddle combs available. For more information, send SASE to **J.A. Meck,** PO Box 756, Cornelius, OR 97113. (503) 628-2696.

SALE ON ALL SPINNING WHEELS & FREE SHIPPING! Schacht Wheel $415, Louët S-90 $415, Ashford Traditional D.D. $189, Louët Roving Drum Carder $199. *New* JENSEN "Tina" Traveller, SCHACHT, JENSEN, ASHFORD, LOUËT, LENDRUM. All models available. Seven different travel size wheels. *DEALS* on looms from SCHACHT, NORWOOD, CRANBROOK, HARRISVILLE, LOUËT, LECLERC, DUNDAS. Wool combs by Meck, Viking, Louët. Electric spinners, drum carders, pickers, blockers, flax processing equipment, natural dyestuffs, over 150 books in stock, videos, exotic fibers, accessories, parts. DELUXE LEARN TO SPIN KIT $19.95 ppd. GREAT PRICES! Catalog $3, fiber sample cards $3.50. *Call me for your best deal!* Lois Scarbrough, **Bountiful,** 125-B Moraine, Box 1727, Estes Park, CO 80517. (303) 586-9332. Call 7 days/week. VISA, MC, AMEX.

SPINNING & WEAVING EQUIPMENT AT DISCOUNT PRICES!! Ashford, AVL, Clemes & Clemes, Cranbrook, Haldene, Harrisville, Lendrum, Louët, Norwood, Schacht, Tennessee great wheel. All accessories, yarns, fibers, dyes, samplers—all available by mail from SRH. Shipping free on floor looms and wheels! Call or write for information today! Business hours M–F, 8–1, or whenever. Price list $2. Sample catalog $15 (refundable with $50 purchase). **Suzanne Roddy, Handweaver,** 1519 Memorial Drive, Conroe, TX 77304. (409) 756-1719.

TRIANGULAR FRAME LOOMS. Show off handspun yarns! Weave large shawl or combine triangular pieces for ponchos, blankets, etc. Variable sizes. Complete instructions. No weaving experience necessary. Easily transportable. **Carol Leigh's Specialties,** 7001 Hillcreek Rd. SO, Columbia, MO 65203. (314) 874-2233.

WHEELS—WE PAY SHIPPING! Reeves, Louët, Ashford, Schacht, all models available. For prompt courteous service call 800-468-0035. **Yarn Barn,** 918 Massachusetts, Lawrence, KS 66044.

WOOL PICKERS©, WOOL COMBS©, BLOCKERS©, Skein Winders©. Flax processing equipment and accessories for each made from hardwood, finished with Danish oils and/or plasticized; each designed and crafted for handspinners by Meck. For more information send SASE to **Meck's,** PO Box 756, Cornelius, OR 97113. (503) 628-2696.

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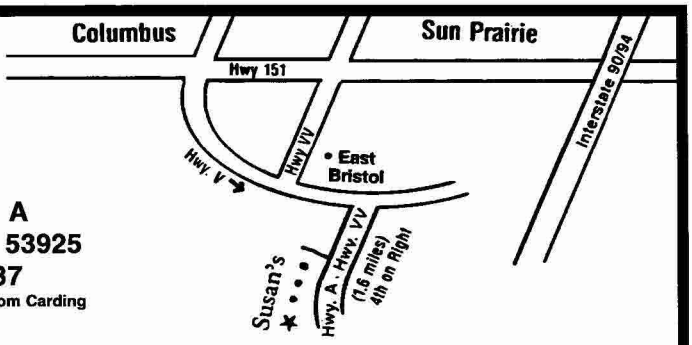

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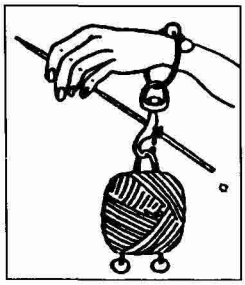

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