

WHAT IS WOOL GREASE? A Scientist Explains

SPIN OFF WINTER 2022

Spin Off

the art & craft of spinning yarn

WINTER 2022

Building Better *Blends*

Rare-Breed Tweed
Card Your Own

20
*Blends
to Try!*

STRONGER SOCKS—
Naturally?
No-Nylon Socks to Spin + Knit

LUXURY BLENDS • RARE-BREED TWEED • NO-NYLON SOCKS

SPINOFFMAGAZINE.COM



majacraft



The mighty Majacraft Fusion Engine Drum Carder is really built to last. The enclosed gears are very strong and safe from stray fibres so they will never clog. These gears also make it very light to crank. The drums are a little bit magic, guiding the fibre into the batt for you. The Fusion Engine is virtually maintenance free.

The packer brush is conveniently placed at the back and the licker drum, with its special-action smooth tines, is adjustable for different fibres and batt types. You can also easily swap between main drums with a choice of 128, 92, and 72 tpi. This is your forever carder!

all you need to card your dreams

USA

ARIZONA

Grandma's Spinning Wheel
6544 E. Tanque Verde #150
Tucson, AZ 85715
Ph 520 290-3738
spinningramma@aol.com
www.grandmasspinningwheel.com

CALIFORNIA

The Village Spinning & Weaving
425-B Alisal Rd
Solvang, CA 93463
Ph 888 686-1192 Toll Free
villagespinweave@mac.com
www.villagespinweave.com

COLORADO

Bountiful
211 Green Mountain Dr
Livermore, CO 80536
Ph 970 482-7746
Toll-free 877 586-9332
info@bountifulspinweave.com
www.bountifulspinweave.com

Blazing Star Ranch

3424 S. Broadway
Englewood, CO 80113
Ph 303 514-8780
blazingstarranch@gmail.com
www.blazingstarranch.com

ILLINOIS

The Fold
3316 Millstream Rd
Marengo, IL 60152
Ph 815 568-0165
thefold@mc.net
www.thefoldatmc.net

INDIANA

The Trading Post for Fiber Arts
8833 S. 50 W.
Pendleton, IN 46064
Ph 765 778-3642
tradingpostfiber@aol.com
www.tradingpostfiber.com

KENTUCKY

The Woolery
859 E Main St STE 1A
Frankfort, KY 40601
Ph 502 352-9800
info@woolery.com
www.thewoolery.com

LOUISIANA

Weavin' Place
79434 Deluane Rd
Folsom, LA 70437
Ph 985 796-8048
cheryl@weavinplace.com
www.weavinplace.com

MAINE

Halcyon Yarn
12 School St
Bath, ME 04530
Ph 1-800-341-0282
purchasing@halcyonyarn.com
www.halcyon.com

NEW MEXICO

The WoolShed
150 Prairiewood Lane
Stanley, NM 87056
Ph 5052046127
TheWoolShed.maplewindfarm@gmail.com

NEW YORK

Whispering Pines Shetland Sheep Farm
9920 Chestnut Ridge
Middleport NY 14105
Ph 716 5253347
jen6265@gmail.com

NORTH CAROLINA

Hippie Chix Fiber Art
102 Indian Mound Rd
Cullowhee, NC 28723
Ph 828 293-2420
gaijohnston@frontier.com
www.hippiechixfiber.etsy.com

The Tail Spinner

109 North Wilmington Street
Richlands, NC 28574
Ph 910 324-6166
linda@tail-spinner.com
www.tail-spinner.com

OHIO

Three Sheep Gallery
164 Wolcott Dr
Boardman, OH 44512
Ph 330 95533600
linda@threesheepgallery.com

TEXAS

Woolly Designs
37 Dodge Rd.
Boerne, TX 78006
Ph 970 921-3834
www.woollydesigns.com

TENNESSEE

Smoky Mountain Spinnery
466 Brookside Village Way
Gatlinburg, TN 37738
Ph 865 436-9080
nancy@smokymountainsspinnery.com
www.smokymountainsspinnery.com

WISCONSIN

Susan's Fiber Shop
N250 Hwy A
Columbus, WI 53925
Ph 920 623-4237
susan@susansfibershop.com
www.susansfibershop.com

WASHINGTON

Rowan Tree Woolery
Selah, WA 98942
Ph 509 388-5619
lhargov@charter.net
www.rowantreewoolery.com

Japan

Kakara Woolworks
580 Yagami, Akaiwa-shi,
Okayama-ken 709-0734
Ph81 869959988
info@kakara-woolworks.com
www.kakara-woolworks.com

Canada

BRITISH COLUMBIA

Blue Moon Studio
Andrea Revoy
Creston, BC V0B 1G1
250.402.3795
bluemoonstudio.ca

NOVA SCOTIA

Gaspereau Valley Fibres
PO Box 2368
Wolfville, NS B4P 2N5
Ph 902 542-2656
brenda@gaspereauvalleyfibres.ca
www.gaspereauvalleyfibres.ca

ONTARIO

The Fibre Garden
3799 Main Street
Jordan, ON Canada L0R 1S0
Tel 289-567-0555 or
Toll-free 1-855-236-3829
info@fibrearden.ca
www.fibrearden.ca

The Black Lamb

198 Victoria Street North, Port Hope,
Ontario Canada L1A3N3
Ph 905 885-0190
fibre@theblacklamb.ca
www.theblacklamb.ca

Australia

**Janet Day
My Spin on Things**
20/129 Harding Street
Coburg 3058
Victoria
Ph 0425 777 173
info@mypinonthings.com.au
www.http://mypinonthings.com.au

Wendy Dennis

Wendy Dennis Polwarth Wool
64 Skene Street
Birregurra
Victoria 3242
Email: wool@tarnie.com
WEB: www.tarnie.com

Virginia Farm Wool Works

VIRGINIA FARM
WOOL WORKS
9 Serina Ave
Castle Hill NSW 2154
Ph 0468 866 789
info@virginiafarmwoolworks.com.au
www.virginiafarmwoolworks.com.au

Yarnarama

Vaucluse Ave
Valley View, SA 5093
Ph 0466-788-349
knitwise@yarnarama.com.au
www.yarnarama.com.au

United Kingdom

WALES

Sarah Stacey Handspinning & Knitting

Cwmyoy
Monmouthshire, NP7 7NR
Ph 018 7389-0712
hedgehogcarding@gmail.com
www.hedgehog-equipment.co.uk

ENGLAND

The Threshing Barn

Janet Phillips
Unit 10, Reeth Dales Centre
Silver Street, Reeth
Richmond, DL11 6SP, UK
PH 01748 884025 or
01969 663191
info@threshingbarn.com

SCOTLAND

The Wheel Ewe

Ruth Robinson
Ph 07900 633067
ruth@thewheelewe.co.uk
www.TheWheelEwe.co.uk

Majacraft Ltd - 586 Oropi Road, RD3 Tauranga 3173 New Zealand

phone +64 7 543-3618 - email support@majacraft.co.nz
web www.majacraft.co.nz



KROMSKI & SONS
Great tools for all of your fiber needs!



JOIN THE *Kromski Fun*
FACEBOOK GROUP!



Kromski North America
1103 N. Main St., Pavo GA 31778
(229) 859-2001
mail@kromskina.com



www.kromski.com
www.kromskina.com

Discover our collection

Have you already made a choice?



S17



S95



S96

www.louet.com

You can find more information about our products and dealers on our website: www.louet.com



S10C



S10C



S10C

louët

SINCE 1974

LENDRUM

Quality Spinning Tools Since 1976



The Folding Wheel has the widest range of flyer speeds available, from 5 up to 44



Available unfinished, in Cherry, Walnut, or Maple.

VISIT YOUR NEAREST DEALER TO SPIN ON A **LENDRUM**

Fibre Garden

3799 Main Street
Jordan Ontario L0R 1S0
(289) 567-0555
info@fibregarden.ca

Homespun Haven

4165 Round Prairie Rd.
Armstrong, BC V0E 1B4
(250) 546-3224

Honeysuckle Fibre Arts

9600 Third St.
Sidney, BC V8L 2Z9
(250) 656-4201

Southwest Corner

4255 E. River Rd.
Tucson, AZ 85718
(520) 335-4113
cottonspinning.com

Village Spinning & Weaving Shop

(888) 686-1192
villagespinweave.com

Lambspun

1101 E. Lincoln Ave.
Fort Collins, CO 80524
(800) 558-5262
lambspun.com

Shuttles Spindles & Skeins

shuttles@shuttlesspindlesand
skeins.com

Serendipity Farm

9501 Silver Lake Dr.
Leesburg, FL 34788
(757)651-2632
fibertoolsonline.com

The Fold

3316 Millstream Rd.
Marengo, IL 60152
(815) 568-5730
thefoldatmc.net

Yarn Barn

930 Massachusetts
Lawrence, KS 66044
(800) 468-0035
yarnbarn-ks.com

The Woolery

859 E. Main St. Suite A
Frankfort, KY 40601
(800) 441-9665
woolery.com

Webs

PO Box 147
Northampton, MA 01061
(800) 367-9327
yarn.com

Maple Row Farm

1059 Cline Rd.
Sherwood, MI 49089
(248) 892-3732
dbcine2@gmail.com

Earth Guild

33 Haywood St.
Asheville, NC 28801
(800) 327-8448
earthguild.com

Jehovah Raah Farm

204 Dogwood Rd.
Candler, NC 28715
(828) 627-3362

Red Stone Glen Fiber Arts

435 Poppas Ford Rd
York Haven, PA 17370
(717) 212-9022
redstoneglen.com

Misty Mountain Farm

154 Quail Call Lane
Amisville, VA 20106
(540) 937-4707
mistymountainfarm.com

Paradise Fibers

225 W. Indiana
Spokane, WA 99205
(888) 320-7746
paradisefibers.com

Weaving Works

16825 48th Ave W.
Unit 130
Lynnwood, WA 98037
(206) 524-1221
weavingworks.com

Susan's Fiber Shop

N250 Hwy A
Columbus, WI 53925
(920) 623-4237
susansfibershop.com

Threshing Barn

Reeth, Richmond,
DL11 6SP UK
01748 884025
info@threshingbarn.com

LENDRUM

403 Millhaven Rd., Odessa, OH Canada K0H 2H0
gord@lendum.ca (613) 386-7151 www.lendum.ca

Contents

VOL. XLV NO. 4 WINTER 2022

FEATURES

20 **Beauty and the Beast:**
Herdwick Wool, a Heritage Mill & Luxury Cloth

CATH SNAPE

26 **Nature's Nylon:**
Natural Alternatives for Stronger Socks

STEFANIE JOHNSON

36 **Fiber Blending and Hand Comfort**

CARSON DEMERS

42 **Optimizing Luxury:**
Getting the Most Mileage Out of Exotic Fiber

LISA MITCHELL

50 **Wool & Hemp:**
A "Primitive" Fiber Dream Team

MADELINE KELLER-KING

64 **Structure:**
Choosing Fibers for Drumcarding

EMILY WOHLSCHEID

70 **Wool Basics:**
What Is Grease?

A. SABINE SCHRÖDER-
GRAVENDYCK

74 **Llama Fiber:**
A Realm of Possibilities

DR. ANNAMARIE HATCHER

78 **Llama Fiber:**
An Exploration in Spinning and Knitting

BARBARA KELLY-LANDRY

On the cover: Fiber by Naturally Knitty and Louet blending board. Meet the artist, Jessica Gutoski, on page 88. Photo by Matt Graves

spinoffmagazine.com

- Calls for Entries • Corrections
- Index of Past Issues



THE BLENDS ISSUE 58

Photo by Matt Graves

PROJECTS

30 **Alloy Socks**
STEFANIE JOHNSON

54 **Sturdy Mittens for Winter Walks**
MADELINE KELLER-KING

58 **Table Scraps: Clasp-Weft Table Runner**
TRACY LIVERNOIS



Photo by Nikyle Begay

12



Courtesy of Sue Carney

18



Photo by Matt Graves

42

DEPARTMENTS

4 **Editor's Letter**

6 **Reviews**

8 **Get This: Pamper Yourself**

12 **A Quick Spin**

NIKYLE BEGAY AND HOLLY
CALLAHAN-KASMALA

18 **Your Finished Object:**
Kaffe Fassett Pillow

88 **Beauty Shot**



Blends—from the familiar Merino/silk top to the small-batch roving with 10 ingredients—are one of the many things that seem to come and go in popularity. Two decades ago, I started traveling outside of my local area to visit fiber festivals and was amazed at how the offerings varied. In one part

of the country, there might be dozens of rovings available that included soy silk, SeaCell, Ingeo, silk noil, Firestar, and more. In another region, it might mostly be combed top with tussah available in dozens of colors—no SeaCell in sight.

As I crisscrossed the country each year teaching workshops (until COVID, of course), I still saw some of these regional differences despite the changes in our digital connectivity. Fascinating, I tell you! In one guild, everyone might have a drumcarder or two. Another guild might not have drumcarders, but most spinners had several sets of combs. Some guilds were a mix, others less interested in blending tools in general. We all have so much to learn from one another!

In this issue, more than a dozen makers share their work and experience with you. **Emily Wohlscheid** walks you through the design and sampling steps for four different blends, and **Lisa Mitchell** uses her homegrown guanaco to create a set of batts that test luxury fiber blending ratios. **Stefanie Johnson** develops natural-fiber blends for tough, no-nylon socks; and physical therapist **Carson Demers** explains why some blends stress your hands and what you can do about it. I hope you love learning from these authors as much as I do.

Wishing you peace and perfectly filled bobbins,



A blend of blends. See what Kate is doing with leftovers at spinoffmagazine.com.

Photo by Kate Larson

Spin Off®

Vol. XLV No. 4 Winter 2022

EDITORIAL

Editorial Director Anne Merrow
Editor Kate Larson
Associate Editor Debbie Blair
Managing Editor Laura Rintala
Project Editor Angela Schneider
Editorial Assistant Katrina King
Technical Editors Karen Frisa, Angela Schneider
Copy Editors Katie Bright, Trish Faubion
Proofreader Lavon Peters
Editors Emeritae Anne Bliss, Anne Merrow, Amy Clarke Moore, Deborah Robson

CREATIVE SERVICES

Art Director Charlene Tiedemann
Production Designer Mark Dobroth
Photographer Matt Graves
Visual Stylist & Illustrator Ann Sabin Swanson

long thread

MEDIA

Founders Linda Ligon, Anne Merrow, John P. Bolton
Publisher John P. Bolton
Director of Marketing Haydn Strauss
Director of Media Sales & Brand Partnerships Julie Macdonald
Director of Digital Content & Strategy Tiffany Warble
Director of Events and Customer Success Rachel Martin

Spin Off® (ISSN 0198-8239) is published quarterly by Long Thread Media LLC, 1300 Riverside Ave, Ste 206, Fort Collins, CO 80524; phone (888) 480-5464. Periodicals postage paid at Fort Collins, CO, and additional mailing offices. All contents of this issue of *Spin Off*® are copyrighted by Long Thread Media LLC, 2021. All rights reserved. Projects and information are for inspiration and personal use only. *Spin Off*® does not recommend, approve, or endorse any of the advertisers, products, services, or views advertised in *Spin Off*®, nor does *Spin Off*® evaluate the advertisers' claims in any way. You should, therefore, use your own judgment in evaluating the advertisers, products, services, and views advertised in *Spin Off*®. Reproduction in whole or in part is prohibited, except by permission of the publisher. Subscription rate is \$29.99/one year in the U.S., \$39.99/one year in Canada, and \$49.99/one year in international countries (surface delivery). U.S. funds only.

Postmaster: Please send address changes to 1300 Riverside Ave, Ste 206, Fort Collins, CO 80524.

Subscribers: For subscription information, call (888) 480-5464, email support@longthreadmedia.com, or visit spinoffmagazine.com. Please allow six weeks for processing address changes.

Shops: If you are interested in carrying this magazine in your store, email Michaela Kimbrough at mkimbrough@longthreadmedia.com.

Contact us: For questions about purchases made on the website, call (888) 480-5464 or email support@longthreadmedia.com.

For advertising information, call Julie Macdonald at (888) 480-5464 ext. 705, or email sales@longthreadmedia.com.

For editorial inquiries, email spinoff@longthreadmedia.com.

VISIT US ON THE WEB
spinoffmagazine.com • longthreadmedia.com

--- MADE IN BOULDER, CO



BETTER BY DESIGN

SCHACHT SPINDLE CO.

6101 Ben Place
Boulder, CO 80301



Flatiron Wheel



 [schacht_spindle_company](https://www.instagram.com/schacht_spindle_company) |  [schachtspindlecompany](https://www.facebook.com/schachtspindlecompany) | [schachtspindle.com](https://www.schachtspindle.com)

Frost Yarn: Batt Carding Masterclass (Digital Book + Video)

Nicole Frost

Nicole Frost's multimedia approach in this virtual offering combines video instruction with a digital book download filled with samples that are sure to inspire. The video portion covers various techniques including striped, ombré, double-carded, variegated, marled, tweed, and fleece batts. The course is geared toward students with some familiarity with the drumcarder, skipping the basics and going directly into the blending process. Frost shows how she preps fiber prior to carding for each technique, and care is taken to give students natural pause points to prepare their own fibers before resuming video instruction on the carding process.

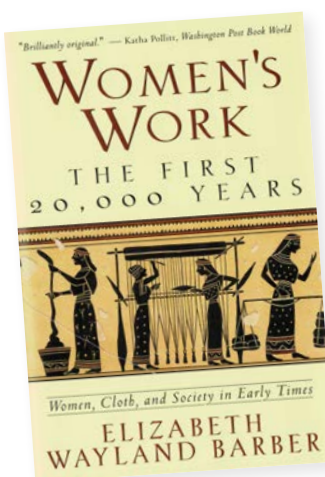
Frost is well known for her use of bright, bold colors for her business, Frost Yarn, so it's no surprise that her class samples make use of her signature neon rainbow palette. The vivid colors help students understand how individual blending techniques affect the resulting batts, yarns, and swatches. While there is some noise when the carder is running, it is acknowledged with humility and humor and does not detract from the visual demonstration and clear instruction provided.

The samples created in the video are beautifully photographed and included in the accompanying photo book along with 20 full pages of color and texture inspiration from nature, artwork, and more. As a bonus, Frost includes her comprehensive dye atlases for both Dharma and Jacquard acid dyes. This course is an excellent value for advanced beginners to seasoned fiber artists.



— Emily Wohlscheid

Online course and digital book, 2021. \$35. frostyarn.com



Women's Work: The First 20,000 Years; Women, Cloth, and Society in Early Times

Elizabeth Wayland Barber

This textile history classic is well worth revisiting in the context of living through (and spinning through) a pandemic. *Women's Work: The First 20,000 Years* traces the development of ancient textiles back to the invention of string twenty to thirty thousand years ago. As professor emerita of archaeology and linguistics at Occidental College, Dr. Elizabeth Wayland Barber pulls from wide-ranging sources, including ancient Greek poetry, Indo-European linguistics, prehistoric art, and archaeology, for her research.

A maker herself, Barber's approach to history places real value on the knowledge that comes with practicing a craft, mining her sources for milestones in human civilization and women's key role in it—told through the story of spinning and weaving textiles.

Alone in a house with a three-year-old with the world shut down over the last year, I was knee-deep in living one of the central theses of the book: If a culture needs women to do something, they have to be able to do it while caring for a small child at the same time. Reading this book as I carded and spun my way through a bag of filthy, raw wool, I found a connection to my own humanness that spanned time. Barber's words echoed in my head: "For millennia women have sat together spinning, weaving, and sewing." Though many of us may have been spinning alone through the pandemic and its shutdowns, Barber demonstrates that we have also been spinning in the company of twenty thousand years of women.

— Sydney Maresca

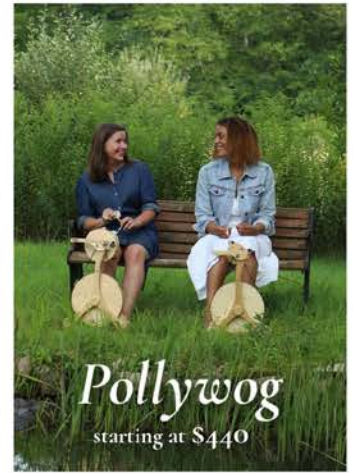
New York: W. W. Norton, 1994. Paperback, 336 pages, \$19.95. ISBN 9780393313482. wnorton.com



Become a Dealer or
Find a Local Dealer
www.spinolution.com



Echo
starting at
\$692



Pollywog
starting at \$440



Firefly
starting at
\$1280



Monarch
starting at
\$1322



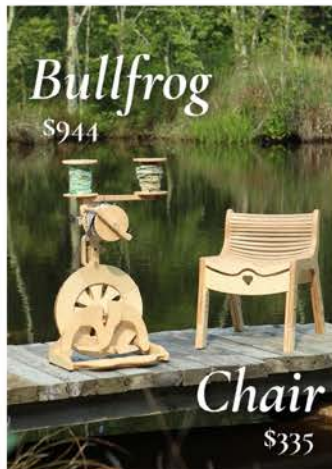
King Bee
\$1063



Worker Bee
\$1101



Queen Bee
\$912



Bullfrog
\$944
Chair
\$335

Pauly Winder

NEW: Auto Winding Flyer for SpinOlution Wheels.



Small - \$125
4 oz / 12 oz

Large - \$150
8 oz / 16 oz



Shop Online!

Purchase the PaulyWinder, Flat Pack Bobbins, and many other NEW SpinPerfect Accessories for SpinOlution wheels at www.spinperfect.com

GET THIS

PAMPER YOURSELF

LIZ GOOD



Textile company **yarn&whiskey** offers hand-made project bags and pouches in a variety of bright, bold African-print fabrics. Available in five sizes, the elegant **Pop Up Pouch** folds flat when empty and expands to hold all your supplies. A full-length metal zipper allows access to everything inside. The Boomerang colorway shown here is a size small. yarnandwhiskey.com



Organize your stash with **Stash Markers** from **TheFiberSprite**. These customizable laser-cut wooden labels rest on your shelves with wooden bases to keep them upright. Order a pack of 5 or 10 and customize the text on your markers. The text can be any terms you use to organize your fiber stash. Markers are sanded and finished with linseed oil; however, you can request unfinished markers to customize them even more. thefibersprite.etsy.com

The **Spinning Wheel Charm** from **Spruce Mountain Designs** has so many adorable details! At just a half inch tall, this three-dimensional charm features wood grain on the treadles, turned spindles on the wheel, and yarn collecting on the bobbin. It can be customized to fit Pandora-style bracelets for an additional fee. spruce-mountain.com



Three Fates Yarns' supersoft **Merino, yak, and silk top** starts out a light gray/brown that creates a rainbow of deep, rich colors with subtle tonal variations when dyed. Available in a variety of luscious colorways, there are generally four to six color repeats per braid, allowing for lots of options for combining colors when spinning. threefatesyarns.com

If you have a new product you would like featured in Get This, please contact us at spinoff@longthreadmedia.com.

HansenCrafts miniSpinner®

Leading the way in hand spinning technology!

- Built to last
- Each one is unique
- Made from beautiful hardwoods
- Crafted by our skilled team
- Manufactured in Port Townsend, WA



"There's something to be said for a specialist product which combines beautiful materials with specific design and functionality. This is an heirloom piece of equipment for the beginner and experienced spinner alike. Excellent customer service by people who clearly live and love what they make and do."

-Customer

www.hansencrafts.com
(360) 747-7746

**Southern
Comfort
Products**

60 PRO Series Drum Carder

4 drums 18x60batt
72/90/120/120tpi
dual motor



Jumbo Triple Drum Electric with Brush

3 drums 9x36batt
90/120/120tpi



Standard Triple Drum Electric with Brush

3 drums 9x24batt
90/120/120tpi
VariSpeed

Southern Comfort Products

91 Totoro Way
Bunker Hill, WV 25413

(304) 229-2052

hog@netins.net

www.southerncomfortproducts.com



ashford
WHEELS & LOOMS

Elizabeth 2

A simply stunning double drive spinning wheel.
Includes 4 bobbins and tensioned lazy kate.
Wheel diameter 24"

Traditional

The world's most popular spinning wheel.
Choose *single drive* or *double drive*.
Includes 4 bobbins and lazy kate.
Wheel diameter 22"



Traveller

A small and beautiful compact castle spinning wheel.
Choose *single drive* or *double drive*.
Includes 4 bobbins and built-in lazy kate.
Wheel diameter 18"



Kiwi 3

Our most popular wheel with folding treadles.
Includes 3 large bobbins, built-in lazy kate and wooden threading hook.
Wheel diameter 17½"



NEW
Optional carry bag



Kiwi Super Flyer

Makes spinning and plying art yarn so convenient. Huge 1½" orifice and free-flow yarn guides for smooth non-stop spinning.
Includes 3 bobbins, lazy kate and drive band.





Joy 2

A very portable and light spinning wheel.

Includes 3 large bobbins, built-in lazy kate and carry bag.

Wheel diameter 15¾"



Country 2

Have the freedom to spin and ply an even wider range of bulky yarns!

Includes 1 large country spinner bobbin and built-in lazy kate.

Wheel diameter 18"



e-Spinner 3

The smallest, lightest and most versatile electronic spinner.

Includes 3 jumbo bobbins, carry bag, foot switch and tensioned lazy kate.



e-Spinner Super Jumbo

The best features of the Country 2 and the e-Spinner 3 in a super size, portable electronic spinner!

Includes one huge 3lb capacity bobbin, carry bag, and foot switch.



e-Ball Winder

Infinitely variable speed. Soft start motor and foot switch for better control of your yarn. Powerful 12v 2.0-amp DC motor drives a balanced cone assembly. *12v mains power cord and foot switch included.*

Ball Winder and e-Ball Winder

Wind yarn into balls quickly, smoothly and effortlessly. Perfect balls every time. Wind extra large balls up to 17½ozs. Lacquer finish.

Choose manual or electronic.





Cute lambs in Béésh haagééd or Coppermine, Arizona.

Photo by Kelli Duna

Navajo-Churro Sheep and Shepherds

Meet the Rainbow Fiber Co-Op

NIKYLE BEGAY

On a crisp July morning a few weeks ago, I sat amongst the red rocks in my backyard, watching the sun rise and the sheep graze as smoke from a local wildfire began to settle in the valley. I listened to the soft mutters that the sheep made as they ate, and my eyes began to swell with tears as I reflected on the tough year that we had in 2020. COVID-19 swept the globe and at one point the Navajo Nation led in cases per capita in the US—many Diné lost their lives and many Diné flocks lost their shepherds.

The smoke, now thick in the air, was a stark reminder that the Southwest is still in a devastating drought. A curious lamb comes my way, she sniffs my face and hair before sneezing all over me, it was then my sadness turned into laughter as I wiped tear-laden lamb snot away from my face.

The latest wave of the pandemic has brought painful memories back to the surface. I remember last year and feeling helpless as COVID-19 worked its way into Indigenous communities across the country. I was astonished that amidst the pandemic, many people around the world rallied together on social media and other platforms to organize relief efforts

for Indigenous tribes. Those efforts orchestrated food boxes, household cleaning supplies, pet food, and PPE for those at most risk of contracting the virus.

While the Navajo Nation was being ravaged with cases of COVID-19, a group of influential fiber artists reached out to me via Instagram. Our conversation turned to ways we could help Diné shepherds and their sheep. The group was shocked to learn that for nearly a century, Navajo-Churro wool—the once preferred wool used exclusively in the most well-made Diné blankets and rugs—has been deemed inferior and that it currently has no place in the national or global market. Last year, a handful of Diné shepherds felt lucky to be paid one to five cents per pound for their Navajo-Churro wool; others weren't as fortunate. "Our Navajo-Churro wool was kicked away," said one Navajo shepherd (who wishes to remain anonymous) as tears fell down his cheeks. "The traders tell us our wool is worthless and that we need to start crossing our sheep with fine wool rams."

Stories like this and frustration over offensive prices for Navajo-Churro wool are common amongst Diné shepherds, especially those that are continuing the work of their parents and grandparents. Their dedication



Photo by Kelli Dunaj

Inside Mora Valley Wool Mill.



Kelli Dunaj (left) and Nikyle Begay (right), with Rainbow Fiber Co-Op producer member Irene Benalley (center).

Photo by Nikyle Begay

fuels their determination to resist the outside pressure to switch breeds, always to commercial breeds that are not cut out for the extreme conditions of the Southwest. “Navajo-Churro sheep are a legacy passed down from generation to generation. They are my grandparents and where their heart always was. They are my parents and where home will always be. The sheep will always take care of us, so I have to take care of them,” says Kelly Skacy, a lifelong Navajo-Churro shepherd who has dedicated herself to motherhood, shepherding, and being a steward of the land.

When I was a child, my grandmother would tell me, “Always care for the sheep and in return they’ll care for you.” Growing up and raising my own flock of Navajo-Churro, I’ve come to understand what she meant. Shepherding in my culture is more than turning out the flock, feeding hay, and providing fresh drinking water. It is a never-ending lesson on responsibility, durability, and maintaining a strong will.

With the events of the past year, I began to take these teachings to heart in a new way. I felt moved to do something, not just to support my own flock, but to do something on behalf of my fellow Diné shepherds. I joined forces with a friend and Navajo-Churro shepherd in California named Kelli Dunaj. We feel a

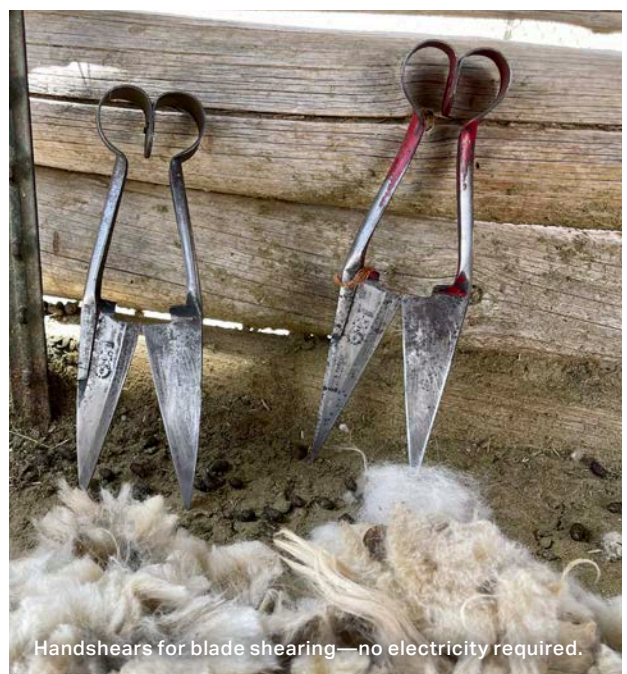
kinship in our reverence for the pastoral lifeway and are both enthralled by the enduring significance of Diné sheep culture over nearly five centuries. Kelli and I worked diligently on a plan to improve the financial sustainability of some of the largest remaining flocks of Navajo-Churro sheep on ancestral Diné land. From this, Rainbow Fiber Co-Op was formed.

Partnering with Fibershed, a nonprofit organization that develops regional, land-regenerating natural fiber and dye systems, Rainbow Fiber Co-Op has blossomed into a new and exciting wool cooperative. We are a Diné-led co-op that aims to create more equitable market outcomes for our flocks by starting up an e-commerce marketplace for Diné-grown Navajo-Churro weaving yarns. So far, the co-op has raised enough money through a generous startup grant from the First Nations Development Institute of Longmont, Colorado, and with private donations to pay a stipend to our shepherds for their shearing, a fair price per pound for their raw wool, a deposit on mill processing fees, the cost of creating an e-commerce website, and legal and administrative fees for the formation of a registered agricultural cooperative.

The goal of the project is not to profit, but to make enough money from the sale of Navajo-



A relaxed ewe and a skillfull shearer.



Handshears for blade shearing—no electricity required.

Photos by Kelli Dunaj



Photo by Kelli Dunaj

Diné shepherds and ancestral flocks of Navajo-Churro sheep are weathering a pandemic and poor wool prices. You can help support a Diné-owned wool co-op organized to support flocks on the Navajo Nation.

Churro yarns grown by Diné producers to fund the wool buy and yarn production again the following year. A onetime investment in establishing an online marketing channel will create a reliable and self-sustaining cycle of economic benefit for the shepherds and their flocks. Rainbow Fiber Co-Op believes that the shepherds' hard work to preserve their culture and traditions through Navajo-Churro sheep has enormous value and deserves fair monetary compensation. It is our goal to provide these shepherds and their wool the same opportunity that other shepherds in the US create for themselves through online marketplaces. The income generated will go right back into caring for these critically important flocks of Navajo-Churro sheep.

WHY THE RAINBOW IN RAINBOW FIBER CO-OP?

In Diné culture, a rainbow is the connection between the earth and sky. It signifies protection and brings blessings to the land. In our traditional story of creation, it is told that the deities came together to create every living being on earth—including sheep. The sheep were created using different colors of clouds. White clouds, gathered in the daylight, were molded into white sheep. Black, nighttime clouds were gathered and then molded into black sheep. Dark, steel-colored storm clouds were used to create gray or “blue” sheep. Clouds that appeared yellow in the twilight were gathered to form tan-colored sheep. The Rainbow beings gave a part of

their beauty to form their own sheep. They used the orange and red clouds, often seen at dusk, to form the first brown sheep. They told the other deities that the brown sheep will be a rare “blessing” to test the humility of humankind.

The first sheep were then assembled with wild tobacco for their ears, precious stones as their eyes, a willow branch broken into four sticks became their legs. The deities then recited sacred prayers and songs as the Wind beings swept through and blew first breath into them. The deities, satisfied with their creation, sent them to earth upon a rainbow trail, and we have been shepherds ever since. Calling ourselves Rainbow Fiber, we are paying homage to our traditional story of the creation of sheep and call upon the rainbow spirits for guidance, protection, and continued blessings for Diné shepherds, their sheep, and their wool.

For more about the Rainbow Fiber Co-Op please visit rainbowfibercoop.org. You can also follow our journey on Instagram [@rainbowfibercoop](https://www.instagram.com/rainbowfibercoop). We are currently fundraising to cover our first-year expenses. You can donate to support the project through the DONATE page on our website. All donations are 100% tax-deductible through our fiscal sponsor, fibershed.org.

Axééhéé'! Thank you!

Note: Diné is the traditional name for the tribe commonly known as the Navajo.



Tweed ingredients



Tweed batt



Tweed batt and skein



Tweed butterfly and swatch

Photos by Pete Kasmala

Rare-Breed Tweed

HOLLY CALLAHAN-KASMALA

Editor's Note: Holly wrote a wonderful article for Spin Off Fall 2021 about processing fleeces from her Hog Island sheep. She mentions in the article that she saves these precious nepps to create what she calls rare-breed tweed. We asked her to tell us more about it!

Working with heritage-breed fleece, especially whole fleeces, means you end up with lots of leftover bits. In addition to unused portions from the neck or britch areas, Hog Island wool often contains nepps. They're created during processing when the natural wool break occurs. I pull out and save them for rare-breed tweed.

When I have accumulated a few handfuls of nepps, I add them to an acid-dye bath. I like to have at least three different colors of nepps before I begin blending, but subtle monochromatic shades are also effective. My usual blend is fleece from my light-colored Hog Island ewes mixed with my Jacob's black and dark-

brown spots. The result is a gray yarn with flecks of color throughout. You can also make heathered tweed by mixing in additional dyed wool. To keep your tweed subtle, use the smallest of the nepps. The bigger and brighter the nepps, the more dramatic the fabric.

You can make your own tweed by blending your wool on a drumcarder or on handcards. I generally make several passes on the drumcarder, splitting each batt into sections and re-carding as I go. The nepps occasionally stick to the licker-in on my drumcarder, but it's easy enough to pull them off and layer them back into the fiber as I re-card.

Spinning the tweed yarn is easy and fun. I use a supported longdraw, letting plenty of twist into the drafting zone to grab onto the nepps. Some extra twist in plying helps keep the nepps in place as you finish the yarn. Wash, dry, a few quick snaps, and the yarn is ready to be knitted or woven into beautiful rare-breed tweed fabric. ●

Holly Callahan-Kasmala lives in northern Maryland. She is cohost of the Coffee with the Chicken Ladies podcast and writes about all things sheep and wool on her blog baltimorewoolcompany.com.



ESTES PARK

WOOL MARKET

30th Anniversary Celebration!

Save the Date!

Workshops: June 9 and 10 ■ Market: June 11 and 12
Estes Park Events Complex, Estes Park, Colorado
estesparkeventscomplex.com/wool-market

We have wheels in stock!

We carry spinning wheels from:

Lendrum
Ashford
Schacht
Majacraft
Kromski
Louet

Suppliers are working hard to catch up with production. We have many in stock or have them on order from these manufacturers. Why wait? Get yours ordered today and enjoy soon!

YARN BARN of Kansas



*Lendrum Saxony
in Cherry or Walnut
(left or right flyer)*

yarnbarn-ks.com 800-468-0035

Kaffe Fassett Pillow

SUE CARNEY

Designer and pattern Kaffe Fassett, Cityscape I-Cushion from *Modern Daily Knitting, Field Guide No. 16: Painterly* by Kay Gardiner and Ann Shayne.

Fiber Back of pillow: Three Waters Farm, Blushing Pinks (Blue-Faced Leicester) and Summer Shade (Blue-Faced Leicester); and Shirsty Cat, Smokey Gems (SW Merino).

Front border and I-cord Raven Ridge Fiber Arts, Mountain Bluebird (85% Polwarth/15% tussah).

Other supplies 20" × 20" Soft Touch pillow insert; Spectrum Warm/Cool 1.75" buttons, purple and teal.

Fiber preparation Combed tops, batts, and rovings. For Smokey Gems, I used handcards to mix fibers to bridge colors.

Wheel spindle system Schacht Ladybug, scotch tension.

Ratio 6.5:1.

Drafting method Short-forward draw.

Singles direction Z-spun.

Singles wraps per inch 20 (back).

Ply wraps per inch 13 (back).

Total yardage 416 yards for the back; 133 yards for the border and I-cord; unknown for the patterned section.



Sue and her fabulous handspun Kaffe Fassett pillow.

Photos courtesy of Sue Carney

Yarn classification/weight Sport (back); varied (front).

Needles U.S. size 5 (back and border); U.S. size 6 (front).

Gauge 21 stitches and 26 rows = 4" (back); 17 stitches and 24 rows = 4" (front).

Finished size 20" × 20" cushion.

My Kaffe Fassett cushion is a perfect addition to my colorful living room. Despite its pride of place, you would immediately notice that spinning consistency was not a priority. I needed yarn for Modern Daily Knitting's 2020 Kaffe-along and was confident I had enough leftover handspun to make a brightly colored version of the Cityscape I-Cushion. After gathering scrap balls and unused practice skeins from over 10 years of spinning, I still needed more. The hideous, handspun striped sweater languishing in my cedar chest provided the rest of the yarn in a wild array of colors.

Before I began to knit the front panel, I organized my yarn into color families. This collection consisted of various types of fiber that had been prepared and

spun on my Schacht Ladybug using different methods. It included batts, combed top, and roving spun into 2-ply, 3-ply, and chain-plied yarns. My project quickly transformed into a memory sampler that included souvenirs from trips to fiber festivals, local shops, and some of my favorite dyers.

This project was my first attempt at intarsia, which I found surprisingly easy. As I followed the pattern chart, I focused on color placement reminiscent of an antique Amish quilt. In the end, the vivid colors combined exactly as I had hoped. I completed the front by spinning a two-ply skein of Mountain Bluebird by Raven Ridge Fiber Arts to create the complementary border and I-cord.

Before I started the back, I took a Zoom class with Jillian Moreno and was captivated by the color swatches she created. Although I knew the back of the cushion wouldn't match the front, I decided to try fractal spinning. I pulled out a braid of Spunky Eclectic and carefully followed the dividing and spinning procedure from Jillian's lecture (not used in this project). When a package of Blushing Pinks and Summer Shade arrived from Three Waters Farm, I immediately started this magical spinning and plying technique again. For the last color, I used my Schacht handcards to add pieces of the Three Waters Farm fiber to the Shirsty Cat colorway, Smokey Gems. This provided a bridge between the colors on the back and the front.

The back panels were a quick knit because the unexpected color changes were engaging. The fun was over as soon as I began the assembly because the pillow

was an awkward size and the overlapping section of the envelope ribbing was unwieldy. After inserting the pillow, I breathed a sigh of relief and added three big garish buttons for good measure.

This cushion represents the history of my spinning. Here are my teachers and friends. Here is Sheralynn, my first extremely patient, long-distance coach in Australia. Here is my local spinning group in Central New York who answered my many questions. Here is Barb, who gifted me my first fancy drop spindle. And here is my friend Jesse. When I confided in her about my questionable spinning ability, she said, "Dude, you know how people are book smart and street smart? We are street spinners."

Street spinners, this project is definitely for you. ●

Have a finished object to share? Tell us about it! Contact spinoff@longthreadmedia.com to submit your project.



Handspun singles ready for plying. Fiber by Shirsty Cat.



Sue used antique Amish quilts as the inspiration for color placement.



Farfield Mill, Sedbergh, Cumbria

Beauty and the Beast

Herdwick Wool, a Heritage Mill & Luxury Cloth

CATH SNAPE

This is a tale of sheep in tune with their landscape, a heritage mill, and a textile designer who created unique fabric from an unexpected blend of fibers. The sheep are Herdwicks, guardians of the fells. They are hardy characters, well suited to the cold, wind, and rain of England's Lake District. They are one of my favorite sheep with their beautiful gray coloring, round faces, and perpetual smiles. Beatrix Potter—author and illustrator

behind Peter Rabbit—loved them, too. Her interest in the breed and the legacy she left has helped preserve the Herdwick in its natural environment. However, this handsome creature produces a beast of a fleece, coarse with hair and kemp. Traditionally, the fleece is used for carpets, or, in bad times, it is burnt as worthless.

In 2017, two enterprising young women, horrified at wasted wool and passionate about the Lake District's

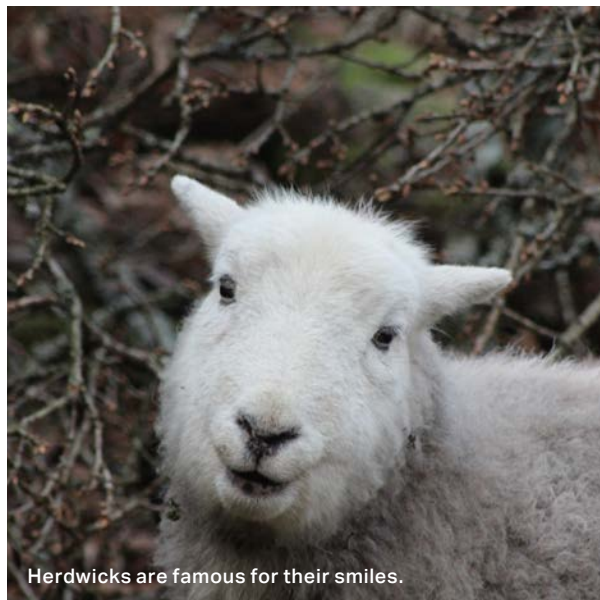
Photos by Cath Snape unless otherwise noted

This handsome creature produces a beast of a fleece, coarse with hair and kemp. Traditionally, the fleece is used for carpets, or, in bad times, it is burnt as worthless.

famous Herdwick sheep, sought to find a use for this “carpet wool.” Rachel and Alice visited the historic Farfield Mill to discuss their idea with David, the master weaver. He then introduced them to Carole Bowman, who agreed to design and weave a sample fabric to be used for luxury interior design items.

Secretly, Carole thought Herdwick wool was only good for carpets. However, after working with it, her views changed. The fabric design she developed was a success and is now woven commercially at Farfield and other mills in the north of England for Cable & Blake, Rachel and Alice’s designer label. And Carole’s interest in the potential of Herdwick wool was piqued.

Farfield Mill is a piece of industrial history hidden away in a field outside Sedbergh, Cumbria, in



Herdwicks are famous for their smiles.

Photo by John Reid via Pixabay



Millspun cones with examples of sari silk and Herdwick roving; singles on the bobbin and wound ready for weaving.

Photo by Carole Bowman



Carole designing in her workshop.

Courtesy of Carole Bowman

northwest England. Built in 1837 as a water-powered textile mill, its heritage continues to be an important part of its present. The site hosts craft studios and workshops, has a museum, and welcomes visitors who want to see working looms. Carole is passionate about the mill and its history. It is there, in her studio workshop, that she spins, dyes, and weaves yarns and fabric for sale at the mill. Her background is in textile design, and she studied in Bradford, center of the wool trade in the United Kingdom.

After Carole's experience creating Herdwick fabric for interior design, she started wondering what the possibilities might be for this hardy wool. And

she came to this: "What if I combine this low-value wool with another low-value fiber? Could the result be greater than the sum of the parts?" The more she thought about this, the more she liked the idea. Sari silk is a recycled and inexpensive fiber; could it be effectively combined with Herdwick? If so, how? With a little experimentation, she produced a yarn at the mill. The spun skeins were on display in the workshop while Carole considered the fabric design. The beautifully spun yarn from such an unusual fiber combination caused much interest among mill visitors.

I was one of the people who visited Farfield Mill, chatted with Carole, and admired the yarn. The idea of the yarn remained with me, intrigued me. What a great combination; it shouldn't work, but it did.

THE BLEND

When *Spin Off* called for articles for the theme *Opposites Attract*, I immediately thought of this yarn and contacted Carole. She told me that the yarn had sold before fabric could be woven, but she would work with me and create more yarn. Together, we would weave samples and enough fabric to create a finished item. I developed a new friendship, learned a new technique, and have been inspired to create my own versions of this yarn and fabric.

Carole's Dubbing Method

1. Hold the two rovings next to each other in your fiber hand. Here, the Herdwick is in line with the yarn, the sari silk to the side.
2. Start by spinning a fine Herdwick yarn with a short-forward draw.
3. From time to time, tilt your fiber hand so a few fibers from the silk are caught in the twist. Use your middle finger to nudge a few silk fibers into the drafting zone if necessary.

You can control the thickness, length, and spacing of the silk additions to create different effects. For a warp yarn, however, the silk inserts should be fine, without slubs that would catch on the reed.

If you are using the yarn for weft or knitting, you can create silk slubs, but make sure they are well secured.



Holding the two rovings. When you wish to add sari silk, tilt your hand and catch a few fibers with your middle finger.

Herdwick Fiber

Few spinners are eager to spin the coarse blend of wool, hair, and kemp that makes up Herdwick fleece. I had prepared a fleece by drumcarding and then spun it as a chunky yarn, but seeing Carole's fine singles was a revelation. Commercially prepared roving is available and easier to spin than my hand-prepared fiber. It contains many short fibers and black and white kemp that add texture and color to the yarn. Some liken spinning Herdwick to spinning Brillo pads and warn of finger damage, but Carole and I have found that its texture is not as bad as its reputation.

Sari Silk

When I think of silk, I envision softness and elegance, flowing scarves, and bright saris. I loved the idea of combining silk with Herdwick, a juxtaposition that challenges expectations. Sari silk uses the offcuts from weaving, which are shredded and then carded into roving; it consists of short fibers as well as threads and knots.

A word of warning: Many sari silk preparations will bleed. If keeping the colors bright and separate is important, perform a wash test first.

CAROLE'S PROCESS

After Carole identified the fibers she would use in her blend, she needed to decide how to combine them in the yarn. Carole used a technique she now refers to as dubbing, based on a comment from her fly-fishing husband. This method incorporates short fibers into the base fiber. In this case, the short sari silk adds bright spots of color to the longer-stapled, tweedy gray Herdwick.

The Design Process

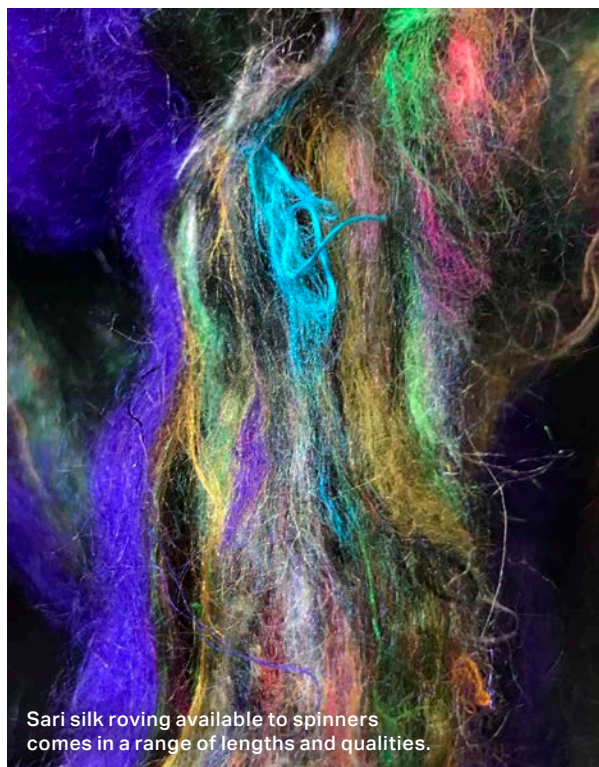
Carole shared the details of her design process with me. She said, "For me, the inspiration is often born out of spinning a yarn, as in this case. As the yarn develops, ideas about the end use and the cloth emerge. I decided that I would weave with handspun and commercial yarn and create a fabric to use in home textiles. My design board is a loose organic thing with a collection of images, fabrics, yarns, and color swatches, to inspire and to confirm or reject choices."



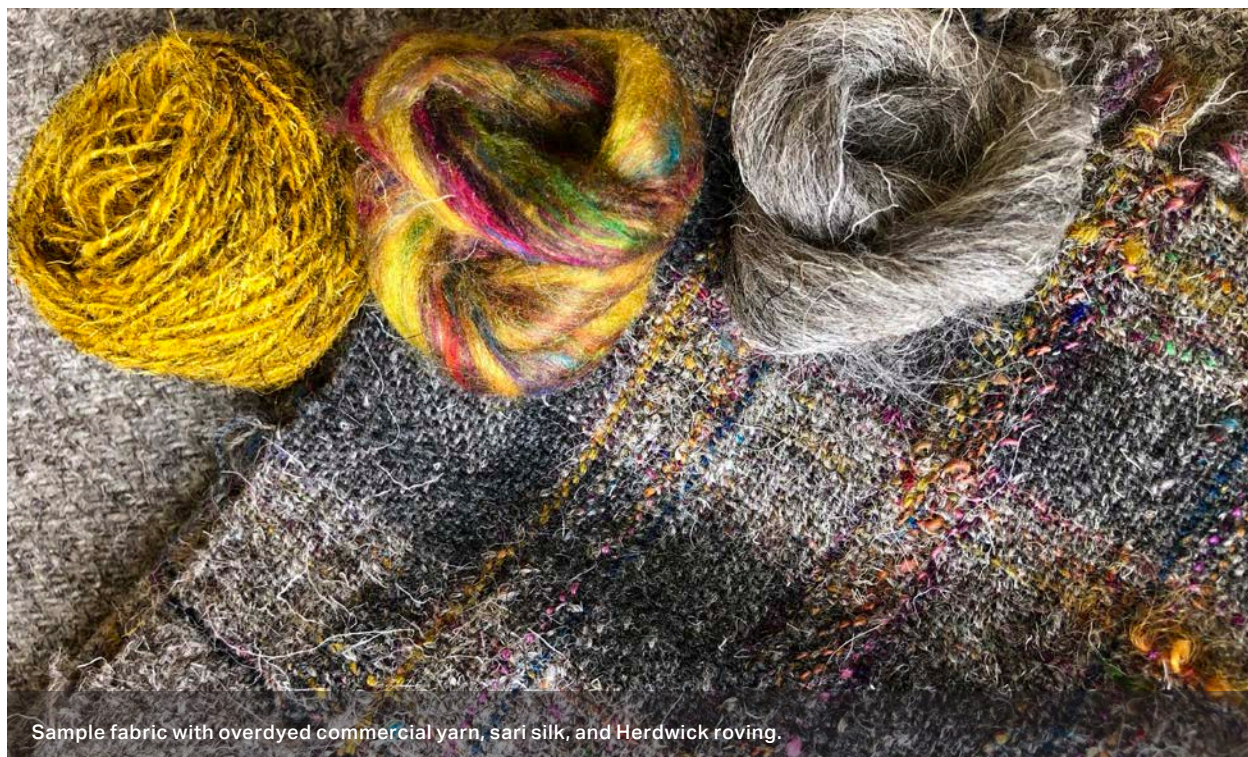
Herdwick staple.



Herdwick roving showing black and white kemp.



Sari silk roving available to spinners comes in a range of lengths and qualities.



Sample fabric with overdyed commercial yarn, sari silk, and Herdwick roving.

The Weaving

Carole continued the design process using her Louet Magic Dobby loom. Both yarns measured 28 wraps per inch (wpi), so for a firm fabric, she chose a sett of 16 ends per inch (epi). She overdyed some commercial Herdwick with a golden yellow acid dye to produce an intense yellow ochre that echoes the lichen of the local landscapes. She sampled colors, patterns, and textured yarns but decided on a plain, balanced weave and then wet-finished and fulled the samples.

The handspun yarn in the samples worked well. However, weaving the fabric introduced another beast. Carole quickly discovered that the Herdwick was very “sticky” on the loom, making the shed difficult to create. Her handspun warp yarn did not hold up as well as she hoped on a full length and width fabric, and some of the warp threads broke. Because this was a checked fabric, the handspun warp threads made up around 10 percent of the more than 400 warp ends, so it was not a disaster—it just led to another step in the adventure. To make progress, she was able to pull through replacement warp threads. Exploration continues.

CATH'S VARIATIONS ON THE HERDWICK CLOTH

Inspired by Carole, I created my own versions of this intriguing blend.

Variation 1

I started by drumcarding 5% sari silk with 95% Herdwick fleece. When spun with a short-forward technique, my Z-spun singles measured 22 wpi and 6 twists per inch (tpi). I plied from separate bobbins to get a two-ply yarn that measured 14 wpi and 4 tpi. Knitted with U.S. size 8 (5 mm) needles, the swatch felt like it would make a great knitted jacket fabric. I preferred the

Happy Herdwicks

To find out more about these hardy sheep and the shepherds who care for them, read *The Shepherd's Life*, by James Rebanks.

Beatrix Potter also loved Herdwicks. Learn more about her at nationaltrust.org.uk/beatrix-potter-gallery-and-hawkshead/features/beatrix-potter-the-farmer.

The Herdy company has created a range of products based on the Herdwick's cute appearance. herdy.co.uk.



Photo by APB via Pixabay

side of the swatch showing reverse stockinette stitch with some of the natural kemp visible on the surface.

Variation 2

Following Carole's lead, I started with Herdwick roving and sari silk. This time, the Z-spun singles I produced using Carole's dubbing method measured 30 wpi and 11 tpi. I created a two-ply yarn at 20 wpi and 8 tpi. When I started spinning the other two handspun yarns I had planned to use in my weaving project—Herdwick and dyed Herdwick—I spun the singles at 14 wpi and did some test wraps to see what the warp would look like. The sari silk disappeared! I modified the dubbed yarn by adding more ply twist and plying again with a third ply to make a crêpe yarn.

I wove a sample at $7\frac{1}{2}$ epi on a rigid-heddle loom using handspun Herdwick in three forms: dyed (13 wpi), plain (15 wpi), and with sari silk (15 wpi). I don't have Carole's design skills, but I'm pleased with the cushion sewn from the fabric. I have fallen in love with the tweedy nature of Herdwick yarn and plan to use the subtle effect of the silk with the Herdwick for future projects.

I am grateful to Carole for introducing me to this technique and to Herdwick yarn. I have loved the journey and will continue to explore the possibilities. I hope you, too, will be inspired to try something different. ●

Learn more about Carole Bowman and her textile work on Instagram @beetextile.

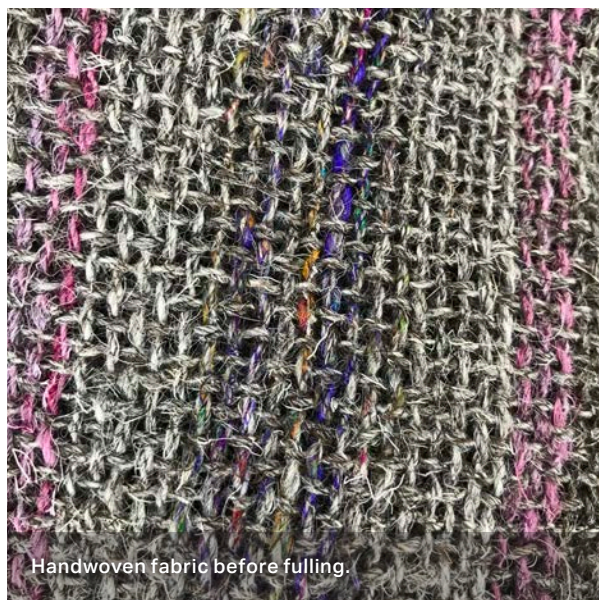
Resources

Cable & Blake, cableandblake.co.uk.

Farfield Mill, farfieldmill.org/heritage.

Herdwick Sheep Breeders' Association, herdwick-sheep.com.

Cath Snape is an enthusiast who loves nature, history, and anything related to fiber and textiles. Spinning is her passion, and she enjoys sharing that passion through teaching. She runs Beechwood Crafts, delivering craft courses from her tranquil patch in Yorkshire. She loves to understand and is intrigued by new ways and techniques. Visit her at beechwoodcrafts.com, Instagram @beechwoodcraft, and facebook.com/inspiringcraftcourses.



Handwoven fabric before fulling.



Fabric after fulling.



Finished cushion.



Gulf Coast Native wool blended with Wensleydale and spun into a stunning three-ply sock yarn.

Photos by Matt Graves

Nature's Nylon

Natural Alternatives for Stronger Socks

STEFANIE JOHNSON

I've made a study of socks, having knitted more than 140 pairs (14 of which were made with handspun yarn) over the years. My first handspun socks were made with two-ply, fingering-weight yarn that was 100% alpaca. They were soft and silky and kept their shape better than I expected, thanks to the stitch pattern. However, after only four months, the thin spot on the ball of my foot fell victim to a nail in our

hardwood floor. It was a poor yarn choice, yet I loved those socks!

Many of the commercially available sock yarns we have come to know and love in North America are 75% to 90% Merino wool and 10% to 25% nylon. The nylon is added to increase the strength and, hopefully, the longevity of handknitted socks. Merino wool is a soft, fine, highly crimped wool with a staple length

of 2 to 5 inches. Because of its crimp, it has a lot of elasticity, which is a great feature in socks. Most people find it comfortable against the skin. Although I love the softness of my Merino-blend socks, they are not as durable as I'd like for my outdoorsy adventures.

After wearing through a couple pairs of handspun socks, I began using superwash wool/nylon commercial fiber blends hoping that they'd be more durable. Then I graduated to carding nonchemically processed wool with nylon fibers to get a longer-lasting sock. Now I want to explore alternatives to man-made nylon to strengthen sock fiber blends in my quest for a more sustainable, environmentally friendly existence.

FIBER CHOICE: FINDING BALANCE

Creating the perfect sock blend—and ultimately yarn—is about balance. There are countless possible fiber combinations suitable for sock yarns, depending upon your desired sock and the wearer's willingness and ability to properly care for them. Down wool is soft, insulative, and elastic. Alpaca is touted as being warmer than wool, but without crimp, it lacks elasticity. Silk adds strength and a beautiful sheen, while cotton adds coolness and comfort to the yarn. A small touch of angora enhances softness and warmth and adds a bit of halo. Longwools decrease pilling and increase durability, and mohair adds strength and resistance to abrasion and felting. Blends provide the opportunity for the desirable qualities of different fibers to work synergistically.

An important trait of a long-lasting sock is the tight gauge of the knitting, which produces a dense, durable fabric. The number of plies is also an important factor, and increasing the number of plies will generally result in a stronger yarn. Try tugging on a 12-inch length of singles yarn from both ends and you will find it comes apart more easily than a three-ply yarn of the same length. The plies reduce abrasion of the yarn as well since the exposed surface area of each ply of the yarn is decreased as more plies are added. My go-to handspun sock yarn is a traditional three-ply with a lot of ply twist. I have also knitted socks with handspun yarns that consist of four singles traditionally plied, cabled yarn construction, chain-plied yarns, or crêpe yarns; all held up well to wear.

NO-NYLON SAMPLES

After learning about the Shave 'Em to Save 'Em rare breed initiative from the Livestock Conservancy in the Spring 2019 issue of *Spin Off* (see Resources), I branched out significantly from my usual commercially processed spinning fibers. One of the earliest new breeds I tried was Gulf Coast Native (GCN). I purchased some raw fleece from Mary Henze of Rock Mills Farm and fell in love with the bouncy, springy yarn that I was able to create from the fiber. The fleece was fine and crimpy, had little grease, and was soft enough for next-to-skin wear.



Gulf Coast Native is a rare breed in the United States and can be purchased in different preparations. *From top:* dyed locks, natural and dyed rovings, and a dyed batt



Stefanie blended three fibers with Gulf Coast Native. *From top:* mohair roving, Wensleydale combed top, and Lincoln roving

Subsequently, I compared other new-to-me fibers with GCN and decided it was a fiber I needed to explore more. I discovered Red Oak Farm's combination pack of GCN wool roving in natural and indigo-dyed colors as well as indigo-dyed locks in their Etsy store. It was a great opportunity to compare what I knew from my first GCN experience with GCN wool from another farm. And who doesn't love a little color?

After consulting *The Fleece & Fiber Sourcebook* by Deborah Robson and Carol Ekarius, some of the lustrous longwools that I considered for my sock-blend explorations included Bluefaced Leicester (BFL), Wensleydale, Border Leicester, and Lincoln, in addition to mohair fiber from Angora goats. I have worked with BFL before and found that I enjoy spinning and using 100% BFL for socks. It is sleek, yet bouncy, and BFL is on the finer side for a longwool—a great combination of qualities for a sock yarn.

Next, I looked at Wensleydale. The wool from this breed varies but is frequently on the fine end of the longwool family. Wensleydale is best known for its distinctively curly locks, and some find it fairly resistant to felting,* making it a great option for socks. Border Leicester, another longwool originating from the north of England, is described by Robson and Ekarius as a sturdy, friendly wool with a crisp

hand, with finer fleeces making hard-wearing yet comfortable garments. Lincoln is another hard-wearing longwool with a lot of strength; it will felt, but not easily.

Lastly, I jumped into a new species and considered mohair. Kid mohair is the finest, softest mohair. As goats age, their fiber becomes stronger and more lustrous with larger fiber diameters and more pronounced crimp, meeting the durability requirement for a sock yarn.

Sample Sets

From the endless combinations of all of the above fibers, I narrowed my options to three sample blends, and I planned to test each blend in a three-ply yarn structure and knitted swatches. For each of the samples, I decided to use an 80/20 fiber blend so I could compare them on a level playing field. Using my drumcarder, I blended three layers of GCN with two layers of the accompanying fiber for each of the 80/20 blends. After the first pass, I removed the batt and split it lengthwise into four strips, teased each one to the width of the drumcarder's infeed tray, and put them through for a second pass. The sample batts were each rolled back up as if to make rolags and predrafted into a long roving. I spun them on my Schacht Ladybug with scotch tension, a ratio of 8:1, and a short-forward draw for maximum control. Worsted-style spinning (drafting without twist) resulted in a more durable, denser sock yarn. I chose to chain ply the samples because it is a simple way to create three-ply yarn when working with small amounts of fiber.

The first blend was 80% GCN wool with 20% mohair from Buscho Farms. Mohair tends to be resistant to felting due to the fiber's scale structure, which is thinner, smoother, and larger than that of wool. I used an adult mohair fiber in my sample to add hard-wearing qualities to the blend. With a 4- to 6-inch staple and a lot of luster and body, it added strength to my finished yarn.

For the second sample, I spun a blend of 80% GCN wool with 20% Wensleydale longwool roving from the Frivolous Ewe. Wensleydale is a lustrous

wool with a long staple of 7 to 12 inches; the Wensleydale used in this project had an average staple length of 8 to 9 inches. I expected some difficulty blending it with the shorter stapled GCN. To head off any potential issues, I pulled 8-inch sections of the GCN roving and carded those with Wensleydale staple-length fibers that were pulled from the roving. The Wensleydale fleece I used had a much finer fiber diameter than most other longwools, which gave this knitted swatch a softer feel than the other two samples. It is an ideal fiber addition for socks that feel great and are very durable.

My third blend was 80% GCN wool and 20% Lincoln longwool roving from Richert Ranch. Lincoln is a lustrous wool with a long staple that can range from 7 to 15 inches and forms heavy locks. It makes smooth, hard-wearing yarns—another suitable sock fiber.

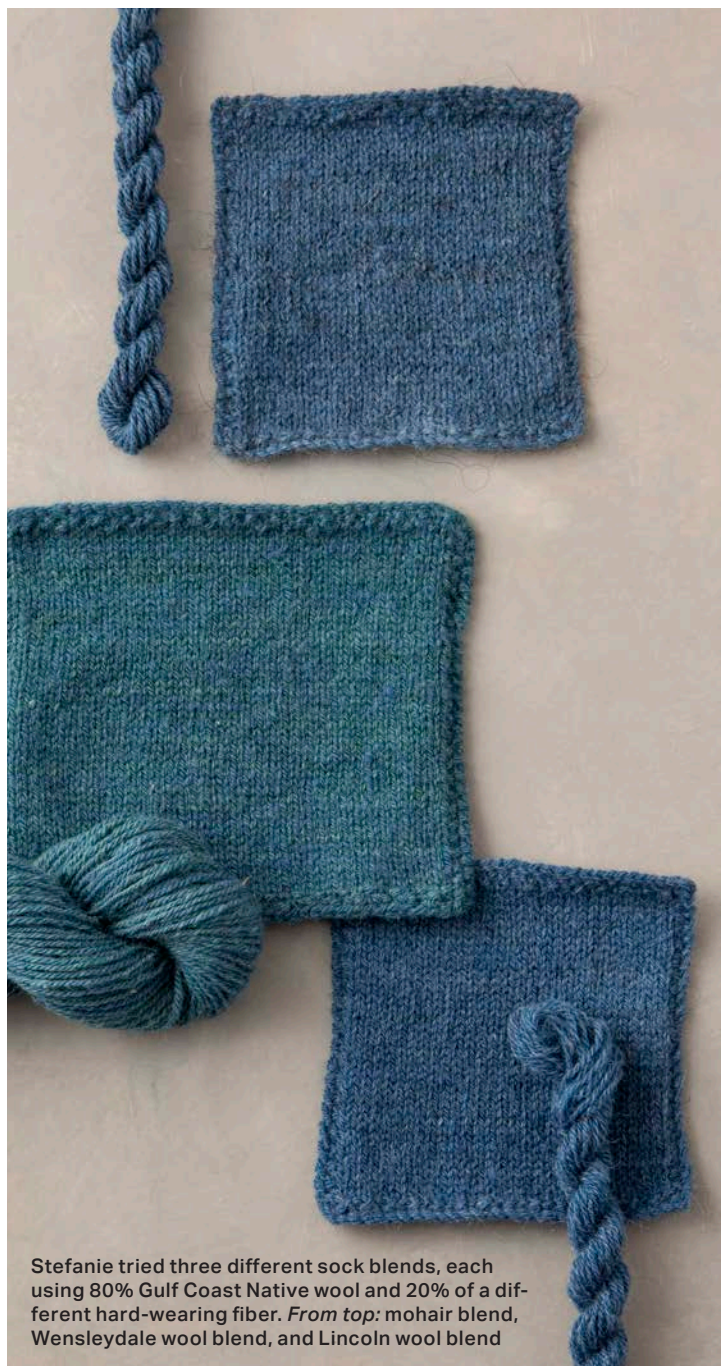
After swatching the three sample yarns, I decided to go with the more colorful 80% GCN/20% Wensleydale blend for my sock project. This blend felt the softest of the three to the touch, followed by the Lincoln blend, and finally the mohair blend. The Lincoln blend felt a bit more slippery, and the mohair blend had some coarser fibers protruding from the knitted sample's surface. Since I had Wensleydale fiber in tonal greens that blended beautifully with the GCN wool in natural and shades of indigo, I designed a sock that incorporates slipped stitches and small cables but uses only one color of yarn per round (see page 30).

My next sock yarn spinning adventure will be with a blend that includes 5% angora for softness and warmth and to keep my beloved bunnies close to me. What sock yarn blend will you be spinning next? ●

**Propensity to felt depends quite a bit on how the fibers are aligned and the condition of the fleece.*

Resources

As the Whorl Spins: "Challenge Accepted! Shave 'Em to Save 'Em." *Spin Off* Spring 2019: 18.
 Buscho Farms, etsy.com/shop/buschofarms.
 Frivolous Ewe, facebook.com/frivolousewe.
 Livestock Conservancy. "Shave 'Em to Save 'Em." <https://livestockconservancy.org/get-involved/shave-em-to-save-em/>.



Stefanie tried three different sock blends, each using 80% Gulf Coast Native wool and 20% of a different hard-wearing fiber. *From top:* mohair blend, Wensleydale wool blend, and Lincoln wool blend

Red Oak Farm Wool, etsy.com/shop/redoakfarmwool.
 Richert Ranch, richertranch.com.
 Robson, Deborah, and Carol Ekarius. *The Fleece & Fiber Sourcebook*. North Adams, Massachusetts: Storey Publishing, 2011.
 Rock Mills Farm, etsy.com/shop/rockmillsfarm.

When **Stefanie Johnson** is not protecting public health through environmental inspections and communicable-disease investigations, she enjoys teaching others to spin, knit, and weave. The Johnsons raise French Angora rabbits, honeybees, and a variety of chickens and ducks on their hobby farm, Settlers Grove, in Illinois. More of Stefanie's work can be found in *Knitty* and *Knotions*, and on Etsy and Ravelry.



Combine colors and fibers to create fun socks that last.

Alloy Socks

STEFANIE JOHNSON

Creating socks that are durable and resistant to abrasion yet soft and elastic is a great spinner's challenge. My handspun sock yarns have evolved over the years, and the no-nylon sock is my newest quest (see page 26). This design grew out of my love for trying out new fiber blends and color combinations. The stitch pattern allows use of small amounts of handspun yarn in a variety of colors in a cohesive way. The colorwork effect is attained by slipping stitches along with one-by-one cables, making wrangling multiple yarn colors a bit easier as only one color is used at a time.

SPINNING NOTES

For each of the contrasting colors, I blended 0.8 ounce (23 grams) natural, light indigo, or dark indigo Gulf Coast Native (GCN) wool with 0.2 ounce (6 grams) green Wensleydale on a drumcarder. I added three layers of GCN with two layers of the Wensleydale one at a time to create a single batt. After the first pass, I removed the batt and split it lengthwise into four strips. I then teased each strip wider to fill the width of the infeed tray and put it through the drumcarder for a second pass.



Gulf Coast Native and Wensleydale wool blended to create a nylon-free hard-wearing sock.

To create the main color, I used medium indigo GCN locks instead of prepared roving. First, I carded the locks alone into a batt, and then I carded twice more with Wensleydale fiber as described above. I made two main-color batts for this sock project.

When I was ready to spin, I split each finished batt into three equal parts lengthwise. I used a scale to ensure that they were equal in hopes of not having a lot of leftover singles. Each third was rolled back up as if to make a rolag, and I predrafted from the short end into a long roving. I spun them on my Schacht Ladybug wheel with scotch tension, a ratio of 8:1, and a short-forward draw for maximum control. Worsted-style spinning (drafting without twist) resulted in a dense sock yarn that is more durable than a lofty woolen-style yarn. Since the fiber was carded, not combed, it is semiworsted rather than a true worsted yarn.

After the singles rested on the bobbins overnight, I plied the three singles together with a good amount of ply twist at a ratio of 8:1 and then set the twist by soaking the skeins in hot water with a little Eucalan wool wash for about 10 minutes. Next, I gently squeezed the excess water from the skeins and soaked them in cold water for about 5 minutes. The skeins were snapped, then hung to dry.

The yarns fluffed up after they were dry. When first spun, the yarns were 14 to 15 wraps per inch (wpi). After washing, they were 13 to 14 wpi. The different colors of GCN wool spun up a little differently, and I found that the natural-colored roving had some noils in it, creating a slightly textured singles. I was pleased with the texture as it was consistent throughout the skein. I ended up with four colors ranging from pale green to dark teal.

MATERIALS

Fiber 4 oz (113 g) Red Oak Farm 100% Gulf Coast Native wool, natural and indigo dyed; 4 oz Frivolous Ewe 100% Wensleydale roving, handpainted green.

Yarn 3-ply; 140 (170, 205) yd MC, 60 (75, 90) yd each of CC1, CC2, and CC3; 1,520 ypp; 14 wpi; sportweight.

Needles Size 2 (2.75 mm). Adjust needle size if necessary to obtain the correct gauge.

Notions Markers (m); tapestry needle.

Gauge 37 sts and 55 rnds = 4" in patt.

Finished Size 6½ (7¾, 9)" foot circumference and 8¾ (8¾, 9¼)" long from back of heel to tip of toe; foot length is adjustable. Socks shown measure 7¾".

Visit spinoffmagazine.com/spin-off-abbreviations for terms you don't know.

Notes

- These socks are worked in the round from the top down with a heel flap and gusset.

STITCH GUIDE

1/1 LC: on RS: Drop sl st from left needle and let it hang in front of work, k1, return sl st to left needle and knit it; on WS: Sl 1 pwise wyb, drop sl st from left needle and let it hang in back of work, return sl st from right needle to left needle, return hanging sl st to left needle, p2.

1/1 RC: on RS: Sl 1 pwise wyb, drop sl st from left needle and let it hang in front of work, return sl st from right needle to left needle, return hanging sl st to left needle, k2; on WS: Drop sl st from left needle and let it hang in back of work, p1, return sl st to left needle and purl it.

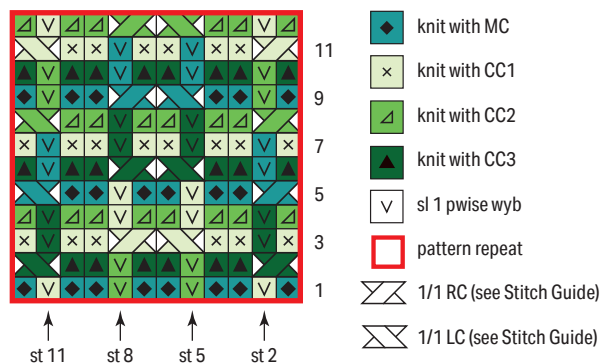
Editor's note: for an alternate set of cable instructions, see the box on page 33.

SOCKS

With MC and using the Old Norwegian method, CO 56 (68, 80) sts. Place marker (pm) and join in the rnd.

Work in k2, p2 rib until piece measures 1½" from CO.

Colorwork



Next rnd *K14 (17, 20), M1; rep from * to end—60 (72, 84) sts.

With CC1, knit 1 rnd.

Next rnd With CC2, k1, *sl 1 pwise wyb, k8, sl 1 pwise wyb, k2; rep from * to last 11 sts, sl 1 pwise wyb, k8, sl 1 pwise wyb, k1.

Work Rnds 1–12 of Colorwork chart 3 times, then work Rnds 1–9 once more. Break CC1, CC2, and CC3 and cont with MC only.

Heel Flap

Note: Heel is worked back and forth over first 16 (16, 22) sts and last 16 (16, 22) sts of rnd.

Set-up row 1 (RS) With MC, k1, sl 1 pwise wyb, k8, [sl 1 pwise wyb, k2] 2 times, k0 (0, 6), turn.

Set-up row 2 (WS) Sl 1 pwise wyf, p1 (1, 7), [1/1 RC, 1/1 LC, p8] 2 times, 1/1 RC, 1/1 LC, p2 (2, 8), turn.

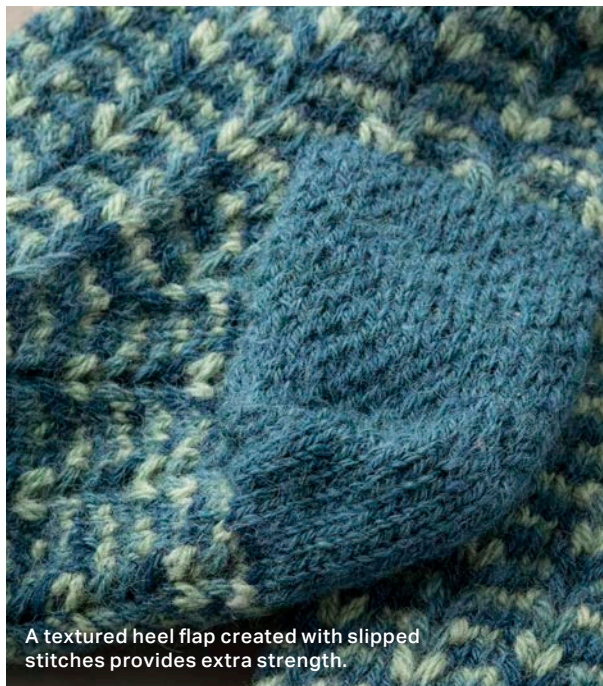
Row 1 (RS) *Sl 1 pwise wyb, k1; rep from * to end.

Row 2 (WS) Sl 1 pwise wyf, purl to end.

Row 3 Sl 1 pwise wyb, *sl 1 pwise wyb, k1; rep from * to last st, k1.

Row 4 Sl 1 pwise wyf, purl to end.

Rep last 4 rows 7 (7, 8) more times.



Stefanie's 1/1 Cable Method

- **1/1 LC** on RS: Sl next 2 sts to right needle pwise, sl left needle back into 1st sl st pwise from front, pull right needle out of the 2 sl sts, being careful not to lose the sts, then from the back, slide right needle back into 2nd sl st pwise and return it to the left needle, knit sts in their new order; on WS: Sl next 2 sts to right needle pwise, sl left needle into 1st sl st pwise from front and sl both sts off right needle, sl right needle back into 2nd sl st pwise and transfer it back to left needle, p sts in new order.
- **1/1 RC** on RS: Sl next 2 sts to right needle kwise as if to k2tog, sl left needle back into 1st sl st from behind (st was originally 1st, now is 2nd), pull right needle out of the 2 sl sts, being careful not to lose the sts, then from the front, use the right needle to pick up the 2nd sl st and return it to the left needle, knit sts tbl in their new order; on WS: sl next 2 sts to right needle pwise, sl left needle into 1st sl st pwise from back. Slide both sts off right needle. Sl right needle back into 2nd sl st from front and transfer it back to the left needle, p sts in new order.

Turn Heel

Row 1 (RS) [Sl 1 pwise wyb, k1] 8 (8, 13) times, sl 1 pwise wyb, ssk, k1, turn—1 st dec'd.

Row 2 (WS) Sl 1 pwise wyf, p3 (3, 11), p2tog, p1, turn—1 st dec'd.

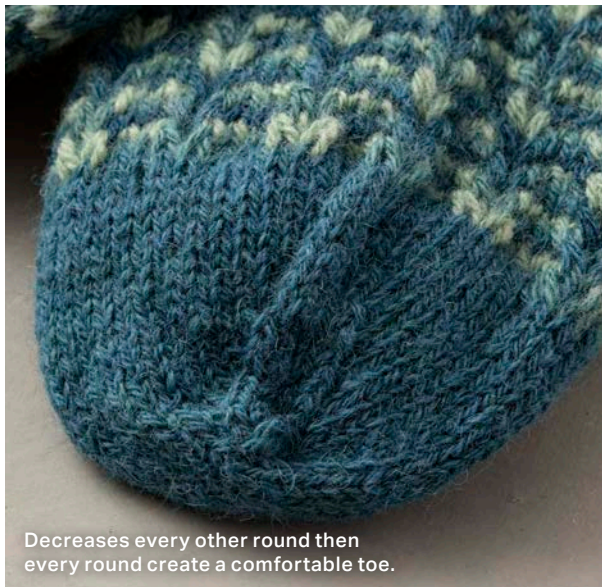
Row 3 Sl 1 pwise wyb, knit to 1 st before gap, ssk, k1, turn—1 st dec'd.

Row 4 Sl 1 pwise wyf, purl to 1 st before gap, p2tog, p1, turn—1 st dec'd.

Rep last 2 rows 5 (5, 6) more times—18 (18, 28) heel sts rem.

Gusset

Next rnd (RS) Sl 1 pwise wyb, k17 (17, 27) heel sts, pick up and knit tbl 18 (18, 20) sts along side of heel flap, pm for beg of rnd, beg with st 5 (5, 11) and ending with st 8 (8, 2), work Rnd 10 of chart over 28 (40, 40) instep sts, pm, pick up and knit tbl 18 (18, 20) sts along side of heel flap, knit to end of rnd—82 (94,



108) sts total: 28 (40, 40) instep sts, 54 (54, 68) sole sts.

Set-up rnd Work instep sts in patt, sl m, k1, ssk, knit to last 3 sts, k2tog, k1—80 (92, 106) sts rem: 28 (40, 40) instep sts, 52 (52, 66) sole sts.

Next rnd Work instep sts in patt, sl m, k3 (3, 4), beg with st 2 (2, 8) and ending with st 11 (11, 5), work Rnd 12 of chart (working each cable cross as k2) to last 3 (3, 4) sts, k3 (3, 4).

Dec rnd Work instep sts in patt, sl m, k1, ssk, k0 (0, 1), work in patt (as charted) to last 3 (3, 4) sts, k0 (0, 1), k2tog, k1—2 sts dec'd.

Cont in patt, rep dec rnd every other rnd 9 (9, 10) more times—60 (72, 84) sts rem: 28 (40, 40) instep sts, 32 (32, 44) sole sts.

Foot

Work even in patt until piece measures $6\frac{3}{4}$ (7, $7\frac{1}{4}$)" from back of heel, or $1\frac{1}{2}$ ($1\frac{3}{4}$, 2)" less than desired finished length, ending with a MC rnd. Break CC1, CC2, and CC3 and cont with MC only.

If last chart rnd worked was Rnd 1, work the foll rnd: [sl 1 pwise wyb, k2] 2 (2, 0) times, *1/1 LC, 1/1 RC, k2, [sl 1 pwise wyb, k2] 2 times; rep from * 3 (4, 6) more times, [1/1 LC, 1/1 RC, k2] 1 (1, 0) time.

If last chart rnd worked was Rnd 1 or 5, work the foll rnd: K0 (0, 6), *ssk, k2tog, k8; rep from * 4 (5, 5) more times, [ssk, k2tog, k2] 0 (0, 1) time—50 (60, 70) sts rem.

If last chart rnd worked was Rnd 9, work the foll 2 rnds: K6 (6, 0), *sl pwise wyb, k2, sl pwise wyb, k8; rep from * 3 (4, 6) more times, [sl 1 pwise wyb, k2] 2 (2, 0) times.

Next rnd K6 (6, 0), *ssk, k2tog, k8; rep from * 3 (4, 6) more times, [ssk, k2tog, k2] 1 (1, 0) time—50 (60, 70) sts rem.

Size 6½" only

Next rnd Knit to m, remove m, k2, pm, knit to last st, sl 1 pwise, remove m, return sl st to left needle, pm for new beg of rnd—25 sts each for instep and sole.

Size 7¾" only

Next rnd Knit to 2 sts before m, pm, k2, remove m, knit to m, remove m, k2, pm for new beg of rnd—30 sts each for instep and sole.

Size 9" only

Next rnd Knit to m, remove m, k1, pm, knit to end—35 sts each for instep and sole.

All sizes

Toe

Knit 1 rnd.

Dec rnd *K1, ssk, knit to 3 sts before m, k2tog, k1, sl m; rep from * once more—4 sts dec'd.

Rep dec rnd every 3rd rnd 2 more times, then every other rnd 3 (4, 4) times, then every rnd 1 (2, 4) time(s)—22 (24, 26) sts rem.

FINISHING

Break yarn, leaving a 12" tail. With tail threaded on a tapestry needle, graft sts using Kitchener st. Weave in ends. Wet-finish by soaking in warm water with wool wash for a few minutes, then press excess water out by wrapping in a towel and squeezing. Dry socks on sock blockers for best result. ●

Resources

Frivolous Ewe, facebook.com/frivolousewe.
Red Oak Farm Wool, redoakfarmwool.etsy.com.
Robson, Deborah, and Carol Ekarius. *The Fleece & Fiber Sourcebook*. North Adams, MA: Storey Publishing, 2011.

When **Stefanie Johnson** is not protecting public health through environmental inspections and communicable-disease investigations, she enjoys teaching others to spin, knit, and weave. The Johnsons raise French Angora rabbits, honeybees, and a variety of chickens and ducks on their hobby farm, Settlers Grove, in western Illinois. More of Stefanie's work can be found in *Knitty*, *Knotions*, and on Etsy and Ravelry.



Spin anywhere with the Electric Eel Wheel

www.DreamingRobots.com



Electric Eel
Wheel

Weaving • Spinning • Dyeing • Felting



eTc
EUGENE
TEXTILE
CENTER

WE CARRY ALL YOUR FAVORITES

Ashford • Schacht • Kromski • Louët • Majacraft
Jacquard • Knitter's Pride • Glimåkra • Angelina
Ashland Bay • Fiber Trends • Nancy's Knit Knacks
Unicorn Fibre • Natural Dyes

GREAT NEWS!
We now stock
Majacraft Wheels

psst...
Always FREE
shipping on orders
over \$100



www.EugeneTextileCenter.com • 541-688-1565



Fiber Blending and Hand Comfort

CARSON DEMERS

You don't need convincing that one of the best parts about being a spinner is designing your own yarn. It's probably a big reason you're a spinner in the first place. From fiber content to grist, drafting method to plying technique, the spinner's choices are seemingly endless. But there's one choice you make that you might not realize you're making: "How will my fiber and preparation choices impact how my hands feel while and after I spin it?" Yes indeed, you have a lot of input into how comfortable your spin is going to be. Let's look at the myriad variables in blended fibers and how they impact your hand comfort. We'll also look at ways to work with "difficult" blends and remain comfortable. Finally, I'll share a little experiment I did on working with blended fibers.

Before we jump into the weeds, let me remind you that the "ergonomics equation" says that



Each blending experiment included mohair locks, Angelina fiber, and two kinds of dyed wool. Shown top right: punis created on a blending board

Photos by Matt Graves unless otherwise noted

Comfort = Physical Controls (where and what you work with) + *Administrative Controls* (how you plan your work) + *Behavioral Controls* (how you do your work). Looking at blended fibers is a good way to see how these controls give you a lot of options for managing your comfort. If you understand them, you can vary them to suit your hands' needs. It goes without saying that proper wheel adjustment and maintenance are key factors in spinning comfort, so we'll limit our discussion to the fiber portion of our spinning environment.

FIBERS AND FRICTION

Let's start with the contribution of some physical characteristics of fibers. Friction is a clearly important consideration, and it is present continuously throughout the spinning process. Friction is affected by variation in the surface of each fiber. It's helpful

to imagine what the surface of the fibers looks like very close up (a handheld microscope makes this easy to see). There may be a lot of peaks and valleys along the surface—not just crimp, but tips of shorter fibers, bent fibers, cuticle cells, etc. Let's call this the fiber's topography. Fibers with similar topography will have similar amounts of friction uniformly throughout the fiber supply and will draft with consistent force requirements, blended or not.

The force of friction is greatest with the first draft, which overcomes *static* friction. In subsequent drafts, you experience the lesser force of *kinetic* friction. It's much like getting a full grocery cart moving—the first push is the hardest, and then it requires a lesser amount of force to keep it going. But, if there's a fiber that wants to move faster or slower than the rest of the pack, things change.

Imagine a close-up look at the surface of a lock of Shetland wool. Even if you haven't spun it, you've probably touched Shetland sweaters or other garments and know that it's a fuzzy, lofty fiber. You can almost see the topography of the fiber. When you're spinning just Shetland, these peaks and valleys require the same amount of force to start and keep them moving throughout the entire process.

Now imagine the surface of a thread of silk. There are no peaks and valleys! Put the two together, and the silk will move much more readily than the Shetland because there's less resistance (friction). Using our cart analogy, it's the difference between pushing on a vinyl floor and then on carpeting. This is what happens with blended fibers. In fact, the blend will move more easily than if it were just silk alone because the Shetland's surface has fewer points of contact with the silk than the homogenous silk threads do with one another. This translates to more work in the spinner's hands because they need to adapt to two different (and in this case, disparate) topographies. You must accommodate for this difference by varying the amount of force to attenuate the different amounts of friction and control the entry of twist.

What does this tell us about hand comfort? Well, if you want to make work easier on your hands while spinning blended fibers, look for blends that have fibers

with similar topographies. A Bluefaced Leicester (BFL)/silk blend is very comfortable to spin because the fibers are both relatively smooth and long. A Shetland/Clun Forest blend would be fun and easy, too. But a blend of Teeswater and Clun Forest (though interesting) would be harder to manage because of the very different amounts of friction each contributes owing to its topography. An important caveat to note relates to the fiber processing, which we'll discuss in a moment.

FURTHER DIMENSIONS IN FIBER

Another element of topography that you need to consider is the *curvature* of the staple, that is, the three-dimensional appearance of it. The crimp of Merino is iconic for its regularity. The raw locks look wavy, as if just two-dimensional. Now consider a lock of mohair. It curls and spirals, and despite its slipperiness, the very shape of it makes it challenging to draft because you have to get the curls to open into a position for twist to enter. There are other considerations, which we'll look at in a moment, but for now, understand that getting curls to separate, straighten, and attenuate for a uniform yarn requires some additional output from your hands.

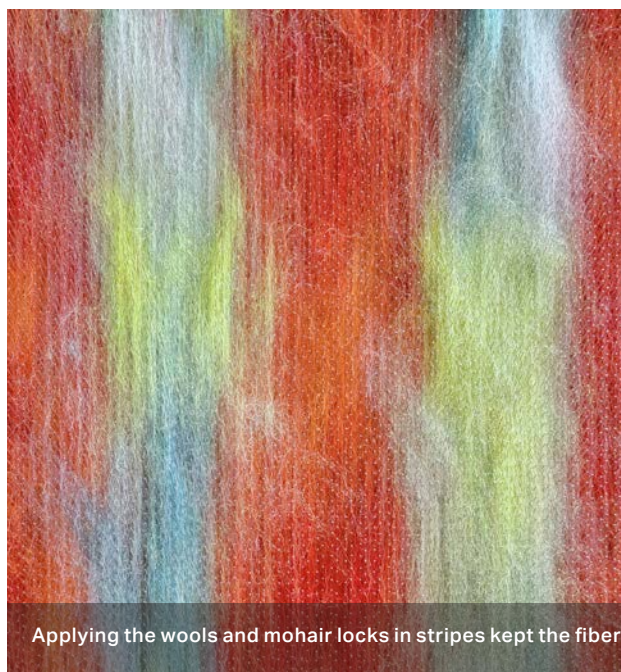
Finally, you need to consider fiber length in how hard your hands will work while spinning a blended

preparation. In blends of long and short fibers, twist will travel along the length of longer fibers, making them easy (and willing) to draft. But this can catch the shorter fibers in the twist before they're attenuated, making it harder to do so. To avoid this, draft for the shortest fiber in the preparation for worsted draft, or carefully control the entry of twist in long draw. Many spinners may rely on a tight pinch grip to do both, which can contribute to the dreaded De Quervain's tenosynovitis. Adjusting treadling speed, pulley size, and uptake (brake) are more hand-friendly ways to slow the entrance of twist.

PREPARE TO SPIN IN COMFORT

Of course, one of the main reasons we spin blends in the first place is we want contributions from different fiber types. Odds are, you won't blend two fibers that are remarkably alike—what's the point? So, given all these physical-characteristic differences that make more work for your hands, what's a spinner to do? A key part of this answer lies in your *administrative controls*—your intended yarn.

Knowing what kind of yarn you want to make will help inform your decision-making about fiber prep. Do you want an even yarn, or do you want to see the



Applying the wools and mohair locks in stripes kept the fibers distinct in the rolags.

Photos by Carson Demers

characteristics of the blend's components—those little mohair curls, for example? Thorough blending will cause you to lose some of the visual characteristics of each fiber, but it will make for easier work on your hands. On the other hand, less blending and a more artsy yarn would also be easy on them. But making a smooth, even yarn with lightly blended preparations means your hands do the work of processing as they draft—double duty. This is very noticeable when spinning from an artsy batt, where fibers may be lightly carded and not well aligned.

If you're carding blended rolags or making them from a blending board, keep each rolag to a single length of the longest fiber to make easier work for your hands. Overlapping long fibers will collapse your rolag, making hands work harder to draft.

The take-away is that if you want the easiest spinning experience for your hands, use well-blended and aligned fibers with similar topographies and lengths. The degree and method of blending are certainly impactful, not just to the final yarn, but to the comfort of spinning it.

DECISIONS IN YOUR HANDS

Your decision of what to spin and how to blend it should be based on a knowledge of what kind of shape your hands are in. Do you have arthritis, weakness, or sensory deficits? Do your hands need to do a lot of other fine-motor work, and for what kind of duration? The answers to these questions help you to make informed decisions about how much work your hands can tolerate in spinning blended fibers and, truly, any activity. If your hands have issues, work with fiber blends that are more consistent in their topography. Take heart if your hands aren't in top shape and you want a yarn that will be more challenging to spin. There are other variables to manipulate. You can vary the frequency and duration of time you are spinning to give your hands time to rest. You can pair your more challenging yarn with another project that's easy on your hands. And you can (and should) do some self-care for your hands after the spin, even if your hands are in good shape.

This brings us to the *behavioral controls*. What do you do to take care of these precious tools? Skin care,



Loosening the fibers on the comb rather than keeping them pushed to the bottom of the tines can also help reduce hand fatigue.



The combing and carding waste from the other two samples made a lovely, easy-to-spin blend.

including moisturizer and sugar or salt scrubs, may sound luxurious, but it helps to keep hands sensitive to touch, which is so important in drafting fibers. Being able to trust the input from your hands means you don't have to keep your head down to watch what they're doing; this saves your neck, upper back, and shoulders from strain. Hand and forearm stretches and strengthening exercises give tissue more tolerance to the forces they encounter with spinning and all activity.

While the blending choices of the fiber fall into the administrative controls, paying attention to them is a behavior choice. Behavior choices and changes are the hardest part of balanced ergonomics for most people. Change can be hard, but you can teach an old dog a new trick. It's a good idea to keep your eyes on the prize of being able to spin for your whole life and not be stopped by hand issues. A few wise choices now can help attain that longevity.

PREPARATIONS FOR COMFORTABLE SPINNING

I wanted to put this information to the test before sharing it with you, so I made three small skeins each with dyed BFL roving, dyed Corriedale, mohair locks, and Angelina (because it was a gloomy day). BFL is a longwool with a curly crimp pattern. Corriedale has a distinct, crisp crimp with more crimps per inch than BFL. Mohair locks are curly and silky. Angelina is a fine-micron polyester fiber of varying lengths; mine is about 2 inches (5 cm). Each preparation had similar proportions of each fiber, although I was not careful to weigh them.

I spun the first yarn from rolags, which were prepared on a blending board to keep the mohair locks intact. I wanted to make a yarn that showed the

colors of each fiber but that was smooth and relatively even. I drafted backward, which varied between a long draw and a short-backward draw, depending on the fiber I encountered.

The second yarn was prepared on and spun from mini combs with a short-forward draft. Each of these yarns was spun in the Z direction and plied as a two-ply yarn in the S direction.

The final yarn was made from what didn't come off the combs and bits from the blending board. It was a hodgepodge with little organization and spun Z long draw and chain plied. The second and third yarns were a dream to spin—easy on the hands and quickly done. I attribute this to well-blended fibers (yarn 2) and a more artsy yarn (yarn 3). The first yarn was by far the most difficult on my hands. I needed to modify my drafting technique as I encountered various fiber types, particularly the mohair. ●

Carson Demers is a physical therapist, ergonomist, and the author and publisher of *Knitting Comfortably: The Ergonomics of Handknitting*. He teaches throughout the United States and internationally and is a frequent contributor to fiber- and craft-related publications. His aim is to keep us all creating healthfully and comfortably ever after. Visit him online at ergoiknit.com.



The same fiber content made for three very different spinning experiences depending on the preparation method.

Try our dyed roving

R.H. Lindsay Company
Wool Merchants

rhlindsaywool.com Fiber by the pound
617-288-1155 and by the bale

Sweater by Martha Owen

THE FOLK SCHOOL
CHANGES YOU.

Engaging hands and hearts since 1925. Come enjoy making crafts and good friends on 270 natural, scenic acres in western North Carolina.

JOHN C. CAMPBELL FOLK SCHOOL
folkschool.org 1-800-FOLK-SCH
BRASSTOWN NORTH CAROLINA

Discover
New Ideas

FOR PREPARING, SPINNING, AND USING YOUR HANDSPUN YARN!

Patterns, eBooks, and video downloads are available online in the *Spin Off* pattern shop.

Get started on your next spinning project today at lt.media/so-patterns

long thread
MEDIA

PLY THE MAGAZINE FOR HANDSPINNERS

PLY THE MAGAZINE FOR HANDSPINNERS

PLY THE MAGAZINE FOR HANDSPINNERS

PLYMAGAZINE.COM

PLY MAGAZINE

THE MAGAZINE FOR HANDSPINNERS

PASSION COMMUNITY CRAFT



Lisa spinning in the pasture at her farm—the peace and regal quality of guanacos and the joy of spinning combined in one beautiful moment.

Photos by Jane Bear, janebearphotography.com, unless otherwise noted

Optimizing Luxury

Getting the Most Mileage Out of Exotic Fiber

LISA MITCHELL

Several years ago, I splurged on 5 grams of pure saffron. The precious spice came in a small flat tin that I promptly put in the spice cupboard. Since I didn't know how to cook with it, and I didn't want to risk using it incorrectly, I decided to admit its fate. It was "Shrine Spice." Every time I opened the cupboard for pepper, I would acknowledge the saffron, say hi, give

it a nod, and just appreciate its presence on the shelf. Sometimes, I would open the tin and smell it while admiring the beautiful red-orange threads.

Then my son married a wonderful woman with Persian relatives. She saw my saffron and announced that she could teach me how to make traditional Persian rice with *tadig*. We set out to make it one

Christmas Eve, and I was tickled to find that only ½ teaspoon of my precious 5 grams was required to make this special dish. The rice was a gorgeous yellow, and the crusty tadig layer was deliciously infused with saffron flavor. And best of all, my saffron was no longer stuck in Shrine Spice status. It could be used and enjoyed over many meals.

Exotic fiber tends to suffer the same fate as my saffron. For instance, I gave a friend of mine an ounce of guanaco fiber two years ago for her birthday. When she opened the gift, her eyes got wide and her fingers plunged into the bag. She was thrilled by her new fiber acquisition and promptly put the ounce of fluff in a crystal bowl. Occasionally I ask her about it: “What are you going to make with that guanaco I gave you?” She sighs wistfully and says, “I don’t want to waste it. I don’t want to ruin it. I think I just want to look at it and pet it every once in a while.”

Some people lock their precious fiber in ziplock bags and store it in the freezer to protect it from moths. This method reminds me of the safety deposit boxes at the bank. Others find a special place for it in their fiber stash so that every time they visit the stash, they get to view the fiber. Another friend told me, “Honestly, I have such affection for those lustrous locks, I should probably name them.”

It’s understandable. Sometimes owning a rare fiber is enough on its own, or your auspicious stash enhancement might be too small to go sampling willy-nilly. Experimenting with blends or preps seems too decadent. Much of the time, spinners just resort to coveting the idea of owning the precious fiber.

Once you take the plunge and spin your exotic fiber, you most likely want to get the most mileage out of what you have. If it is expensive and rare, it may be a once-in-a-lifetime chance to spin. Should you blend it with another fiber to make it go farther? If so, what fibers and how much? If you know ahead of time the blend ratios you can use without sacrificing the deliciousness of your treasured fiber, you could have a head start on actually using it.

Because I have the advantage of owning guanacos, I have the privilege of enjoying the exquisite and rare fiber without the hesitation, and I’m happy to share one of my experiments. I decided to sample various blend ratios to figure out how far I could stretch the guanaco quantities while still doing the luxury fiber justice.

PRESERVING EXOTIC FIBER QUALITIES

Before I started this blending experiment, I made a list of the special qualities in my exotic fiber that I wanted to be sure to preserve in my blends. Guanaco



Guanaco fiber weighs nearly nothing and feels like a warm cloud of air.



Baby Andes safely tucked in between females.

is a down fiber similar to qiviut, the downy undercoat of the musk ox. The undercoat of the guanaco must keep the animal warm even in the very high altitudes of their native South America. The longer guard hairs do a lot of the heavy lifting when it comes to rain and snow, so the undercoat can remain very fine. This means that the guanaco fiber is very light, very airy, and very insulative. The staples are short and without crimp, so once spun, the drape is flowy, wispy, and divine. The hand of the cut side of guanaco fiber feels like a newborn's head. I decided to call this quality "deliciousness." I wanted to be

sure to make a blend with deliciousness that comes through in the knitting.

My list was complete. I wanted to find a blend ratio that preserved three essential qualities of the guanaco: airy lightness, drape, and deliciousness.

I decided to use the most decadent fiber I have available from my farm. It comes from a *chulengo* (baby guanaco) named Andes who was eight months old at the time of shearing. His fiber measured 13 microns with a 1¾-inch (4.5-centimeter) staple length. Most guanaco comes in at 17 to 18 microns with staple lengths of ¾ to 1½ inches (1.9 to 3.8 centimeters)—



Lisa's blends included 13-micron guanaco and 19-micron Merino.

Photo by Matt Graves



Guanacos on Whidbey Island?

In 2018, my husband, Greg, and I decided to drastically change our lifestyle. We bought a farm on Whidbey Island in the Pacific Northwest and set out to raise fiber animals. As a lifelong knitter, I wanted to have the experience of starting from the very beginning. I wanted to literally go from farm to frock. It started out as an adventure and became even more of one when I sent my husband to buy sheep. He didn't buy sheep—he bought guanacos instead!

It was quite a learning curve to figure out how to manage guanacos. Even though all of our guanacos

were born in captivity on U.S. soil, they have retained their wild instincts. We acquired our guanacos from a larger herd that had been part of a zoo disbursement. Unlike llamas, their domesticated relatives, guanacos are difficult to handle, startle easily, and don't want to be your friend. The new challenge was exactly what we needed. We are no longer the suburban professionals whose lives were vaguely unfulfilling. Instead, we raise guanacos for their exquisite fiber and enjoy the rhythm of a beautiful life filled with making beautiful things.

all the more reason to know how to best preserve the special qualities of Andes's fiber.

Materials and Methods

My sampling goal was to determine the smallest amount of guanaco I could use in a blend of guanaco and Merino that still preserved the qualities of the luxury fiber.

Sample Batts

For all my samples, I followed the same steps. I first dehaired the guanaco using a set of handcards. I do

this during carding by allowing the guanaco to stick out from the top edge of a handcard. The guard hairs are longer than the undercoat and are easy to pull out with my fingertips.

I carefully washed some 19-micron white Merino. I first flick carded each lock on both the cut and tip ends, placed them in a mesh basket, and scoured the locks. This method retains active crimp in the wool and avoids neps during processing. I then drumcarded the two fibers together by feeding the Merino under the licker-in and painting the guanaco directly onto the drum. I



Photo by Matt Graves

Batts, skeins, and knitted swatches created with guanaco and Merino. Sample #1 (*top*) has the smallest percentage of guanaco; you can see the color darken with higher percentages of guanaco to Merino in Sample #2 (*middle*) and Sample #3 (*bottom*).

blended each batt with three passes through my old Fricke drumcarder. The hand crank and fine cloth allow me to control the intake speed and create smooth batts.

Spun Samples

For all yarn samples, I stripped the batts onto small sections and spun singles with a high-speed whorl at a 20:1 ratio on my Schacht Matchless with a short-forward draw, while allowing twist to come into the draft triangle. I transferred the singles to a storage bobbin to even out the twist and then created a two-ply yarn using the next slower whorl (17:1) on my wheel. I gave the samples a light wash and hung them to dry.

Knitted Samples

For all my lace samples, I cast on 31 stitches using size 2 bamboo needles and knitted two repeats of a traveling vines lace pattern with a garter-stitch border on all four sides. I wet-blocked each swatch with T-pins.

Assessing the Samples

Sample #1: 20% guanaco/80% Merino

Creating a batt on the drumcarder with this blend was an easy process. The Merino provides a great base for the guanaco. The spin was buttery and smooth. Even though the Merino staple length was a good inch and a half longer than the guanaco, there was no separation as the fibers drafted out during spinning. This was likely due to the preservation of the Merino's crimp while scouring in lock form.

The resulting yarn is bouncy, stretchy, and soft. It leans toward the Merino feel of things. The lace sample is thick and resilient with the slightest of guanaco halo.



Rating

Drape: So-so

Airy lightness: So-so

Deliciousness: Good

How far could this blend stretch 1 ounce (28 grams) of guanaco? With this ratio, it is possible to multiply your yarn yield by 4.5. With 28 grams of guanaco and 98 grams

of Merino, you could produce 126 grams of yarn.

Sample #2: 40% guanaco/60% Merino

Blending on the drumcarder was dreamy as the guanaco fibers began to influence the color. The spin felt a bit delicate, probably because there were more of the finer fibers in the mix. There was still little separation between the fibers during the spin. The resulting yarn is very soft and drapery. The lace sample has a soft guanaco halo and drapes beautifully with some amount of stretch.



Rating

Drape: Lovely

Airy lightness: Lovely

Deliciousness: Yum

How far could this blend stretch 1 ounce of guanaco? With this ratio, it is possible to multiply your yarn yield by 2.5. With 28 grams of guanaco and 42 grams of Merino, you could produce 70 grams of yarn.

Sample #3: 60% guanaco/40% Merino

Blending on the drumcarder was tricky because the dominant guanaco fiber was so fine and short. There was just enough Merino to make this work. I noted that any higher percentage of guanaco would need a different preparation, such as rolags or punis. The color of the guanaco came through beautifully in this sample. My fingers enjoyed the feel of the fibers as I spun the singles, giving them a bit more twist to accommodate the short staple. The lace sample is very drapery, has a delicious hand, and still holds its shape.



Rating

Drape: Mesmerizing

Airy lightness: Lovely

Deliciousness: Drool-worthy

How far could this blend stretch 1 ounce of guanaco? With this ratio, it is possible to multiply your yarn yield by 1.6. With 28 grams of guanaco and 18 grams of Merino, you could produce 46 grams of yarn.



Lisa tried combining other luxury fibers to see how that would compare to the guanaco/Merino samples. Shown: 25% guanaco/25% Pygora/5% satin angora/45% Merino

Photo by Matt Graves

Sample #4: 25% guanaco/25% Pygora/5% satin angora/45% Merino

I wanted to see how a sample with some combined luxury fibers would compare to the guanaco/Merino blends, so I gathered up all the fibers that come directly from our farm animals and made this blend. The result is a very light, very soft, and delicious sample. I particularly like the shine that the Pygora added to this blend, creating depth and texture in the finished yarn.



Rating

- Drape:** Squishy
- Airy lightness:** Gently insulative
- Deliciousness:** Decadent

Conclusion

How much mileage can you get out of your exotic fiber without sacrificing its exquisite qualities? As a result of my sampling, I would recommend a blend ratio of exotic fiber to base fiber of 40/60. Any less than 40% exotic fiber and you really can't experience the deliciousness of your special fiber. At 40%, you can feel it. At 60%, you can celebrate it. And if you don't have enough of one kind of exotic fiber, consider blending several fiber types at the 60/40 ratio, and you will make something that is truly memorable. ●

Lisa Mitchell raises guanacos and other luxury fiber animals with her husband, Greg Hudson, at Aliento Luxury Fiber Farm on Whidbey Island in Washington. As an art therapist turned fiber artist, she talks about living a handcrafted life on her podcast, *A Fiber Life*. Her blog, the shop, and more pictures of their beautiful animals can be found at afiberlife.com.

Classic Carder

drum carders for fiber preparation

www.classiccarder.com

Email - paulbrittain@mac.com

Also at www.susansfiber.com

BOUNTIFUL BIG SALE

SCHACHT • MAJACRAFT • ASHFORD
LOUET • JENSEN • WEAVING LOOMS

*FREE U.S. Shipping on orders over \$99.00

Celebrating our 33rd Year!

<p>Schacht Sidekick SALE</p> <p>w/Gift *Free U.S. Ship</p>	<p>Maple or Cherry Schacht Ladybug SALE</p> <p>w/Gift *Free U.S. Ship</p>	<p>Majacraft Aura Wheel</p> <p>w/Gift *Free U.S. Ship</p>
<p>Ashford E-Spinner 3 w/ Bag, Kate, Accessories</p>	<p>Majacraft Little Gem Wheel</p> <p>w/Gift *Free U.S. Ship</p>	<p>Schacht Matchless SALE</p> <p>w/Gift *Free U.S. Ship</p>

* Free Shipping in 48 states. AK and HI please inquire.

We beat advertised prices • Call us for your best deal
Discounts to Schools, Colleges, Government Organizations

Toll Free: (877) 586-9332

info@bountifulspinweave.com

<https://bountifulspinweave.com>

HipStrings

VINTAGE STYLE

Modern craft

hipstrings.com

Play with color

The **WOOLERY**®

Your Fiber Journey Starts Here!

www.woolery.com



Photos by Matt Graves

A blend of Icelandic wool and hemp sent Madeline on a spinning and dyeing adventure.

Wool & Hemp

A "Primitive" Fiber Dream Team

MADELINE KELLER-KING

I've had a long-standing love of Icelandic wool. The beautiful warmth of multicoated breeds and the lineage of the breed itself give a spinner plenty of things to contemplate while working with this versatile fiber. As much as I love it on its own, it is rare for me to find it blended with other fiber. Then I came across Dakota Carding & Wool Co.'s carded cloud blend "Primitive"

on social media. It is a beautiful blend of black Icelandic wool and bleached hemp, and my fingers itched to try it.

I had so many questions about this blend. Did the variation of staple length in the Icelandic wool make it challenging? What inspired it? Kelly Knispel, the mill owner, entertained my questions. The short answer is that the two fibers play to one another's strengths, and the hemp sliver Kelly uses has a staple length (around 4 inches) comparable to the longest parts of the Icelandic fleece in the 50/50 blend. This makes it easy to spin, even with the contrasting fiber characteristics.

Hemp, like most bast fibers, is not at all elastic, softens with wearing and washing, is resistant to mildews, and is quite strong. Wool generally is more insulating, has more memory, and is softer than hemp. Kelly says that a blend of the two "works well together and produces a strong yarn/material that is soft, warm, and durable. Spinning hemp with wool makes for a versatile yarn as the wool brings warmth, softness,

and elasticity to combine with the durability and antimicrobial qualities of hemp.”

Kelly has a background in working with Icelandic sheep and their wool, having raised them on her South Dakota ranch from 2003 to 2010. When she acquired her carding mill in 2009, she started experimenting and discovered that the longest and densest fibers of the outer coat—the *tog*—were separating from the rest of the fibers during carding. Leaving only the midrange *tog* and the *thel* (the shorter, softer undercoat in Icelandic wool) in this lofty woolen preparation made it easier to match with other fibers, and after some experimentation with hemp, the Primitive blend was born. Kelly “found this blend to be a suitable matchup of fibers, wisdom of the ancients, and intrigue for the modern handspinner.”

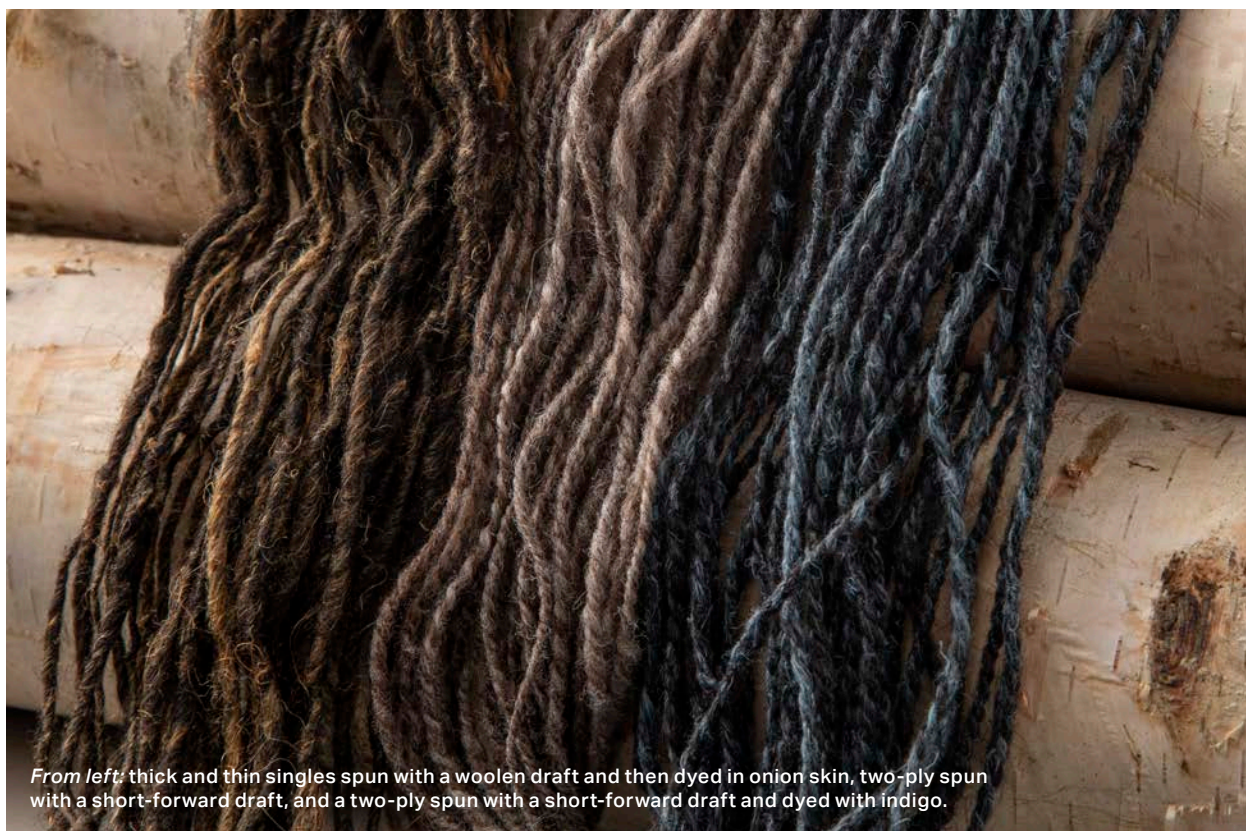
When asked about her inspiration in pairing the two, she responded, “In creating this wool/hemp blend, I honor the many qualities of Icelandic wool and the hemp plant that make each of them the

amazing fibers we have come to know and appreciate through thousands of years of human utilization.

Hemp was probably the first fiber plant to be cultivated and used by humans. Icelandic wool is a uniquely dual-coated wool preserved and harvested by humans who live in the harshest of environments. Both hemp and wool fibers have withstood the trials of time, and they continue to be a source of inspiration and environmental usefulness as we look to the future and learn more about our relationship with the earth.”

SPIN, SAMPLE, REPEAT

Naturally, I needed to spin some of this fiber! I decided to create a set of sample yarns of different weights and spinning styles before choosing one for a project. Due to the carded cloud prep and my own inclinations when spinning Icelandic wool, the first sample I chose to make was a lopi-esque thick-and-thin singles yarn. This is one of my favorite



From left: thick and thin singles spun with a woolen draft and then dyed in onion skin, two-ply spun with a short-forward draft, and a two-ply spun with a short-forward draft and dyed with indigo.



A blend of Icelandic wool and hemp.

yarns to spin, and the hemp provided an interesting additional texture. When spun with a woolen draw, the hemp did tend to want to grab onto like fibers; in my finished yarn, you can see where there are distinct places within the skein that are almost entirely hemp. While the carded cloud itself wasn't completely homogenous, my drafting technique seemed to further separate the fibers and change the distribution of the hemp. The resulting yarn has low twist, which helps keep the hemp on the softer side (bast fibers tend to get wiry when overspun), and there is interesting contrast in texture and color between the two fibers. This yarn is soft and light, and I can imagine it knitted into a cowl or a hat or even spun in bulk to make a cardigan.

I spun the second yarn semiworsted with a short-forward draft and plied it; the resulting two-ply yarn was approximately DK weight. This yarn is much denser than its woolen-spun counterpart, and even with a low ply-twist angle, the word that comes to mind when I touch it is "sturdy." While there are still sections in the yarn where the fiber is mostly either wool or hemp, the worsted drafting style did make more even fiber distribution possible, and plying the yarn balanced this out considerably. It is much

toothier than the woolen yarn, though I expect that will change some over time as the finished item is worn. While the loftier woolen yarn spun from this fiber is lovely and soft, when I thought of things I needed in my life, this second sturdy yarn was perfect for a Montana winter necessity—hard-wearing mittens (see page 54).

Next was a trip to the dyepots. When I'm working with blends of protein and cellulose fibers, I choose natural dyes that will take on protein but not cellulose—a trick for creating lovely heathered fiber and yarns. In the case of this particular fiber, the wool is as close to true black as natural fiber can get, so I chose dyes I knew the cellulose fibers would pick up and hold: indigo, which dyes plant and animal fibers equally well, and onion skins. Treating cellulose with tannins before mordanting is a good way to get more saturated colors, and using a dye that includes tannins allows me to save a step. Onion skins, one of my favorite dyestuffs, are an easily accessible source of color and tannins. Both skeins took the color beautifully. The black contrasts with the colors, highlighting the shades instead of muting them, and makes for some dramatic skeins.

When using this yarn to knit my mittens, I kept things simple. The colors and texture of the yarn add enough interest to a finished fabric that I didn't feel stitch patterning was needed, and I didn't want fabric that was prone to catching during dog walks in the woods. The addition of hemp to the wool did decrease its elasticity dramatically, which made my work more challenging. I decided to add to the strength of my mittens by using small needles—US size 2. I would have had an easier time of it if I'd knitted at a looser gauge. I used some Merino handspun to knit a liner for the mittens, and I am very happy with the finished project. I look forward to winter adventures with these mittens for many years to come. ●

Madeline Keller-King is a fiber artist and natural dyer who lives in the woods of northwestern Montana in the company of her spouse and family of pups. You can follow her adventures on social media where she goes by @woolywitchofthewest.

TheDancingGoats.Com

Hand Made Fiber Arts Tools In
Copper Alloys & Native Hardwoods:

Bowls
Combs
Distaffs
Diz Tools
Support Spindles
Tapestry Looms

Historic & Prehistoric Reproductions

Exclusive Maker of the Tayet Spindle &
Tayet Tapestry Loom

Classes are Available in Spinning &
Tapestry Weaving at Guilds & Festivals

TheDancingGoats on ETSY:
Coupon: Spinoff for 11% off

Take the Road Less
Traveled By



TREENWAY
silks
www.treenwaysilks.com

Turquoise
Merino Wool

75% Merino &
25% Peducle Silk

Peduncle Silk
natural color

PEDUNCLE SILK

blend Peduncle Silk with merino—the combination sparkles!

100% Silk from India

toll-free 1.888.383.silk (7455) Lakewood, CO • USA

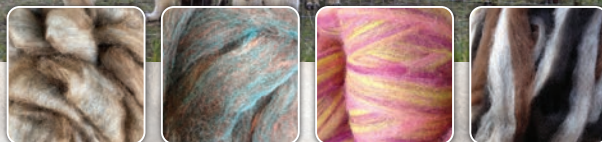
Akerworks™
akerworks.com

Spinning, knitting, and crocheting
products, designed and crafted in
Knoxville, Tennessee.



photo by Evanita W. Montalvo

Natural Fibers from the Farm



Alpaca and Alpaca Blend Roving and Yarn
Hand-Dyed and Natural Colors

Use Coupon Code: SpinAlpaca for 15% Off

Stewart 
Heritage Farm

www.StewartHeritageFarm.com



These lined mittens have a sturdy outer layer and cozy interior to keep your spinner's hands comfortable this winter.

Sturdy Mittens for Winter Walks

MADELINE KELLER-KING

Inspired by the substantial two-ply yarn I spun from Dakota Carding & Wool Co., these lined mittens should stand up to outdoor adventures with my pups this winter. I knitted the mittens to fit my own hands—a woman’s size small. You can easily adjust the finished size by changing the size of the needles, the gauge of the yarn, or both.

SPINNING NOTES

I explored several drafting methods and yarn types (see page 50), and the delightfully sturdy semiworsted two-ply yarn was perfect for this project. The final skein was about DK weight after wet-finishing.

The mitten lining can be considerably different from the outside of the mitten because it receives very little wear. A much finer, crimped wool is a perfect pairing for the sturdy Icelandic/hemp blend, so I chose to work with some lovely natural brown Merino from Julie Robinson, a shepherd local to me in northwest Montana. I flicked the ends of each Merino lock and spun them into a woolen-style yarn using a long-draw drafting technique. The woolen-

style spinning technique created a fluffy yarn with a lot of air trapped in it. This adds even more warmth to this bonus layer of insulation inside the mittens. My hands should be toasty even on the coldest Montana winter days.

MATERIALS

Fiber MC: 4 oz Dakota Carding & Wool Co.

“Primitive” carded cloud, 50% Icelandic wool/50% hemp; **CC:** 4 oz Merino flick-carded locks.

Yarn MC: 2-ply; 105 yd; 425 ypp; 9 wpi; bulky weight.

CC: 2-ply; 115 yd; 975 ypp; 13 wpi; DK weight.

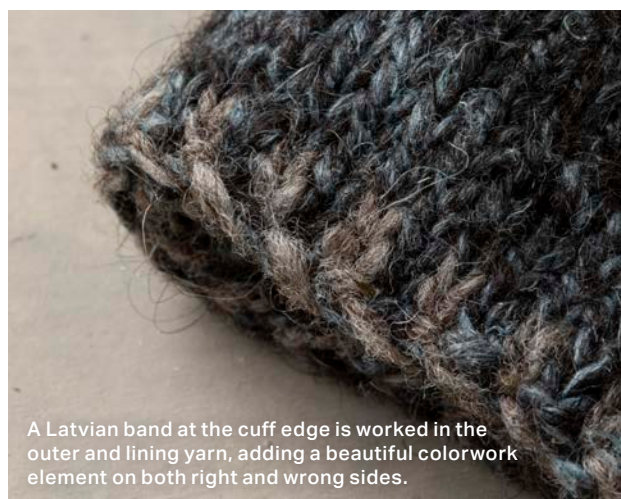
Needles Size 2 (2.75 mm). Adjust needle size if necessary to obtain the correct gauge.

Notions Markers (m); stitch holder; tapestry needle.

Gauge 22 sts and 32 rnds = 4" in St st with MC; 27 sts and 39 rnds = 4" in St st with CC.

Finished Size 8¾" outer circumference, 7" inner circumference, 8¾" outer height, and 7" inner height.

Visit spinoffmagazine.com/spin-off-abbreviations for terms you don't know.



Notes

- These mittens are worked in the round from cuff to tip, then stitches are picked up around the cast-on edge, and the lining is worked in the round.
- Mitten and lining are worked using the same size needle, but because the lining yarn is thinner, the lining fits inside the mitten.

MITTENS

With MC and CC held tog, make a slipknot and place it onto needle (this does not count as a st). Using the long-tail method, with MC over your thumb and CC over your index finger, CO 48 sts. Drop slipknot from needle. Place marker (pm) and join in the rnd.

Latvian Braid

Rnd 1 *K1 with MC, k1 with CC; rep from * to end.

Rnd 2 Bring both yarns to front of work, *p1 with MC, bring CC under MC, p1 with CC, bring MC under CC; rep from * to end.

Rnd 3 *P1 with MC, bring CC over MC, p1 with CC, bring MC over CC; rep from * to end.

Break CC.

Cuff

Knit 12 rnds with MC.

Thumb Gusset

Set-up rnd K1, pm, knit to end.

Inc rnd M1L, knit to m, M1R, sl m, knit to end—2 sts inc'd.

Rep inc rnd every other rnd 6 more times—62 sts; 15 sts before m.

Knit 1 rnd.

Next rnd Place first 15 sts on holder for thumb, CO 1 st, knit to end—48 sts rem.

Hand

Knit 26 rnds.

Shape Tip

Set-up rnd K24, pm, knit to end.

Dec rnd *K1, ssk, knit to 3 sts before m, k2tog, k1; rep from * once—4 sts dec'd.



The thumb gusset is neatly formed with mirrored increases.

Rep dec rnd every rnd 9 more times—8 sts rem. Break yarn, draw tail through rem sts, and fasten off on WS.

Thumb

Return 15 held thumb sts to needles and, with RS facing, rejoin yarn.

Next rnd K15, pick up and knit 1 st in CO st—16 sts total.

Knit 16 rnds.

Dec rnd *K1, ssk, k2, k2tog, k1; rep from * once—12 sts rem.

Dec rnd *K1, ssk, k2tog, k1; rep from * once—8 sts rem.

Dec rnd *Ssk, k2tog; rep from * once—4 sts rem.

Break yarn, draw tail through rem sts, and fasten off on WS.

Weave in ends before beg lining.

Linings

Look at WS of mitten cuff to find a row of purl bumps in CC just below MC edge from CO. Insert needle under each purl bump—48 sts. Pm and join in the rnd.

With CC, knit 4 rnds.

Beg with cuff and working with CC only, finish as for mittens.

FINISHING

Weave in ends. Push linings into mittens. Block if desired. ●

Madeline Keller-King is a fiber artist and natural dyer who lives in the woods of northwestern Montana in the company of her spouse and family of pups. You can follow her adventures on social media where she goes by @woolywitchofthewest.

Experts know and trust Unicorn Fibre products



"Since I found Power Scour, I've never used anything else. It saves me time, money, and water...whether I'm washing a few ounces or a few hundred pounds of wool. I also love Unicorn Fibre Rinse because of what it does for my raw fleece. Some breeds can feel a little crunchy after scouring, but I add a bit of Fibre Rinse in the last rinse water and these fleeces are an extreme pleasure to spin."

—Beth Smith • designer/teacher/author

- Power Scour - for raw fleece and stains
- Fibre Wash - cleans and refreshes all garments, knitwear and yarns
- Fibre Rinse - gentle, luxurious anti-static conditioner



Unicorn Fibre

UnicornFibre.com
800.711.8225

Proven, Powerful, Earth-Friendly
Fibre Cleaners

Use code "SPINOFF2021" for a 15% discount.

OHIO VALLEY Farm and Fiber Mill

\$50 BUILD-A-BLEND SPECIAL!!

Create your own 2 lb. roving blend from premium fibers sourced directly from small US growers.

TRY SOMETHING NEW!! IT'S SIMPLE:

1. You select 2 – 3 fibers of your choice from of a variety of sheep breeds, alpaca and mohair.
2. We process it into roving and ship it to you*.
3. Call the mill for available fibers and to place your order.

*Shipping and Handling additional cost.
Offer good through March 31, 2022.

Formerly Ohio Valley Natural Fibers
937-446-3045 www.ovnf.com

Golding

Precision Fiber Tools

Heirloom Quality Spinning Tools,
Designed and Hand-built by Master Woodworker
Thomas Golding and son Seth Golding.



Lazy Kate I

Golding Gossamer

Micro Kate

"Fleur de Lys"

fibertools@vermontel.net
www.GoldingFiberTools.com
1-800-710-1872 • 1-802-869-2095



clemes.com

Elite Series Drum Carders

- Easily process a wide range of fibers
- Make woolen, worsted, & art batts
- Seamlessly transition from hand crank to electric drive
- Professional-grade carding cloth
- Free US shipping



Proudly Made in the USA



A table of leftovers never looked so good! Tracy put odd bits of yarn to best use with an easy clasped-weft technique.

Photos by Matt Graves unless otherwise noted

Table Scraps

Clasped-Weft Table Runner

TRACY LIVERNOIS

In spring 2020, when our world began to change, I found myself with extra time on my hands. I had recently acquired a small four-harness floor loom, and although I'd had some weaving experience, I was feeling rusty. I needed to brush up on my weaving skills. Since travel to fiber festivals or workshops was not an option, I decided to subscribe to Long Thread Media, which gave me access to wonderful online videos; it was a great way to continue learning and exploring fiber art techniques safely from home. There were so many videos to choose from, and I wanted to watch them all! I picked a few titles and dove in. Two of the workshop videos became the impetus for this table runner project: Laura Bryant's *A Fiber Artist's Guide to Color* and Sara Bixler's *Creative Weaving: Clasped Weft Patterns*.

As a longtime spinner, I have acquired bags of handspun I can't bring myself to throw out. Many of us have similar collections of small skeins, balls, and wads of leftovers from knitting projects, and my stash included bits of novelty yarns and yarns of colors I just wasn't quite sure I liked. Added to the mix were skeins and samples that serve as evidence of my practice at a new technique, and using or tossing this kind of handspun can be challenging.

Laura Bryant states in her video that all colors have the potential to work nicely together; they just need to be close in "color density" to one another. I take this to refer to the perceived lightness or darkness of a yarn—the gray scale. At one point in the video, she shows a tableful of colorful yarns across the spectrum and, with her organization, makes total sense of them, placing them into a lovely light-to-dark gradient. To me, this seemed like a new way to look at color—not the usual grouping based on their place on the color wheel.

An idea came to me: Why not challenge myself and use this concept to pull all my yarn scraps together into one piece? Of course, for best harmonization, she did

suggest using colors that appear similar in density close to one another. But my yarns were all so different! With her theory, I'd only have a small handful that matched, and I wouldn't have enough for an entire project. So I let things stew and watched the video on clasped-weft weaving.

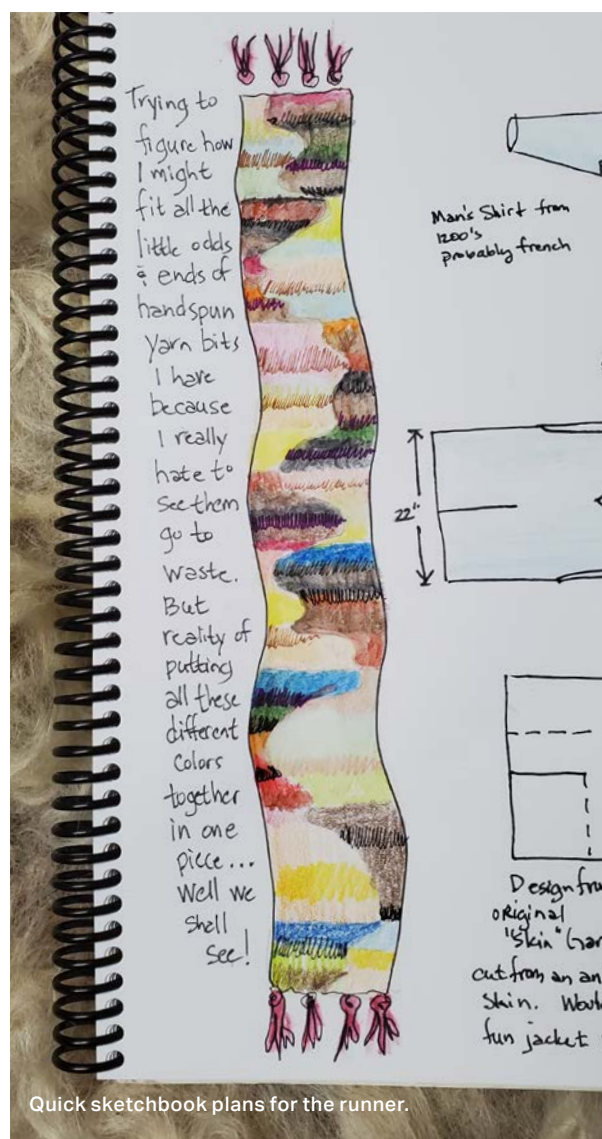


Photo by Tracy Livernois

It was the video by Sara Bixler that got me thinking about the pairing of extreme light and dark colors—to draw attention to that line between the weft yarns and the relative distance the light and dark create like a landscape. I could use up more of my scraps, melding one side light and one side dark so the colors would harmonize as they traveled. A balance could be created by two colors with different densities juxtaposed throughout a textile. So why not a clasped-weft weaving to use up these scraps? A weaving project would help me practice warping skills, learn a new technique, and play with color and the placement of color to harmonize all those bits as best I could. In my sketchbook, I drew up my idea for a clasped-weft table runner.

I threw in all the colors from my pencil box just to imagine what that might look like, also playing with placement of light and dark. I was apprehensively finishing up the drawing when my husband peered over my shoulder and exclaimed, “Wow that’s really cool! What is it?” With that bit of encouragement, however small, I decided it was worth a go.

STARTING FROM SCRAP

I pulled out my scrap bag, mostly containing wool with many neutral blacks and browns from my flock of Shetland sheep. I eliminated yarns too thin or too

chunky that I didn’t think would work for weft-faced weave in this project. Once the yarns were spread out on the table, I spent about 30 minutes organizing them into a light-to-dark gradation, paying attention to my understanding of Laura Bryant’s “color density” and the relationship of each color to the others. Then I separated them down the middle into a dark pile and a light pile. I took a black-and-white photo with my phone to check my work and did a tiny bit more shuffling.

Next, I paired a few yarns, one from each pile that might work together with clasped weft. The pairs were distinctly different in color density but had a similar color hue that would harmonize them (I did use a bit of the color-wheel theory here). I also tried to pair yarns of similar gauges. I lined the yarns up on the table as I planned to weave them, organizing a few to get me started.

When choosing the warp, I went bold, selecting bright red 5/2 pearl cotton that had been on my shelf a long time—obviously not a favorite. I measured our dining table and figured the desired finished size to calculate warp width and length. I then warped the loom, and away I went. After weaving a header, I did a practice section to see how my color plan would work and how hard I needed to beat the weft into place for the fabric I had in mind.

Not pleased with the jagged, pointed peaks I was getting, I drew up a rough drawing to give myself an idea of how I wanted the clasp connections to flow. Although crude, it did help me determine peaks and valleys and when to completely switch light and dark yarns. Without it, at times I felt lost, even though it was just a guide and I wasn’t following it exactly. I also found that using a Sharpie to draw light lines or dots on the warp ends gave me some points to follow as I wove. Overall, it was a quick weave, and it was fun to watch all those yarn balls slowly disappear from the tabletop.

MATERIALS

Structure Plain weave with clasped weft.

Equipment 2-shaft or rigid-heddle loom, 9" weaving width; 8-dent reed; 1 shuttle.

Fiber About 13 oz wool and other fibers in assorted colors.



After weaving some samples, Tracy decided she wanted a more “rounded-hills” effect (*left*) rather than her first “jagged-peaks” attempt (*right*).



Pretty handspun leftovers and Tracy's sketch with the "rolling hills" design.

Yarns Warp: 5/2 pearl cotton (2,100 yd/lb) or similar size and strength, 238 yd. **Weft:** assorted handspun yarns, about 9–10 wpi and 600 yd/lb, worsted weight, 400–600 yd total.

Other Supplies Temple, tapestry needle (for hemming).

Warp Length 72 ends 3¼ yd (117") long (allows 14" for sampling and take-up and 33" for loom waste; loom waste includes optional fringe).

Setts Warp: 8 epi (1/dent in an 8-dent reed). **Weft:** varies, 12–18 ppi, used doubled.

Dimensions Width in the reed: 9". **Woven length:** (measured under tension on the loom) 70". **Finished size:** (after hemming) 9" × 70".

RUNNER

1 Organize the weft yarns: Arrange your weft yarns from light to dark. Midweight yarns with two or more plies are good (around 600 ypp, but they can vary from 300 to 900 ypp). Once you have a color gradient, split them down the middle so you have two piles, light and dark.

2 Warp the loom: Choose a warp color that is harmonious with your weft; its appearance will be

subtle, but it will peek through the finished cloth.

Wind a warp of 72 ends 3¼ yd long. Thread the loom for plain weave. Centering for a weaving width of 9", sley 1 end per dent in an 8-dent reed.

3 Decide whether to finish the ends with hems or fringe. For fringe, leave the desired fringe length plus 1" and spread the warp with scrap yarn. For hemming, spread the warp with scrap yarn, wind the shuttle with weft, and weave 1½" plain weave.



Tracy opted to hem her runner rather than leave fringe edges.



Weaving "rolling hills" rather than sharper jagged edges was more challenging, but the extra effort created undulating shapes that complement the yarn differences well.

4 Begin clasped weft: Pick two colors, one each from the light and dark piles. You might also decide which will go next in the weaving. For clasped weft, only one side of the weft will need to be put on a shuttle, and the other can stay in a ball. Decide whether you want light or dark on the shuttle and wind it on.

5 Start with the shuttle on one side and the ball of the other yarn on the opposite side. Open a shed, pass the shuttle all the way through to the opposite side (Figure 1), around the second weft yarn, and back in the same shed to the starting side (Figure 2), leaving an 8" tail on the second weft. Keep the shed open and pull the wefts from either side, deciding where you want the clasp line to be in the weaving (Figure 3). Once you find that point, beat the weft into place and change sheds. Take care not to draw the edges in. Allow the weft without a shuttle to roll on the ground,

place it in a dish, or put it in a bag to hang (see Tracy's Weaving Notes and Tips).

6 In each shed, you will decide where the join should sit, gradually moving to right or left, and at what angle the line will travel. You can decide if you want sloping hills or jagged peaks. When you run out of one weft, join a new yarn from the same light or dark

Clasped Weft

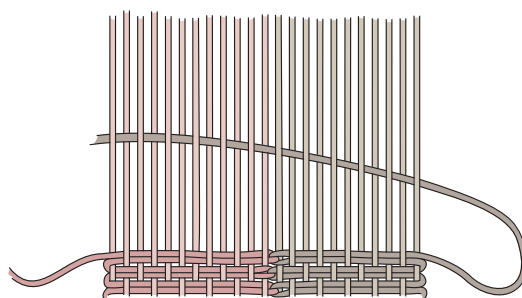


Figure 1

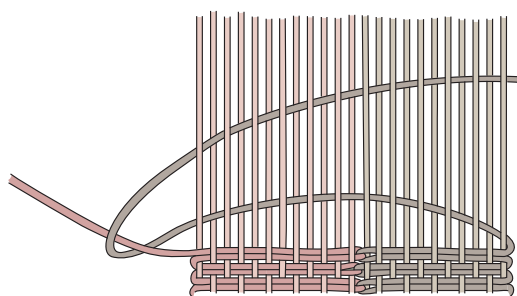


Figure 2

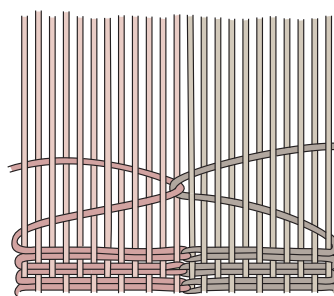


Figure 3

This clasped-weft technique uses two weft yarns that wrap around each other within the warp. The point where they meet can be easily adjusted to create shapes in the woven cloth.

Tracy's Weaving Notes and Tips

- I used a temple to help keep my selvages a consistent width.
- As I wove, I kept one yarn on a shuttle and the other in a ball. I found it helpful to contain the ball in a bag. I used a cloth bag with straps to tie onto my front beam and then moved it to the left or right depending on which side of the weaving I was using the ball on.
- With clasped-weft weaving, you can decide if you want rolling hills or jagged peaks. I found the rolling hills a bit more difficult to execute but got better with practice. Pinning a template drawing under the warp threads or using a pen to lightly mark warp threads can help guide you.
- When you run out of one yarn or want to change yarns, try to stay with dark or light; don't change both yarns used for clasped weft at the same time. This will avoid any drastic lines across your piece, giving it better flow.
- Periodically switch dark and light yarns from one side to the other to balance the weight of the piece. Where you do this is up to you.

Weft Choice

- This project consumed about 13 ounces of weft yarns (mostly wool), so I suggest you start with a pound of scraps and eliminate a few of the color or gauge outliers. The average weight for my yarns was about 600 yards per pound, although that varied quite a bit (300–900). Thin yarns can be doubled.
- When choosing the weft pairs, pick yarns of similar weight.

Insert an extra weaving pick here and there if needed to even things out.

- Using one dominant yarn that appears frequently throughout may add coherence to the finished product. I used many bits of natural-colored Shetland in browns and blacks.
- To see colors clearly, organize your weft yarns on a table with a neutral background and good natural lighting.



Tracy organized her scraps by color density, separating light and dark colors. Then she used a black-and-white photograph to check her work.

Photo by Tracy Livernois

pile. Periodically switch sides from light to dark to give balance to the piece, but do not change both yarns at the same time to avoid any drastic lines across your piece. (See Tracy's Weaving Notes and Tips.)

7 Weave 70" or desired length. End as you did at the beginning. For a hem, weave 1½" plain weave and then weave a few picks of scrap yarn to protect the weft. For fringe, leave the desired length of fringe plus 1". Cut the fabric from the loom.

8 Trim and knot the fringe, or turn the hems under twice and stitch in place. Steam the runner with an iron or fabric steamer to flatten. ●

Resources

- Bixler, Sara. *Creative Weaving: Clasped Weft Patterns*. Video download. Fort Collins, Colorado: Long Thread Media, 2015.
- Bryant, Laura. *A Fiber Artist's Guide to Color*. Video download. Fort Collins, Colorado: Long Thread Media, 2011.
- Knisely, Tom. *Weave a Good Rug*. Video workshop. Fort Collins, Colorado: Long Thread Media, 2013.

Tracy Livernois stays busy on her small farm, which includes a spinner's flock of Shetlands, a large vegetable garden, an active border collie, and her many fiber arts tools. She is the primary wheel tester for her husband, Tom, who handcrafts McTavish Wheelworks spinning wheels. You can find her online at Ravelry as Sheepiegirl or at the Ravelry group McTavish Wheelworks.



A drumcarder can create surprising, harmonious blends from the most diverse assortment of fibers.

Photo by Matt Graves

Structure

Choosing Fibers for Drumcarding

EMILY WOHLSCHEID

Blends that contain fibers with very different characteristics—staple length, crimp, silkiness, and so on—can be unpredictable. Sampling is an important first step when planning blends whether you intend to order a large quantity of roving or top from a mill or just want to have control over a project from start to finish. How well do the fibers complement one another in different ratios? What do the fibers do for the structure of the finished yarn and project?

An easy way to start planning a blend is to identify the type of yarn and project you want to create, which will determine the properties of the fiber types and the ratio of different fibers in your blend. For example, a pattern with lace elements doesn't require the tensile strength and durability that a more utilitarian, hard-wearing, somewhat elastic item, such as a sock, would need. Or you might want to highlight the smooth luster of a blend rather than create a soft halo. It's all up to you.

I like to think of the blended batts I create on my drumcarder as semiwoolen or woolen preparations depending on the fibers that make up the batt. These familiar terms are applied and interpreted in various ways by spinners, but I'm using them here to indicate blends that have a dramatic difference in the staple length of the different fibers (woolen) or a moderate difference in staple length (semiwoolen). This is one of the ways I think about building batts and developing blends.

THE BLENDS

I planned several blends that would result in a range of yarns suitable for different textile purposes. I pre-weighed fibers into one-ounce bundles in varying ratios, and I created labeled samples.

Blend 1

I started with a yarn that would be drapery and lustrous. I really love to use mohair in my blends for its halo and drape, but I didn't want to make the yarn overly coarse by including too much of it. Silk and mohair are similarly drapery, so I kept them in even ratios for each blend at 50% Corriedale/25% mohair/25% red eri silk, 60% Corriedale /20% mohair/20% red eri silk, and 70% Corriedale/15% mohair/15% red eri silk. All of the fibers in my blend were the same length, carded into an organized preparation, so I call this a semiwoolen blend.

Blend 2

I hoped to make a glow-in-the-dark project for my son with a blend I created for memory and elasticity. The glow-in-the-dark (GID) effect fiber was short and crimpy, but the minimal amount I intended to use wouldn't affect the structure of my yarn much. The GID fiber was almost white, so I wanted to find a balance between a significant glow and not tinting the base color too much. I chose low-blend contents of 80% Rambouillet/20% GID and 90% Rambouillet/10% GID.

Blend 3

I wanted to try a blend with an even greater difference in the staple length (even more woolen), so I began planning a wool/cotton blend. I wanted the flecking from the cotton to be very subtle, so it wouldn't appear tweedy or heathered. I chose two similar shades of pale yellow and weighed fibers for a 70% Rambouillet/30% cotton and an 85% Rambouillet/15% cotton blend.

Blend 4

I chose similar shades of dark blue/purple for a semiwoolen blend. Rather than using silk, whose staple is quite long, I went with a bamboo fiber that had a staple length similar to the Rambouillet fiber. The similar,



Photo by Matt Graves

Laid side by side, each grouping of fibers combines different staple lengths, fiber diameters, crimp structures, and colors.



Weighing fiber into a one-ounce bundle.



Variations on four fiber combinations, ready to be blended.

medium-staple lengths will make a good base blend for spinning a semiwoolen yarn in 70% Rambouillet/30% bamboo and 85% Rambouillet/15% bamboo blends.

THE CARDING PROCESS

I used my Clemes & Clemes Elite Convertible drumcarder for my blends. It is a versatile carder with medium cloth, about 72 teeth per inch (tpi), and I knew it would handle the varying staple lengths of my wools and add-in fibers with ease.

For the first pass on the drumcarder, I split each blend up similarly: a layer of wool, then a layer of “effect” fibers, wool, effect, wool. For each blend, I began by adding a layer of wool a bit at a time, taking care not to overload the feed tray. A good rule is to card only an amount of fiber that can remain cobweb-like, so that you can still see through to the tray below. I burnished between layers as necessary, compressing the fibers on the main drum a bit, but each blend had to be treated a little bit differently.

The method I used to add the effect fibers for the second layer of each blend depended on the fiber type. Because of the long staple of the red eri silk, I chose to apply it directly to the drum. This let me distribute it evenly across the drum without any worry that its sticky and static tendencies would have it wrapping around my licker-in. The mohair and bamboo were easily added to the drum in their respective blends using the same cobweb method I used for the wool.

Shorter fibers such as the cotton and GID fiber had to be handled a bit differently, even from each other. For the cotton sliver, I used an approach I often use with noils, ginned cotton, and sliver: applying it directly to the drum. Some fibers still make their way to the licker-in, but they are easily taken care of with a little help from a burnishing brush. I lightly pick them up off the licker-in while it is stationary using the brush and then place them back on by burnishing the main drum.

I rarely use anything synthetic—short of a bit of sparkle—so the short, slippery, and very staticky GID fiber presented an issue. I reserved a small portion of my three wool layers, spread a sparse amount of the GID fiber across the tray underneath an equally thin layer of wool, and cranked it onto the drum as I

did for my plain wool layer. This helped process and incorporate the GID fiber into the blend better.

Each of my blends required at least two passes on the drumcarder before I was satisfied, but some required more. For the second (and third) pass, I simply split up the batts and applied small amounts back to the carder just like my original plain wool layers until all of the batt was back on the drum.

Both Blend 1 (Corriedale/mohair/red eri silk) and Blend 4 (Rambouillet/bamboo) looked almost like commercial blends after two passes, while Blend 2 (Rambouillet/GID) and Blend 3 (Rambouillet/cotton fiber) required three passes through the drumcarder. I was eager to spin up some samples to see what worked and what would need modification.

THE RESULTS

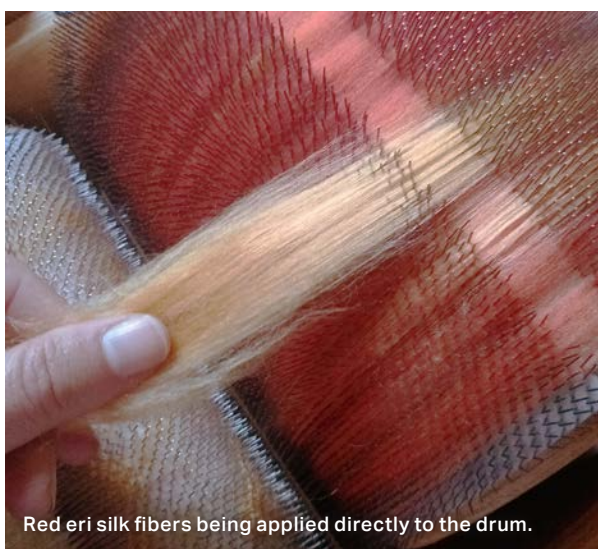
I spun and plied all my samples on my Schacht Ladybug, using the smaller pulley on my medium whorl for an 8:1 ratio. To finish my yarns, I washed them in hot water and whacked them before hanging them to dry.

For the Corriedale/mohair/silk blend (Blend 1), I was shooting for a lustrous, drapey yarn with good stitch definition, so I split it into strips and spun them end to end using a short-forward draw. I overspun my singles a bit and tried to reach a nice, even two-ply that would create a crisp, distinct stitch in a project. I was surprised to find how drastically different the color of the finished yarns was compared to the prepared batts. Based on the feel and look of these two-ply yarns, I was most satisfied with the drape, luster, and halo of the 60/20/20 blend.

The project I intend for the Rambouillet/GID fiber blend (Blend 2) is a winter hat, so I took the resulting springy blend and rolled it into little “fauxlags” to be spun from the side, using a long draw for a light worsted two-ply. Although the resulting yarns were squishy and just what I hoped for structurally, I was dissatisfied with the look of the yarn itself. It came out somewhat tweed-like, and it was difficult to avoid the effect fibers clumping together in areas. I also found that even an 80/20 blend wasn’t quite sufficient to get a distinct glow.



A thin layer of wool fibers spread on the feed tray.



Red eri silk fibers being applied directly to the drum.



Yellow cotton sliver applied directly to the drum.



From left: batts and handspun yarn in 50% Corriedale/25% mohair/25% red eri silk, 60% Corriedale/20% mohair/20% red eri silk, and 70% Corriedale/15% mohair/15% red eri silk; and 80% Rambouillet/20% GID and 90% Rambouillet/10% GID. The medium proportions of the 60/20/20 silk/mohair blend had the best combination of luster, halo, and drape, but neither of the GID blends was quite right.



From left: batts and yarn of 70% Rambouillet/30% cotton, 85% Rambouillet/15% cotton; and 70% Rambouillet/30% bamboo and 85% Rambouillet/15% bamboo blends. In both cases, the blend with less wool proved the better one.

Photos by Matt Graves

Another pass on the carder and test dyeing the GID fiber will be in order for the next attempt.

The Rambouillet/cotton fiber blend (Blend 3) appeared very textural as a batt, so I was concerned I would have difficulty avoiding a tweed-looking yarn again. I wanted it to be a light and airy yarn, so I chose to spin them using the same methods I had for the previous blends. I was really pleased with both resulting yarns but ultimately favored the texture of the 70/30 blend.

I finished my spinning with the Rambouillet/bamboo blends (Blend 4), splitting them into strips and spinning each end to end with a short-forward draw. This, by far, was the closest to looking like a commercial blend upon spinning. They both came out beautiful, but the extra luster in the 70/30 blend was more appealing.

You can learn a lot about how to get the structure of the yarn you want through blending your own fibers. Be brave and use the blending equipment at your disposal. Even a humble set of handcards can yield great samples, and you might be surprised at how satisfying it is to have so much control over your finished product! ●

Resources

Wohlscheid, Emily. *Drumcarding Basics & Beyond*. Online course. Fort Collins, CO: Long Thread Media, 2020.

Emily Wohlscheid is the fiber and jewelry artist behind Bricolage Studios. She works out of a cooperative studio in West Michigan and teaches online and in person around the country. You can find out more at bricolagestudios.bigcartel.com.



heaven to knit a joy to dye

Fine Rambouillet Yarn,
Climate Beneficial™ and sourced
from a single ranch in California.

www.lanislana.com



Greenwood Fiberworks
hand-dyed luxury fibers and more

GreenwoodFiberworks.com



Hand-dyed fiber and yarn • Wool from 30+ breeds • Hand-carded batts
Natural blends • Select commercial blends

MaineFiberWorkshop.com



Interviews with your favorite needleworkers and fiber artists...

Stories of Cloth, Thread, and Their Makers

SEASON 4
STARTS
JANUARY
2022

Start Listening Today!
longthreadmedia.com/podcast

Sponsored by



NOW AVAILABLE ON



Apple Podcasts



Spotify



Google Podcasts

long thread
MEDIA



Whose fleece are you calling greasy? Learn more about what makes up the grease in a raw wool fleece. Shown, the Leine sheep breed, which is an endangered breed that originates from the area close to the river Leine in Northern Germany.

Photos and illustrations by A. Sabine Schröder-Gravendyck

Wool Basics

What Is Grease?

A. SABINE SCHRÖDER-GRAVENDYCK

Have you ever stopped to wonder what grease is? Spinning terms can often lead to confusion, even for the seasoned handspinner. Grease is a natural part of a raw fleece, but even when working with wool shorn right off the sheep, we do not get in touch with pure grease. Secreted by the glands in the sheep's skin, natural grease originates from the sheep, as does suint and the fiber itself. What is often called "wool grease" is a mixture of suint, dirt, grease, and more. Let's take a closer look.

Grease

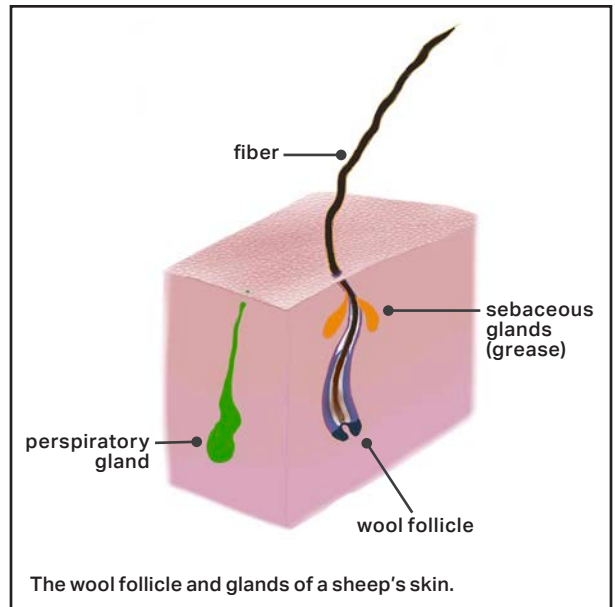
Wool fat or grease—chemically speaking, a wax—is produced by the sebaceous glands that accompany the follicles that grow the fibers. A complex blend of waxes, oils, fatty acids, complex alcohols, and more (all the secrets of lanolin’s natural ingredients still need to be solved) flows through the excretory duct into the area where the new fiber leaves the hair follicle and slides toward the skin surface. And once grease and fiber reach the surface, they become part of the fleece; the grease coats the fibers.

Suint

Produced by the perspiratory glands in the sheep’s skin, suint is sheep sweat and consists largely of potash salts of various fatty acids and small quantities of sulphate, phosphate, and nitrogen compounds. Suint is water soluble and is easily removed by soaking fleece in plain water.

Yolk

In a fleece, suint and grease combine into what is often called yolk. (Yolk can also be used to describe a yellow stain.) This substance protects the skin and fiber, keeping them both elastic and smooth. Yolk prevents adjoining fibers from becoming cotted and felted, and it aids in maintaining staple structure. Yolk is hydrophobic



and adds to the water-repellent quality the F-layer provides to every fiber’s cuticle (see “Wooltripping: What’s Inside the Not-So-Familiar Wool Fiber?” by Deborah Robson, *Spin Off* Spring 2018).

Lanolin

If you wash greasy wool and let the water cool after taking out the fiber, you will get a redeposition of the grease in the washing basin, close to the water surface. It’s possible to harvest it, and after cleaning and



Washed Moorschnucke locks, an endangered breed with a double-coated fleece. Notice the brittle and sticky grease remaining in the fiber.



Lanolin is considered to be a well-tolerated substance for most people and is used in many hypoallergenic formulations. The information that lanolin is an allergen is mostly based on the misinterpretation of a study published in 1953.

removing the impurities, you would have lanolin, a good emulsifier and skin-care product for making unguents and skin cream. However, extracting the lanolin needs to be done carefully, removing all pesticides and insecticides that may be contained in the grease.

In regions with a lot of sheep with greasy wool, grease is refined and purified into lanolin on a grand scale. A single Merino sheep can produce about 1 kg (about 2 pounds) of grease per year. Lanolin can provide additional income for sheep farmers when it is processed and then used in protectant coatings like leather and cotton dressing, timber sealer, corrosion inhibitor, lubricants and, naturally, fiber rinses for enhancing softness after washing. One of lanolin's many remarkable qualities is that it does not go rancid.

After further processing, lanolin can be used in ointments, lip balms, shaving creams, and the like, as well as in pharmaceuticals for human and veterinary medicine. Lanolin restores the skin's moisture balance and softness due to its outstanding emollient and emulsifying qualities.

WASHING

Wool grease is not water soluble, and its consistency depends on the temperature. At about 104°F (40°C), it turns from a solid to a liquid. This melting point may be a little lower or higher depending on the composition of the grease, breed, flock, individual sheep, feeding, and other factors. With this in mind, we can choose a water temperature for wool washing. To remove grease, the

water temperature needs to be at least several degrees higher than the melting point of grease, or 110°F (44°C), during the whole washing process. Otherwise, the grease will redeposit on the fiber.

To remove a substance that is insoluble in water, organic solvents can be used, but these are mostly dangerous and toxic. To wash fleece, use a mild detergent. (Learn more about washing fleece in "How to Wash Fleece and Leave the Grease." See Resources.) Greasy fleeces call for more detergent. In general, fine wools have a lot of grease—easily 15 to 16 percent of the weight of the fleece—while the fiber may be about 40 percent of a raw fleece. In addition, grease can bind to dust and dirt, skewing the weight of raw wool and the ratio of fiber to grease. Compared to fine wools, landrace breeds such as Shetland and Navajo-Churro are mostly on the other end of the spectrum. Medium breeds and crosses can fall somewhere in between or toward one extreme or the other.

If it so happens that you cannot remove the grease through washing, there are a range of things that can happen.

- The grease may become gummy, cloggy, or friable, and it can cause the fibers to stick together.
- After washing, any leftover grease may change from one of the previously mentioned qualities to another, or the grease might become inconspicuous.
- In some cases, the grease may become brittle and fall out during combing, carding, and spinning; in other cases, it will not.

Washing a fleece is all about balance. Too much grease makes the wool sticky and hard to draft, leading to an inconsistent yarn that isn't fun to spin. Washing away all of the grease makes the wool brittle and hard to draft. I feel strongly that when fully scoured, wool feels lifeless and harsh, the spinning isn't interesting to me, and my handspun feels lackluster. The right amount of grease makes handspun proceed swimmingly.

I'm not the only one who feels this way. Experts such as Elizabeth Johnston, Paula Simmons, Norman Kennedy, and Peter Teal all discuss either how wool with some grease left in or with a lubricant added later (or a combination of both) aids spinners in creating consistent yarns that just feel better to spin.

SPINNING IN THE GREASE

Most spinners prefer clean fibers, but some people like to spin raw wool—unwashed and directly as it comes after shearing and skirting. This is commonly referred to as “spinning in the grease,” and it’s usually done in a warm environment (see melting point above) and with fleeces that aren’t overly greasy or dirty.

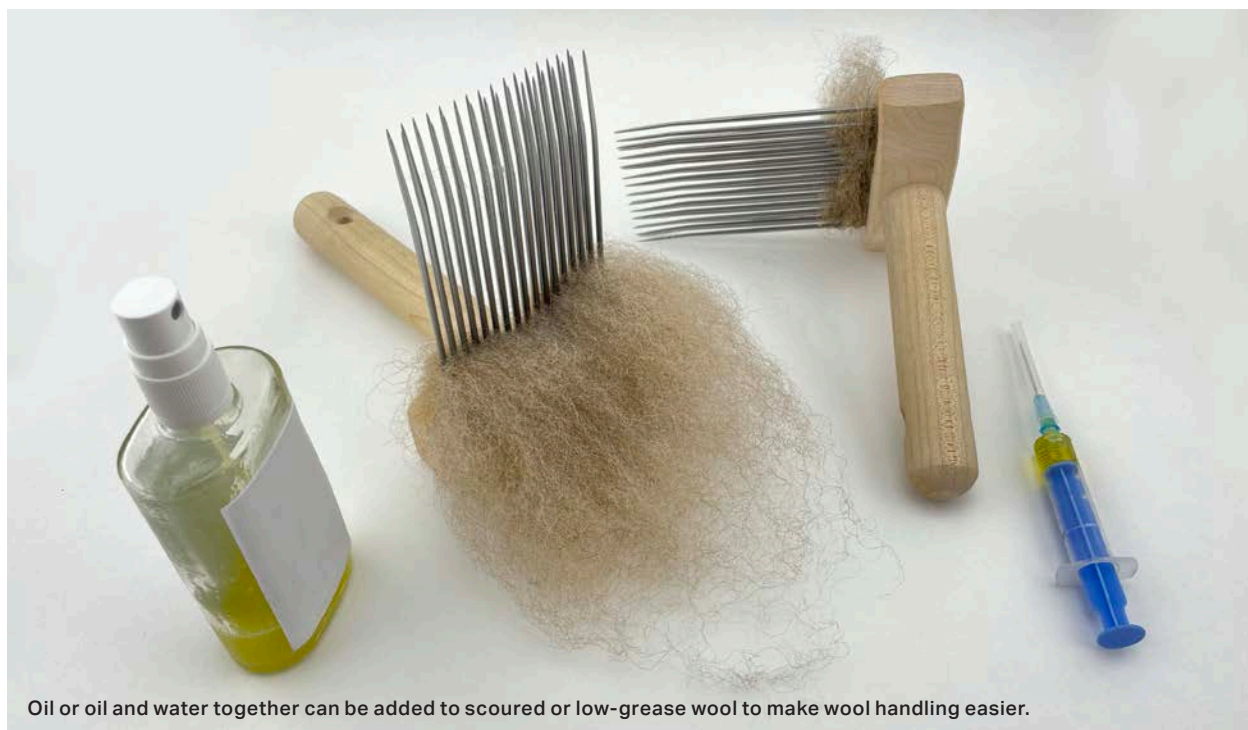
Unlike grease, suint is water soluble; it washes out with plain water. Soaking raw wool in water will bring out the suint’s natural ability to saponify in the presence of grease. Soaking wool in water will yield a pretty clean fleece, but the fiber will still be considered greasy enough for “spinning in the grease.” Some spinners add a clean, very lightweight oil to further aid in handling. Spinning traditions around the world have wonderful variations of this process depending on the fleece produced by local sheep, the availability of water and fuel, and much more. ●

Resources

- Amos, Alden. *The Alden Amos Big Book of Handspinning*. Loveland, CO: Interweave Press, 2001.
- Berg, Jeremy M., John L. Tymoczko, and Lubert Stryer. *Biochemie [Biochemistry]*. Berlin: Spektrum Akademischer Verlag, 2003.

- Bogdan, Ulrike. *Von Fasern, Farben und Fäden [Of Fiber, Color, and Threads]*. Aschaffenburg, Germany self-published eBook, 2015. nemo-ignorat.de.
- Doehner, Herbert and Horst Reumuth. *Wollkunde (Wool Studies)*. Berlin: Verlag Paul Parey, 1964.
- Lanis Lanolin, lanolin.com/about-lanolin.
- Millington, K. R., and John A. Rippon; Gajanan Bhat, editor. “Wool as a High-Performance Fiber.” *Structure and Properties of High-Performance Fibers*. Cambridge, MA: Woodhead, 2017.
- Nickel, E., A. Schummer, and E. Seiferle. *Lehrbuch der Anatomie der Haussäugetiere III [The Anatomy of the Domestic Animals III]*. Berlin: Verlag Paul Parey, 1984.
- Popescu, Crisan, and Hartwig Höcker. “Hair: The Most Sophisticated Biological Composite Material.” *Chemical Society Reviews* 36, no. 8 (2007), 1282–1291.
- Schröder-Gravendyck, A. Sabine. “How to Wash Fleece and Leave the Grease.” spinoffmagazine.com.
- Teal, Peter. *Hand Woolcombing and Spinning*. Petaluma, CA: Unicorn Books and Crafts Inc., 2005.

A. Sabine Schröder-Gravendyck, D.V.M., makes her home on Germany’s North Sea coast where she works as a naturalist and educator in sustainability and ecology. She is always looking for new ways to help people merge their personal spaces with nature. You can find more about Sabine on her website, florafauna.pro.



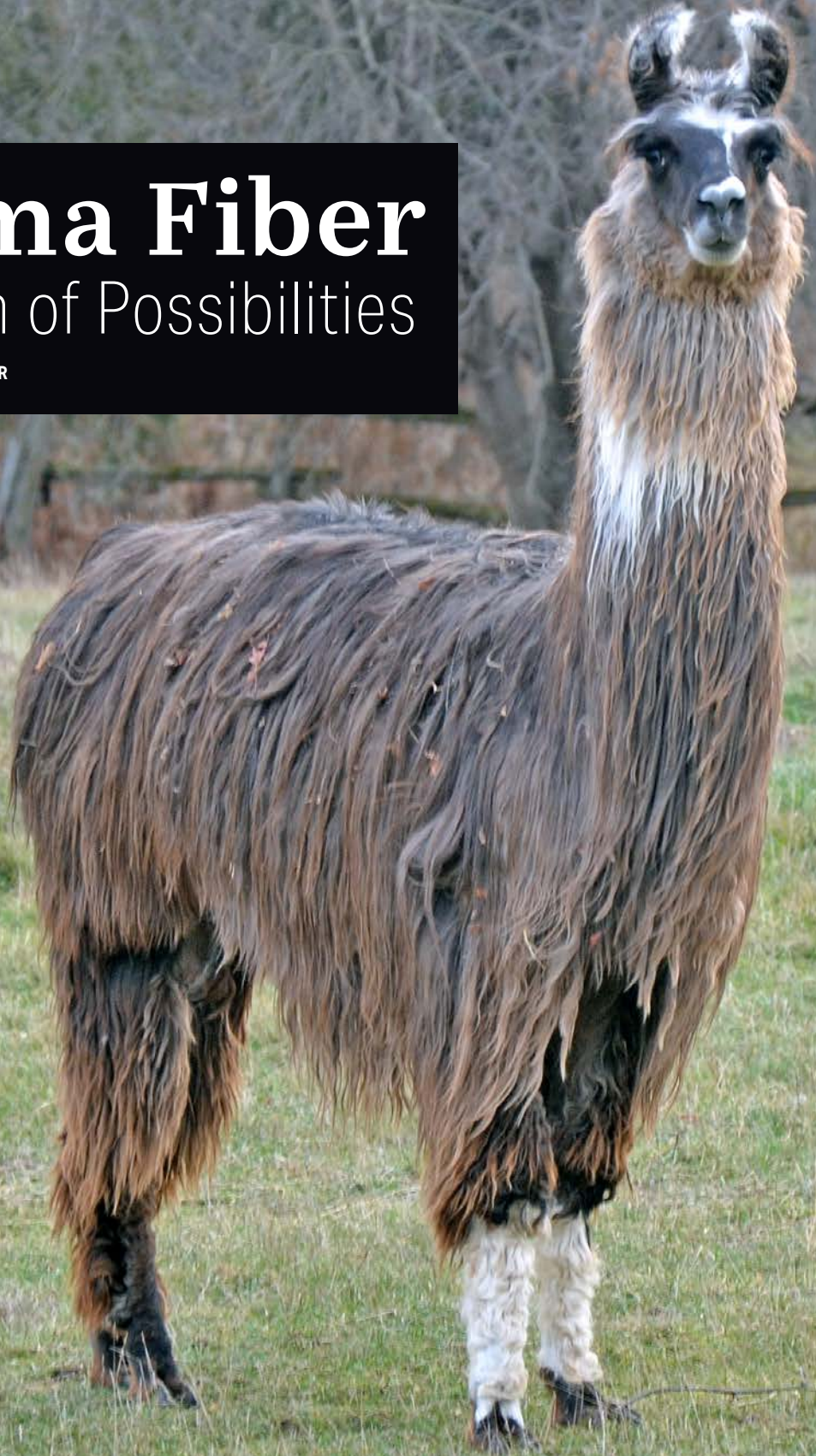
Oil or oil and water together can be added to scoured or low-grease wool to make wool handling easier.

Llama Fiber

A Realm of Possibilities

DR. ANNAMARIE HATCHER

Photos by Vick Barylak and courtesy of Karen Caldwell, Misty Morn Llamas unless otherwise noted



Misty Morn's Just North of Amazing—call name: North. This fella got rave reviews from all over the United States and some llama folks from Europe. Phenotype: Suri.

In my regular visits to the local yarn shop where I often indulge in a little tactile therapy, I have noticed that many luxury blends include “baby llama.” I was intrigued, having the impression that llamas were guard animals that ensured the safety of fiber-bearing alpaca flocks. To satisfy my curiosity, I searched out llama fleeces, with which my friend Barbara Kelly-Landry, my Ashford spinning wheel, and I could experiment.

I was a bit shocked to find out that, according to the Llama Canada website, llama and alpaca fibers are sometimes considered the same commercial product in South America, where the species originated. The finer fiber is sold as alpaca and the coarser as llama, irrespective of which animal it came from.

THE SEARCH FOR “REAL” LLAMA

Some llamas produce fleeces similar to the woolly huacaya alpaca. However, fleece quality is less of a sure thing with llama. The large variation in

fleece characteristics is due to two factors: First, most animal-husbandry efforts over time have not been oriented toward fleece quality, so there is large variation in those genes that control fleece characteristics. Secondly, all four species of New World camelids can readily interbreed. That lovely “alpaca” fiber that you purchase may come from an alpaca, llama, or anything in between.

I wanted to be sure that Barbara and I had “real” llama fleece to work with. My research led me to Misty Morn Llamas in the Ottawa Valley, Ontario, where Karen Caldwell raises silky, Argentine, and suri llamas. Karen’s sole interest is to breed llamas and save bloodlines for the future. Her breeding stock is registered and microchipped. Karen sent me a fleece from one of her silky llamas, and our adventure began.

There are two basic types of llama, the *ccaras* (translated “without hair”) and the *chakus* (translated “woolly”). The *ccaras* are the more common, sometimes called “classic,” and are used as beasts of burden. The



Silky llama locks from Misty Morn Llamas.



Körnerstone's Lucky Ace—call name: Ace—is 50 percent Argentine.



Misty Morn's Diamond Frost. Phenotype: Silky.



The formal name for this stud is MDL-AB Flashy Cordero. Call name: Cordero. Phenotype: Suri.

chakus are single-coated animals with soft fibers, thicker fleece, and hair that falls over their eyes.

North American llama fleeces vary, but there are four main categories. The first is the ccara, a double-coated llama, which has more guard hairs and less woolly fiber in the shorter undercoat. This fleece must be dehaired before spinning, and the undercoat may be a great fiber to spin.

The other types of llama fiber are variations of the chaku, which is kept mainly for its wool. The second fleece type is the silky, which is slippery to the touch and lustrous. Suri is also lustrous and slippery to the touch, but the fiber twists into distinct strands and is quite heavy and drapery when knitted. The fourth type is huacaya, which is a single coat of fine, dense fiber that has lots of loft or crimp. Some guard hairs can be found in any of these three types, but some breeding programs over the years have resulted in animals with very fine guard hairs that usually don't have to be removed before spinning.

FLEECE QUALITY: MORE THAN JUST DIAMETER

The quality of fleece is often judged by the diameter of the fibers measured in microns. As a general comparison, the fine Merino fiber that we are used to spinning generally falls in the range of 20 to 22 microns. Most alpaca fiber measures 20 to 35 microns, and llama undercoat ranges from 20 to 40 microns. By contrast, the very fine, highly prized, and expensive guanaco fiber is between 14 and 15 microns. Vicuña measures 12 to 14 microns, similar to cashmere.

The diameter of a fiber is only one of the characteristics that influence its value to a handspinner. Scale frequency and cuticular height may also affect how the fiber behaves. Fibers of similar diameter such as Merino, alpaca, and llama may differ significantly because of crimp or the construction and frequency of scales on the fiber's surface.

In a study of 60 kids—20 huacaya, 20 suri alpacas, and 20 chaku llamas—a group of Italian scientists led

by Dr. Alessandro Valbonesi found that llama fleece is clearly distinguished from both alpaca types, having the highest percentage of largest fibers and the highest percentage of fibers with more than nine scales per 100 microns of fiber length. The cuticular scale frequency for llamas and alpacas resembles that for wool (10 to 12) but is significantly higher than cashmere or mohair (6 to 8). Even though the diameter and scale frequency may be similar, the cuticular scale height is significantly different between Merino wool (well above 0.6 microns high) and llama and alpaca (less than 0.4 microns high).

As Barbara Kelly-Landry and I began this adventure with llama fiber, our spinning friends asked us, “Why?” After our very satisfying experiments spinning and blending, we are asking, “Why not?” ●

Find Barbara’s article, “Llama Fiber: An Exploration in Spinning and Knitting,” on page 78.

Resources

- Cowie, Helen. *Llama*. London: Reaktion Books Ltd., 2017.
 Llama Canada, llamaCanada.com.
 Misty Morn Llamas, mistymornllamas.ca.
 Robson, Deborah, and Carol Ekarius. *The Fleece & Fiber Sourcebook*. North Adams, MA: Storey Publishing, 2011.
 Valbonesi, Alessandro, Mijail Gonzales, Marco Antonini, et al. “Comparison of Fiber and Cuticular Attributes of Alpaca and Llama Fleeces.” *Textile Research Journal* Vol 80 (4) (February 2010): 344–353. doi.org/10.1177/0040517509337634.

Annamarie Hatcher, PhD in Zoology from the University of Western Australia, is a freelance science writer and is studying to be a Master Spinner after 46 years of hobby spinning. Her interest in llama fiber for spinning began as an assignment for her Master Spinner program.

Relatives with Benefits

The llama story begins with the origin of camels on the Great Plains of North America about 40 to 50 million years ago. Old and New World camels diverged and parted ways about 3 million years ago, when a land bridge formed between North and South America. Ancestors of Old World camels migrated across the Bering Strait to Asia, and ancestors of New World camels (guanacos and vicuñas) travelled to the southern continent. Around 4500 BCE, through the selective breeding efforts of farmers, researchers believe llamas were domesticated from guanacos and alpacas were domesticated from vicuñas. All four species now coexist. (For more on guanacos, see “Optimizing Luxury,” page 42.)

Between 1400 and 1533, llamas and alpacas played a crucial role in the culture and survival of the Incas in the central Andes. Because llamas were larger and stronger, their main role was as beasts of burden. Llamas also produced fiber, which was spun and woven into clothing worn by the lower classes. On the other hand, clothes made from alpaca wool were worn by nobility. This diversion in their roles outlined the direction of animal-husbandry efforts to improve llamas as pack and guard animals and alpacas as fiber producers.



Finely woven, brightly colored hats, customarily featuring a square crown and four pointed tips, are most frequently associated with two ancient cultures of the Andes: the Wari and the Tiwanaku. These hats were made from camelid fibers carefully prepared into yarns and expertly dyed. Artists from the two cultures also employed similar geometric designs and stylized images representing plants and zoomorphic forms, such as llamas with wings on their backs. Four-cornered hat, Wari culture, Peru, seventh to ninth century. (1994.35.137)

Courtesy of the Metropolitan Museum of Art, New York



Llama Fiber

An Exploration in
Spinning and Knitting

BARBARA KELLY-LANDRY

Barbara tested several blends combining Romney, llama, and silk.

Photos by Matt Graves

When Annamarie Hatcher suggested that we experiment with spinning and knitting silky-variety llama fiber, I was intrigued (see “Llama Fiber: A Realm of Possibilities,” page 74). Although I specialize in knitting and spinning in my work as a professional historic interpreter at Nova Scotia’s Fortress of Louisbourg National Historic Site, silky llama falls outside my usual range of materials.

We anticipated using llama in blends with other fibers to spin for our specific goals. We aimed for one blend that would produce a hard-wearing, comfortable pair of hiking socks and another blend for a luxurious, lustrous shawl. To us, these goals represented two ends of a spectrum that would give us a better understanding of the llama fiber and all its possibilities.

Silk was a necessary addition for our sock blend to wick away moisture and provide strength for longer wear. The llama fiber would add strength to the sock yarn as well as softness and warmth. However, the lack of memory in the llama fiber would lead to a sock that would likely wrinkle under foot and sag at the ankle, so we added wool to the blend. We chose fleece from a locally produced Romney—a versatile fleece with a well-defined crimp—to make up for the crimpless silky llama and tussah silk (see Table 1).

For the shawl, we wanted a yarn that would sensuously drape over the shoulders and (the tricky part) provide crisp definition for the lace pattern. We thought that the llama and silk fibers would contribute to the first goal and the wool to the second.

We used a drumcarder to blend the fibers, which I then spun in the Z direction and plied in the S direction



TABLE 1

Fiber Characteristics			
Origin	Staple Length	Lock structure (crimp)	Color
Silky llama (raw)	3½ inches	No crimp, slippery	Dark brown
Romney wool (raw)	5½ inches	5 crimps per inch	Gray/mottled
Tussah silk top	5 inches	No crimp, slippery	White

as a two-ply laceweight or light fingering-weight yarn (see Table 2).

SAMPLING YARNS ALONG THE SPECTRUM

To anchor one end of our spectrum, I used 100% silky llama (Blend 1), and for the other end, I used 100% Romney wool (Blend 5).

To test our blends, we needed to swatch. For each blend, I knitted three swatches of 40 stitches:

stockinette stitch on US size 1 (2.25 mm) needles; a simple lace pattern of yarn over, knit 2 together on US size 4 (3.5 mm) needles; and a pattern from Barbara Walker's *A Second Treasury of Knitting Patterns* called Celtic Cable, also knitted on US size 1 (2.25 mm) needles. These swatches told an interesting tale.

None of the 100% silky-llama swatches (Blend 1) held their shape after blocking. In the knitting pattern



The 50% silky llama/25% tussah silk/25% Romney wool swatches had the right combination of definition and body for hiking socks.



Airy and open, the lace swatch in 25% silky llama/25% tussah silk/50% Romney wool was just right for a lace shawl.



From top to bottom: Blend 3, 2, and 1. Each of the three fibers in the blends enhanced a different aspect of the yarn.

we used, we felt they were lackluster and flat with little definition and no three-dimensional quality.

The second set of swatches was in our sock blend (Blend 2). The lace swatch was lovely but lacked the airy quality that we would want for a shawl. The cable

swatch was perfect—sturdy and dense without being heavy, with good definition and visibility.

The third set of swatches was in our lace blend (Blend 3). They held their shape after blocking. The cable swatch was a better sample than the silky llama

TABLE 2

Blends on the Llama Spectrum						
Blend	Proposed application	wpi	Equivalent yarn classification	tpi (2-ply)	Angle of twist (degrees)	Grist (yards per ounce)
1) 100% silky llama	shawl	30	lace	4.6	20	87
2) 50% silky llama, 25% tussah silk, 25% Romney wool	socks	25	lace	3.6	35	92
3) 25% silky llama, 25% tussah silk, 50% Romney wool	shawl	21	fingering	3.8	28	77
4) 25% tussah silk, 75% Romney wool	socks	25	fingering/lace	4.2	30	103
5) 100% Romney wool	socks	21	fingering	3.6	27	86

alone, but it lacked the definition and density that would make a sturdy pair of socks. The lace sample popped! It blocked beautifully, gave the lace a lovely rounded quality, and felt light, airy, and soft as well. Success!

I also decided to swatch a wool/silk blend (Blend 4) to better understand the contribution of the llama to our combinations. Working with the Romney wool and tussah silk alone, I realized that the silky llama added depth and quality to all the blend swatches.

This has been quite an eye-opening experience for me. The possibilities that llama blends can offer is more apparent to me—and I know now that the true test of any yarn you spin is not just in the properties of the skein but in the textile that comes to life on your needles. ●

Resources

Walker, Barbara G. *A Second Treasury of Knitting Patterns*. Pittsville, WI: Schoolhouse Press, 1998.

Barbara Kelly-Landry, a lifelong resident of Cape Breton Island, Nova Scotia, Canada, has been an employee of the Fortress of Louisbourg National Historic Site for the past 37 years. She has spent much of that time interpreting textile traditions of the eighteenth century, including bobbin lace, knitting, and spinning. She looks forward to her next spinning and knitting adventure with her best friend, Dr. Annamarie Hatcher.



Blend 2 of silky llama, tussah silk, and Romney creates a beautiful heathered effect when knitted.

GET EVERY ISSUE!

Handwoven, Spin Off, PieceWork, and Easy Weaving with Little Looms
PLUS 100+ crafting videos for as little as \$15 per month.



NEW ADDITION!
PieceWork Library
featuring unlimited access to Weldon's Practical Needlework and much more!



NEW ADDITION!
Get 4 Print Issues a Year!
Easy Weaving with Little Looms will be published quarterly and included in the Long Thread Media All Access Pass.



Video Workshops
on pin-loom, tablet, and rigid-heddle weaving are included!



Subscribe today at longthreadmedia.com

long
thread
MEDIA

NOW *you* CAN
learn from
expert spinners

Video workshops by your favorite spinners.

**Coming
Soon!**

Spinning Wild & Unusual Silk with *Judith MacKenzie*



Drumcarding Basics & Beyond with *Emily Wohlscheid*



Color and Yarn Design for Spinners with *Deb Menz*



Unlimited
Access to All
Video Workshops

\$14.99
a month

ACCESS *125+* VIDEOS AND WORKSHOPS
IN A VARIETY OF SKILL LEVELS

START WATCHING ONLINE at learn.longthreadmedia.com

EQUIPMENT



SPINDLEWOOD CO
We specialize in fine hand Spindles, crafted from Domestic or Exotic Hardwoods made to your preference.

503.838.3388
WWW.SPINDLEWOODCO.COM



Dakota Carding & Wool
Carding Wool, Exotics, Color & Fiber Blends
Small Orders Welcome



dakotacardingandwool.com

Premier Classifieds

Issue Date for Circulation Data Below, *Spin Off* Fall 2021. Total Number of Copies—Average number of copies each issue during preceding 12 months is seventeen thousand five hundred eighty-eight; number of copies of single issue published nearest to filing date is seventeen thousand six hundred nineteen. Mailed Outside-County Paid Subscriptions Stated on PS Form 3541—Average number of copies each issue during preceding 12 months is eight thousand four hundred eight; number of copies of single issue published nearest to filing date is eight thousand one hundred seventy-eight. Mailed In-County Paid Subscriptions Stated on PS Form 3541—Average number of copies each issue during preceding 12 months is zero; number of copies of single issue published nearest to filing date is zero. Paid Distribution Outside the Mails Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and other Paid Distribution Outside USPS—Average number of copies each issue during preceding 12 months is two thousand three hundred seventy-seven; number of copies of single issue published nearest to filing date is two thousand three hundred nineteen. Paid Distribution by Other Classes of Mail Through the USPS—Average number of copies each issue during preceding 12 months is one thousand three hundred eighty-eight; number of copies of single issue published nearest to filing date is one thousand three hundred eighty-one. Total Paid Distribution—Average number of copies each issue during preceding 12 months is twelve thousand one hundred seventy-two; number of copies of single issue published nearest to filing date is eleven thousand eight hundred seventy-eight. Free or Nominal Rate Outside-County Copies included on PS Form 3541—Average number of copies each issue during preceding 12 months is fifty; number of copies of single issue published nearest to filing date is sixty-two. Free or Nominal Rate In-County Copies included on PS Form 3541—Average number of copies each issue during preceding 12 months is zero; number of copies of single issue published nearest to filing date is zero. Free or Nominal Rate Copies Mailed at Other Classes Through the USPS—Average number of copies each issue during preceding 12 months is zero; number of copies of single issue published nearest to filing date is zero. Free or Nominal Rate Distribution Outside the Mail (shows & festivals)—Average number of copies each issue during preceding 12 months is 25; number of copies of single issue published nearest to filing date is one hundred. Total Free or Nominal Rate Distribution—Average number of copies each issue during preceding 12 months is seventy-five; number of copies of single issue published nearest to filing date is one hundred sixty-two. Total Distribution—Average number of copies each issue during preceding 12 months is twelve thousand two hundred forty-seven; number of copies of single issue published nearest to filing date is twelve thousand forty. Copies Not Distributed—Average number of copies each issue during preceding 12 months is five thousand three hundred forty-one; number of copies of single issue published nearest to filing date is five thousand five hundred seventy-nine. Total—Average number of copies each issue during preceding 12 months is seventeen thousand five hundred eighty-eight; number of copies of single issue published nearest to filing date is seventeen thousand six hundred nineteen. Percent Paid—Average number of copies each issue during preceding 12 months is ninety-nine point thirty-eight percent; number of copies of single issue published nearest to filing date is ninety-eight point six-five percent. Paid Electronic Copies—Average number of copies each issue during preceding 12 months is one thousand two hundred eighteen; number of copies of single issue published nearest to filing date is one thousand four hundred seventy-eight. Total Paid Print Copies + Paid Electronic Copies—Average number of copies each issue during preceding 12 months is thirteen thousand three hundred ninety; number of copies of single issue published nearest to filing date is thirteen thousand three hundred fifty-six. Total Print Distribution + Paid Electronic Copies—Average number of copies each issue during preceding 12 months is thirteen thousand four hundred sixty-five; number of copies of single issue published nearest to filing date is thirteen thousand five hundred eighty-eight. Percent Paid (Both Print & Electronic Copies)—Average number of copies each issue during preceding 12 months is ninety-nine point forty-three percent; number of copies of single issue published nearest to filing date is ninety-eight point eighty percent.

Your Ad Could Be Here

Contact Julie Macdonald
sales@longthreadmedia.com
888-480-5464, ext. 705
mediakit.longthreadmedia.com

LITERATURE

FREE

Paco-vicuna Fiber (½ oz) with book order

SPINNING Alpaca, Llama, Camel & Paco-vicuna
\$12 + \$3.50 shipping

52 pages, 8 fiber samples, 8 projects 4th edition

Chris Switzer
1236 Glacier View Ln.
Estes Park, CO. 80517
www.alpacaland.com

LITERATURE

The Spinning Wheel Sleuth

A Newsletter About Spinning Wheels and Related Tools

\$28/ 4 issues (\$32 Canada)

Back Issues on flash drives

www.spwhsl.com



Advertiser Index

Akerworks	53
Ashford Handicrafts LTD	10-11
Bountiful	49
Chris Switzer	85
City of Estes Park - Estes Park Wool Festival	17
Classic Carder	49
Clemes & Clemes, Inc.	57
Dakota Carding & Wool	85
Dreaming Robots	35
Eugene Textile Center	35
Fancy Fibers Fiber Art Center	87
Golding Fiber Tools	57
Greenwood Fiber Works	69
HansenCrafts	9
HipStrings	49
John C. Campbell Folk School	41
Kromski North America	C3
Lani's Lana	69
Lendrum	2
Louët	C2-1
Maine Fiber Workshop	69
Majacraft	C4
Ohio Valley Farm & Fiber Mill	57
PLY Magazine	41
RH Lindsay	41
Schacht Spindle Co., Inc.	5
Southern Comfort Products	9
Spindlewood Co.	85
SpinOlution	7
Stewart Heritage Farm	53
The Dancing Goats	53
The Fiber House	87
The Sheep Shop at Nistock Farms	87
The Sheepshed	86
The Spinning Wheel Sleuth	85
The Woolery	49
Treenway Silks	53
Unicorn Fibre Wash	57
Woolgatherers Ltd LLC	87
Yarn Barn of Kansas	17

Be Astonished by **COLOR**

Wander through the sources, colors, and stories of natural dyes worldwide, from the soil beneath your feet to the petals of common flowers to a few new tricks from the extraordinary indigo plant.

Order Your Copy Today!
\$24⁹⁹



Order online at longthreadmedia.com/natures-colorways

ARIZONA

Fiber Creek

Suite 123, 1046 Willow Creek Rd
Prescott, AZ 86301
(928) 717-1774
fibercreekprescott.com

Tempe Yarn & Fiber

1415 E University Dr
Tempe, AZ 85281
(480) 557-9166
tempeyarn.com

CALIFORNIA

Babetta's Yarn & Gifts

4400 San Juan Ave #20
Fair Oaks, CA 95628
(916) 965-6043
babettas yarnandgifts.com

Dharma Trading Co

1604 4th Street
San Rafael, CA 94901
(434) 456-1211
dharma trading.com

Fengari

415 Main St
Half Moon Bay, CA 94019
(650) 726-2550
fengari.net

Hands On Knitting Center

912 New York Street, Suite A
Redlands, CA 92374
(909) 793-8712
www.handsonknittingcenter.com/

The Altered Stitch

12443 W Magnolia Blvd
Valley Village, CA 91607
(818) 980-1234
thealteredstitch.com

COLORADO

Blazing Star Ranch

3424 S Broadway
Englewood, CO 80113
(303) 514-8780
blazingstarranch.com

Knot Just Yarn, LLC

1250 S. Buckley Road
Unit H
Aurora, CO 80017
(303) 990-3310
knotjustyarnllc.com

Lambspun of CO

1101 E Lincoln Ave
Fort Collins, CO 80524
(800) 558-5262
lambspun.com

Longmont Yarn Shop

454 Main St.
Longmont, CO 80501
(303) 678-8242
www.longmontyarn.com

Piney Creek Yarn

15422 E Orchard Rd
Centennial, CO 80016
(720) 596-4462
pineycreekyarn.com

Serendipity Yarn & Gifts

PO Box 5120
Buena Vista, CO 81211
(719) 395-3110
serendipityyarn.com

SHUTTLES SPINDLES & SKEINS

760 S 43rd St
Boulder, CO 80305
(303) 494-1071
shuttlesspindlesandskeins.com

Yampa Valley Fiberworks LLC

41180 North Highway 13
Craig, CO 81625
970-824-9568
www.yampavalleyfiberworks.com

CONNECTICUT

Madison Wool

56 Wall St
Madison, CT 06443
(203) 245-5921
madwool.com

FLORIDA

A Good Yarn

5736 Clark Rd
Sarasota FL 34233
www.agoodyarnsarasota.com

IDAHO

Yarn Underground

409 S Washington St
Moscow, ID 83843
(208) 882-7700
yarnunderground.com

ILLINOIS

Esther's Place

201 W. Galena St. (RT 30)
Big Rock, IL 60511
(630) 556-9665
esthersplacefibers.com

Fiber Universe

305 Southwest Water Street
Peoria, IL 61602
(309) 673-5659
thefiberuniverse.com

INDIANA

Spinnin Yarns

145 N Griffith Blvd
Griffith, IN 46319
(219) 924-7333
spinninyarns.com

Trading Post for Fiber Arts

8833 S 50 West
Pendleton, IN 46064
(765) 778-3331
tradingpostfiber.com

KANSAS

Yarn Barn of Kansas

930 Massachusetts
Lawrence, KS 66044
(785) 842-4333
yarnbarn-ks.com

KENTUCKY

LSH Creations

1584 Wellesley Drive
Lexington, KY 40513
(859) 321-7831
lshcreations.com

The Woolery

Ste 1A, 859 E Main St
Frankfort, KY 40601
(800) 441-9665
woolery.com

MAINE

Belfast Fiber Arts

171 High St
Belfast, ME 04915
(207) 323-5248
belfastfiberarts.com

Halcyon Yarn

12 School St
Bath, ME 04530
(800) 341-0282
halcyonyarn.com

One Lupine

170 Park St
Bangor, ME 04401
(207) 992-4140
maineyarnandfibersupply.com

MARYLAND

Black Sheep Yarn Shop

9602 Deereco Rd.
Timonium, MD 21093
(410) 628-9276
blacksheep yarnshop.com

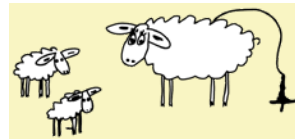
Cloverhill Yarn Shop

77 Mellor Ave
Catonsville, MD 21228
(410) 788 7262
cloverhillyarn.com

Vulcan's Rest Fibers

2728 Augustine Herman Hwy
Chesapeake City, MD 21915
(410) 885-2890
vulcansrest.com

MASSACHUSETTS



Sheepshed

456 Summer Street
North Andover, MA 01845
(603) 533-0664
www.sheepshed.net
Sheepshed specializes in all fibers for spinning and felting, Jacquard Dyes, our own exclusive line of sheep pottery, soaps, candles, knitting yarns, Unicorn fiber wash.

The Fiber Loft

9 Massachusetts Ave
Harvard, MA 01451
(978) 456-8669
thefiberloft.com

WEBS - America's Yarn Store

75 Service Center Rd
Northhampton Rd., MA 01060
(800) 367-9327
yarn.com

MICHIGAN

Gate House Fiber Arts

2400 Faussett Rd
Howell, MI 48855
(810) 923-1136
gatehousefiberarts.com

Heritage Spin & Weaving

47 E Flint
Lake Orion, MI 48360
(248) 693-3690
heritagespinning.com

Knit & Spin

8868 Water St., Suite B
Montague, MI 49437
(937) 477-5531
www.knitandspin.biz

The Hen House Quilt Shop

211 S Cochran Ave
Charlotte, MI 48813
(517) 543-6454
thehenhousemi.com

MINNESOTA

Carole's Country Knits at Rocking Horse Farm

25636 County Rd 74
St Cloud, MN 56301
(320) 252-2996

Weavers Guild of Minnesota

3000 University Ave SE #110
Minneapolis, MN 55414
(612) 436-0463
weaversguildmn.org

MISSOURI

Hillcreek Yarn Shoppe

4093 E. Ketterer Rd
Columbia, MO 65202
(573) 825-6130
hillcreekyarn.com

Yarn Social

1707 W 45th St
Kansas City, MO 64111
816-867-0522
yarnsocialkc.com

NEBRASKA

Laughing Lamb Fibers

925 Illinois St
Sidney, NE 69162
(866) 582-0058
laughinglambfibers.com

Plum Nelly

743 W 2nd Street
Hastings, NE 68901
(402) 462-2490

NEW HAMPSHIRE

Hodgepodge Yarns & Fibers

59 Belknap Ave
Newport, NH 03773
(603) 863-1470

NEW JERSEY

The Spinnery

33 Race St
Frenchtown, NJ 08825
(908) 996-9004
spinnery.ajmmobilesolutions.com

Woolbearers Yarns

90 High St
Mount Holly, NJ 08060
(609) 914-0003
woolbearers.com

NEW YORK

Fiber Kingdom

137 E Broadway
Salem, NY 12865
(518) 854-7225
fiberkingdom.com

Spinning Room of Altamont

190 Main St / PO Box 427
Altamont, NY 12009
(518) 861-0038
spinningroom.net

The Sheep Shop at Nistock Farms

10137 Mattoon Rd
Prattsburgh, NY 14873
(607) 522-4374
www.nistockfarms.com

Yarn Shop at Foster Sheep Farm

460 W River Rd
Schuylerville, NY 12871
(518) 338-6679
fostersheepfarm.com

NORTH CAROLINA

Earth Guild

33 Haywood St
Asheville, NC 28801
828-255-7818
earthguild.com

Silver Threads & Golden Needles

41 E Main St
Franklin, NC 28734
(828) 349-0515
silverthreadsyarn.com

Three Waters Farm

5330 Three Waters Lane
Graham, NC 27253
(866) 376-0378
threewatersfarm.com

Yadkin Valley Fiber Center

321 East Main Street
Elkin, NC 28621
(919) 260-9725
yadkinvalleyfibercenter.org

OREGON

Eugene Textile Center

2750 Roosevelt Blvd
Eugene, OR 97402
(541) 688-1565
eugenetextilecenter.com

Teaselwick Wools

1313 Mill St SE
Salem, OR 97301
(971) 304-7050
teaselwickwools.blogspot.com

Web-sters

11 N Main St
Ashland, OR 97520
(541) 482-9801
yarnatwebsters.com

PENNSYLVANIA

Darn Yarn Needles & Thread

253 Mercer St
Harmony, PA 16037
(724) 473-0983
darnyarnneedlesandthread.com

The Ross Farm

102 Route 519
Eighty Four, PA 15330
(724) 222-2643
therosfarm.com

The Speckled Sheep

2707 Old Philadelphia Pike
Bird in Hand, PA 17505
(717) 435-8359
thespeckledsheep.com

Twist Knitting & Spinning

5743 Route 202
Lahaska, PA 18931
(215) 794-3020
twistknittingandspinning.com

SOUTH CAROLINA

LoftyFiber

101 NE Main St Suite M
Easley, SC 29640
(864) 810-4747
loftyfiber.com

SOUTH DAKOTA

South Dakota Natural Colored Wool Studio

109 N 2nd St
Grotton, SD 57445
(605) 397-4504
sdnaturalcoloredwool.com

TENNESSEE

Smoky Mountain Spinnery

466 Brookside Village Way Ste 8
Gatlinburg, TN 37738
(865) 436-9080
smokymountainspinnery.com

Sunshine Weaving and Fiber Arts

327 W. Main Street
Lebanon, TN, 37087
615-440-2558
sunshineweaving.com

TEXAS



Fancy Fibers

111 South Main St
Farmersville, TX 75442
(972) 616-3276
fancyfibers.com
Classes, tools, equipment, and yarn for weaving, spinning, dyeing, and rug hooking. Brassard cottons; Jagger Brothers wools. Kromski, Schacht, Ashford, Louet, Leclerc, and Glimakra.

Hill Country Weavers

4102 Manchaca Rd
Austin, TX 78704
(512) 707-7396
hillcountryweavers.com

Yarnorama

130 Gonzalez St
Paige, TX 78659
(512) 253-0100
yarnorama.com

UTAH

Desert Thread

29 E Center St
Moab, UT 84532
(435) 259-8404
desertthread.com

Needlepoint Joint

241 25th St
Ogden, UT 84401
(801) 394-4355
needlepointjoint.com

VERMONT

Six Loose Ladies Yarn & Fiber Shop

287 Main Street
Chester, VT 05143
(802) 875-7373
sixlooseladies.com

VIRGINIA

The Knittin' Coop

7 S. College Ave
Salem, VA 24153
(540) 588-2447
www.theknittincoop.com

WASHINGTON

Blizzard Yarn & Fiber

6924 NE Fourth Plain Blvd
Vancouver, WA 98661
(360) 991-5350
blizzardyarnandfiber.com

Cabled Fiber & Yarn Studio

125 W 1st St
Port Angeles, WA 98362
(360) 504-2233
cabledfiber.com

Northwest Yarns

1401 Commercial St.
Bellingham, WA 98225
(360) 738-0167
nwyarns.com

WISCONSIN

Icon Fiber Arts

1876 Dickinson Road
De Pere, WI 54114
(920) 351-4024
iconfiberarts.com

Fiber Garden

N5095 Old Hwy. 54
Black River Falls, WI 54615
(715) 284-4590
fibergarden.com

Rainbow Fleece Farm

W7181 Hustad Valley Rd
New Glarus, WI 53574
(608) 527-5311
rainbowfleecefarm.com

Sow's Ear

125 S Main St
Verona, WI 53593
(608) 848-2755
knitandsip.com

Sutters Gold N Fleece

9094 Co Hwy O
St Germain, WI 54558
(708) 805-1650
suttersgoldnfleece.com

The Woolgatherers

Weaving studio and fiber shop. Makers of DutchMaster table looms, spinning stools; Weaving, spinning, fiber, knitting, needlework—convenient downtown location. Individual instruction. Books. Gallery. Fine Fabrics. 25-A N. Main St. Fond du Lac, WI 54935 920-907-0510 www.woolgatherers.com

WYOMING



The Fiber House

The Fiber House

146 Coffeen Ave
Sheridan, WY 82801
Vendors for Schacht, Ashford, and Kromski wheels and looms. Supplies for all fiber arts needs. Individual and group classes. See our website for more. (877) 673-0383 thefiberhouse.com

CANADA

Where the Wildflowers Grow Gallery

1281 West Riverside Drive
Perth-Andover, NB E7H 5G9
Canada
(506)273-2217
wildflowergallery.net

JAPAN

Kakara Woolworks

580 Yagami
Akaiwa-shi, Okayama-ken
709-0734
Japan
+81-(0)86-995-9988
kakara-woolworks.com

UNITED KINGDOM

George Weil & Sons

Old Portsmouth Rd
Peasmarsh, Guildford GU3 1LZ
United Kingdom
01483 565 800
www.georgeweil.com

The Handweavers Studio and Gallery

140 Seven Sisters Road,
London N7 7NS
020 7272 1891
handweavers.co.uk

Weft Blown Ltd

25-27 Ritchie St
West Kilbride North Ayrshire
Scotland, UK, KA23 9AL
+44 (0) 7930 657900
info@weftblown.com

Contact Michaela Kimbrough for magazine standing order opportunities.
mkimbrough@longthreadmedia.com



Photo by Matt Graves

Dark Water Fractal Pack shown with a Louet blending board.

Puni-Style Rolags

KATE LARSON, *SPIN OFF* EDITOR

Maker: Naturally Knitty in Sheboygan, Wisconsin. Fractal Pack with 4 ounces of blended Merino, silk, Targhee, Rambouillet, Dorset, and Polypay.

We couldn't resist featuring Naturally Knitty's Dark Water colorway and spectacular blending technique on the cover of our Blends issue. Fiber artist Jessica Gutoski creates several types of rolags and batts, including this fractal pack containing a set of puni-style rolags and coordinating batt. Jessica says that the

set allows you to “spin two singles (one of the rolags and one of the batt), and ply them together to get a barber-poling fractal(ish) yarn.”

With a shop full of beautiful rolag sets, Jessica answers the question, “Why rolags?!”

“They are fun little rolls of fiber—easy to transport and spin on the go. They are great for woolen-spun yarns, and I enjoy spinning them with a long draw. They can be spun worsted drafting technique as well. And a little pre-drafting goes a long way!”

| Visit Jessica's online shop at etsy.com/shop/naturallyknitty