Keys to Asymmetrical Design, p. 48—Plus 4 projects to inspire you



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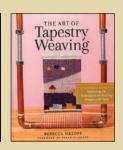


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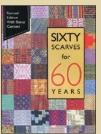
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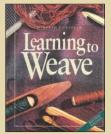


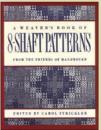




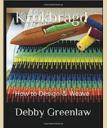








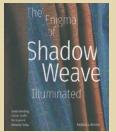




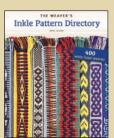
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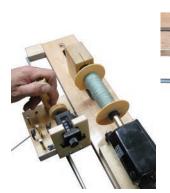
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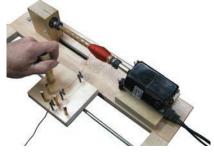
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TOM KNISFLY

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Hello, weavers!

I'm honored and delighted to introduce myself to you as the new editor of *Handwoven*.

Here at the beginning of my tenure, I find myself filled with many, many ideas for inspiring stories, projects, and ways of sharing them with you—and also with trepidation about following in the footsteps of *Handwoven*'s former editors.

As I make my way through all 219 back issues of the magazine (spanning 45 years!), it's clear that Susan E. Horton, Anita Osterhaug, Madelyn van der Hoogt, Jean Scorgie, Jane Patrick, and *Handwoven*'s visionary founder, Linda Ligon, were (and still are) smart, creative, and skilled weavers and editors.

Weaving trends have changed over the decades. Nevertheless, my personal to-weave list grows longer with every back issue I read, precisely because of the skill those editors used in covering this craft we love in a way that still feels relevant. My fondest wish is that my work here lives up to and builds on their legacies.

Onward to what you'll find inside this dual-themed issue.

First, if you have bare floors in need of covering, you've come to the right place. The brilliantly colorful krokbragd rug on our cover had everyone on staff excited. Wouldn't it brighten your space? If that's not quite what you're looking for, we have five other rug projects to consider. Some use rags, stash yarns, or even shearing leftovers; some have bold geometric shapes; and one special project makes a rug that is supremely fluffy.

Next, if you're curious about asymmetry, we have an article about how to design a balanced asymmetric pattern. If you're not up to designing with asymmetry quite yet, we have several gorgeous patterns to get you started.

Other stories include how to weave with a clasped warp on a multi-shaft loom; ideas for weaving in the face of movement tremors; a review of two books you might want for your library (one of them written by a former *Handwoven* editor!); and how a unique commemorative banner was designed and woven—you may have seen it in person at the 2022 Complex Weavers Complexity exhibit.

I'm curious—what's on your loom right now? Please show us on Instagram or Facebook by using #handwovenmagazine. And send your weaving questions and comments to handwoven@ longthreadmedia.com. I look forward to hearing from you!

Happy weaving,



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FUTURE THEMES

FALL 2024 Anything but Twill! We love twills, but here's your chance to try out and fall in love with other structures.

WINTER 2024

Color in Fiber

From brilliant color to ingenious uses of natural tones, this issue will help you bring color to life.

SPRING 2025 Easy Breezy

Pack away your warm winter textiles and welcome springtime with a range of lacy, open, and transparent weaves.

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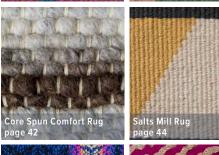
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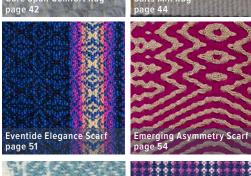
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Project Index











Letters

Stories, tips, tricks, and questions from Handwoven readers

When I recently needed to transfer hundreds of heddles on my newly acquired 54-inch Fireside loom, I saw I could quickly get in deep trouble.

To keep all those heddles from crossing and tangling as I moved them, I grabbed a couple of large knitting stitch holders and fastened one through the top and another through the bottom of the heddles.

My partner, who has a nearly complete metal shop, immediately made me a batch of similar pieces with scrap wire. They look like large safety pins without eyes. Using them, I can gather 50 or more heddles and securely wrangle them into place with no hassle at all. (Editor's Note: If you don't have a friend or partner with a metal shop, you can buy large knitting stitch holders or extra-large, heavy-duty safety pins, also known as blanket pins.)

Thanks again for supporting my new life-support system, known to many as weaving. I started weaving at the age of 75—what an audacious move! -Aline Faben, Fortuna, California

I wish I knew then what I know now when I wrote my article "Warp Speed: Winding Warps with Multiple Ends in Hand" (Spring 2024)!

Since writing that piece, I have learned how to warp a loom front to back, or as Madelyn van der Hoogt puts it, "thread before you beam." I wound a test warp using the same stripe pattern as my Swift Serviettes in the same *Handwoven* issue to iron out the details of warping multiple ends front to back.

In short, I found that to warp a loom front to back with a mixed warp, you need to sley the reed in the warp color order. In other words, you need to reorganize the warp to form the pattern stripes in the reed. Here is how to proceed:

- 1. Put lease sticks through the cross.
- 2. Get comfortable: find a setup that allows you to sley the reed accurately and comfortably. I prefer to work with a vertical reed, with lease sticks held behind the reed about halfway up and with the balance of the warp looped around a dowel to offer some resistance.
- 3. Cut the loops and sley in the warp color order, maintaining the order at the cross as much as possible. Be careful not to drop ends.
- 4. Once the warp is sleyed, place the reed in the beater and remove the
- 5. Thread the heddles in the warp color order. Because the sett in the Swift Serviettes design is 2 ends per dent, you still have to pay attention to order—the pair of ends in a given dent may be of different colors.
- 6. Tie on and beam. It is a good idea to use the beater to monitor possible tangles in the warp. Let the beater rest on the breast beam as you beam. When the warp pulls it toward the castle, it indicates the beginning of a tangle. Clear those tangles as they arise with a few good tugs on the warp.

(Thank you to my guildmate Colleen Casey for her thorough instruction in F2B warping.)

-Véronique Perrot





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Rigid Heddle Weaving Basics and Beyond

Bv Deborah Iarchow

Explore color, design, and texture as you follow Deborah's clear, step-bystep, instructions. From plain weave to inlay and hand-manipulated lace this book opens the whole world of creative weaving. 201 pages

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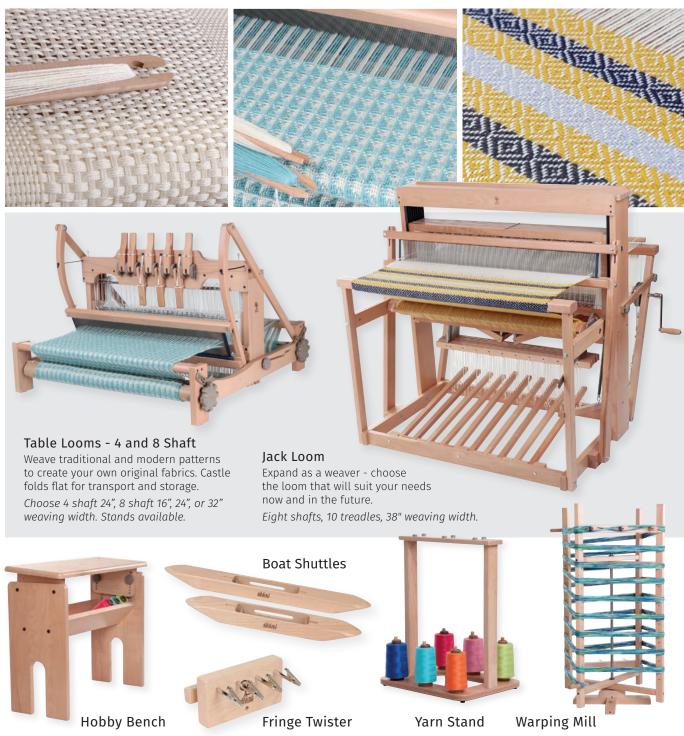














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Rags to Rugs 30 New Weaving Designs for Repurposed Fabrics By Tom Knisely

In the past few years, I have become increasingly aware of the quantity of textiles in our landfills. I try to be judicious about the clothing and linens I purchase, with an eye to buying pieces with longevity. But even so, I feel guilty when I throw away clothing or plastic bags, knowing that they will live virtually forever in a landfill. In Rags to Rugs, his latest rag rug weaving book, Tom Knisely shows how you can incorporate used clothing and bedding linens, discarded plastics, worn-out rag rugs, and even used drop cloths into your rug weaving.

You might assume that rugs made from discarded fabrics would be solely utilitarian, but that is not the case. Knisely is a proficient weaver and designer who spent the time up front to plan beautiful rugs made from relatively humble beginnings.

When the rag weft is uninteresting, such as a plain army-gray wool, he uses colors and patterning in his warp to create an attractive design. For a rug using a blue plaid weft, he lets the warp drop into obscurity and allows the fabric to dictate a new overall design. Confronted with plain flannel sheets, he uses tie-dye to create fun, colorful designs before making rag strips from them.

Within these pages, you'll find instructions for weaving rugs using boundweave, plain weave, twill, overshot, log cabin, summer and winter, and clasped wefts. Each of the 30 patterns includes a draft, warp and weft descriptions, setts, and basic directions. What you won't find are warp lengths and yardages because Knisely considers those to be

discretionary—and he's a proponent of warping for more than one rug at a time.

Apart from the inspiring rug patterns, I was happy to find a robust "Rag Rug Weaving Basics" section that covers everything a rug weaver might want to know about tools, warp and weft considerations, various weft preparation methods, warping, weaving, and finishing. This book is a great jumping-off point for anyone interested in weaving rugs using fabrics and fibers that would otherwise be added to our landfills. I highly recommend it.

Mechanicsburg, PA: Stackpole, 2023. Paperback, 144 pages, \$29.95. ISBN 978-0811770576.

-Susan E. Horton

SUSAN E. HORTON is the former editor of Handwoven. She is a collector of art and fiber books. She leans heavily on weaving books for inspiration and guidance.



Nordic Hands

25 Fiber Craft Projects to Discover Scandinavian Culture By Anita Osterhaug

I believe our interests are often a manifestation of our search for self and ancestry—an attempt to connect to our past through our modern-day activities. In my thirties, travel and food were at the top of my list. Longing to understand more of my family history, I took my grandmother on a self-designed culinary tour of Poland, including a stay in her mother's hometown of Kraków. While the time spent with my grandmother was memorable, the post-Communist-era food was not. Thankfully, where I chose food, Anita Osterhaug chose fiber. And for that, we all benefit.

Osterhaug, who also happens to be a former editor of Handwoven, grew up surrounded by Nordic textiles. As a young girl, she learned Nordic knitting and embroidery techniques from her grandmother and beloved Aunt Katy. Decades later, the serendipitous timing of a bequest from Aunt

Katy and an Interweave Press fiber-arts tour of Scandinavia became the germ of *Nordic* Hands, a beautiful and heartfelt love letter to Nordic textiles.

The book is broken into five parts. The first serves as a primer of Scandinavian history, giving context to the types and styles of projects included. The remaining four chapters are organized around the pillars of Nordic life: nature, community, craftsmanship, and sustainability.

To my surprise and delight, as a craftindiscriminate maker reviewing a book for a weaving magazine, the projects, by Osterhaug and others, include knitting, wetfelting, and needlefelting as well as weaving.

The weaving projects cover frame, inkleband, and rigid-heddle looms (primarily plain weave with supplementary weft translatable to shaft-loom weaving). The projects are practical in their use (home items) and

in their affordable materials requirements— Scandinavian sensibility at its finest!

Importantly, the book's instructions are so accessible they absolutely dare a reader to not try a new craft or return to an old one. I've never had much luck knitting brioche, but Osterhaug's simple and clear directions for her gorgeous Nordic Summer and Winter Throw have me ready to cast on and try again.

Despite its stunning photos, Nordic Hands is not just a coffee-table book. The writing is so engaging that I found myself lingering over passages about Nordic history, ritual, and design. Osterhaug's close connection to her heritage is palpable, and her accomplishments as a journalist, writer, and fiber artist earn this book a spot in any crafter's library as the resource on all things Nordic. Aunt Katy's gift of that seminal trip was not just to Osterhaug but to all of us.

-Christine Jablonski

Atglen, PA: Schiffer, 2023. Hardcover, 192 pages, \$34.99, ISBN 978-0764366918.

CHRISTINE JABLONSKI is an avid weaver who rediscovered her love of knitting thanks to plane travel and jury duty.

Favorite Finds

A cute tool for knitting cord, an extra-fine heddle for the rigid-heddle loom, a clip-on temple, and a handcrafted double-bobbin shuttle

Trim and Embellish

Looking to add that special touch to your weaving? Make custom i-cord with this wonderful knitting mushroom from Knitting on the Fringe. Measuring 31/4 inches tall, it fits comfortably in the hand and is self-contained with the needle fitting inside. Craft coordinating hanging loops for towels, embellish the edge of a pocket or scarf, or maybe even make cording to use in a diversified-plain-weave project. knittingonthefringe.etsy.com





Fine Yarns? No Problem!

Rigid-heddle weavers rejoice! Have you wanted to use thinner yarns and weave with more ends per inch without having to set up multiple heddles? Now you can! Tabby Tree Weaver's superfine rigid heddles are available in four sizes ranging from 15.5 to 25.5 dents per inch, with six lengths to fit either your Ashford or Schacht loom. tabbytreeweaver.com

An Adjustable Aid

Need an extra hand to keep those selvedges in line? Try using Leclerc temple clips from the Yarn Barn of Kansas. The set comes with four clips, four eye screws for attaching to your loom, and three sets of weights. Clip a temple to each edge of your cloth, thread the cords through the eye screws, and add the right amount of weight for your desired tension. yarnbarn-ks.com



Photo courtesy of the Yarn Barn of Kansas



Double Your Fun

Weave two yarns at one time with this double-bobbin shuttle from Handywoman Shop. This super-slim model comes in a variety of hardwoods (olivewood shown here), holds two 4-inch bobbins, and measures 12 inches in length. The slim profile also makes it perfect for finishing off those last few inches of warp with ease. handywomanshop.com

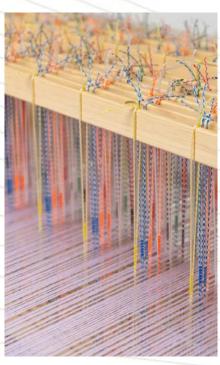


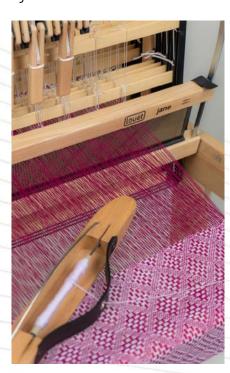
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Bright Treasures from Old Swedish Farmhouses

By Lynn Rognsvoog

Colorful and whimsical woven and embroidered cushions and bedcovers from the latter half of the eighteenth century through the mid-nineteenth century are currently on view at the American Swedish Historical Museum in Philadelphia. The textiles are from the personal collection of Philadelphians Wendel and Diane Swan.

Most of the roughly 50 textiles on display were created by women living on farms in southern Sweden, where skills in weaving, embroidery, and other forms of textile production were necessary to run a household. As farming life changed with the onset of both the Industrial Revolution and mandatory schooling of children, these textiles became "Sunday

Culture," in use on Sundays and special occasions rather than every day. Restricting the use of these beautiful pieces reinforced their special status and had the effect of minimizing everyday wear and tear while preserving their bright colors.

The women who created the textiles used naturally dyed fibers. Metal salts or urine served as mordants and resulted in vibrant, stable colors. Images were created in the cloth using embroidery, tapestry, and even rya techniques.

Common motifs in the pieces include depictions of exotic and mythical birds and other creatures, Roman mosaics, geometric patterns, and floral images of all kinds, highlighting the influence foreign trade had on even these rural communities.

SWEDISH FOLK WEAVINGS FOR MARRIAGE, CARRIAGE, AND HOME 1750-1840

When: Through September 22, 2024

Where: American Swedish Historical Museum, 1900 Pattison Ave., Philadelphia, PA

Info: americanswedish.org for

hours and tickets





Left: Brightly colored parrots, flowers, and leaves on a Flemish-weave cushion cover. Right: Geometric patterns decorate this cushion cover, woven by MHD in 1828 using rya techniques.

ALSO OF NOTE

SMALL EXPRESSIONS

When: July 2-August 26, 2024 Where: Wichita-Sedgwick County Historical Museum, 204 S. Main St., Wichita, KS Info: wichitahistory.org for hours and tickets. In association with Convergence 2024, Small Expressions is a juried exhibition of contemporary small-scale works that speaks to the intricacy of expression, the intimacy of design, thoughtful communication, and visual excitement. The exhibit will travel around the United States after it leaves Wichita; for dates and locations, visit weavespindye.org /book-an-exhibit.

COMPLEXITY

When: July 6-August 17, 2024 Where: Mark Arts, 1307 N. Rock Rd., Wichita, KS Info: markartsks.com for hours. Free admission. In association with Complex Weavers 2024, Complexity is a juried international members' exhibition of works that employ complex or innovative design, techniques, and/or weave structures. To view the exhibit online, visit complex-weavers.org/galleries.

JEREMY FREY | WOVEN

When: Through September 15, 2024 Where: Portland Museum of Art, 7 Congress Square, Portland, ME Info: portlandmuseum.org for hours and tickets.

More than 50 baskets woven from natural materials including black ash and sweetgrass by Jeremy Frey, a seventhgeneration Passamaquoddy basketmaker, will be on display. A printed exhibit catalog is available. The exhibit moves to the Art Institute of Chicago from October 26 through February 10, 2025.

SILK RIBBON WEAVING

When: Through September 2024 Where: Whitchurch Silk Mill, 28 Winchester St., Whitchurch, Hampshire, UK Info: whitchurchsilkmill.org.uk for hours and tickets.

In a creative collaboration between this living museum of industrial heritage and Jane Austen's House in Chawton, the mill has wound a long silk ribbon warp inspired by Jane Austen's home and by objects from the museum's collection. Visitors will see workers weaving it off through September.



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Tom wove a series of color gamps using 8/4 cotton warp and rag wefts to better understand the color interactions that happen in rag weaving.

Rag Rug Color Gamps

BY TOM KNISELY



A gamp is a marvelous weaving tool. What is a gamp? It's like a sampler. Rather than threading one pattern, you plan multiple threadings across the warp. As you weave, often (but not always) using multiple treadlings, you get many different combinations of warp and weft. Weavers use gamps to study twill threadings and treadlings, overshot patterns, and, one of my favorites, color interactions.

When you thread a color gamp, you thread several colors in a warp-stripe arrangement. It can be anything you would like to try. It could be a gamp of different neutral colors or one with the primary and secondary colors on a color wheel or a rainbow order of red, orange, yellow,

green, blue, indigo, and violet. You could thread a monochromatic gamp in blues going from the lightest blue to the darkest. For your weft, you'll weave the gamp in the same color order as you warped it, or what is called tromp-as-writ. As you weave, you'll clearly see how the warp and

weft colors interact with each other. It is a far cry from mixing finger paints together in elementary school, but the idea is the same.

In the past, I have woven color gamps in plain weave and twill, but I wove those gamps using the same threads in the warp and the weft. I wondered what it would be like to weave a color gamp for rag weaving. It could prove to be a valuable study to see what happens when colored rags are woven into different color families of warp ends. My excitement took me to the fabric store to see if I could buy

solid-colored fabrics in primary, secondary, and tertiary colors. I was in luck when I found the quilters' cotton fabrics. I used a color wheel to help me pick out the 12 colors needed for my experiment in addition to black, gray, and white. Because I didn't know exactly how much fabric I would need, I purchased 5 yards of each color so I would have long strips of fabric to work with. That gave me more than enough weft for this experiment, with plenty of leftovers for other rugs later.

I washed the fabrics in hot water on a regular cycle to tighten them up and dried them on a regular setting. To prepare my weft, I tore each length of cloth into 1½-inch strips and tapered the ends. I knew I wanted to warp and weave four different color gamps: neutrals, reds

Some color blocks underwent drastic changes, and some were as expected. I am no longer afraid to use color in my rug warps and have a much better understanding of how color plays into my woven pieces.

and purples, yellows and oranges, and blues and greens. Each piece of fabric produced twenty-one 1½-inch strips. I put aside five strips of each fabric color for each gamp.

I started preparing myself to warp my loom four times for this color study-I was not discouraged but excited to do so. I knew that I wanted to weave each of the weft colors for about 4 inches and each warp color would be about 4 inches wide. If I wanted to weave all 12 colors plus the three neutrals, I would need 60 inches of warp for the color areas. I then added 12 inches for

20 percent take-up and 36 inches for hems and loom waste for a total of 3 yards for the warp length.

I try to weave efficiently, making the most of my time and warp. However, this little experiment meant that I needed to purchase 25 spools of 8/4 carpet warp in different colors. Because there were 800 yards on each spool and I only needed 48 ends of each color, I could easily afford to make the warp a *little* longer. I made each warp 5 yards long so I could weave a rug on the added warp length. For my bonus rugs, I used up unrelated leftover rags from other



Even though the 8/4 cotton warp is relatively small compared to the thick rag weft, warp color can make a big difference in how the weft appears.



Left: The value of warp yarn also affects the weft. Jewel-tone rags are the star of the show with a darker warp but fade to the background when paired with a lighter warp. Right: Tom's rag-weaving color gamps are invaluable resources when it's time to choose project colors.

FIGURE 1. WARP COLOR ORDERS

Gamp #1: The Neutrals

48 48	3			Black
48	48			■Dark Gray
48	48			White
48	48			lvory
48		48		Ecru
48		48		Red Brown
48			48	■ Dark Brown
336 ei	nds total			

Gamp #3: Yellows and Oranges

48 4	8		■ Bronze Gold
48	48		Yellow
48	48		Pear
48		48	Peach
48		48	Gold
48		48	Burnt Orange
288 e	nds tota	al	

rug projects. (When you are a rag rug weaver, you always have rags in your stash. I could get ahead in my gift-making!)

I have to say that I learned a lot from weaving these rag rug color gamps. I found quite a few surprises

Gamp #2: Reds and Purples

48_4	8		Velvet
48	48		Purple
48	48		Lavender
48	48		Pink
48		48	Red
48		48	KY Cardinal
288 e	nds total		_

Gamp #4: Blues and Greens

48	48	Navy
48	48	Royal
48	48	Slate
48	48	Colonial Green
48	48	Myrtle
48		48 Forest
288 6	ends total	

in the color interlacements. Some color blocks underwent drastic changes, and some were as expected. I am no longer afraid to use color in my rug warps and have a much better understanding of how color plays into my woven pieces. Although

I chose to use solid-color fabric strips to weave samples that were as "pure" as possible, I now have a pretty good idea of what my rug will look like, even when using fabrics with a printed pattern.

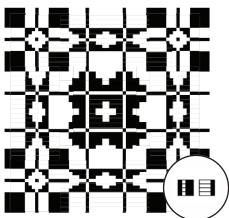
I have included my charts for the color orders in the warps (Figure 1), and you can also find them and more photos of the gamps in my book *Weaving with Rags*. I hope you try weaving your own color gamps and experience the fun of seeing how different colors play together in your warp and weft.

Happy weaving, Tom

TOM KNISELY is the resident weaving and spinning instructor for Red Stone Glen Fiber Arts Center. He is a regular contributor to Handwoven and has written five books on weaving.

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Having a partner help with weaving—whether by threading heddles, tying treadles, or reading the draft—can not only make weaving easier but also provide a great opportunity to socialize.

Vintage Weavers

Get a Move On! Working with Movement Challenges

CYNTHIA EVETTS AND TINA FLETCHER

Forbes magazine reports that maintaining mobility and movement control is one of the eight challenges of aging. While this may not be news we want to hear, that same article also tells us that technology and innovation are making life easier and better for those experiencing movement challenges. Let's look at what that entails and how it impacts our weaving lives.

MEET VIKTORIA

Viktoria is a 62-year-old weaver living in New York City. As a proud descendant of a long line of Ukrainian weavers, she enjoys working in the traditional Ukrainian style. Two years ago, Viktoria noticed her hands trembled when she held a glass of water. She was diagnosed with Parkinson's disease (PD), and soon she needed a straw to drink

without splashing. Weaving became progressively more difficult, but she was reluctant to abandon her family's tradition of spinning wool and creating intricate woven designs. Viktoria's children and husband were convinced that weaving might be nearly as important for her satisfaction and well-being as doctor's appointments, therapy sessions, and medication schedules.

LEARNING THE LINGO ABOUT BODY MOVEMENTS

Movement challenges span a wide range of conditions that can affect our daily lives and weaving activities. For simplicity's sake, let's put them under two umbrellas: things that are associated with fast or uncontrolled actions (*movement-go*), and those that make it hard to move (*movement-slow*).

Movement disorders usually involve *ataxia* (a loss of coordination), *dystonia* (the presence of twisting or repetitive movements), and *tremors* (shaky movements typically associated with the head,

voice, tongue, or legs). Each disruptive movement pattern can vary in intensity, parts of the body involved, and when they occur.

Conditions such as arthritis, stroke, and muscular sclerosis can cause movement restrictions because of weakness, pain, or lack of control.

MOVEMENT-GO

In hyperkinetic or movement-go disorders such as essential tremors (involuntary tremors), the body calls in too many muscle fibers for a desired action, leading to shaking or writhing. According to the Cleveland

Weavers are not alone when it comes to experiencing tremors while working. Tremors and other muscle disorders are famously associated with:

- · Pistol shooter's cramps
- · Golfer's yips
- · Runner's dystonia
- · Oyster shucker's dystonia
- · Speed skater's English-mop foot
- · Pianist's dystonia
- · Writer's cramp

Clinic, about 5 percent of adults over the age of 65 have essential tremors. Usually, they increase over time, and while they are successfully accommodated in the early years, even basic actions such as reaching for items can be challenging later in life.

Essential tremors tend to quiet down when a body is at rest and flare up during voluntary movements such as warping a loom; these are known as action tremors. They can also affect actions such as holding still while reading a pattern draft; these are known as postural tremors.

MOVEMENT-SLOW

PD is a classic hypokinetic or movement-slow condition because it results in a stiffening of the body, face, and hands. People with PD tend to develop balance challenges, have stooped posture, and often may live with resting tremors in their fingers, thumbs, and even chins. Their tremors involve the legs and feet instead of the head and neck motions seen in essential tremors.

As opposed to movement-go conditions, PD can seem worse when a body is at rest. People with PD also

tend to develop compact handwriting to offset the impact of tremors on their larger writing style.

BASIC MOVEMENT IMPROVEMENT STRATEGIES

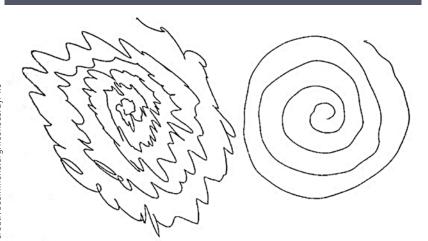
Moving slowly and struggling to control movements can frustrate even the most patient and methodical weaver. LSVT BIG is a training protocol that encourages folks with PD to change their perception of the size of their movements. Going big with movements may help to overcome struggles with fine motor control. Music and rhythm can assist movement and coordination, so dancing to music with a strong beat is frequently recommended. Many occupational and physical therapists can assist in learning these and other techniques to improve functional movement.

Moving with shaky tremors can bring frustrations of a similar nature. Gaining stability through weight bearing can be helpful—such as adding weight to tools or materials, or even wearing wrist weights to dampen tremors. Using your own body weight can help if you are able to lean on your elbows or forearms to steady your hands.

Regardless of whether you are struggling to get moving or to keep from moving too much, these movement struggles exist on a continuum. There is no magic formula to solve these issues, but experimenting with a variety of strategies may result in discovering what works best for any particular task at hand.

EMBRACE WHAT YOU'VE GOT WHILE WEAVING

Use your experience and know-how to get around movement challenges.



These spirals were drawn by a patient with an essential tremor on one side of his body. The spiral on the left was drawn with his left hand, the one on the right with his right.



Here are some common hacks as applied to weaving.

- Weight it out. Use larger and heavier shuttles. A bit of weight and a larger surface to grasp can ease the weaving process. Alternatively, if you don't want to change your tools, you can wear small wrist weights to help dampen tremors. Rest often, as the extra weight can be tiring for your muscles.
- · Partner-up to set up. When setting up your next project, offer to read the draft and oversee the work while steadier hands thread the warp through the reed and heddles. Weaving partnerships can be satisfying when the productivity is shared.
- · Size matters. Experiment with your warp width and fiber size. Try going narrow and tight to deal with resting tremors, or wide and loose when challenged by intention tremors caused by a range of conditions. Consider bulky fibers to avoid the frustration of fiddling with thin threads that can be easily tangled, crossed, or broken.
- Step on it. Use a loom with foot treadles or one with hand levers to compensate for tremors.

· Prop it. Prop hands and arms when threading fibers or passing shuttles. More stability in big arm muscles and joints will allow for better control in the smaller muscles that control your hands. Stability leads to mobility.

WORK WITH YOUR MOVEMENT CHALLENGES

Watch What You Eat and Drink

One way to stay in front of movement disorders is to eat well. Research shows that dietary choices can slow the onset and severity of conditions such as PD and essential tremors.

A Mediterranean diet of veggies, fruits, whole grains, fish, and olive oil seems to be a front-runner in this area, and a diet containing soy protein, yogurt, spinach, and sweet potatoes also shows promise.

Caffeine and tobacco consumption can make tremors worse, so put aside that cup of coffee or cigarette when completing detailed finish work, such as knotting fringe, to help keep your hands and head steadier.

Drinking 2 to 4 ounces of wine is known to improve essential tremors but should not be used as a remedy for those with PD.

While there is no substitute for medical intervention to address movement challenges, weavers can adopt movement-healthy habits at home to augment their medical care.

- Design weaving patterns for success.
- · Adjust tension on the loom; make it tighter and heavier to optimize control.
- · Alter size and/or weight of shuttles or add weight to your active body part(s).
- · Avoid caffeine, tobacco. and alcohol.

- · Practice relaxation and mindfulness.
- Stay strong by using your muscles rather than overprotecting yourself.
- · Use rhythm. Allow music or singing to set a comfortable pace that helps your body move.

Try Some Apps

Technology can help people manage movement challenges in a variety of ways.

Because lack of sleep, too much caffeine, low blood sugar, anxiety, and some medications can all cause movement challenges, it makes sense to consider using technology to address these factors. Here are some helpful resources:

- · Accessibility options through the Apple Store (apple.com/accessibility /mobility) include apps providing voice control and switch control to operate devices, predictive text to make writing easier and faster, and activity or workout trackers. Some of our favorite accessibility features are assistive touch, which customizes gestures such as a clench or pinch; alternative input, which tracks eye and other movements to control phones and tablets: and touch accommodations to make touch screens less sensitive to movements such as tremors. A visit to a local phone store may be helpful in setting up accessibility features on a technology device, but a little advanced planning can help technology users develop a clearer picture of what they need most. Phrases to use in a computer search include phone accommodations for movement disorders and accessibility apps for shaking hands.
- Parkinson's LifeKit (apps.apple .com/mm/app/parkinsons-lifekit /id1226151783) tracks the many aspects of movement disorders, including when a voice sounds faint, tremors act up, or dexterity seems challenged. Monitoring these things can help weavers



Propping your arms and hands when passing the shuttle can give you more stability and more control over your movement.

decide when their body is most ready for weaving and how well movement interventions are working. This app costs \$99.99.

- Beats Medical Parkinson's Therapy (beatsmedical.com/parkinsons) uses a metronome to deliver rhythmic beats to trigger smoother mobility, dexterity, and speech for people with movement challenges. This app has a free 14-day trial.
- Staybl (staybl.app) uses an accelerometer to counteract unwanted tremor-induced smart device movements by instantly moving its on-screen browser in the opposite direction. This app is a free download.

REMEMBER VIKTORIA?

Over time, Viktoria learned she has a better time with weaving if she does a little prep work before she starts, including dancing with her husband to relax her muscles and switching her traditional happy-hour highball for some herbal tea. She's learned to match her pattern choices with her shakes and finds that she enjoys weaving large and bold styles. She has even allowed her daughter to do some of the detailed handwork on handwoven skirts. Keeping Viktoria weaving has become a real family affair, and they have found that working together has provided them with many happy times—especially the dancing.

Together, CYNTHIA EVETTS and TINA FLETCHER have 83 years of weaving experience, 78 years of occupational therapy practice, 47 years in higher education, and 19 years of friendship and shockingly similar interests. They are definitely vintage weavers.

RESOURCES

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Left: Sara began her composition with this photograph of her son's plane. She then used computer programs to remove the background, simplify the image, and insert minimal shading. Right: The finished weaving also includes the logo of the aircraft manufacturer as well as the number that appears on the tail of the plane.

Soaring Sensations

Portrait of a Glider

BY SARA VON TRESCKOW



To celebrate my son's achievements as a pilot, I wanted to design and weave a piece that recognized his experiences with sailplanes and motorized aircraft. I developed the woven image from a photograph of the glider on the ground at a gliderport in Elmira, New York. After extracting the plane and reducing the colors, I rotated the figure so that the plane appeared to be flying. The dragonfly represents the logo of the glider model, a vintage German "Libelle" or dragonfly. The number is the tail number specific to that plane.

The weaving itself defies easy classification; though it is a woven graphic, it's not a tapestry. Instead, I wove it on a single-unit drawloom. My first attempt in damask failed to allow for the shading needed to make the image more interesting.

After sampling, I realized I could accomplish my vision by brocading a five-end twill in selected areas using a separate set of five treadles.

To weave a design such as this requires preparation. Rather than the usual structural draft, the weaver

takes a digital image and reduces the number of pixels to match the number of warp threads on the loom, in this case, enough threads to produce 150 pixels for the 150 drawcords, with each cord controlling five threads. Photo applications such as Photoshop, Elements, and other graphic design apps can do this. While there are functions to reduce pixels automatically, doing so can distort the image. At each reduction step, care must be taken to keep the basic design and silhouette intact by manually adjusting pixels bit by bit.

My first attempt in damask failed to allow for the shading needed to make the image more interesting.

Once a graphic has been simplified, it can be worked into a textile using half-heddle sticks, drawcords, pick-up sticks, or similar tools. While slow, using a simple standard structure as the ground allows for the creation of many images on a single warp by varying the graphed representation of the desired image. This type of graphic design is not confined to a drawloom; for example, finnweave or doubleweave pickup would work as well.

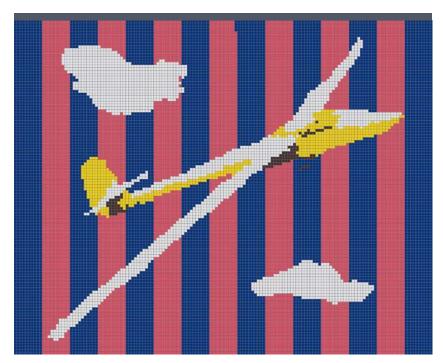
Damask on the drawloom often consists of basic satin weaves, as they allow for areas of distinct colors to form. I chose to work on what is normally the "back" side, using the blue of the weft yarn for a weft-faced, five-end satin background and the warp-effect satin in white for the plane, clouds, and tail number.

I wove using a chart created in a design program for beading and fiber artists that prints the image on 11" × 17" paper for easy reading. I picked each row on the drawcords and then marked it as woven. The brocaded areas needed two treadled picks with the ground pick first. Because this thread showed up mainly on the back side, I did not need to select a specific color. Then, I treadled the corresponding twill pick. I used small bobbins of the correct color to fill the designated pattern areas. Light gray and black provided additional detail.

The finished piece was displayed

in the Complex Weavers Complexity exhibit in Knoxville, Tennessee, in 2022, and it now hangs in our son's home. He recently returned from the 37th FAI World Gliding Championships in Narromine, Australia, where he participated as a crew member for the US team.

SARA VON TRESCKOW learned to weave while living in Germany for 20 years. She is the author of When a Single Harness Simply Isn't Enough, a guide to setting up and designing with drawlooms for double-harness weaving.





Top: Along with simplifying the image, Sara added clouds above and below the aircraft so it looked like it was flying. After editing the image, Sara used the file to guide her work as she pulled the drawcords on her drawloom. Bottom: Detail of brocaded shading



Tuscan Summer Rug

SANDI LEMONS



STRUCTURE

Krokbragd.

EQUIPMENT

3-shaft loom, 31" weaving width; 8-dent reed; 3 large boat shuttles and 4 bobbins or 4 stick shuttles.

YARNS

Warp: 8/5 linen (446 yd/lb; Bockens), half-bleached,

Weft: 1.25/1 mattgarn (100% wool; 620 yd/lb; Borgs), #5001 natural, 693 yd; #5040 dark red, 416 yd; #5778 very dark purple, 545 yd; #5595 light gold, 379 yd.

OTHER SUPPLIES

Temple (recommended).

WARP LENGTH

123 doubled ends 21/4 vd long (includes doubled floating selvedges; allows 31" for loom waste: loom waste includes fringe).

SETTS

Warp: 4 epi (every other dent in an 8-dent reed). Weft: about 43 ppi.

DIMENSIONS

Width in the reed: 305/8". Woven length: (measured under tension on the loom) 50". Finished size: (after steaming with iron) 28" × 48" with 7" fringe.

I have always been a lover of symmetry and geometrical patterns.

Before I learned to weave, I would sit in meetings at my university job doodling these kinds of patterns all over my notes. I have also always been drawn to textiles. Throughout my many travels I've never failed to come home with textiles of some kind. Fast-forward to the first time I walked into a weaving studio and beheld a krokbragd rug in progress. I thought, "Now, I want to do that!" I was there for my very first weaving lesson, so I had a lot to learn first, but I always knew I would circle back to krokbragd. Here is the result, and I hope you enjoy weaving this rug as much as I did!

f I Wind a warp of 123 doubled ends (246 total threads) 2¼ yd long. This includes the 2 doubled ends that will be used as floating selvedges. Warp the loom using your preferred method, following the draft in Figure 1. Centering for a weaving width of 305/8", sley a doubled end in every other dent in an 8-dent reed (4 epi). Beam the floating selvedges with the rest of the warp, sley them through empty dents on either side of the warp, and weight them behind the back beam.

f 2 Wind bobbins or stick shuttles with each of the weft colors. Leaving at least 8" of unwoven warp for fringe, spread the warp with scrap yarn.

3 Leaving a tail at least 4 yd long for hemstitching, weave 1" in natural following the krokbragd treadling. Use the tail to hemstitch in groups of 2 doubled warp ends (4 threads).



4 Weave each motif following the color sequence in Figure 2 and weaving order in Figure 3. Each design row consists of 3 picks, treadled 1-2-3, repeated 3 times (9 picks). Columns 2 and 1 are repeated in Figure 2 to show what the full pattern looks like; while you're weaving, don't include those column repeats. End with another 1" in natural and hemstitch as you did at the beginning.

HEDDLE COUNT

Shaft 3	30
Shaft 2	60
Shaft 1	31
Total	121

1. DRAFT

			30x —		1	2	3	
			3		3	3		
		2	2		2		2	
	1		1			1	1	
•	flo	atin	r colvod	•	/	/	/	-repeat
	110	guni	g selved	ge				

3. MOTIF ORDER

1" Natural
Motifs 1–9
Center Motif
Motifs 9–1 (reverse order)
1" Natural

4. FRINGE



 $oldsymbol{5}$ Leaving at least 8" for fringe on both ends, cut the rug from the loom. Trim the ends to 7". Work the fringe in groups of 4 threads. Cross a group over the next group to the right. Combine two groups that come together in an overhand knot 1" from the rug edge (see Figure 4). Repeat with the next two groups. Note that either the first or last group will have only 2 threads. Braid each combined group for 4" and secure with a half-hitch knot. (If you want to make a fancier finish, Sandi recommends trying one of the edges in Finishes in the Ethnic Tradition; see Resources.)

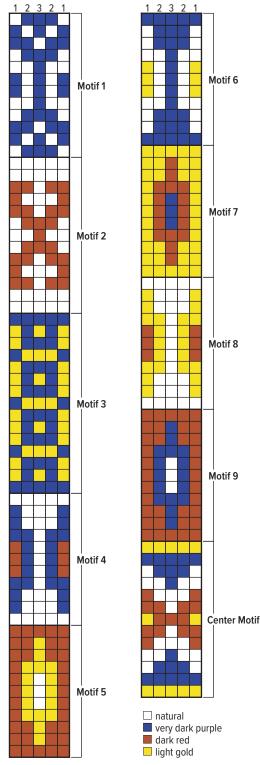
6 Steam the rug to finish: Lay a damp towel on top of the rug and press firmly with a hot iron over the entire surface of the rug. Do the same with the fringes to make them lie flat.

RESOURCES

Baizerman, Suzanne, and Karen Searle. Finishes in the Ethnic Tradition. St. Paul, MN: Dos Tejedoras, 1994. Greenlaw, Debby. Krokbragd. Self-published, 2019. ———. Krokbragd Patterns. Self-published, 2021.

SANDI LEMONS is the owner of Tabby Tree Weaver in Fishers, Indiana. She gets to weave between teaching, managing inventory, and serving customers . . . so basically never. Of course, her favorite weave structure is the slowest one to weave.

2. WEFT COLOR ORDER



For each row, weave the color sequence, treadling 1-2-3, repeated 3 times (9 picks total each row).

Columns 2 and 1 are shown repeated above simply to help you visualize the pattern.



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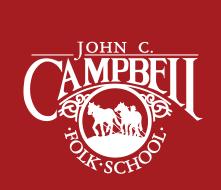


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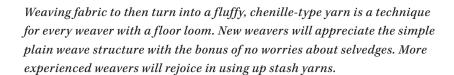
folkschool.org/handwoven



Catherine gets her lush, multicolor pile by making chenille yarn using odds and ends from her stash.

Weaving a Twice-Woven Rug

CATHERINE MARCHANT



My experience with this technique started with a guild program back in the 1990s with the idea of creating the weft of the rug by first weaving a crammed and spaced fabric, cutting it up into long strings of chenille, and then weaving the resulting fluffy strings into a lovely, shaggy rug. My weaving neighbor,

Judy, wove several that I admired, but it took me 30-odd years to get around to weaving one myself.

At the outset of the COVID-19 pandemic shutdown, I thought it would be an excellent time to use up some of my stash. I wove and wove and wove, but thanks to internet shopping, my stash hardly

shrank. I had to get serious. I dug out my notes from that long-ago guild meeting and got started.

I pulled out bins of yarn and saw I had lots of red, so I started there.

Digging through other bins, I pulled out oranges and purples and the odd ball of turquoise and made a pile of yarn on the floor.

There is no need to worry about the fiber content or diameter of the yarn. Wool or cotton, laceweight or bulky knitting yarn, all of it goes together. This is a good project for





Top: The pile of odd yarns used by Catherine to create the weft bundles needed for her initial woven fabric. Bottom: Multiple yarns are bundled together to make the weft.

the acrylic yarn you inherited from your great-aunt Tilly, scratchy yarn, and yarns in colors so unappealing you can't imagine what made you buy them in the first place.

Wind the first warp using fine, strong yarn. I used 20/2 cotton, but 10/2 would also work. The fine warp will bite into the soft weft yarns, gripping them after they are clipped. Don't worry about the color of the warp; just use what you

have—you won't be able to see it in the finished product. I wound a warp of 288 ends, 5 yards long. A 5-yard warp will make chenille strips just long enough to fit on a rag shuttle.

Thread the warp for plain weave using two or four harnesses. Select the narrowest dent reed you have; sley the warp with 4 ends in one dent and the next 4 in the next dent. Then skip the dents for the rest of

There is no need to worry about the fiber content or diameter of the yarn. Wool or cotton, laceweight or bulky knitting yarn, all of it goes together.

the inch and repeat. I used a 15-dent reed, so I threaded the first 2 dents with 4 ends each and then skipped the next 13 dents. If you don't have a 15-dent reed or finer, put all 8 ends into 1 dent. Tie on to your apron rod, and you are ready to go. There is no need to weave a header to spread the warp.

Pulling yarn from your pile, combine enough strands to make a bundle about the size of your pinky finger, and wind them all together onto a rag shuttle. If you run out of a particular yarn before the shuttle is filled, just tie on another. Start weaving. Don't concern yourself about distributing the colors evenly. The colors will be woven into each chenille string and spread throughout the second weaving. The selvedges are easy—just leave a loop at each edge to clip later; messy is fine.

When you cut the first weaving off the loom, knot each group of four warp ends to protect the weft. Keep the fringe long enough to tie to the next string as you weave the rug in round 2.

I warped for 36 strips to weave a rug 30 by 50 inches and ended up with several strips left over. Make fewer strips if you want to weave a rug with smaller dimensions.

Treat the second warp as you would when making a rag rug. I have an abundance of 8/4 cotton warp yarn, so that is what I usually use.

Notes on Chenille

Chenille yarn has two components: fine core threads and the thicker, short lengths of pile the core threads hold on to. The result is a fluffy yarn that looks a bit like a caterpillar. In fact, the name chenille comes from the French word for caterpillar. Another great description of chenille comes from Deborah Jarchow in her *Handwoven* article "Weaving with Rayon Chenille" (September/ October 2023), in which she says it is "like a pipe cleaner but with a softer core."

Other possibilities would be linen rug warp or cotton twine. (Use what you have—we are stash-busting here.) The color of the second warp is a little more important than it was for the first warp, but really, the only place it shows is in the hem. Wind a warp that is 6 ends per inch (epi), spaced evenly. (I usually double the epi on the outside edges for a rag rug, but if you do that here, you will not be able to pack the hem tightly and will have to make fringe.) Spread the warp and weave the hem. I bundle 4 or 5 strands of 8/4 rug warp to weave a 3-inch hem, packing as tightly as possible. These bundles can be all one color or several colors.

Now it's time to cut the chenille threads apart. Because my hands get tired when cutting, I cut half a dozen strands and weave with them while my hands recover.

Wind the first chenille strand onto a rag shuttle. As you place the first pick, wind the end of the warp bundle around the end warp thread and back into the same shed. When you come to the end of that chenille strand, wind the next chenille strand onto the shuttle and tie the end of





Top: Catherine's first warp is an extreme example of crammed and spaced. Eight ends, sett tightly, are spaced about an inch apart. The crammed ends hold the weft firmly in place while the spaces allow ample room to cut the fabric into chenille yarn. *Bottom:* After weaving the fabric, Catherine carefully cuts between the warp threads to create a chenille yarn.



After the chenille yarn is cut, it makes for an extra-fluffy weft, perfect for weaving rugs.

the last strand to the beginning of the next. This keeps the butt ends tight together. Pay attention to the selvedges. The edges will be fluffy and loopy, but you don't want them to be too loopy. Repeat the hem at the end of the rug. Cut the rug off the loom. Fold the hems over twice and stitch by hand or machine.

To wet-finish, I filled my toploading washing machine with hot water and washed on the delicate cycle. I laid the wet rug on my patio to dry in the sun.

This rug is resilient and cushy on bare feet, perfect for next to the bed.

While hunting up all the red yarn I could find in my stash, I discovered a ton of gray yarn. I feel another rug coming on, this time gray with white, black, and lots of that glitzy novelty yarn I hoarded back in the nineties.





Twice-Woven Rug

CATHERINE MARCHANT

STRUCTURE

Plain weave.

EQUIPMENT

2- or 4-shaft loom, 36" weaving width; 15-dent reed; 6- or 12-dent reed; boat shuttle; rag shuttle.

YARNS

First warp: 20/2 cotton (8,400 yd/lb; Lunatic Fringe Yarns), 1,440 yd.

First weft: various yarns of any size and fiber. Second warp: 8/4 cotton carpet warp (1,600 yd/lb; Maysville), 495 yd.

Second weft: chenille strips from first weaving; 8/4 cotton carpet warp for hems, 165 yd.

WARP LENGTH

First warp: 288 ends 5 yd long (allows 10" for take-up, 33" for loom waste).

Second warp: 180 ends 23/4 yd long (allows 7" for take-up, 28" for loom waste).

My shaggy rug is inspired by a desire to reduce my out-of-control yarn stash. First, I weave a fabric with stash yarns, then I cut it up into a chenille-like bulky yarn that becomes the weft of the rug. Even though this technique involves warping the loom twice, the plain-weave structure makes the threading and weaving easy.

For the chenille, I make a pile of yarn put-ups on the floor. I select a dominant color and a couple other colors to serve as contrast. Yarn weights can vary from fine weaving yarn to bulky knitting yarn. The fibers can be anything, natural or synthetic. Several years after weaving my first twice-woven rug, it is still cushy and has held up through repeated vacuuming. Because the rug has pile on both sides, it is also reversible. If you're using it on a smooth or slippery floor, just make sure to put a nonslip rug pad underneath.

f 1 Wind a warp of 288 ends 5 yd long using a color that will go with the weft yarns you've chosen. Warp the loom using your preferred method, threading for plain weave. Centering for a weaving width of 352/15" in a 15-dent reed, sley 4 ends in one dent and 4 ends in the next dent, then skip 13 dents. Repeat across the warp.

2 Take enough strands of yarn that, when held together, they are the width of your pinkie finger (see the bottom photo on page 29). Wind them together onto a rag shuttle. Weave until you can no longer get a good shed, changing yarns as they run out. Leave loops sticking out of each selvedge with every pick.

SETTS

First warp: 60 epi with gaps (4 ends in each of 2 adjacent dents, skip 13 dents in a 15-dent reed). First weft: about 4 ppi.

Second warp: 6 epi (1/dent in a 6-dent reed or 1 in every other dent in a 12-dent reed).

Second weft: about 6 ppi for hems; about 3 ppi for woven chenille warp.

DIMENSIONS

Width in reed: first warp, 352/15"; second warp, 30". Woven length: first weaving, 137"; second weaving, 60". Finished size: 27" × 52".

 $oldsymbol{3}$ Cut the weaving off the loom, leaving 4"-6" of warp ends to tie the strips together later. Knot each group of 4 warp ends to prevent raveling.

4 Slice the fabric into strips, cutting down the center of each gap between warp-end groups.

5 Wind the second warp with 180 ends 2¾ yd long, using a color that coordinates with the first weaving. Thread for plain weave using your preferred method. Centering for a weaving width of 30", sley 1 per dent in a 6-dent reed or 1 in every other dent in a 12-dent reed.

6 Wind the weft for the hems using 5 strands of 8/4 cotton carpet warp on the boat shuttle. Wind a chenille strand onto the rag shuttle. Spread the warp with scrap yarn.

7 Weave 3" of plain weave for the hems using the 8/4 cotton. Begin weaving with the chenille in plain weave. The fuzzy weft



will show on both sides of the rug. As you reach the end of each strand, tie the warp ends of the chenille weft to the next strand. Continue for about 54" or until you run out of chenille weft.

8 Using 5 strands of 8/4, weave 3" of plain weave for the hem.

9 Remove the rug from the loom. Trim ends and fold them over 1" twice to enclose the raw edges. Stitch the hems by hand or machine. 10 Finish by machine washing with hot or warm water on the delicate cycle. Air-dry. Any wool pile will not shrink appreciably, and the yarn will bloom, making the pile feel denser.

RESOURCES

Ignell, Tina. "Intimations and Sensations." VÄV 2 (May 27, 2022), 51-53. Meany, Janet. "Twice Woven Rugs." Complex Weavers Newsletter 47 (January 1995), 18-20.

CATHERINE MARCHANT of Alpine, Utah, looks forward every morning to weaving in her studio. Consequently, she needs all the stash-busting projects she can find. She is a member of the Mary Meigs Atwater Weavers Guild in Salt Lake City, Utah, and the Westfield Weavers Guild in Westfield, New Jersey.



Building Blocks Rug

SUZIE LILES



STRUCTURE

Taqueté.

EQUIPMENT

4-shaft loom, 37" weaving width; 5-dent or 10-dent reed; 3 ski shuttles.

YARNS

Warp: 8/5 linen warp (446 yd/lb; Bockens), unbleached, 465 yd.

Weft: 1.25/1 mattgarn (100% wool; 137 yd/3.5 oz skein; Borgs), #5059 navy, 2,220 yd; #5538 magenta red, 945 yd; #5513 green yellow light, 189 yd. 8/5 linen, unbleached, 21 yd.

WARP LENGTH

184 working ends (186 threads total) 21/2 yd long (includes doubled selvedges; allows 42" for loom waste: loom waste includes fringe).

SETTS

Warp: 5 epi (1/dent in a 5-dent reed or every other dent in a 10-dent reed). Weft: 20 ppi.

DIMENSIONS

Width in the reed: 364/5". Woven length: 48". Finished size: 321/2" × 48" plus 4" fringe on each end.

In 1983, at my first three-day workshop, taught by Gorel Kinersly, I wove a rug sample using taqueté. In addition to learning that newto-me weave structure, I came away from the workshop with an understanding of blocks, which has aided my designs ever since.

This project, combining taqueté and my love of blocks, brought my thoughts back 40 years to my beginnings as a weaver. I like how the blocks look, as well as the design possibilities that come from changing the colors and sizes of each block. I used a Glimåkra loom because I find heavy-duty looms stand up to the high tension and heavy beating required when weaving rugs.

f I Wind a warp of 184 working ends (186 threads total) 2½ yd long. Warp the loom using your preferred method, following the draft in Figure 1. Thread the first and last ends doubled. Centering for a weaving width of 364/5", sley 1 per dent in a 5-dent reed or every other dent in a 10-dent reed. Sley the doubled selvedge ends together in a single dent.

f 2 For each weft color, wind 3 strands of the same color on a ski shuttle. Leaving 6" of warp for fringe, spread the warp with scrap yarn.

f 3 Twine the beginning of the spread warp following the instructions in How to Twine on page 36.

4 Weave following the draft in Figure 1. Twine the end as you did at the beginning.



The reverse side of this rug is mainly blue, with narrow blocks of red and yellow.

 $oldsymbol{5}$ Leaving at least 6" for fringe, cut the rug off the loom.

6 Braid the warp ends. Suzie used 3 paired warp ends per braid and then braided the tails of the twining yarn to match the fringe. Do not wet-finish.



HEDDLE COUNT

184
46
46
36
56

1. DRAFT

	- 4	х —			- 2	x –	- 4	х –	- 7	x -			- 6	x -] 1	2	3	4	_
Г								4		4						П	4		4	1
3		3		3		3						3		3		3		3		1
Г	2				2				2				2			Г		2	2	1
			1				1				1				1	1	1]
No	Note: First and last ends are doubled in the heddles and in the reed.] -

navy magenta red green yellow light

RESOURCES

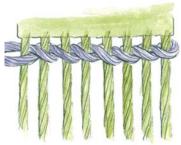
Collingwood, Peter. Techniques of Rug Weaving. New York: Watson-Guptill, 1969.

Horton, Susan E. "Finishing Tips and Techniques You'll Want to Know." Handwoven, April 26, 2022. handwovenmagazine.com/team-colors -weave-along-finishing-tips-and -techniques-youll-want-to-know.

SUZIE LILES has taught weaving for over 35 years. She owns Eugene Textile Center and co-owns Glimåkra USA with her daughter Sarah Rambousek.

How to Twine

Twining is a common finish for rugs. Not only is it attractive, it also secures the weft. Here's how to twine each end of this rug:



- 1. To make a twining strand, measure 2 lengths of warp varn 5 times the width of the warp. Hold those lengths of yarn together and fold them in half. The resulting strand will be made up of 4 threads.
- 2. Place 1 end of the twining strand below the first warp end and the other end above the first warp end so that the fold is snugged up against a selvedge thread.
- 3. Bring the strand that is below the warp up and forward 1 end. Bring the strand that is above the warp down and forward 1 end.

11/2

- 4. Continue this over/under pattern across the warp, as shown in the illustration. When you have completed the row of twining, use your fingers or a comb to push it into place against the fell line.
- 5. Temporarily secure the ends of the twining strands. After you cut the rug off the loom, braid the warp ends and twining tails to secure, as noted in Step 6 of the instructions.



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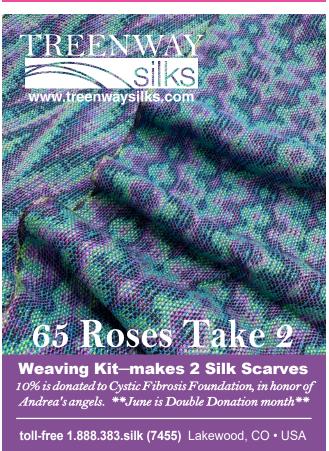
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Sand and Sky Stitched **Double Cloth Rug**

TOM KNISELY



Stitched double cloth twill

EQUIPMENT

8-shaft loom, 26" weaving width; 8-dent reed; 5 rag shuttles.

YARNS

Warp: Bomullsmattvarp 12/6 (100% cotton; 1,463 yd/lb; Bockens), #61 dark brown, 530 yd.

Weft: Comfy Cozy cotton flannel fabric (100% cotton; Joann), Blue Ashes, Hunter Green, Adriatic Blue, Caramel, and Tobacco Brown, 4 yd each.

OTHER SUPPLIES

Two 2-lb weights for floating selvedges; fabric scissors or rotary cutter and self-healing mat; metal temple; Fray Check.

WARP LENGTH

202 working ends (212 total threads) 21/2 yd long (includes doubled floating selvedges; allows 8" for take-up, 43" for loom waste).

SETT

Warp: 8 epi (1/dent in an 8-dent reed). Weft: about 10 ppi.

DIMENSIONS

Width in the reed: 252/8". Woven length: (measured under tension on the loom) 39". Finished size: (after wetfinishing and hemming) 23½" × 33".

The possibilities of stitched double cloth have intrigued me for

some time now. The treadling order follows the same order as complementary plain weave and doubleweave overshot, which have a common ancestor: twill.

Recently, as I was tying up my treadles for some turned-twill towels, I noticed a correlation between the 1/3 twill tie-up and the 3/1 twill tie-up. When I looked closer at the tie-up, I divided it into quadrants. The lower left and the lower right quadrants contained everything in the tie-up to weave four-shaft stitched double cloth. The upper quadrants would work to weave the other four shafts of this eight-shaft threading. It became obvious I had missed something. I would have to revise my turned-twill treadling to accomplish the stitched double cloth, but what's new?

I experimented with a loosely sett warp to allow the rag color to dominate the rug's design. As I treadled for stitched double cloth, the familiar opposing lines of a turned twill started to appear. As I wove on, I could see that the color blocks were switching positions from front to back, just as they should in stitched double cloth.

This rug was quick to weave. I loved weaving it, and now you can, too.

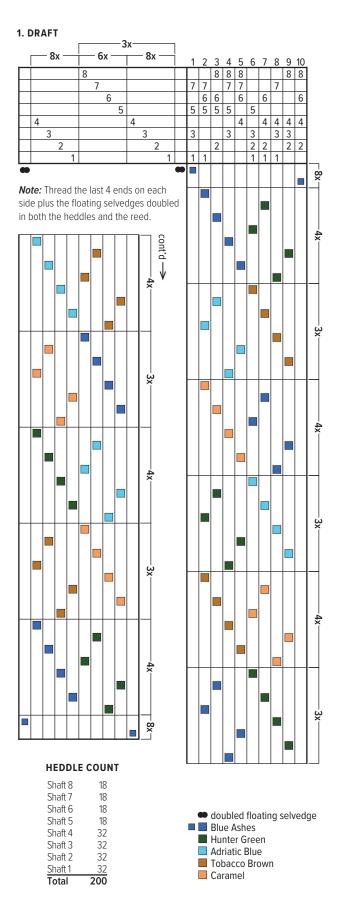
 $oldsymbol{1}$ Prepare the rag strips: Wash the flannel on a regular cycle and dry on medium heat in a dryer. Cut off the selvedge edges with sharp scissors or a rotary cutter and self-healing mat. Tear the fabric lengthwise into $1\frac{1}{2}$ " strips. Tear those strips in half into $\frac{3}{4}$ " strips. (Tom finds this is easier than trying to tear them into 3/4" from the beginning.) You could also cut your fabric into strips, but Tom prefers the look of torn fabric. For the hems, tear 3/4" strips

Tips

- · Trim the end of each rag strip into a long taper. To start or stop a color, fold the tapered end around the selvedge and back into the same shed. To join a new strip of the same color, overlap the tapered ends of the old and new weft strips.
- Tom recommends using a sturdy loom for weaving rag rugs. An extra firm beat is required for packing in rag weft, and a sturdy loom—preferably with a heavy beater—will make the job easier. Also, the warp needs to be under a higher-than-normal tension for rag weaving, which can cause narrow sheds on jack looms.

of Blue Ashes in half into 3/8" strips. You will need about 25 yd of the thinner hem weft. See Tips.

 $\mathbf{2}$ Wind a warp of 208 ends $2\frac{1}{2}$ yd long. Wind 4 additional ends to be used as floating selvedges and set them aside. Warp the loom using your preferred method, following the draft in Figure 1. Centering for a



weaving width of 252/8", sley 1 per dent in an 8-dent reed, doubling the first 4 ends and the last 4 ends in the heddles and dents. Sley the doubled floating selvedges through empty dents on each side of the warp and weight them over the back beam. Tom used 2-lb weights for his floating selvedges.

3 Wind your rag shuttles with each of the rag wefts. Spread the warp with scrap yarn. Insert a temple within the scrap yarn header.

4 Weave the plain-weave hem using the Blue Ashes hem weft and following the draft in Figure 1. Then switch to the thicker weft and weave the body of the rug following the draft for about 36". End with 16 picks of plain weave using the thinner weft for the hem.

5 Weave several picks of scrap yarn to protect the weft. Cut the fabric from the loom. Run a line of Fray Check between the scrap yarn and the hems. Cut off the scrap yarn. Fold the hems over twice, press, and secure with machine stitching. Sew the ends closed.

6 Wet-finish in warm water either by hand or machine. Press the excess water out in a big towel. Lay the rug flat to dry.

RESOURCES

Knisely, Tom. Rags to Rugs. Guilford, CT: Stackpole Books, 2023.

- ---. Weaving Rag Rugs. Guilford, CT: Stackpole Books, 2014.
- ---. Weaving with Rags: Making Rag Rugs and More. Video. Long Thread Media.

TOM KNISELY weaves and teaches weaving and spinning at Red Stone Glen Fiber Arts Center. He lives with his wife and two cats near New Cumberland, Pennsylvania.













Core Spun Comfort Rug

CYNTHIA COX

STRUCTURE

Plain weave.

EQUIPMENT

2- or 4-shaft loom, 32" weaving width; 8-dent reed; metal weight for the loom's beater bar; 2 large stick or ski shuttles. *Note:* A weighted beater bar is very helpful for this project due to the heaviness and bulk of the core spun yarn.

YARNS

Warp: Navajo Churro blanket-weight singles (100% Navajo Churro wool; 225 yd/4 oz; Rainbow Fiber Co-Op), Natural, 512 yd.

Weft: Core spun Leicester longwool/llama yarn (fiber percentages unknown; about 50–70 yd/put-up; Fuzzy Ewe Farm), 95 yd. Navajo Churro blanket-weight singles, 5 vd.

Note: The Rainbow Fiber Co-Op sells its yarn annually and often sells out quickly. Try Navajo Churro blanket-weight weaving yarn (100% Navajo Churro wool, 750 yd/4 oz, Laurel Canyon Farm) in Maria as a substitute. The Fuzzy Ewe Farm core spun was a limited-edition batch and is no longer available. Variegated core spun (100% wool, 45 yd/lb, Wildwood Farm) works as a substitute, as would many other core-spun variegated wools in natural browns.

WARP LENGTH

128 doubled ends (256 total threads) 2 yd long (allows 6" for take-up, 35" for loom waste; loom waste includes fringe).

SETTS

Warp: 4 epi (1 doubled end sleyed every other dent in an 8-dent reed). *Weft:* about 3 ppi.

DIMENSIONS

Width in the reed: 31%". Woven length: (measured under tension on the loom) 31". Finished size: 32" × 30" plus 5" fringe.

Visiting my friend Julie at Fuzzy Ewe Farm is always an adventure.

There are beautiful llamas and Leicester longwool sheep to ooh and aah over while contemplating the bounty of the next shearing. And there is always a good chance that Julie has received a fresh shipment of milled yarn from the previous year's shearing. I discovered the amazing core-spun yarn I used in my rug on one such visit.

Not one for waste, Julie had the mill process the leftover britch and rump wools (combined from the llama and sheep) into this one-of-a-kind rope of core spun. The result is a wonderful mélange of natural colors that I could not resist. It is perfect for a thick, heavy, and soft rug—just what I need to keep my feet cozy on the chilly winter floor of my studio.

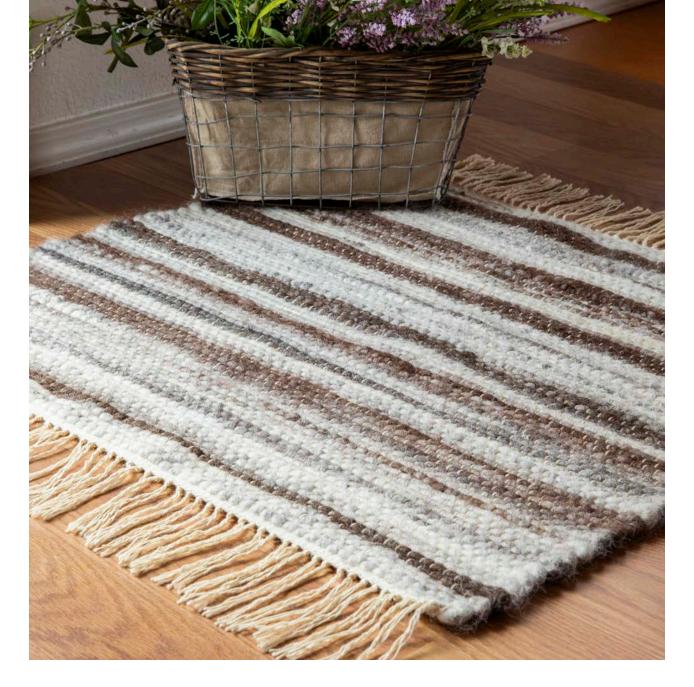
Weaving with this type of yarn does create some challenges. A weighted beater is a must for packing in the heavy, thick yarn—my husband added an 8-pound steel bar to my Leclerc loom, and that helped quite a bit. Also, due to the thickness of the yarn, only small amounts will fit on a stick shuttle, which means frequent splicing and joining. I did find the joining process easy, though, and virtually invisible. Finally, you need to be careful not to twist the yarn as you bring the shuttle in and out of the shed at the selvedges. Keeping the twisting to a minimum will keep your rug from curling. Overall, I am thrilled with the results, and I hope you are inspired to give it a try.

f 1 Wind a warp of 128 doubled ends (256 threads total) 2 yd long. Warp the loom for plain weave using your preferred method,

threading doubled ends in each heddle. Centering for a weaving width of 31%, sley a doubled end in every other dent in an 8-dent reed.

2 Wind a stick shuttle with the Churro for the ends of the rug. Wind another large shuttle with a few yards of the core spun weft yarn. Because it is so thick and bulky, only a few yards will fit on a shuttle. Take





care that you do not get so much on the shuttle that it does not fit through the shed. Spread the warp with scrap yarn.

3 Weave 5 picks of plain weave using the Churro. Beat firmly after each pick.

4 Begin weaving with the corespun yarn. Weave approximately 90 picks or about 30", beating firmly after each pick and being careful not to twist the yarn as you begin each row. For joins, use the

following method: On the cut ends of the core-spun, tease and pull out about 2 inches of the outer layers beyond the cotton core. This provides a thin, flat piece for splicing with a new yarn and makes a clean, invisible transition.

5 End with 5 picks of plain weave in the Churro. Weave a few picks of scrap yarn to protect the weft.

6 Leaving at least 4" on both ends for fringe or a knotted finish, cut the fabric from the loom. Tie

an overhand knot in each pair of doubled warp ends (4 threads) close to the weft or prepare a twisted fringe using 2 doubled ends in each fringe bundle.

7 Do not wet-finish. To clean the rug, shake it and hang it to air outside as needed.

CYNTHIA COX enjoys weaving functional items in her home studio, The Wild Weft. She is inspired by the beauty of West Texas and the variety of unique and natural fibers produced in the region.



Salts Mill Rug

FRANCES RICHARDSON



STRUCTURE

Weft-faced plain weave.

EQUIPMENT

2- or 4-shaft loom, preferably counterbalance or countermarch, 33" weaving width; 6-dent reed; 2 stick or ski shuttles at least 12" long.

YARNS

Warp: 8/5 linen (480 yd/lb; Yarn Barn of Kansas), Natural, 600 yd.

Weft: 2/60 New Zealand rug wool (100% wool; 960 yd/lb; R&M Yarns), Spiced Mustard, 295 yd; Gunmetal Gray, 650 yd; Light Khaki, 3,140 yd. Note: Try Highland (100% wool; 900 yd/lb; Harrisville Designs) or Collingwood Rug Wool (80% wool/20% nylon; 900 yd/lb; Valley Yarns) as a substitute.

OTHER SUPPLIES

Temple; large-eye long carpet needle for finishing.

WARP LENGTH

99 working ends (200 threads total) 3 yd long (allows 6" for take-up and 36" for loom waste).

SETTS

Warp: 3 epi (threaded 1-0/dent in a 6-dent reed). Weft: 18 ppi.

DIMENSIONS

Width in the reed: 323/6". Woven length: (measured under tension on the loom) 66". Finished size: 30" × 57".

A photograph I took looking over the roofs of the Salts Mill loom sheds in Saltaire, West Yorkshire, inspired my rug. I grew up a few miles from Saltaire, and the zigzag pattern of mill roofs was a familiar sight throughout my childhood in the industrial textile district of the West Riding.

Salts Mill was the heart of a model village built on the banks of the River Aire by Sir Titus Salt in 1853 to house his mill workers. A few miles from the center of Bradford, Saltaire provided the workforce a healthier environment than that endured by mill workers in the middle of the city. Salt built housing, a chapel, a library, a school, a laundry, a mechanics institute, and a park around his mill, which at its peak employed 3,000 workers and produced 30,000 yards of fabric a week. After it ended production in 1987, the mill was bought by a local businessman to house the work of his friend and fellow Bradfordian, David Hockney. Saltaire is now a UNESCO World Heritage Site, with the mill housing Hockney's work along with stores and a restaurant. The surrounding housing is still a thriving residential village.

I learned the techniques used to weave my rug at Jason Collingwood's class on rug weaving held at Yadkin Valley Fiber Center in 2019. They are also described in Peter Collingwood's book The Techniques of Rug Weaving.

As I noodled around with the design, I found it more pleasing the simpler it became, but that simplicity became the main technical challenge—there are fewer places for mistakes and inconsistencies to hide!

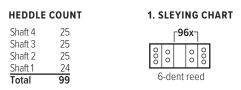
 \mathbf{I} Wind a warp of 200 ends 3 yd long. Warp the loom using your preferred method for a straight draw, either 4, 3, 2, 1 on a 4-shaft loom or 2.1 on a 2-shaft loom. Centering for a weaving width of 323/6", and following the sleying chart in Figure 1, sley a doubled end in every other dent, with a tripled end in the first and last dents (see Resources).

2 Wind a shuttle with 4 strands of Gunmetal Gray held together. Wind a second shuttle with 2 strands of Light Khaki rug wool (see Weaving Tips). The doubled khaki weft will be doubled again when weaving the clasped-weft technique.

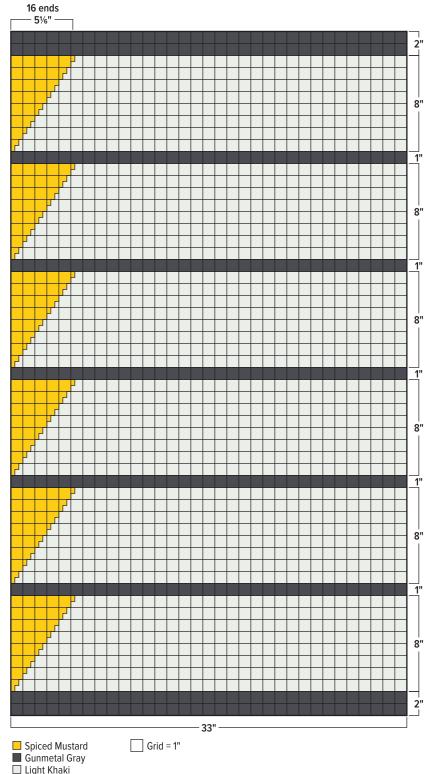
3 With scrap yarn or extra rug weft, weave about 2" of plain weave, bubbling the weft so that it has plenty of length to cover the warp comfortably. This section will be removed when the rug is finished, so it's a good opportunity to practice your beat. Push the outer 2" of weaving down from the fell toward the breast beam, creating two triangles of bare warp at each side.

Weaving Tips

- · When winding a shuttle with multiple strands, keep a finger between strands to ensure even winding. Frances keeps one hand still with her fingers separating the yarn, while holding the shuttle in her other hand and winding the yarns on by turning the shuttle back and forth like a windshield wiper.
- Bubbling reduces draw-in on weft-faced weaves by providing more slack for the weft to wrap around the warp than the usual angled weft or weft smile. After throwing a pick but before closing the shed, spread your fingers and gently draw the weft to the fell line in several places evenly across the width of the warp, creating hills and valleys in the weft. Close the shed and beat as usual.
- Frances used the Maori edge (see Resources) and wove the ends into the rug.
- · If your finishing choice involves weaving the warp ends back into the rug, weave the first and last couple of inches of the rug with a little slack in the weft so that there is room for the additional warp. If you make fringe from the warp ends, do not weave the extra slack in the weft.
- · Splice joins in the weft by overlapping them (see Resources) and leaving about 4" available to darn the ends in. Frances prefers to darn in ends as she weaves, but that can also be done after weaving.



2. RUG SCHEMATIC





Fill these triangles by weaving scrap yarn back and forth until the fell is the same height all the way across the warp. Beat firmly to create a firm base for your rug. Install the temple.

4 Weave 2" of Gunmetal Gray (see Weaving Tips). Send the shuttle through the shed at an angle, tug hard on the varn to settle the selvedge, then change the shed, bubble the weft, and beat on a closed shed. Move your temple frequently as you weave.

5 Begin the clasped-weft band (see Resources). Using the rug schematic in Figure 2 as a guide, mark the warp where the joins in the colors should land. The beginning of the triangle is woven over 1 end; the upper edge is woven over 16 ends. Place 2 balls of Spiced Mustard yarn in a bowl or bag on the floor to the left of the loom and draw 2 strands up. Send the Light Khaki yarn on the shuttle through the shed from the right and link it around 2 strands of the Spiced Mustard before sending it back to the right through the same shed. The Spiced Mustard yarn passes into the shed and back to the left. You will end up with 4



strands of both colors in the same shed, clasped together. Bubble the weft and adjust the position of the clasp to fall under a raised warp so that when it is beaten, it is hidden on the underside of the rug.

6 Weave 9 picks with the first warp end on the left woven in the triangle color. On the next pick, move the clasp over so that the next warp end is woven in the triangle color. Weave 9 picks on that end. Repeat this pattern, weaving 9 picks for each step until you finish on the 16th end. The diagonal edge of the triangle comprises 16 steps of 9 picks each.

7 Weave 1" of Gunmetal Gray. Repeat the triangle/gray pattern until you have woven 6 triangles.

8 After the 6th triangle, weave 2" of dark gray, leaving extra room in the weft for sewing ends into the rug if needed.

9 Weave ½" of scrap yarn to protect the weft. Remove the rug from the loom.

10 Work the Maori edge starting with the rug face down or prepare a fringe (see Resources).

RESOURCES

Collingwood, Jason. Rug Weaving with Jason Collingwood. Class handout from Yadkin Valley Fiber Center, North Carolina, 2019.

Collingwood, Peter. The Techniques of Rug Weaving. New York: Watson-Guptill, 1972.

FRANCES RICHARDSON, former textile conservator and teacher, lives in Rockbridge County, Virginia. She recently undertook research on a collection of local historical weaving drafts.



Left: Tien used the principle of weight to balance her Eventide Elegance Scarf, page 51. Right: Tien's Autumn Splendor uses a balanced, asymmetric design to give the feeling of a windblown leaf.

Balancing Asymmetry

BY TIEN CHIU

Symmetric designs can be beautiful, with the bonus of being relatively easy to design; however, when you want a more lively, less regular feel to your piece, it's time to experiment with asymmetry.

Asymmetric designs are often more visually intriguing than similar symmetric designs. The irregular forms produced by asymmetry make us want to look longer at them to figure out what they mean, visually speaking. As a result, asymmetric projects often feel more dynamic, intriguing, and casual than symmetric pieces. (That doesn't mean they're better than symmetric pieces, though—it depends on your tastes and creative goals for a piece.)

In my handwoven coat, Autumn Splendor (shown above), I wanted a dramatic sense of sweeping movement, like a leaf blown about in the wind. That sense of freedom would have been hard to achieve with a symmetric pattern, so I decided on an asymmetric design. The result is much more free-flowing than a symmetric design would have been.

When you opt for asymmetry, though, design becomes a little more challenging. That's because designs typically look better when they feel balanced between the right and left sides and/or top to bottom. Symmetric designs, as in Draft 1, are easy to balance. You simply do the same thing on both sides and voilà! It all works out. However, if you want to create balance without the formal look created by symmetry, you'll have to work out asymmetric balance.

HORIZONTAL BALANCE

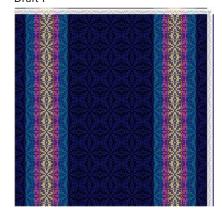
Let's start by discussing horizontal balance, the balance between the right and left sides of a piece. Horizontal balance in asymmetry is hard to define in words but easy to see. Some design elements have more visual interest than others. You can think of them as having more visual weight; they attract the eye more than other elements. If you put all the interesting parts on one side of a piece, it will feel unbalanced, like a seesaw with only one person on it.

The design shown in Draft 2, for example, is unbalanced—the most visually interesting part is all the way on the left, and there's nothing interesting on the right side. Unbalanced designs often feel unsettling. Sometimes, that's what you want but if not, you'll need to balance your design.

One way to balance a design is by putting similar stripes at roughly the same distance from the center to create a piece that is almost, but not quite, symmetric. For example, you can put a stripe on one side and then put a similar-sized stripe with equally assertive colors on the other, placed symmetrically as in Draft 3. This gives the project a more dynamic appearance while still feeling balanced.

The principle of weight can also help with designing balanced asymmetric designs. Think of balance as a seesaw: you can put a weight anywhere on the seesaw, but the farther from the center it is, the more force it exerts. Put another way, a weight on the end of the seesaw arm will push the arm down farther than the same weight right next to the center of the seesaw. The same principle applies in design; a small stripe far from the center of a piece can balance a wider stripe closer to the center.

Draft 1



Draft 2



Draft 3



Draft 4









Draft 6



Draft 7



Draft 8



If you'd like something more symmetrical, you don't have to balance the draft using the same stripes or the same colors.

In the example shown in Draft 4, the large stripe to the left is balanced by the small stripe at far right. The small stripe, farther from the center than the larger stripe, gains visual weight due to its location, causing the design to balance out even though one stripe is larger.

If you'd like something more symmetrical, you don't have to balance the draft using the same stripes or the same colors. The drawdown in Draft 5 shows an example of a balanced stripe design that uses different stripes and colors.

Thus far, we've been playing with

stripes that are internally symmetric—but working with asymmetric stripes works, too, and produces a less rigid feel. In Draft 6 you can see two groups of stripes in similar colors. Notice the formal, ordered, and calming look of the symmetric stripe on the left. Then, on the right, notice the informal, dynamic look of the asymmetric stripes. That's the difference between symmetry and asymmetry!

VERTICAL BALANCE

Top-to-bottom balance, or vertical balance, works differently from horizontal balance. Vertical balance is about making sure that the weight of a piece is distributed in a way that feels comfortable to our visual brain. Putting bigger, darker objects on the bottom and smaller, lighter design elements on top creates a sense of vertical balance.

Designs with big, dark areas suspended on the top of the piece almost seem to be floating in midair and can look unsettling and lacking in vertical balance. That's because we look at them and instinctively think the unsupported dark areas will fall. As a result, vertically balanced designs that are asymmetric generally can't be flipped upside down and retain a balanced feel.

For example, Draft 7 is vertically balanced, with the darker, heavier parts on the bottom and the lighter, smaller ones on top. Draft 8, however, is not vertically balanced; the colors have been flipped from top to bottom, putting the darker, heavier elements at the top, so the design feels unsettling.

Asymmetric, vertically balanced projects often have a definite top and bottom. If you don't mind arranging the item "upright" (or don't mind it feeling upside down!), this isn't an issue. If you'd prefer something that can be flipped top to bottom, such as a scarf, then vertical symmetry or near-symmetry is your best option.

Of course, if you don't mind a piece that feels unbalanced, you can arrange your design however you like! Weave it *your* way.

RESOURCES

Pentak, Stephen, and David A. Lauer.

Design Basics. Boston, MA: Cengage
Learning, 2015.

Eventide Elegance Scarf

TIEN CHIU



STRUCTURE

Twill.

EQUIPMENT

4-shaft loom, 11" weaving width; 12-dent reed; 1 shuttle.

YARNS

Warp: 8/2 cotton (3,360 yd/lb; Maurice Brassard), #83 Noir, 487 yd; #5169 Fuchsia, 88 yd; #3161 Jaune Or, 80 vd; #5029 Bleu Moyen, 72 vd; #1315 Orange Pâle, 44 yd; #5120 Mauve Pâle, 28 yd. Weft: 8/2 Tencel (100% lyocell; 3,360 yd/lb; Maurice Brassard), #T5070 Royal, 646 yd.

WARP LENGTH

290 ends 234 vd long (includes floating selvedges; allows 7" for take-up, 20" for loom waste; loom waste includes fringe).

SETTS

Warp: 27 epi (2-2-2-3/ dent in a 12-dent reed). Weft: 27 ppi.

DIMENSIONS

Width in the reed: 1010/12".

Woven length: (measured under tension on the loom) 72". Finished size: (after wetfinishing and hemming) 9" × 65" plus 3" fringe.

If you're just starting out weaving with asymmetry, this scarf is a perfect introduction as it combines symmetric stripes into an asymmetric design. A wide stripe on one side is balanced by a pair of smaller stripes on the other, giving it a fun, casual feel.

The challenge in designing this scarf lay in combining the three stripes—all different widths—with the woven pattern. I experimented with aligning the stripe width and placement with the pattern repeat (32 threads), but this resulted in a stiff, rigid feel. Placing the stripes with no care for the woven pattern, though, felt disjointed. The symmetric colors in each stripe seemed to "want" a symmetric woven pattern to go with them. What to do?

I decided to center each stripe around an element in the woven pattern to align the two types of symmetry: color and weaving pattern. However, I made the stripes different widths, which changed the appearance of the motifs. The large stripe runs across what looks like a series of four-pointed stars. The medium-size stripe creates large "eyes," and the thin stripe produces a tiny series of Xs and Os.

If you are designing with a draft that creates motifs (as opposed to an "allover" draft such as 2/2 straight twill), think carefully about how to align those motifs with your color pattern, especially when designing asymmetrically! Thinking about how color and woven pattern coordinate can make all the difference in designing a piece you love.

f I Wind a warp of 288 ends 2¾ yd long following the warp color order in Figure 1. Wind 2 additional ends of Noir (black) to be used as floating selvedges and set them aside. Warp the loom using your preferred method, following the draft in Figure 2. Centering for a weaving width of 101%12", sley 2-2-2-3 per dent in a 12-dent

reed. Sley the floating selvedges through empty dents on each side of the warp and weight them over the back beam.

f 2 Wind a bobbin with the weft. Tien recommends winding several bobbins of weft to make it easy to switch bobbins as they run out. Leaving at least 6" of unwoven warp for fringe, spread the warp with scrap yarn.

 $oldsymbol{3}$ Leaving a tail 1 yd long for hemstitching, begin weaving the pattern following the draft in Figure 2. Use the tail to hemstitch in groups of 4 warp ends, including an occasional 3- or 5-thread unit to keep the colors neat in the striped areas.

4 Continue weaving following the draft for about 72", ending at the end of a pattern repeat. Hemstitch as you did at the beginning.

 $\mathbf{5}$ Leaving at least 6" for fringe on both ends, cut the fabric from the loom. Trim the fringe ends to 5". Prepare a twisted fringe using 2 hemstitched groups in each fringe bundle.



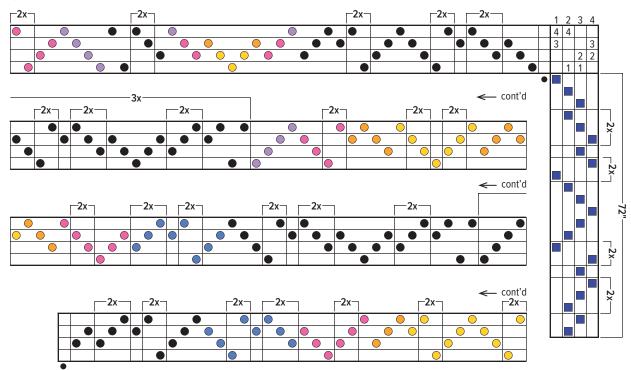
HEDDLE COUNT

Total	288
Shaft 1	45
Shaft 2	72
Shaft 3	90
Shaft 4	81

1. WARP COLOR ORDER

26_	13				13													#5029 Bleu Moyen
29_			15	,				11					3					#3161 Jaune Or
16			3	3			4	4					1	1				#1315 Orange Pâle
32		8			3		6		6			2			2			#5169 Fuchsia
10						4				4	1					1		#5120 Mauve Pâle
175 1	6					125					7						27	#83 Black/Noir
288 e	ends	tot	al															

2. DRAFT



floating selvedgeBleu MoyenJaune Or Orange PâleFuchsia Mauve PâleBlack/Noir Royal

 $oldsymbol{6}$ Wet-finish in warm water with a small amount of mild detergent by gently agitating with your hands for 1–2 minutes. Rinse well and dry flat. Press with an iron when almost dry.

 ${\bf TIEN\ CHIU}\ teaches\ classes\ on\ color\ and$ design at The Handweaving Academy, an online school where weavers learn to design projects they'll love.





Emerging Asymmetry Scarf

BRENDA GIBSON



STRUCTURE

Deflected doubleweave.

EQUIPMENT

8-shaft loom, 13" weaving width; 12-dent reed; 2 shuttles.

YARNS

Warp: Kiku 20/2 silk (5,000 yd/lb; Treenway Silks), #226 November Maverick, 468 yd. 2/18 superfine merino (5,040 yd/lb; Jagger Spun), Chanel, 468 yd. Weft: Kiku 20/2 silk, #226 November Maverick, 388 yd. 2/18 superfine merino, Chanel, 404 yd.

WARP LENGTH

312 ends 3 vd long (allows 8" for take-up, 21" for loom waste; loom waste includes fringe).

SETTS

Warp: 24 epi (2/dent in a 12-dent reed). Weft: 24 ppi.

DIMENSIONS

Width in the reed: 13". Woven length: (measured under tension on the loom) 79". Finished size: (after wet-finishing) 91/2" × 67" plus 11/2" fringe.

I am fond of all forms of doubleweave but especially love deflected doubleweave with its bold and exuberant patterning possibilities. Yarns will curve and gaps will close upon wet-finishing, and the effects of differential shrinkage can be creatively exploited.

The fabulous color and texture in my scarf remind me of a regal theme, with gold threads contrasting beautifully against sumptuous fabrics in purples, pinks, and reds. Where I live in the United Kingdom, we were recently immersed in pageantry with the funeral of Queen Elizabeth II and the coronation of King Charles III. Historically, many kings and queens have been famously eccentric literally meaning off-center—or asymmetric, one might perhaps say.

There are both aesthetic and practical reasons for embracing asymmetry from time to time. The slight disturbance of an otherwise symmetrical pattern can create a frisson of visual interest. Here, I used a slight variation in the width of threading blocks, the depth of treadling blocks, and the rhythm of the point reversals, in addition to placing the focal point of the design off-center.

Deflected doubleweave has two sets of selvedges, one for each color. A symmetrical draft has an outer pair of selvedges in one color and an inner pair in the other color, which can involve the need for some tricky choreography of shuttles when changing color. However, by making an asymmetric draft with each outer selvedge a different color, no such adjustments are required, provided each shuttle starts at its own selvedge. All this enables a smoother and more pleasurable weaving experience.

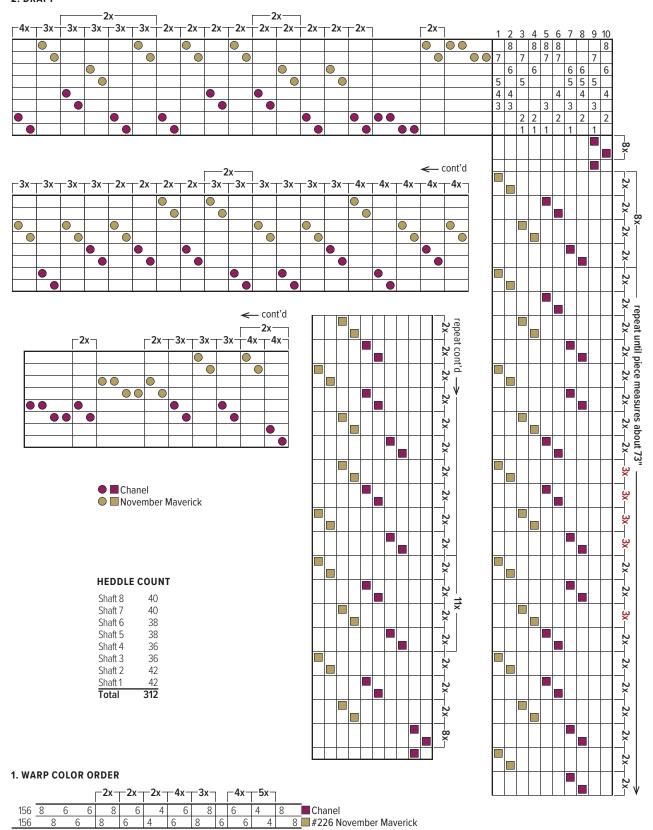
I Wind a warp of 312 ends 3 yd long following the warp color order in Figure 1. Warp the loom using your preferred method,

Note on Structure

Deflected doubleweave is a subset of doubleweave where the warp and weft threads of each layer alternate in groups rather than individually.



2. DRAFT



8 #226 November Maverick

4

following the draft in Figure 2. You may find it easier to wind 2 separate warps, 156 ends of each color, and combine them either in the raddle or in the reed according to your warping method. Centering for a weaving width of 13", sley 2 per dent in a 12-dent reed. Note: While many deflected-doubleweave projects require a floating selvedge, this one does not, nor is it recommended by the designer.

2 Wind shuttles with each of the weft colors. Leaving at least 2" of unwoven warp for fringe, spread the warp with scrap yarn.

3 Starting from the right side and leaving a tail 1 yd long for hemstitching, weave 17 picks of plain weave with the merino shuttle, ending with the shuttle on the left side. Use the tail to hemstitch in color groups of 4 or 6 warp ends; divide the widest color stripes into 2 groups of 4 ends.

4 Starting with the silk shuttle on the right side, weave the border treadling for the start. Continue weaving the main patterned body of the scarf following the draft in Figure 2 until it measures about 73". Weave the border treadling for the end and add 17 picks of plain weave in merino so that the shuttle ends on the right. Leave a tail 1 yd long before cutting the shuttle thread, and hemstitch in merino as you did at the beginning.

 $\mathbf{5}$ Leaving at least 2" for fringe on both ends, cut the fabric from the loom.



6 Wet-finish in water at about 100°F (which feels only just warm) with a mild detergent suitable for silk and wool. Squeeze the scarf in the water to full the merino but do not agitate so much as to create obvious shrinking or fulling. Rinse, blot in a towel, and leave to dry completely before judging the effect, which is not obvious when wet. It is better to have to repeat the finishing process to enhance the effect rather than have too much shrinkage or fulling, as these processes are irreversible. The silk should just bubble up a little above the slightly fulled merino wool background. The short, hemstitched fringe can be straightened out while still damp

(a nailbrush is great for this) and given a final neatening trim when dry.

RESOURCES

Keasbey, Doramay. Pattern Techniques for Handweavers. Eugene, OR: selfpublished, 2005.

Richards, Ann. Weaving: Structure and Substance. Ramsbury, Wiltshire, UK: Crowood Press, 2021.

van der Hoogt, Madelyn, ed. The Best of Weaver's: Fabrics That Go Bump. Sioux Falls, SD: XRX Books, 2002.

BRENDA GIBSON, based in London, has been weaving seriously and teaching weaving since retiring from her first career about 17 years ago.



Using the clasped-warp technique, Robin gets planned areas of asymmetric warp color changes throughout her scarf.

Clasped Warp on 4 Shafts

ROBIN LYNDE



I experimented with clasped warps on a multi-shaft loom, and I enjoy the way pattern appears and disappears when you use a weft yarn that matches one of the warp yarns. I have now used the direct-warping technique for four-shaft shawls and scarves using a variety of yarns.

Clasped-warp weaving gives me the best of both worlds: the fun of changing color with direct warping; and seeing a woven-in pattern come and go as the warp color changes at each clasp or join. Here are my tips for success in the design and execution of such a project.

CLASPED-WARP DESIGN

It's perfectly acceptable to let claspedwarp joins happen randomly, but there are factors you should consider.

Where will the joins occur? Joins in the middle part of your piece may be evident in a shawl but not in a scarf that is tucked around the neck. Also, think about the ends of the piece—will there be fringe or hems? Joins close to the ends disappear in the fringe area and can even disrupt the integrity of hems or fringe.

You have many options for creating designs based on the join

placement. The joins may create an overall diagonal, zigzag, or vertical design or a shape that is more random. Consider using more than two yarns or trading the positions of the yarns (see Figure 1). As I write, I'm thinking of more ideas to explore!

Yarn Color

As in any other weaving, hue and value have huge effects on the resulting cloth. For the most dramatic results, consider using yarns of quite different values. If one warp yarn is light and the other is dark, and you choose to repeat one of those yarns in the weft, you'll see the pattern where one yarn crosses the other but will notice mostly texture where the weft yarn is the same as the warp.

In Figure 1, Designs 4 and 5 use the same layout, but dark and light warp yarns have traded places. Visualize how that center stripe would look in each design depending on the hue or value of the weft yarn.

With my project (page 62), Shawl 1 uses Design 4 with a dark weft that

shows pattern in the center and solid colors on the outer triangle shapes. Shawl 2 uses Design 5 with a light weft, so it has light edges and the center stripe shows pattern as the light weft crosses the dark warp. You can even experiment with adding a third color for weft.

Sett

I weave a lot of wool blankets and shawls, using a somewhat open sett and light beat to produce a lightweight fabric with good drape after fulling.

Looking back over past projects, my rule of thumb is to measure wraps per inch (wpi) and use 50

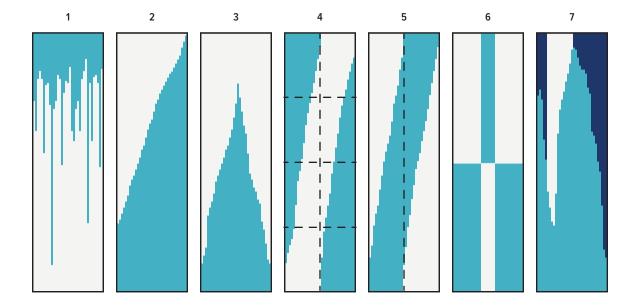
percent as the starting point for the sett. Based on my experience with clasped-weft projects and these yarns, I sett Ashford DK (12 wpi) at 6 ends per inch (epi); locally grown TR yarn (14 wpi) at 8 epi; Harrisville Designs Shetland (14 wpi) at 8 epi; and Jagger Spun Zephyr wool-silk (30 wpi) at 15 epi. When planning the sett, remember that each warp end is doubled.

I recommend against mixing warp yarns in each project because yarns with differing elasticity can give unexpected results. You can use a different weft yarn, but I have used the warp yarns (not doubled) for weft in all of my projects.

1. PLACEMENT OF JOINS

The diagrams indicate warp yarns. Weft choices will impact appearance. Yarns A and B are at different ends in 1, 2, and 3.

- f 1 The simplest method for your first project is to let the joins fall in random locations.
- f 2 This version places joins along a single diagonal.
- **3** Joins can create one or more points.
- **4** The light yarn appears to move diagonally through a dark background.
- **5** Same as 4 but the dark and light yarn positions are reversed.
- **6** Light and dark yarns create squared-off shapes as they trade places.
- 7 This join is more complicated, with two points and a third warp color.



Consider float length and ease of threading when planning the draft for a clasped-warp project. You will be threading while winding your warp and keeping your tension under control. I like to use a threading that is simple to remember and easy to check as I go. Also, float length may be a consideration because your sett is wider than usual for a given yarn.

HOW TO WIND A CLASPED WARP ON A MULTI-SHAFT LOOM

Loom Setup

Attach a warping peg to a fixed surface such as a shelf or heavy table. Move the loom so that the back apron bar is the full length of your warp away from the peg. Measure a nonstretchy cord the exact warp length and attach the ends of the cord to the peg and the back apron bar.

If you want to follow a specific plan for where the joins will land, mark the guide string with a marking pen or with sewing or binder clips at the quarter, halfway, and three-quarter points. Mark these same three points on the reed with scrap yarn as well.

As with any project, make sure you have the correct number of heddles on each shaft before you begin warping the loom.

Secure the beater partway between the shafts and the breast beam. Some looms have a pin to do that; if yours doesn't, tie it in place or use clamps to secure it.

I like to refer to a diagram of the position of the clasping pattern while I'm winding the warp. My diagram is marked with a dotted line down the middle and three dotted horizontal lines to indicate the quarter, halfway, and three-quarter

Tip

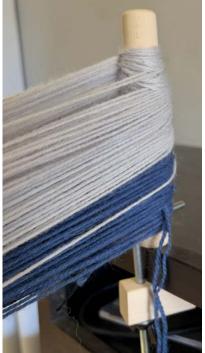
If you are weaving the full width of your loom and don't want to remove extra heddles, you can use two heddles as one.

points (see Design 4 in Figure 1). A bench or chair placed between the peg and the loom is a handy place to hold this diagram as well as your draft and second yarn source.

Measuring Warp

Tie one warp yarn (Yarn A) to the back apron bar and one warp yarn (Yarn B) to the warping peg. Separate the heddles for your first pattern repeat and slide them away from the others. Use a threading hook to pull a loop of Yarn A through the first heddle of your pattern and then through the reed. When the Yarn A loop is in the





Photos by Robin Lynde unless otherwise noted

Left: The completed warp for Shawl 1 is ready to wind on to the loom. Notice the warping guide string with clips attached and the clips on Shaft 4 that indicate threading repeats. Right: The warp for Shawl 1 wrapped on the peg. Each end is wrapped an extra time around the peg to maintain even tension and so the join position doesn't slip.





Left: Halfway through warping Shawl 2 and ready to change yarn colors from one end to the other. The warping guide string with clips is visible. Compare the position of the bench in these two photos. Even though I wind without high tension, the warp tension on Shawl 2 has built up enough to shift the shelf where I attached the peg. I moved the bench to hold the shelf in place while I finished. Right: The full warp for Shawl 2 is ready to wind on to the loom.

position where you want the join, bring the entire ball of Yarn B through the loop and back around the peg. Wrapping it around the peg a second time makes it easier to maintain the position of the join and the tension. That's your first warp end!

Repeat this process for the rest of the warp. Notice that the Yarn A loop will alternate starting positions as you warp, coming from over and then under the back apron bar.

Use the markers on the warp measurement string to aid in placing the joins as you move from one side of the warp to the other. Remember to allow for fringe and waste yarn when determining where to place the joins.

Use binder clips or sewing clips on the heddle bar to keep track as you finish each repeat of the threading draft.

The most difficult part of this process may be learning to keep even tension across the warp because care is needed with stretchy yarns. You do not want a tight warp—you want an evenly tensioned warp. Pay attention to the process, and you will discover tricks to keep your warp tension even. Wrapping Yarn B around the end peg twice helps me focus on the tension of Yarn A as I pick up and thread the next loop.

Make sure the loom and peg stay in place. A lightweight loom or a warping peg that is not firmly attached may shift as warp tension builds up—another reason to keep the warp tension consistent but light.

Winding Warp

After you have threaded all the warp ends, cut and tie the last end of each color to the back apron bar or warping peg. Wind the warp onto your warp beam as normal, making sure that the joins don't catch on the heddles or reed. Using some tension helps as you wind on. If the warp is too wide to hold while winding, wind a few inches at a time, then add tension to groups sequentially.

Tie to the front apron bar and you are ready to weave!

RESOURCES

Lynde, Robin. "Clasped-Warp Weaving." Easy Weaving with Little Looms, 2020, 107-109.

---. "Green Pastures Scarf." Easy Weaving with Little Looms, 2020, 52-53.



Cascading Colors Scarves

ROBIN LYNDE



STRUCTURE

Twill with clasped warp.

4-shaft loom, 24" weaving width; 8-dent reed; 1 shuttle.

YARNS FOR ASHFORD DK SHAWL (SHAWL 1)

Warp: Ashford DK (100% wool, 221 yd/100 g; Ashford), #806 Mist and #826 Sapphire, 828 yd total, split between colors.

Weft: Ashford DK, #826 Sapphire, 443 yd.

OTHER SUPPLIES

Nonstretchy cord, 3 yd; fringe twister (optional).

WARP LENGTH

138 doubled ends (276 ends total) 3 yd long (allows 18" for take-up and loom waste; loom waste includes fringe). Note: Yarn will stretch under tension.

SETTS

Warp: 6 epi (1 doubled end/dent in a 6-dent reed). Weft: 7 ppi.

DIMENSIONS

Width in the reed: 23".

Woven length: (measured under tension on the loom) 90". Finished size: (after wet-finishing) 18" × 76" plus 5" fringe.

YARNS FOR LOCALLY GROWN/ NATURALLY DYED SHAWL (SHAWL 2)

Warp: TR22 or TR23 (100% wool; about 1,500 yd/lb; Meridian Jacobs), natural and indigo dyed, 1,152 yd total, split between colors.

Weft: TR23, natural, 462 yd.

OTHER SUPPLIES

Nonstretchy cord, 3 yd; fringe twister (optional).

WARP LENGTH

192 doubled ends (384 ends total) 3 yd long (allows 18" for take-up and loom waste; loom waste includes fringe). Note: Yarn will stretch under tension.

SETTS

Warp: 8 epi (1 doubled end/dent in an 8-dent reed).

Weft: 7 ppi.

DIMENSIONS

Width in the reed: 24". Woven length: (measured under tension on the loom) 90". Finished size: (after wetfinishing) 19" × 67" plus 5" fringe.

I knew I wanted to submit this clasped-warp idea to Handwoven after I successfully adapted the technique, usually direct-warped on a rigidheddle loom, to a 4-shaft loom. While planning my article, I wove several scarves and shawls and was limited only by time to explore myriad variations. I did not—and could not—weave all the pieces that I envisioned and even had trouble narrowing down which version to share. So instead of choosing one, I offer you two options.

f I Attach a warping peg to a fixed surface such as a shelf or heavy table. Move the loom so that the back apron bar is the full length of your warp away from the peg. Measure a nonstretchy cord the exact warp length for either Shawl 1 or Shawl 2 and attach the ends of the cord to the peg and the back apron bar. Follow the instructions under "How to Wind a Clasped Warp on a Multi-Shaft Loom" in the article on page 58 of this issue, centering for a weaving width of either 23" for Shawl 1 or 24" for Shawl 2. Create your clasp design and thread using the draft in Figure 1 or 2 in this project.



Weaving Tips

- The two designs described here roughly follow Designs 4 and 5 in Figure 1 on page 59. Robin did not include specific amounts for each of the two colors of warp yarn because they will vary depending on your design. Also, you may not use equal amounts of the two colors in your shawl, again depending on your design. Be flexible!
- The warp yarns used in these shawls are very elastic, and they will stretch as you warp the loom. After the finished fabric is removed from the loom, it will shrink substantially in length.
- · Robin chose not to use floating selvedges because she doesn't find the selvedge edge a problem when weaving with wool. For Shawl 2, she started weaving from the left side with Treadle 1 and wrapped the shuttle around the right selvedge thread for each pick on Treadle 6. She skipped that step for Shawl 1. If you prefer, you can use one thread at each edge as a floating selvedge, or you can add another end at each edge to serve that purpose.

2 Wind a bobbin with the chosen weft color. Leaving at least 8" at the beginning of the warp for fringe, spread the warp with scrap yarn.

3 Leaving a tail $2\frac{1}{2}$ yd long for hemstitching, weave about an inch following your chosen treadling draft. Use the tail to hemstitch in groups of 2 doubled warp ends.

(Robin twisted fringe for both pieces but hemstitched only Shawl 2.)

4 Continue weaving, following the draft in Figure 1 or 2 for about 90" or desired length. Hemstitch as at the beginning.

5 Leaving at least 8" for fringe, cut the fabric from the loom. Trim ends to 8". Prepare a twisted fringe using 2 hemstitched groups in each section.

6 Wet-finish in hot water with mild detergent. Agitate by hand or by machine on the delicate cycle for

about 21/2 minutes, drain, and rinse by soaking in warm water. Drain. Lay shawl flat on large towels to dry. When partially dry, hang it over a padded rod.

RESOURCES

Lynde, Robin. "Clasped-Warp Weaving." Easy Weaving with Little Looms, 2020, 107-109.

Petzold, Charles G., Construction of Weaves, Nos. 1–7, handweaving.net. Draft 22200.

ROBIN LYNDE raises her own sheep and dye plants, teaches weaving, and weaves items to sell locally and online.

1. ASHFORD DK SHAWL DRAFT (SHAWL 1)

—13x—

			IJΛ						1	2	3	4		
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2	2		2	2			2		2	2				
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Shaft 1 Total	28 138									,	/			
TULdI	130								/	ľ				

2. LOCALLY GROWN SHAWL DRAFT (SHAWL 2)

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Shaft 4 48 Shaft 3 48 Shaft 2 48						/		,	/	
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Summer Berry Towels

MALYNDA ALLEN

STRUCTURE

Twill.

EQUPMENT

4-shaft loom, 20" weaving width; 12-dent reed; 2–4 shuttles; 5 bobbins.

YARNS

Warp: 10/2 cotton (4,200 yd/lb; Georgia Yarn Company), Natural, 315 yd; Warm Navy, 675 yd; Hyacinth Violet, 1,076 yd.

Weft: 10/2 cotton, Cherry Red, 906 yd; Warm Navy, 479 yd; Olive Green, 450 yd; Natural, 94 yd.

OTHER SUPPLIES

Coordinating sewing thread.

WARP LENGTH

459 ends 4½ yd long (includes floating selvedges; allows 12" for take-up, 32" for loom waste). *Note:* Allow 33" for each additional towel.

SETTS

Warp: 24 epi (2/dent in a 12-dent reed).
Weft: 27 ppi.

DIMENSIONS

Width in the reed: 193/12". Woven length: (measured under tension on the loom) 118", or four towels about 29½" each. Finished size: (after wet-finishing and hemming) four towels, 16½" × 24½" each.

I love symmetry, but I admire the beautiful work of other weavers who design asymmetric patterning with apparent ease. While designing these towels, I combined my love of symmetry and asymmetry. When folded in thirds lengthwise, each third is symmetrical; however, when the towel is open, the asymmetry becomes clear.

I chose a simple rosepath twill and created designs by playing with color placement. In my sampling, I wove one towel by randomly switching weft colors as I went, giving me a beautifully varied sampler, which I then used to plan the border for each towel. Two of the towels use a single weft color (except for the border), and the other two have an accent color throughout the body of the towel. Though you can weave these towels exactly as I did, I suggest putting on a longer warp so you can play with the colors and design your own custom borders.

While weaving, I noticed that the weft colors perfectly match the currants and blackberries I harvest from my garden in the summertime: bright red, black, and white among the dark green foliage. The bright colors of these towels remind me of a summer picnic with red and black currant jelly.

1 Wind a warp of 457 ends $4\frac{1}{2}$ yd long following the warp color order in Figure 1. Wind 2 additional ends of Hyacinth Violet to be used as floating selvedges and set them aside. Warp the loom using your preferred method, following the draft in Figure 2. Centering for a weaving width of $19\frac{3}{12}$, sley 2 per dent in a 12-dent reed. Sley the floating selvedges through the empty dents on each side of the warp and weight them over the back beam.

Weaving Notes/Tips

- The accent thread in the body of towels 1 and 3 is always placed on treadle
 1 between the two treadle 4 picks.
- Because there are many color changes, reduce the thickness of the weft yarn at the selvedges by ply splitting.
 - 1. With the shed open, pull the weft yarn tail up out of the shed about an inch from the selvedge.
 - 2. Split the plies.
 - 3. Take one ply back into the shed, around the floating selvedge, and back into the shed, bringing it out of the shed a few threads past where you brought it out originally. Beat.
 - 4. Trim the tails. This will keep your weft yarns at the same thickness and prevent buildup at the selvedges. You can carry the main color up the edge.

 ${f 2}$ Wind bobbins with each of the weft colors. Spread the warp with scrap yarn.

 $oldsymbol{3}$ With Warm Navy, weave the hem and border for towel 1 following the draft



in Figure 2 and the weft color order in Figure 3. Continue weaving the towel body until the towel measures about 271/2". Weave the hem.

4 Weave 2 picks of contrasting yarn to separate the towels. Weave the remaining towels in Cherry Red, Cherry Red with Warm Navy accents, and Olive

Green, following the draft and weft color orders and separating the towels with 2 picks of contrasting yarn.

5 Weave several picks of scrap yarn to secure the weft. Cut the fabric from the loom.

6 Zigzag-stitch the ends of the weaving and the ends of each

towel on each side of the contrasting picks.

7 Wet-finish as you intend to wash the finished towels. Tumble dry until damp-dry. Press and allow to dry completely.

8 Cut the towels apart between contrasting yarn lines and trim scrap yarn.

HEDDLE COUNT

Shaft 4 Shaft 3	114 114
Shaft 2	114
Shaft 1	115
Total	457

1. WARP COLOR ORDER

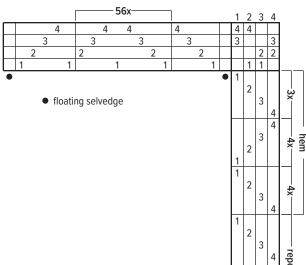
						- 6x					18x —		24			- 3	х —	_		2x			2x —	_	
						ΟX					IOX		ЭX							Z X			2 X		_
70		2	2				2	2								2		2	3		2			Γ	Natural
150				3		3					3		3				3			3			3	Γ	■ Warm Navy
237	21	3			3		3		24	3	2	3		2	1							3	2	5	Hyacinth Violet

457 ends total

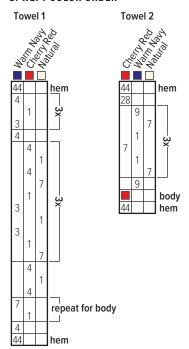


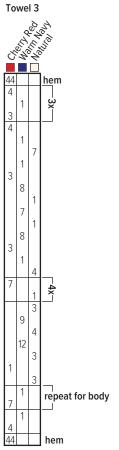
2. DRAFT

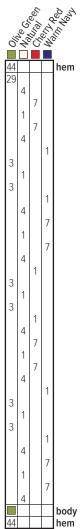
Towel 4



3. WEFT COLOR ORDER







9 Turn the hems up 1" and press. Turn the raw edges under to meet the fold. Press again. Sew the hems in place by hand or machine.

3

3

3

2

RESOURCES

Dixon, Anne. The Handweaver's Pattern Directory. Loveland, CO: Interweave, 2007, 83.

A mother of nine, MALYNDA ALLEN enjoys watching beautiful patterns emerge as she plays with colors at the loom.

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Changing Lanes Scarf

DEBORAH HEYMAN

STRUCTURE

Twill.

EQUIPMENT

8-shaft loom, 24" weaving width; 12-dent reed; 3 shuttles.

YARNS

Warp: 10/2 pearl cotton (4,200 yd/lb; UKI; Yarn Barn of Kansas), #07 Black, 1,060 yd; #01 White, 1,028 yd; #67 Light Orange, #114 Indies Orange, #148 Caribbean, #63 Yale Blue, #37 Bali, #03 Fuchsia, #102 Magenta, and #10 Gold, 32 yd each. 10/2 pearl cotton (4,200 yd /lb; Lunatic Fringe Yarns), #5 Green Yellow, 32 yd. Weft: 10/2 pearl cotton (UKI), #07 Black, 832 yd; #63 Yale Blue, 535 yd; #01 White, 4,761 yd.

When I first began sampling for my project, I was looking to experiment with the goal of achieving a pleated twill. My inspiration was a small photo of a ridged fabric sample by Angela K. Schneider from the May/June 2021 issue of *Handwoven* (Yarn Lab: Camilla Valley Farm 2/16 Worsted-Spun Wool, sample 3). Inspired also by artist Yaacov Agam's agamographs, I'd hoped the vertical stripes would create two different images depending on whether you looked at the fabric from the left or right.

Originally, I planned on keeping my columns in weft-faced and warp-faced twills consistent throughout the length of the fabric, although I soon discovered the design had more interesting contrasts and better color-value balance when I made occasional switches in my treadling to include treadles 1, 2, 7, and 8. Even so, for the sake of getting the fabric to pleat, I wove my sample using only treadles 3, 4, 5, and 6, but after washing, it didn't pleat! Darn. Maybe if I had used a smaller weft? Or an overspun yarn?

I reverted to my idea of occasionally changing the treadling to include eight treadles, feeling satisfied that the asymmetry of the design would be interesting enough in itself, even if the fabric didn't include the texture I'd anticipated.

Asymmetry appears in the colors in both the warp and the weft, and the front of the fabric is different from the back. It's intriguing to see how the colors change depending on whether they are on the white-dominant side or the black-dominant side. Look especially at the two shades of side-by-side Fuchsia and Magenta. On one side, they have a strong contrast, but on the other side, the two shades look quite similar. While it's not quite what I expected, I truly like the way the weaving turned out.

WARP LENGTH

594 ends 4 yd long (includes floating selvedges; allows 10" for take-up, 38" for loom waste and sampling; loom waste includes fringe).

SETTS

Warp: 28 epi (2-2-3/dent in a 12-dent reed).
Weft: about 23 ppi.

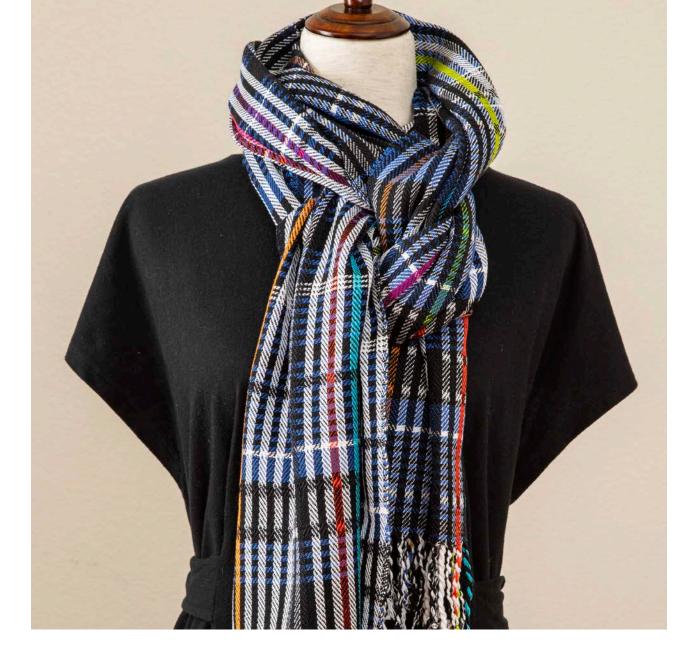
DIMENSIONS

Width in the reed: 214/12". Woven length: (measured under tension on the loom) 96". Finished size: (after wetfinishing and hemming) 19" × 87" plus 4" fringe.

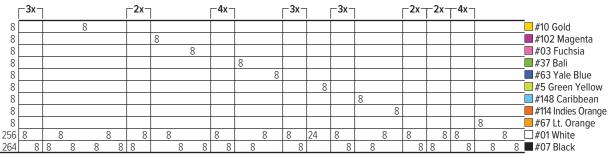
Additional Notes

- Because you'll be switching back and forth frequently between the blue and black wefts, it's best to carry the inactive weft yarn up along your selvedge.
- Only small quantities are required for most of the colors, making this a great project for substituting your own choice of colors as a stash buster.





1. WARP COLOR ORDER

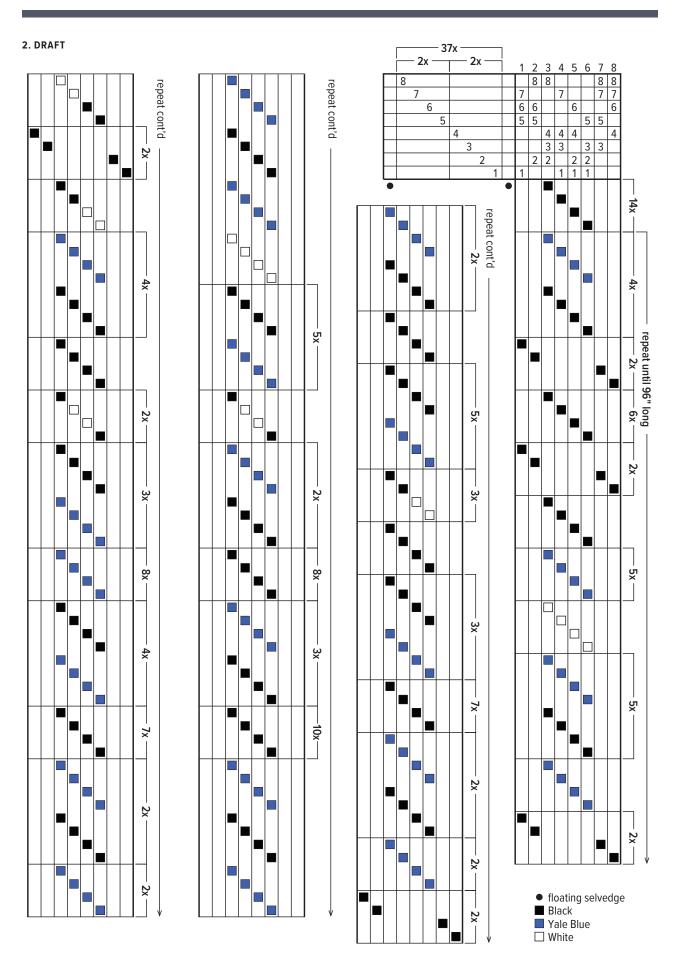


592 ends total

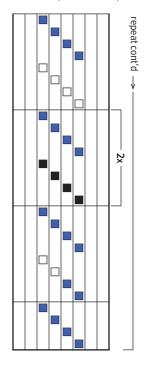
 $oldsymbol{1}$ Wind a warp of 592 ends 4 yd long following the warp color order in Figure 1. Wind 1 additional end each of White and Black to be used as floating

selvedges and set them aside. Warp the loom using your preferred method, following the draft in Figure 2. Centering for a weaving width of 214/12", sley

2-2-3 in a 12-dent reed. Sley the floating selvedges through empty dents on each side of the warp and weight them over the back beam.

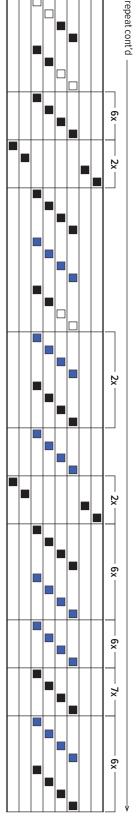


2. DRAFT (CONTINUED)



HEDDLE COUNT

Total	592
Shaft 1	74
Shaft 2	74
Shaft 3	74
Shaft 4	74
Shaft 5	74
Shaft 6	74
Shaft 7	74
Shaft 8	74





- $oldsymbol{2}$ Wind bobbins with each of the weft colors. Leaving at least 8" of unwoven warp for fringe, spread the warp with scrap yarn.
- $oldsymbol{3}$ Weave following the draft in Figure 2 until the piece measures about 96". Leaving at least 8" for fringe on both ends, cut the fabric from the loom. Trim the fringe ends to 6". Prepare a twisted fringe using 2 bundles of 9 ends in each fringe.
- 4 Wet-finish in warm water by gently agitating and then leaving the scarf to soak for 20 minutes. Line-dry.
- ${f 5}$ After wet-finishing, retie the fringe, placing the knots at 3½" and trimming the fringe to a length of 4".

RESOURCES

Field, Anne. Collapse Weave: Creating Three-Dimensional Cloth. North Pomfret, VT: Trafalgar Square Books, 2008.

DEBORAH HEYMAN tries to weave with the motto that your project might not have turned out "good" in the way you expected—it's just a different kind of "good."

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The Sheer Joy of **Weaving Together**

By Handwoven and Easy Weaving with Little Looms staff

Early this year, a group of more than 40 weavers gathered in Colorado for four days of weaving, camaraderie, and fun at Weave Together with Handwoven.



On the official agenda were classes covering a broad range of techniques for rigid-heddle, multi-shaft, tablet, inkle, pin-loom, and tapestry weaving (to say nothing of adventures in visible mending and making Dorset buttons), with teachers familiar to *Handwoven* readers, including Deb Essen, Sara Goldenberg White, Bobbie Irwin, Sarah Neubert, John Mullarkey, Gabi van Tassell, Kate Larson, and Angela K. Schneider.

On the unofficial agenda were good conversations with weaving friends old and new, a marketplace full of goodies to shop for, and many, many door prizes.

Perhaps the best part was the combined show-and-tell/low-key fashion show that wrapped up the event. Weavers walked around the room admiring the finished pieces others brought with them, as well as projects woven and finished in classes that week and even in-progress items still on the loom. There were scarves and tapestries, designs full of texture and color, and an incredible array of bands—including a memorable lace-adorned, jewelembellished inkle band made from handspun tussah silk described as a "gown-less evening strap." The creativity and humor of weavers never cease to amaze!

We hope the work you see here and online delights and inspires you as much as it enchanted us. You can see more pictures and a short video from Weave Together at LT.Media/Weave -Together-2024.



Top: Weaving on a pin loom. Second from top: Cynthia beams as she shows off the lacy techniques and textures she learned in her rigid-heddle class. Above: Weaving for iridescence on a shaft loom. Right: Students concentrate as they learn to weave tapestry.



PROJECT DIRECTORY

Designer/Weaver	Project	Page	Structure	Shafts	Levels
Allen, Malynda	Summer Berry Towels	66	Twill	4	All levels
Chiu, Tien	Eventide Elegance Scarf	51	Twill	4	All levels
Cox, Cynthia	Core Spun Comfort Rug	42	Plain weave	2 or 4	All levels
Fox, Rebecca	A Slice of Layer Cake Runner*	77	Plain weave	2	All levels
Gibson, Brenda	Emerging Asymmetry Scarf	54	Deflected doubleweave	8	AB, I, A
Heyman, Deborah	Changing Lanes Scarf	70	Twill	8	I, A
Hubbart, Carla Jeanne	Zebras on the Serengeti*	77	Plain weave with color-and-weave	RH	AB, I, A
Knisely, Tom	Sand and Sky Stitched Double Cloth Rug	38	Stitched double cloth twill	8	I, A
Lemons, Sandi	Tuscan Summer Rug	24	Krokbragd	3	I, A
Liles, Suzie	Building Blocks Rug	34	Taqueté	4	AB, I, A
Lough, Laura	Mix It Up Mug Rugs*	77	Plain weave	2 or 4	All levels
Lynde, Robin	Cascading Colors Scarves	62	Twill with clasped warp	4	I, A
Marchant, Catherine	Twice-Woven Rug	32	Plain weave	2 or 4	All levels
Richardson, Frances	Salts Mill Rug	44	Weft-faced plain weave	2 or 4	I, A

Levels indicate weaving skills, not sewing skills. AB = Advanced Beginner, I = Intermediate, A = Advanced. "All levels" includes very new weavers. *This is a subscriber-exclusive project; see page 77 for more details.

YARN SUPPLIERS

Baah Yarn, baahyarn.com (Hubbart 77).

Eugene Textile Center, eugenetextile center.com (Liles 34).

Fuzzy Ewe Farm, Fuzzy Ewe Farm. etsy .com (Cox 42)

Georgia Yarn Company, gayarn.com (Allen 66).

Halcyon Yarn, halcyonyarn.com (Lough 77).

Handweavers Studio, handweavers .co.uk (Gibson 54).

Lunatic Fringe Yarns, lunaticfringe yarns.com (Heyman 70).

Maurice Brassard et Fils, mbrassard .com (Chiu 51).

Meridian Jacobs, meridianjacobs.com (Lynde 62).

Quilt Lizzy, quiltlizzy.com (Fox 77).

R&M Yarns, rmyarns.com (Richardson 44).

Rainbow Fiber Co-Op, rainbowfiber coop.org (Cox 42).

Red Stone Glen Fiber Arts Center, redstoneglen.com (Knisely 38).

Tabby Tree Weaver, tabbytree weaver.com (Lemons 24).

Treenway Silks, treenwaysilks.com (Gibson 54).

WEBS, yarn.com (Fox 77).

Yarn Barn of Kansas, yarnbarn-ks.com (Fox 77, Gibson 54, Heyman 70, Richardson 44).

FINISHING TECHNIQUES



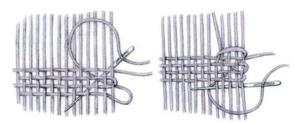
Twisting (or plying) the fringe

Divide the number of threads for each fringe into two groups. Twist each group clockwise until it kinks. Bring both groups together and allow them to twist around each other counterclockwise (or twist in that direction). Secure the ends with an overhand knot. (Use the same method to make a plied cord by attaching one end to a stationary object.)

Double (Italian) hemstitching

Weave several picks of plain weave (or the basic structure of the piece), ending with the shuttle on the right side if you are right-handed, the left side if you are left-handed. Measure a length of weft four times the warp width, cut, and thread this tail into a blunt tapestry needle. Take the

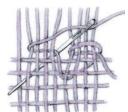
needle under a selected group of warp threads above the fell and bring the needle back to encircle the ends. Next, pass the needle under the same ends but come up two or more weft rows down from the fell. Then bring the needle back around the same group of ends below the fell. Repeat, encircling the next group of ends.



Simple hemstitching

Weave several picks of plain weave (or the basic structure of the piece), ending with the shuttle on the right side if you are right-handed, the left side if you are left-handed. Measure a length of weft three times the warp width and cut, leaving the measured length as a tail. Thread the tail into a blunt tapestry needle.

Take the needle under a selected group of ends above the fell and bring it up and back to the starting point, encircling the same group of ends. Pass the needle under the same group, bringing it out through the weaving two (or more) weft threads below the fell. Repeat for each group of ends across the fell. Needle-weave the tail into the selvedge and trim.









Bonus Projects for Handwoven Subscribers

If you enjoyed this issue, head over to the Handwoven website for even more projects! Get your downloads now at LT.Media/HWSU2024-Extras.

1. Zebras on the Serengeti

CARLA JEANNE HUBBART

Images from an African safari inspired this rigid-heddlewoven scarf. Designer Carla Jeanne Hubbart cleverly combines solid black and white yarns with a verdant handpainted yarn to evoke images of zebras hiding in a lush, rainy-season savanna.

2. A Slice of Layer Cake Runner

REBECCA FOX

Strips cut from a quilt-fabric layer cake make up the weft in this sweet table runner. To show off the fabric's sophisticated neutral palette, designer Rebecca Fox opts for a crammed-and-spaced warp that locks in the weft while giving it room to shine.

3. Mix It Up Mug Rugs

LAURA LOUGH

Use up even the smallest amounts of stash yarns in these cute and clever mug rugs. Employing a simple handmanipulated technique—and multiple put-ups of oddsand-ends stash yarns—designer Laura Lough creates thick, colorful yarn chains perfect for weaving rugs for your glassware (or your floor!).



HANDWOVEN. Retail Shop Directory

ALASKA



Untangled Yarn & Fiber

1624 Tongass Ave Ketchikan, AK 99901 (907) 225-YARN (9276) www.untangledyarnandfiber.com Ketchikan's key stop for fiber artists. Ashford dealer. Looms, wheels, supplies, hand-dyed yarn local and sourced directly from dyers. Open year-round or see our website.

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 tempeyarnonline.com

COLORADO

Blazing Star Ranch

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

Entwine Studio

4003 North Weber St Building H Colorado Springs, CO 80907 (719) 761-1211 entwinecos.com

Lambspun of Colorado

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

Serendipity Yarn & Gifts PO Box 5120 Buena Vista, CO 81211

(719) 395-3110 serendipityyarn.com

FLORIDA

Sheep Thrills

4701 North University Dr Sunrise, FL 33351 (954) 742-1908 sheepthrillsknitting.com

GEORGIA



Georgia Yarn Company

4991 Penfield Rd Union Point, GA 30669 (706) 453-7603 gayarn.com Selling cotton, linen and silk yarns.

ILLINOIS

Fine Line Creative Arts Center

37W570 Bolcum Rd. St Charles, IL 60175 (630) 584-9443 fineline.org

INDIANA

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

KANSAS

Yarn Barn of Kansas

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

KENTUCKY

LSH Creations

1584 WELLESLEY DRIVE Lexington, KY 40513 (859) 321-7831 Ishcreations.com

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

MAINE

Belfast Fiber Arts

171 High St., Suite 8 Belfast, ME 04915 (207) 323-5248 belfastfiberarts.com

Halcyon Yarn

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

MARYLAND

Black Sheep Yarn Shop

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

MASSACHUSSETTS

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 varn.com

MICHIGAN

Fibershed Yarn and Fiber Arts

111 S. Lake St. Boyne City, MI 49712 (503) 209-0431 michiganfibershed.com

Heritage Spin & Weaving

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

Leelanau Fiber

310 N. St. Joseph St. PO Box 52 Suttons Bay, MI 49682 (231) 271-9276 www.leelanaufiber.com/

The Hen House Quilt Shop

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

MINNESOTA

Bella's Flock

11 Division St E Suite 200 Buffalo, MN 55313 (612) 741-6437 https://bellasflock.com

Weavers Guild of Minnesota

1011 Washington Ave S, #350 Minneapolis, MN 55415 (612) 436-0463 weaversquildmn.org

MISSOURI

Hillcreek Yarn Shoppe

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

NEBRASKA

Plum Nelly

743 W 2nd Street Hastings, NE 68901 theplumnelly.com

NEW HAMPSHIRE

Harrisville Designs

PO Box 806 Harrisville, NH 03450 (603) 827-3996 harrisville.com

NEW JERSEY

The Spinnery

33 Race St Frenchtown, NJ 08825 (908) 996-9004 thespinnery.square.site

NEW MEXICO

Espanola Valley Fiber Arts Center

325 South Paseo de Onate Espanola, NM 87532 (505) 747-3577

www.nmfiberartscenter.org

NEW YORK CeCe's Wool

2080 Western Ave Suite 138 Guilderland, NY 12084

(518) 779-9985 www.ceceswool.com

Daft Dames Handcrafts

13384 Main Rd Akron, NY 14001 (716) 542-4235

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

NORTH CAROLINA

Silver Threads & Golden Needles

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

Studio 256

106 S Greene Street Wadesboro, NC 28170 (704) 507-1160 Studio256.online

The Tail Spinner

109 North Wilmington Street Richlands, NC 28574 (910) 324-6166 www.thetailspinner.com



Yadkin Valley Fiber Center

321 East Main Street Elkin, NC 28621 our mailing address: Post Office Box 631 Elkin, NC 28621 (919) 260-9725 yadkinvalleyfibercenter.org Fostering creativity in the fiber arts with beginning to advanced classes, Master Weaving Program and guest instructors throughout the year.

OREGON

Eugene Textile Center

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

Little Hawk Yarns

544 SE Main Street Roseburg, OR 97470 (458) 262-0046 www.littlehawkyarns.com

Pacific Wool & Fiber

13520 SE Southwood Drive Prineville OR 97754 (503) 538-4741 pacificwoolandfiber.com

PENNSYLVANIA

Twist Knitting & Spinning

5743 Route 202 Lahaska, PA 18938 (215) 794-3020 twistknittingandspinning.com

SOUTH CAROLINA LoftyFiber

415 E 1st Ave Easley, SC 29640 864-810-4747 loftyfiber.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

Yarnivore

2357 NW Military Hwy San Antonio, TX 78231 (210) 979-8255 varnivoresa.net

UTAH

Needlepoint Joint

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

WISCONSIN

Icon Fiber Arts

590 Redbird Cir De Pere, WI 54115 (920) 200-8398 iconfiberarts.com

Fiber Garden

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

Fiberwood Studio

2709 N. 92nd St Milwaukee, WI 53222 (414) 302-1849 fiberwoodstudio.com

WYOMING



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



Jane Stafford Textiles

142 Richard Flack Road Salt Spring Island, B.C. V8K 1N4 (250) 537-9468 https://janestaffordtextiles.com/ Retailer for all your weaving needs including yarns, kits, supplies, equipment and hand-dyed silks. Louet loom specialist & dealer. NA wholesaler of Venne yarns.

JAPAN

Kakara Woolworks

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

UNITED KINGDOM

Coorie Creative

82 Murray Place Stirling, Scotland, UK, FK8 2XB +441786 450416 www.coorie-creative.co.uk/

George Weil & Sons

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

The Handweavers Studio and

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

Weft Blown Ltd

17 Ailsa View West Kilbride North Ayrshire Scotland, UK, KA23 9GA by appointment only +44 (0) 7930 657900 info@weftblown.com

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Tackling Textile Waste by Weaving

By Regina McInnes

While at the local tip (that's what we Aussies call the dump), I was struck by the number of textiles the bulldozer was pushing around the waste pit among the building waste, appliances, and plastics of every size and shape.

It's not news that many clothes end up in the trash. According to TheRoundup (see Resources):

- The global fashion industry makes more than 100 billion garments each year.
- 92 million tons of textile waste are produced each year.
- 7% of total worldwide waste is textiles.
- 9% of microplastics in the oceans come from textiles.
- In the US, 17 million tons of textile waste are sent to the dump every year—about 112 pounds per person. How did we get here? The fast fashion industry emerged in the

fashion industry emerged in the twentieth century as a result of advances in production and marketing technologies. Rather than the traditional fashion cycle of introducing new designs seasonally, fast fashion manufacturers continually create a stream of trendy and inexpensive clothes, often made of synthetic fibers, to keep consumers buying. And buy they do—to keep up with those very same trends.

As a result we now own many more clothes than the previous generation did, and we wear each item less often. My father grew up on a small farm in rural Hungary in a family that was neither rich nor poor.



Regina used scraps of her handwoven fabric to make a platypus for a special fouryear-old. When it becomes raggedy and the child moves on to other toys, the platypus can even go onto the compost heap to break down.

As a little boy, he owned one pair of everyday shorts and a shirt, plus a good outfit for Sundays. When I consider my wardrobe, I own much more than I need—and a fair few of my clothes are fast-fashion items made with nondegradable fibers.

What does all this have to do with weaving?

After the long, slow process of planning a draft, winding a warp, and weaving the cloth, weavers are not likely to carelessly throw away the result, even when it doesn't turn out exactly as we'd hoped.

I keep pieces of my woven fabric in a box at the bottom of my wardrobe, and I rummage through that box when I'm in search of just the right fabric for a new project. One such project was a stuffed platypus that has become a much-loved toy for four-year-old Rosy. When the platypus has ended its life, it can go onto the compost heap, as all fibers used in it—even the filling—are natural and will break down quickly.

Recently, while I was lining up at a coffee shop, I noticed a woman in front of me wearing a jacket that she had obviously designed and made herself. The way she'd cleverly joined several pieces of woven material to

make a unique design was striking. She was very pleased with my praise, and I'm sure she won't throw that garment away in a hurry.

This incident strengthened my resolve to continue weaving and creating. I will buy fewer fast-fashion items, find more secondhand items, search for better-quality clothing and home textiles, and use them all longer.

Weaving for purpose and pleasure is part of the process of being aware of the time, energy, and resources that go into textile production. So, keep weaving, spinning, knitting, and making beautiful things!

REGINA MCINNES loves all fiber arts and creating unique and beautiful things.

RESOURCES

Ruiz, Arabella. "17 Most Worrying Textile
Waste Statistics and Facts."
TheRoundup, April 11, 2023. theroundup
.org/textile-waste-statistics.
Wilén, Suss, and David Goldsmith.
"Handwoven Textiles—A Step on the
Path to Sustainable Fashion?"
University of Borås, November 9, 2018.
phys.org/news/2018-11-handwoven
-textilesa-path-sustainable-fashion
.html.