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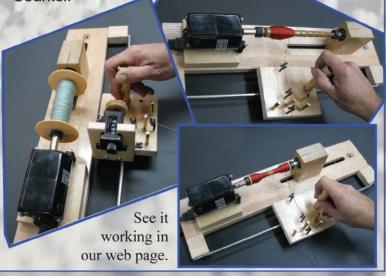




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"If this whole weaving thing doesn't work out, we could always try that," said my husband, pointing to the wall behind me. Large harnesses with flat steel heddles lined the walls of the restaurant where we were eating in Providence, Rhode Island. Quickly, I noted the width and counted harnesses (eight) before speculating about

how many other diners would know what they were looking at. Not many, I guessed, unless they were weavers or friends or family of a weaver.

As Virginia Postrel points out in her book *The Fabric of Civilization* (reviewed on page 12), fabric-related terms imbue (a dyeing-related word) our language yet are often disconnected from their source, just as the harnesses were disconnected from the loom. We throw around terms like "dyed in the wool," "weaving through traffic," or "knitted brows" without contemplating their origins. Fabric has been, is, and always will be an important component of civilization and our language.

This issue focuses on weaving that moves out of the woven grid during wet-finishing. The deflection might be caused by the yarns, the weave structure, or a combination of the two. Besides the obvious structural candidate, deflected doubleweave, there are also projects that use structures such as honeycomb, M's and O's, and spot Bronson. Continuing along the same theme are two technique articles: adapting double knitting to doubleweave and sashiko-inspired weaving. Tom Knisely writes about multiple ways of keeping weaving records, and for our Spotlight, Karen Donde describes Nevan Carling's passion for refurbishing and cataloging old looms. This issue also contains the first of a series on best weaving practices for beginning and intermediate weavers by Susan Bateman and Melissa Parsons.

I'm happy that this whole weaving thing is working out for me; I love

being part of a community that celebrates the very *fabric* of our lives.

Weave well,

Swan



# **FUTURE THEMES**

# JANUARY/FEBRUARY 2022 Deep Stash

We all have yarn stashes, but have we ever looked at them critically? What yarns should be in a stash? How should you care for a stash? Is there really such a thing as a stash-busting project? This issue will feature projects and articles that are all about using, expanding, or improving your stash, whether that

means adding specialty art yarns or workhorse staples.

# MARCH/APRIL 2022

National Parks and Museums
Being stuck at home for much
of 2020 and some of 2021
made many of us long for travel.
What park or museum did you
miss the most? This issue will
include projects that pay homage to national treasures both
natural and man-made.

# MAY/JUNE 2022

Plain and Fancy Twills

Some twills are so simple they can feel almost ordinary—until you realize that all those little floats add texture, drape, stretch, and lots of design opportunities. On the opposite end of the spectrum are the fancy twills that have all those same characteristics, while looking anything but simple.

# HANDWOVEN.

IOVEMBER/DECEMBER 2021, Volume XLII Number 5

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Handwoven" (ISSN 0198-8212) is published seven times a year in February, April (special issue), May, July, September, October (special issue), and November with a total of 7 issues by Long Thread Media LLC, 1300 Riverside Ave, Ste 206, Fort Collins, CO 80524; phone (888) 480-5464. Periodicals postage paid at Fort Collins, CO, and additional mailing offices. All contents of this issue of Handwoven" are copyrighted by Long Thread Media LLC, 2021. All rights reserved. Projects and information are for inspiration and personal use only. Handwoven" does not recommend, approve, or endorse any of the advertisers, products, services, or views advertised in Handwoven". Nor does Handwoven evaluate the advertisers' claims in any way. You should, therefore, use your own judgment in evaluating the advertisers, products, services, and views advertised in Handwoven". Reproduction in whole or in part is prohibited, except by permission of the publisher. Subscription rate is \$29.99/year in the U.S..\$39.99/year in Canada, and \$49.99/year in other countries, surface delivery. Printed in the U.S.A.

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

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

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

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# Letters

Stories, tips, tricks, and questions from *Handwoven* readers

I love Cheryl M. Maid's suggestion in the September/ October 2021 issue (Letters) about including readers' weaving tips. Here are two of mine: First, use color-coded quilting clips (also known as sewing clips or wonder clips) to hold the heddles at the sides of the shafts. Second. use coded stick-on numbers on the shafts to match the quilting clips so you can see at a glance which shafts you have lifted.

Thank you for a great magazine every time.

-Karen Tayler, via email



Shafts with color-coded stickers and coordinating quilting clips.



One of Carol's handwoven baby blankets on the loom. She wove two, one of which was inspired by palaka, a traditional Hawaiian plaid, and the other featuring a family tartan.

The May/June 2021 issue covering plaids and checks was very informative and on point for me. Because we live in Hawaii, it was especially nice to see palaka revisited. I made a blanket inspired by palaka fabric for my first grandchild. I enlarged the pattern and added a third color. For my second grandchild's blanket, I enlarged a traditional family tartan.

I really appreciate *Handwoven* as a source of information and inspiration.

-Carol, via email

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# **Project Index**









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Carling working at the Wilcox House loom.

# Nevan Carling

A Passionate Champion for Loom-Building Traditions

BY KAREN DONDE

When Nevan Carling looks at an old loom, he sees a miniature house, a microcosm reflecting the development of building traditions. Carling is a timber framer and carpenter who prefers traditional methods and hand tools.

Carling calls Hartford, Connecticut, home and is also a student of archaeology and heritage management at the University of York in England. When Kate Smith, director and head teacher at Marshfield School of Weaving, asked whether he would like to help with a research project called the Great American Loom Survey, he didn't hesitate. As Carling likes to say, the project was perfect for somebody "young and

spry." Carling happily drove around New England and searched for old looms to record in exchange for weaving lessons when he delivered recovered looms to Marshfield.

According to Carling, the early looms still found throughout New England embody rather idiosyncratic timber-framing traditions. For example, in western Connecticut along the border with New York, you can find an amazing combina-

tion of Anglo and Dutch timber framing in both the houses and looms from the eighteenth and nineteenth centuries. While most houses from those centuries are gone, several looms remain.

"To be able to see, on a micro level, the creation of a New World style of timber framing, a wholly American style, is very interesting to me," he said.

Carling was given his first loom in 2019 and started restoring it the following summer when the pandemic forced him to return home from study abroad. His mother is a knitter and the owner of the Village Wool Yarn Shop in Glastonbury, so the idea of creating cloth with yarn wasn't unfamiliar to him.

# THE BEGINNING

His story really began, though, when he was 13, about six years before acquiring that first loom and, yes, that makes Carling 20 now, but don't let his age fool you.

"At 13, I got interested in blacksmithing and was given a forge and anvil," he said. Not surprisingly, his Hartford neighbors were unhappy about the open flame and loud clanging in his backyard. The next year, he tried building his own blacksmithing workshop. He set to work using hand tools he had found and restored and quickly discovered he was a much better woodworker than blacksmith.

"As I started to learn more about woodworking traditions and timber framing," continued Carling, whose father is English, "I realized I saw myself in the development of New England timber-framing styles from the seventeenth to eighteenth centuries: an English skeleton on the inside, but wholly American facade on the outside. It was a way to connect with my father's side of the family, being able to look at buildings and say, 'This is a part of my heritage, and I really want to preserve that heritage."

Supporting his interest, Carling's parents dropped him off in Latvia for an intense timber-framing course when he was just 16. Carling helped build two houses while he was there, giving him solid foundational knowledge.

When he returned to the United States, he applied that knowledge to his own building projects while also

Carling's parents dropped him off in Latvia for an intense timber-framing course when he was just 16. Carling helped build two houses while he was there, giving him solid foundational knowledge.

working on a team preserving old houses. In a few years, he was off to York to start university. Being so close to continental Europe, he got involved with Carpenters Without Borders, which enabled him to learn continental hewing techniques.

Then the pandemic brought him home to Connecticut.

## A GRAND DISCOVERY

In the process of restoring his loom that summer, Carling contacted the Marshfield School with questions. That conversation led to his work on the loom survey, which he now intends to document in Mortise & Tenon Magazine, a publication focused on preindustrial woodworking.

As part of the survey, Carling contacted every historical society in Connecticut asking if it had an old loom. He ended up speaking with Carol Laun, archivist and curator for the Salmon Brook Historical Society in Granby, Connecticut. Laun told him the society had just been given a house on the historic Wilcox property. While cleaning it out, they found an old barn loom in the attic. At Laun's invitation, Carling went to check it out.

"The Wilcox house is amazing," Carling said. "It remained in the same family from 1819 to 2019." The attic was filled with all kinds of weaving and spinning tools, including a warping board built into the queen posts of the roofing system. "It was a complete weaver's workshop."

Even more rare was the paper trail Laun found in probate records that may reference this loom. An 1801 entry from the ledger of Moses Godard, a weaver and the first proprietor of the house, shows a payment to Nahun (Nathan) Holcomb for "framing a loom and repairing his looms."

The picture is complicated because the next owner of the house, Sadoce Wilcox, also appears to have been a weaver. Probate records show a loom listed in his 1833 inventory, in addition to those for his father and grandfather from 1777 and 1773. According to Laun, "The first Wilcox to come to the colonies in 1635 was a linen weaver."

It is impossible to know whether this loom was the one Godard had built or one brought by the Wilcox family. However, based on construction methods and telltale marks Carling found, he said it very likely was built between 1801 and 1839. "These four-post-and-rail looms appeared around the end of the eighteenth century and continued into the nineteenth," he explained.

Intrigued by the loom's provenance and eager to document it, Carling agreed to restore the loom for display. He took it apart and then cleaned the wood with alcohol and oiled it with pine tar and turpentine before reassembling it. He carefully preserved any chalk counting marks he found on it, which probably were made by the last weaver to use it.





Photos by Rafael Franco

Left: Carling began woodworking when he was just 13 years old. His passion for the craft led him to work with Carpenters Without Borders in continental Europe while on school breaks. Right: Carling finds he prefers traditional hand tools for woodworking.

Low beams and a very steep staircase leading to the attic made it impractical for visitors to see the loom in its natural habitat, so Carling suggested the well-lit front parlor as an alternate exhibit location. He suspects the loom may have been moved there for weaving during summers based on his experience working in the attic in August.

The Great American Loom Survey has several goals, according to Carling, including learning more about who built the old looms. It seems probable the builder of this loom was Holcomb, and Carling, whose main interest is how the looms were built, thinks whoever built it was a timber framer.

"He uses a joint I only see in looms built by timber framers," he said. It's a hard joint to cut, so the person who built this loom was very skilled and thought about it the same way Carling does—as if the loom is really a tiny house.

Carling said he sees evidence of three types of Early American loom makers. First were weavers who built their own looms. They knew how a loom worked but were not great carpenters or blacksmiths, evidenced by the finishing and alignment of the wood and metal parts.

Second, there were joiners or fine woodworkers who created perfect, tight joints. They knew what a loom looked like and how it functioned but did not understand the stresses the loom would undergo. Their perfect tight joints would eventually blow out under weaving tension and beating.

Finally, in the case of the Wilcox loom, a timber framer appears to have worked closely with the weaver making sure to address particular requirements for the loom and the

order in which parts needed to be made. For example, the loom must be framed before determining the correct arc for the ratchet and pawl. Carling can even imagine the conversations that took place.

"The weaver asks the timber framer, 'Can you build a loom for me?' The timber framer heads off to the sawyer to get offcuts," Carling envisions.

"When the loom is assembled in a rough state," he continues, "the timber framer and weaver pack it up and head to the blacksmith shop. So you have at least three people present: the blacksmith, the timber framer, and the weaver, all having a conversation about how best to fit all these things together so the weaver can produce cloth."

Carling relates the interconnectedness of that process to his current journey. "I am quite stunned at how this loom has opened up opportunities not only for myself but for a lot of other people, like [those at] Marshfield," he said.

# LOOKING FORWARD

"Loom timber framing brings me directly into the historic preservation of houses and working in Europe," he said. He has also reached out to British timber framers about organizing a survey of British looms.

The archaeologist in him wants to create a typology of the movement of horizontal looms from their earliest appearance in England in

the twelfth and thirteenth centuries to New World traditions. However, he has a few steps to finish first.

In September 2021 he returned to the University of York. For his senior dissertation, he wants to use the data collected for the Great American Loom Survey to create a publicly accessible map, pinning the looms by location and including details about each one. Already committed to completing his master's degree at York, he sees this as an ongoing investigation that could take years.

Carling is also learning French. His work with Carpenters Without Borders set his sights on another dream: being part of the restoration of Notre-Dame de Paris.

"I don't even have to touch any wood," he said, bubbling with obvious passion. "If I could be accepted as a student on the project and just stand there, watching and learning from these French carpenters as they raise the new roof on the cathedral, that would be so amazing."

With so many ambitions, Carling doesn't expect to become a serious weaver, although he has managed to weave enough denim to have a pair of jeans made for himself. He said he may keep a loom warped for occasional shuttle throwing, but his focus will remain on the looms, how they were made, and the building traditions they represent.

"I don't even have to touch any wood," he said, bubbling with obvious passion. "If I could be accepted as a student on the project and just stand there, watching and learning from these French carpenters as they raise the new roof on the cathedral, that would be so amazing."





# 3-D Hand Loom Weaving: Sculptural Tools and Techniques Sally Eyring

The loom, as it comes to us, is just a starting point. Any modifications made to the loom, other weaving tools, and the weaving process are reflections of the creative problem-solving skills and interest of the weaver. In 3-D Hand Loom Weaving, Sally Eyring offers a glimpse into her fascination with shaped weaving, her depth of knowledge of complex weave structures, and her propensity for pushing beyond the fundamental rules of weaving.

This book begins by introducing new terminology and tools and challenges the notion that all weaving output should be rectangular. The author is clear that an understanding of the fundamental rules of weaving is essential, but innovation occurs when rules are broken. Two such rules

center around tension and take-up. Eyring demonstrates that you can be in full control of both, even when weaving dimensional textiles, by implementing some simple, logical—and rule-breaking—techniques, while using a handful of homemade tools designed to control warp and cloth tension.

At first glance, the techniques and tools can be intimidating, but the author provides clear and detailed explanations of all aspects of the methods and tools mentioned. Eyring breaks down complex maneuvers into a series of logical steps and offers up a menu of à la carte items that can be used to create just about any three-dimensional textile. Eyring describes the rod beam with multiple ratchets and pawls (which control the tension of separate groups of warp threads), the infinite-tensioning system

CIVILIZATION

HOW TEXTILES MADE

THE WORLD

RGINIA POSTREL

(which provides proper tension on individual warp ends), and the cloth trap (which deals with the tension of woven cloth). The loom modifications detailed are not merely makeshift or temporary.

The author doesn't expect the reader to jump into tackling the advanced skills right away. Instead, Eyring offers a few starter projects to introduce her concepts. Using this book, you could begin to create a body of work that builds on each new skill.

3-D Hand Loom Weaving serves as a road map for weavers who want to explore dimensional/shaped weaving and loom modifications but don't know where to start. It will surely inspire contemporary weavers as well as generations to come. Eyring offers a parachute for those ready to take the leap. Where you land is anybody's guess.

-Susie Taylor

Atglen, Pennsylvania: Schiffer, 2020. Spiralbound, 192 pages, \$45. ISBN 978-0764359903.

# The Fabric of Civilization: How Textiles Made the World Virginia Postrel

Many weavers (and even some nonweavers) can name at least a few textile-related historical events: the invention of Eli Whitney's cotton gin or Jacquard's mechanized loom, the progenitor of today's computers. But how many know that textiles spurred the Neolithic Revolution in agriculture, that weaving developed in tandem with mathematics, that a silkworm disease set Louis Pasteur on the path to his great medical discoveries, and that a sixteenth-century English curate's sock-knitting machine is inspiring the cuttingedge 3D printers of today?

These stories, and many more, are spun with humor and wonder by award-winning journalist and scholar Virginia Postrel in *The* Fabric of Civilization: How Textiles Made the World. For any lover of history or textiles, for anyone blessed with a curious mind, this book is a romp through space and time, from Neanderthals to now, from the dawn

of civilization in the Tigris

Valley to the labs of Silicon Valley. In chapters organized around each aspect of textile production—fiber, thread, cloth, dye, traders, consumers, and innovators—Postrel explores the impacts of textile production on human history. She looks at how, "in ways both subtle and obvious, beautiful and terrible. textiles made our world." Postrel weaves together not only the evolution of textile production but also how it drove developments in written language, mathematics, monetary systems, and science. She traces the intersection of textiles with larger social and cultural movements, such as labor rights, clean-water activism, and social welfare.

Postrel is a masterful storyteller, and her writing is deft, clear, and entertaining. She is not a fiber artist, yet her grasp of textile materials and techniques is excellent. A knowledge-

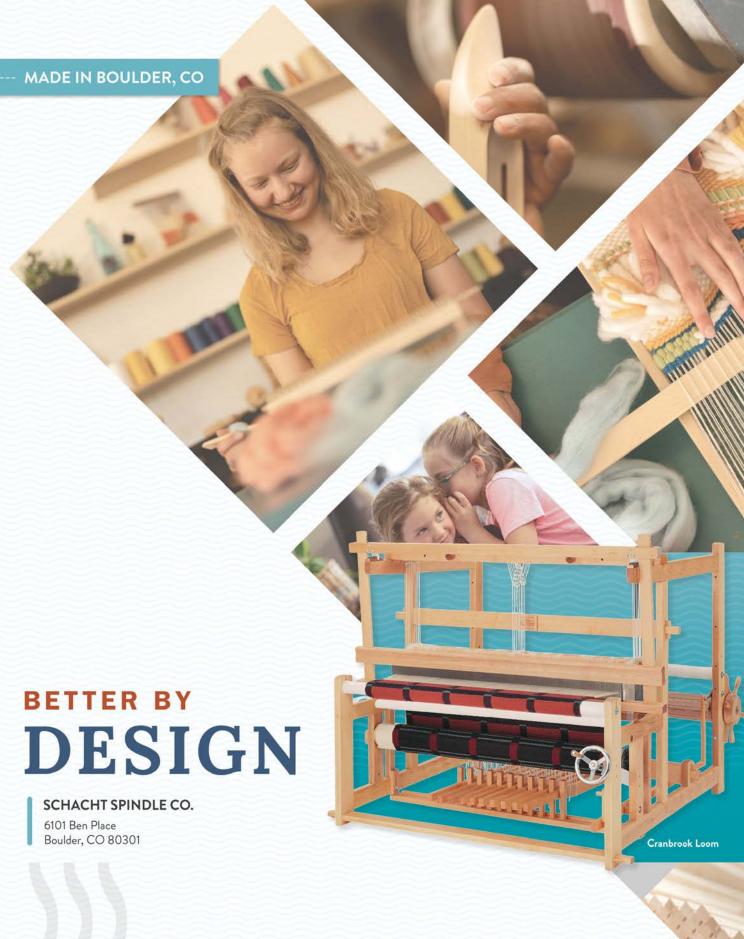
able weaver, spinner, or dyer reading this book will not be annoyed by inaccuracies, while a reader less familiar with these crafts will find enough background to understand the stories.

Postrel does not shy away from controversial issues. She frankly acknowledges the negative impacts of textile production, from enslavement in the American South to the economic enslavement of the Industrial Revolution and the worldwide environmental impacts of textile production. She also doesn't hesitate to challenge popular myths, contrasting the strong toxins released by a traditional natural-dye workshop in India with the clean operation of a state-of-the-art, environmentally conscious dye house in Los Angeles, California.

As Postrel observes, we wear, make, buy, and discard cloth every day, often without a thought. If everyone read this book, I think we would approach the fabric of our lives with more appreciation, wonder, mindfulness, and care.

-Anita Osterhaug

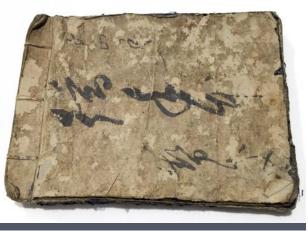
New York: Basic Books, 2021. Paperback, 320 pages, \$17.99. ISBN 978-1-5416-1762-9.











Photos by Tom Knisely

This book belonged to a Japanese weaver before becoming part of Tom's collection. The plain-weave swatches provided all the information needed to re-create the plaid and stripe designs.

# Keeping Records

BY TOM KNISELY



Come January first, my New Year's resolutions are to keep better records and sample more. There is a far better chance that I will keep to these resolutions than my usual ones of losing weight and getting more exercise. I know many of you reading this save files on your computer. You save weaving drafts with pertinent information on thread, thread sizes, and amounts required to weave a given project, along with WIFs of all the treadling variations. I admire you all, but I am just an old-fashioned guy. I need to hold a woven sample in my hand to look at along with the draft and actual snippets of the yarns used to weave the sample. Observing how other weavers keep records of their weaving shamed me and made me realize that this doesn't have to be a difficult task. I just need to get better organized and develop a system that will work well for me.

A few years ago, I met Stephen Szczepanek from Sri Threads in Brooklyn, New York. Stephen is a dealer in antique and vintage Japanese rural textiles. Although Stephen is not a weaver himself, he has a keen eye for collecting and buying fabulous examples of handwoven fabrics that were created for utilitarian use. These fabrics are mainly woven in plain weave, and the designs are created with different arrangements of stripes and checks and often involve fabrics dyed with indigo. Stephen called me one day to offer me a chance to buy a weaver's pattern book containing dozens of small swatches of handwoven cloth. Of course, I bought the book. I love being able to study these small pieces of cloth and share my

findings with other weavers. They're a wonderful source of inspiration.

In this example of record keeping, because the fabrics are mainly plain weave, a sample of cloth is all that is needed. You can easily count the threads making up the stripe arrangement, and then make changes to thread counts or colors to suit your own needs. It's ingenious. These small snippets can be the inspiration for anything from doubleweave blankets to rigid-heddle towels.

The other means of record keeping that I admire for its simplicity is the system used for weaving tartans. It was explained to me that weavers of old kept records for the different clans' tartan color sequences by wrapping colored yarns around a wooden stick in the same order in which they appear on the loom. Now how smart is that? There is no need for a

threading or treadling draft nor a tie-up. Tartans are woven in 2/2 twill. That's all you need to know. The color order in the warp and weft is the important factor that distinguishes the clan tartans.

Studying and weaving tartans today is even easier. One of my favorite resources is a pocket-size book, The Tartan Weaver's Guide, by James D. Scarlett. It contains color examples for 142 tartans with their thread counts and arrangements. Here is an example of the color sequence for Campbell of Cawdor.

#### A K G Κ В K 4 2 16 16 16

A color key is given in the back of the book. A=azure, K=black, G=green, B=blue, R=red. The numerals listed below the colors represent the number of the threads in the sequence. Before you get started, you need to know that the color sequence is in a mirrored order with the end colors used as pivot points. If you read the order from left to right, you start with azure and go to red and pivot back to azure. Pivot points are not doubled.

I thought about this way of record keeping for clan tartans and realized that it was simple and straightforward and didn't need anything more. It was simply up to the weaver to do a little homework, such as choosing the threads for the project and determining the proper sett.

The simplicity of these examples of record keeping inspired me, but I need to do more to keep my own mind straight. I am all over the map with different projects—I never have less than two or three projects going at a time. And not only do I have my own work to consider, but I also carry home my students' work

in my head, and their weave structures and warps change each week of the year. There are always marvelous ideas passing in front of my face, and I don't want to forget them. Between Handwoven, Ravelry, Pinterest, and other internet communities, there is never a lack of ideas that I want to remember. So how am I going to do better?

I started by dedicating a filing cabinet to weaving. One drawer has hanging folders for ideas for towels, blankets, rugs, etc. Another drawer has hanging folders for ideas and pattern drafts for specific weave structures such as overshot, summer and winter, Bateman, tied weaves the list goes on. A third drawer has ideas and samples for perhaps a future book that I want to write. This system works much better than the scattered papers and drafts on the corner of the dining room table well, says my wife.

I know a lot of weavers use weaving record sheets. A good example can be found in Learning to Weave by Deborah Chandler. You can use these sheets to calculate the amounts of materials needed for a project and include the draft and attach samples of the actual yarns as a reminder.

I like to start with graph paper to write out the threading draft, tie-up, and treadling as well as intended threads and colors, sett, width in the reed, and warp length. If I have woven a sample, I include it and slip everything into a clear sheet protector for safekeeping. Pictures are also a good reminder and can be added to that file.

Getting organized is rather a new concept for me, and I think I may really like it. My family appreciates my newly adopted efforts to reduce the clutter and secretly prays that I never go back to my old ways. This is one New Year's resolution that I know I won't break.

Happy weaving everyone.

Tom -



Examples of the tartan color sequences found in The Tartan Weaver's Guide, by James D. Scarlett. Because the warp color order and weft color order in a tartan are exactly the same, and symmetrical, only half of a color order is needed. Tartans are traditionally woven in 2/2 twill so full drafts aren't required to re-create any of the patterns.

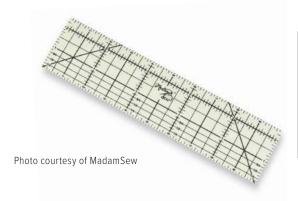
# **Favorite Finds**

Tools and equipment for your studio and fun weaving-related accessories for your wardrobe

# **Weaverly Earrings**

Show off your love of weaving with these made-to-order handcrafted earrings from Traditions in Cloth. The earrings come in a variety of weaving and fiber-related designs lovingly handpainted by artist (and weaver) Melvenea Hodges on lightweight wood. They are available as a matched set (both earrings the same) or as a coordinated pair with two different designs. Pair them with your favorite handwoven accessories or garments for the ultimate weave-centric outfit. traditionsincloth.bigcartel.com





# **Hot Hem Ruler**

Hem straighter and more precisely with the Hot Hem Ruler by Madam-Sew. Grids on the ruler measure fabric folds, while the heat-resistant material allows you to press with the ruler in place for more accurate hemming and seaming. The ruler's nonslip material prevents fabric from moving and sliding as you iron. The grid lines are set at the most common sizes for hems from  $\frac{1}{2}$ " to 10" and include 45° lines for making perfect mitered corners. The ruler measures 2.5" × 10". **madamsew.com** 

# **New and Improved Spring II**

Weave something wonderful with the new Spring II. This parallel countermarch floor loom from Louet has everything weavers loved in the original Spring loom with enhancements. Spring looms are different from other looms on the market thanks to the patented moving breast beam that is controlled by springs. The springs allow the distance between the breast and back beams to change during weaving, resulting in larger sheds with minimal effort. The Spring II is designed to be easier to warp, weave, and wind than the previous Spring and features many hardware improvements. Available with 8 or 12 shafts. **louet.com** 





# **Beautiful Boat Shuttles**

Add some color to your studio with McFarland Spectrum Boat Shuttles from the Woolery. These 9" boat shuttles, designed by Wave McFarland, feature colorful wooden stripes on both sides. Available in six colors, the shuttles hold standard 4" bobbins. Rare earth magnets hold the steel bobbin rods in place to make changing bobbins easier than ever. woolery.com





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# The Adopt-A-Native-Elder Navajo Rug Show & Sale:

Supporting Indigenous Weavers for 32 Years

By C. J. Robb

The story of the Adopt-A-Native-Elder program and the annual Navajo Rug Show & Sale is a story of love for Navajo weavings and the Navajo elders who weave them.

Adopt-A-Native-Elder began supporting traditional Navajo elders in the 1980s. The program started by delivering nonperishable food and everyday necessities directly to elders in need in the most remote reaches of the northern Arizona reservation. Then, in the late 1980s, one of the traditional elders, Katie Furcap from Big Mountain in Arizona, showed up to the food delivery with a Navajo rug that she had recently finished. In an act of pure trust, she handed the rug to Adopt-A-Native-Elder founder Linda Myers, who was also a fiber artist, and simply asked Linda to sell it for her. Linda returned home to Utah and used her list of contacts to find a buyer for Katie's rug.

At the next food delivery, Linda gave the money from the sale of the rug to Katie, and in return Katie gave Linda two more rugs to sell on her behalf. When Linda returned to the reservation with the proceeds from the sale of both of Katie's rugs, she was again presented with two more rugs to sell for Katie, along with two rugs from each of Katie's sisters: Mae Shay, Elsie Shay, and Ruth Benally.

With eight Navajo rugs to sell and four Navajo elders counting on the income from the sales to sustain their



Zonnie Tsinijinnie at the loom with her Heart Rug.

traditional lifestyles, Linda created the first Adopt-A-Native-Elder Rug Catalog to feature the beautiful Navajo weavings created by the elders. She sent the catalog to her contacts as well as weaving groups and museums. Linda was able to sell the eight rugs for Katie and her sisters and give them 100 percent of the proceeds from the sales.

Word of Linda's ability to sell rugs on behalf of the weavers spread, and in 1989, the first Adopt-A-Native-Elder Rug Show & Sale was held in Park City, Utah, featuring a dozen Navajo weavers. The Adopt-A-Native-Elder Rug Show became an annual event in Park City for the next 30 years, culminating in a 30<sup>th</sup>-anniversary show at Deer Valley Ski Resort's Snow Park Lodge in 2019.

In 2020, the COVID-19 pandemic began ravaging the world and taking a particularly heavy toll on the Navajo Reservation. Plans to hold the annual Rug Show were canceled. Navajo weavers, isolated and devastated by the pandemic, still needed a venue to sell their incredible works of art to sustain themselves in their traditional way. The Rug Show moved to a virtual format, featuring the weavers and their rugs online to facilitate sales

to a global audience, while the weavers themselves isolated in their homes. The first Adopt-A-Native-Elder Virtual Rug Show & Sale was a huge success, selling more than 200 rugs on behalf of more than 80 traditional Navajo weavers.

Adopt-A-Native-Elder has grown considerably in nearly four decades of serving the Navajo elders. Today, the program supports 850 elders over the age of 75 and represents more than 80 traditional weavers who rely on their weaving to continue living in their traditional ways. In addition to providing a market for elders to sell their rugs, Adopt-A-Native-Elder distributes traditional wool warp and weft yarns to weavers to ensure that they have the supplies needed to continue weaving. By providing yarn to the elders, Adopt-A-Native-Elder also works to keep the traditions and culture of Navajo weaving alive for future generations. For those who may not be able to purchase a Navajo rug, donating \$50 to the Adopt-A-Native-Elder Yarn Fund provides six skeins of yarn and warp to a traditional weaver, enough to weave a three-by-four-foot rug.

This year's Adopt-A-Native-Elder Virtual Rug Show & Sale, titled "I Have a Voice," will go live to the world on November 12, 2021, at 6:00 p.m. Mountain Standard Time on anelder.org.

The show will feature hundreds of rugs including special "Theme Rugs" created just for the rug show. Rugs available at the show range from large one-of-a-kind works of art to smaller, and sometimes imperfect, rugs woven by older elders in their nineties. The imperfect rugs are affectionately known as "Heart Rugs" and are often woven out of necessity. One weaver, Zonnie Tsinijinnie, wove a small and imperfect Heart Rug when she was in her late 90s; Zonnie asked \$200 for her rug because that was the amount overdue on the payments for her refrigerator. It is common among the weavers to price their rugs based solely on the needs



Ruth, Katie, Elsie, and Mae at the Rug Show.

of their family.

A rug purchase at the Adopt-A-Native-Elder Rug Show helps to sustain the traditional lifestyle of this generation of indigenous people in the United States. For many weavers, this is their sole means of

support for their families. In addition to supporting an elder, you may find an incredible rug to pass on to future generations of your own family while helping keep time-honored Navajo rug-weaving techniques alive.



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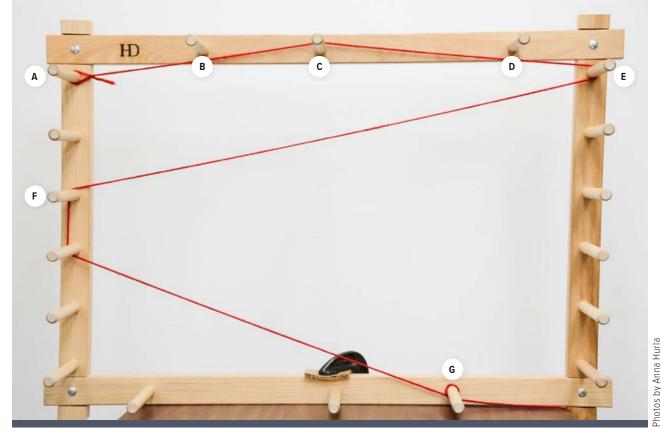






Google Podcasts

long thread



When winding warps that include fractions of yards, you need to get creative with your warp path.

# Best Practices

Winding a Warp

BY SUSAN BATEMAN AND MELISSA PARSONS



For 50 years, the Yarn Barn of Kansas has offered beginning weaving classes. Our teachers have seen just about every challenge a beginning weaver might meet. What better way to share this knowledge than with a yearlong series of articles on good weaving techniques in Handwoven magazine? In this series, we'll explain various methods to make the process of weaving simple and rewarding, beginning with warping techniques. For simplicity, we have focused on warping front to back, but many of the tips apply to other types of warping.

# THE WARPING BOARD

Warping boards allow you to measure each warp end, make sure they're all the same length, and put them in order. In the United States, most warping boards measure 1 yard horizontally. Mini warping boards as well as boards that measure in meters, are also available, so it's important to measure peg distance before winding if you're not certain how your board is set up. Before winding, make sure the height at which you place the warping board is comfortable; straining to reach the pegs is tiring.

Warp length is measured by winding the yarn around a series of pegs. If your warp length is an even number of yards, then the path is easy. If you need a length that includes a fraction of a yard, cut a piece of scrap yarn that length. Hold one end at peg A and cross to peg E, going over C. Then experiment with the path the yarn should take to put the end of your yarn at a peg.

As you wind, you will be making a cross, also known as the porrey cross, between two of the pegs at the top or bottom of your board. When you come to the first porrey cross peg, go over it. When you come to the second one, go under it.

The example below shows a 3-yard warp. Following the example, pick two pegs on the top rail for the porrey cross that are at least 12" from the starting peg A. Tie onto peg A, go over C, under D, and then zigzag across and down to the end point, G, which is 3 yards from A. Retrace back to A, going over D and under C. You have now measured two 3-yard lengths. Continue until you have the number of ends you need. Remember, at the cross, you always go over the first peg you come to and under the second peg. When returning to the cross from the other end, you still want to go over the first peg you come to and under the second peg (this is what makes the X cross). Notice that peg B is not used at any point in our example. You won't always use every peg.

# COUNTING

Half of your warp ends go over peg C, so to save time, count the number of threads on the top of peg C and multiply by 2. If your last warp end finished at peg A, you are done with the calculation. If your last warp end finished at peg G, subtract one end. You can loop a piece of scrap yarn around groups of warp ends as you count them to keep track as you wind. If you loop around the same number each time, you can just count the ties and multiply by the number of ends per tie.

# **CHANGING COLORS**

To change colors according to the pattern's color sequence, tie the last thread of each color to either peg A or G, restart your next color by tying on to that same peg, and continue winding. If your stripes all have even numbers of ends and you will be using a color again, you can put that color "on hold." Take the thread down the outside of the left side of the board to an unused peg and wrap it several times around the peg to hold it temporarily. When you are ready for the color again, simply unwrap it and continue. If your stripes have odd numbers of ends, cut and tie off each color as you finish it.

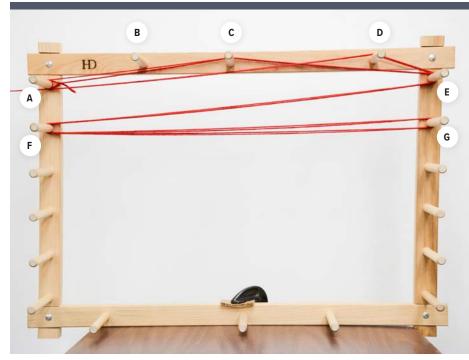
# TYING

To secure the porrey cross, tie it in five places using scrap yarn (see the photos of chaining a warp for an example). Always use a bow rather than a knot because bows untie easily and don't need to be cut. For extralong or slippery

warps, tie firm bows at the midpoint of each yard.

#### CHAINING

To keep your warp organized off the loom, you'll want to chain it as you remove it. Starting at the bottom, pull the looped threads off the ending peg while maintaining the open loop. Stick your hand through that loop and grab onto the entire group of warp threads. Pull the loop that is resting on your wrist over those threads. You now have a new loop. Push your hand through this loop and grab all the warp threads and pull them through the loop. Keep a little tension on the warp so the threads don't pop off the next peg. Continue doing this until you get to the top of the board. You will also chain up the cross area and can hang the chain on peg B. Pull the threads off the starting peg. You can cut the loops on peg A now



Place the porrey cross at least 12" from the starting peg (shown between C and D).

by sliding them onto a pair of scissors or cut them when you are ready to start sleying. Now it's time to sley the reed and thread! Our next article in *Handwoven* will offer tips and tricks for doing just that.

# WARPING TIPS

 $oldsymbol{I}$  Do not pull your yarn tight on the warping board. Leave some slack as you wind. Stretched yarn risks damaging the board by pulling the pegs out and can leave you with a short warp when the yarn returns to its unstretched length.

f 2 Keep cones and tubes on the floor, upright, using a cone stand if necessary so the yarn unwinds onto the warping board without tugging on the yarn or pegs. Keep yarn balls in a bowl or box and frequently check to make sure they unwind smoothly.

3 When winding extrawide warps, don't wrap threads on top of threads—instead, make multiple warp chains and number them. As you tie your porrey cross, tie the bow to indicate the last warp end of that chain. Orient the bows on the same side of the chains when you assemble them at the loom.

4 When you come across a knot or the end of a cone or skein, wind the yarn back to the starting or ending peg, whichever is closest, and tie it off on that peg. Then, tie on and start the new end to continue.

**5** If you need to fix a mistake, carefully wind the yarn back onto the cone or ball thread by thread until you get to the mistake. This prevents unnecessary tangling.

To keep your warp organized off the loom, you'll want to chain it as you remove it.

6 Watch for warp threads that turn back before completing their path. Stop and remove these, taking them back to peg A. If your warp is a single color, simply wind on two replacement threads. If the warp is striped and you don't want to wind back, mark the location with a piece of

scrap yarn. Measure two replacement threads of that color separately and add them in the proper place when you sley the reed.

SUSAN BATEMAN, weaver and teacher, started Yarn Barn 50 years ago. Her hobbies include weaving, working on the farm, volleyball, and bridge.

MELISSA PARSONS has been weaving since 1988. She started working with Susan Bateman at the Yarn Barn in 1992.







Chaining the warp.





# Double Knit to Doubleweave

Rainbow Bubble Scarf

BY YVONNE ELLSWORTH



While looking through Jennifer Moore's Doubleweave: Revised and Expanded, I became fascinated by doubleweave pick-up, especially by how Jennifer used it to make circles. The design reminded me of Lucy Neatby's double-knitting pattern Bubbles Scarf (see Resources). I set myself the challenge of transforming Lucy's scarf into doubleweave. Before starting, I emailed Lucy and asked permission to use her design and received a prompt positive response.

# YARN

Lucy knitted her scarf with Kauni Wool 8/2 Effektgarn, which is great for subtly changing rainbow colors in knitting. However, in weaving, the color changes create long warp

stripes that wouldn't work for this project. I started looking for a handpainted warp with a gradation of colors but couldn't find quite what I was looking for. It came to me that I could dye my own. I have

a weakness for soft yarns, so I picked out my favorite blend of merino/cashmere/nylon (MCN) sock yarn (see Resources). The superwash merino makes up 80% of the yarn, but the 10% nylon keeps the yarn from being too stretchy, and the cashmere adds extra next-to-skin softness.

# WARF

I based my calculations on a 60-inch finished scarf. Estimating 10 percent shrinkage meant I'd need a total of 66 inches of weavable warp on the loom. There were 11 sections in the original knitting diagram, so each section represented 6 inches of weaving. I needed two warps, one for the natural layer and one for the rainbow layer.

I chose 6 inches for a finished width and again allowed for 10 percent shrinkage, which meant I needed about 6% inches in the reed at a sett of 24 ends per inch, or 80 ends per layer. With calculations in hand, I measured out two warps of 80 ends each, one for each layer, adding 30 inches for loom waste and fringe for a total warp length of 96 inches. On one warp, I carefully marked with ties where the loom waste would be at the beginning and end of the warp while still under tension on the warping board. These lengths will change once tension is taken off the warp, so it is important to mark them beforehand. I soaked both warps in warm water to prepare them for dyeing. It's essential to

treat both warps the same way to avoid differential shrinkage later.

I laid the warp that was to be the rainbow layer out on a long table and evenly divided the center portion of the warp into six individual color sections. Using acid dves, I started with red and following the color wheel, dyed each section in turn with orange, yellow, green, blue, and purple. I dyed the front loom waste in red and dyed the back loom waste purple. This way, if my calculations were off a little bit, it wouldn't show in the final scarf.

# WEFT

Next, I dyed my weft yarns. The original knitting pattern had striking, bold colors and the only way to get pure colors like that in weaving is for the warp and weft to be the same color. To achieve those pops of bold color, I dyed a rainbow set of six 50-yard mini skeins for weft. I also soaked a 200-yard skein of natural weft as I had done for the natural warp.

# SETTING UP THE LOOM

For me, the easiest way to put two warps on a loom is warping front to back. First, I sleyed the rainbow warp with 1 end per dent. Then I did the same thing with the natural warp, sleying those ends with the rainbow ends. I threaded the heddles as usual and wound the warp onto the warp beam.

## **CHARTS**

Knitted stitches are wider than they are tall, and a good knitting chart will accommodate for this. Because my goal was a balanced sett for each layer, I adjusted the original bubble charts to be round and not oval. In the spirit of transforming the original pattern, I chose to use Lucy's diagram for placement. I created a chart for each section: 40 squares wide (two rainbow and two natural ends in the warp) and



Knitted scarf



36 squares tall. (A sett of 24 at 6 inches equals 144 picks or 36 sets of the 4-pick doubleweave sequence.) I made my charts in color and added in white bubbles so that I was working on the rainbow side as I wove. Editor's note: Pick-up charts, drafts, and pick-up instructions for the scarf are available as a free PDF download at handwovenmagazine .com/bubble-scarf-nd21.

#### WEAVING

I worked with two shuttles at a time, one natural and one colored, changing to the next weft color whenever I felt like the warp color had changed. It didn't matter exactly where the change happened because the colors blended in the warp making transitional colors. For example, when I saw that the green section of warp was changing to blue, I switched my weft to blue.

I started with a couple of plainweave picks, then hemstitched.

Next, I moved on to the "ribbing" using the pick-up and following the chart. The  $1 \times 1$  pattern is slow, but I hadn't woven doubleweave pick-up before, so this gave me some practice. By the time I was through, I felt like a pro! Weaving the bubbles was easier and much more fun. After the ribbing, I followed the charts, weaving rows with and without bubbles and using highlighter tape on the charts to keep track of my work. I found that some of the pick-up sheds were narrow and followed Jennifer Moore's advice to use a wide pick-up stick to open them up with great success.

# STUFFING THE BUBBLES

Lucy's original pattern recommends stuffing the bubbles for a more



Woven scarf.

three-dimensional appearance. After the last pick of a bubble, I would treadle to separate the layers and stuff the bubble lightly with cotton. The smallest bubbles were the trickiest and used the tiniest amount of stuffing. The next pick in the pattern sealed the bubbles with the stuffing inside.

# **FINISHING**

I finished with ribbing, and after having woven so much doubleweave pick-up, the second time was much easier. I flew through it! I finished with the same hemstitching as at the beginning.

With the fabric off the loom, I ironed the fringe and then trimmed it before twisting fringe with two ends from each layer in each bundle. I soaked the scarf in warm water for 10 to 20 minutes, rolled it in a towel. and then hung it to dry. The yarn

bloomed subtly, making the scarf extra soft and cozy.

Overall, I enjoyed weaving this scarf. I learned so much through the whole process, and I now have many ideas for dyeing and doubleweave pick-up. Don't be surprised if you see more patterns in the future!

# **RESOURCES**

etsy.com/shop/lavendersheep. Neatby, Lucy. Bubbles Scarf (digital pattern). https://littlebarnstudio.ca/products/bubblesscarf-by-lucy-neatby-digital-pattern. Moore, Jennifer. Doubleweave: Revised and Expanded. Blue Ash, Ohio: Interweave, 2018, 49-65.

YVONNE ELLSWORTH lives in Duvall, Washington, where she dyes yarn as LavenderSheep and teaches weaving classes locally. She is the social media coordinator for the Seattle Weavers' Guild.







# Sawtooth Stripe Pillows

ANGELA K. SCHNEIDER



## **STRUCTURE**

Deflected doubleweave.

## **EQUIPMENT**

4-shaft loom, 20" weaving width; 15-dent reed; 2 shuttles; 2 bobbins.

# YARNS

Warp: 16/2 worsted-spun wool (4.400 vd/lb: Camilla Valley Farm), #TR-031 Wine and #TR-069 Dark Green, 864 vd each.

Weft: 16/2 worsted-spun wool, #TR-031 Wine and #TR-069 Dark Green, 572 yd each.

# OTHER SUPPLIES

Two 14" square pillow forms; two 9"-12" zippers in coordinating color; 30" length of thin, strong, slick cord (Angela recommends nylon); 20" needle or hook.

# WARP LENGTH

576 ends 3 vd Iona (allows 6" for sampling, 7" for take-up, 30" for loom waste).

#### **SETTS**

Warp: 30 epi (2/dent in a 15-dent reed). Weft: 30 ppi (not including temporary cord picks).

## **DIMENSIONS**

Width in the reed: 193/15". Woven length: (measured under tension on the loom) 65". Finished size: (after wetfinishing) fabric 16" × 63" for two pillows 14" × 14".

A few years ago, I was scheduled to teach a workshop on deflected doubleweave. Although I specified eight-shaft looms in the workshop description, a prospective student wanted to know if she could take the workshop with her four-shaft loom. My first thought was no, deflected doubleweave uses eight or more shafts. But then I immediately questioned that assumption and said, "Let me get back to you." I threw a sample on a four-shaft loom and started playing. You can weave deflected doubleweave on a four-shaft loom! Designs are limited to one block per layer, but that still gives plenty of options for interesting cloth. My workshop expanded to include four-shaft patterns.

These pillow covers are woven with a simple sequence of blocks, but true to the look of deflected doubleweave, the threads shift and settle into curved shapes that defy their grid-like origins. This creates designs with not-so-simple solid-color stripes with wavy edges.

I invite four-shaft weavers to try a structure usually reserved for more complex looms.

f I Wind a warp of 576 ends 3 yd long following the warp color order in Figure 1. Warp the loom using your preferred method according to the draft in Figure 2. Centering for a weaving width of 193/15", sley 2 per dent in a 15-dent reed.

f 2 Wind a bobbin with each of the weft colors. Spread the warp with scrap yarn using the plain-weave treadles.

# Notes on deflected doubleweave

In deflected doubleweave, blocks of plain weave spread out into adjacent float areas creating the curved edges characteristic of the structure. What looks very geometric on the loom turns into organic shapes during wet-finishing.

 $oldsymbol{3}$  Start each shuttle on the side with the edge color that matches the weft. Use the 6" allowance for sampling to practice the treadling sequence. Weave following the draft in Figure 2. Note that this is a skeleton tie-up and requires using two treadles for most picks. Use the slick cord as a temporary spacer between blocks (see Weaving Tips). Continue weaving until the piece measures 65". End with a few picks of plain weave using scrap yarn to protect the weft.

4 Cut the fabric from the loom. Machine zigzag next to the scrap yarn.

 $oldsymbol{5}$  Wash vigorously in hot water with mild detergent and a cold rinse. Angela scrubbed the fabric on a washboard to encourage as much shrinkage, shifting,

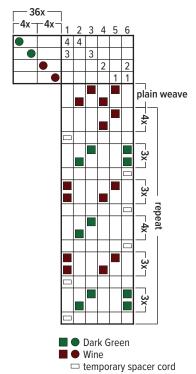
# **HEDDLE COUNT**

Total	576
Shaft 1	144
Shaft 2	144
Shaft 3	144
Shaft 4	144

## 1. WARP COLOR ORDER

	_36x-	
288	8	■TR-069 Dark Green
288	8	■TR-031 Wine
576 ends total		

# 2. DRAFT





# **WEAVING TIPS**

· Deflected doubleweave is challenging to beat consistently when all of the inactive blocks are floating up or down at the same time—as is always the case on four shafts. The first weft pick of a block has a tendency to beat down over the previous block. To avoid overbeating when switching blocks, raise all of the blocks on one layer and insert a length of strong, slick cord. This gives you something to beat against. Weave the next block, then pull out the

cord and place it in the shed before starting the subsequent block (see Figure 2).

- Use a long needle or hook, such as a Tunisian crochet hook, to pull the spacer cord through the shed.
- · If you have difficulty opening the shed on this dense warp, raise the single active shaft first, then add the two shafts (on either treadle 1 or 6) for the passive block. Raise the active shaft when the beater is forward at the fell line.

and fulling as possible. She used multiple passes between the hot wash and cold rinse to further encourage the threads to deflect. Squeeze out excess water in a towel and dry flat.

**b** Lightly steam-press the dry fabric. Measure the pillow forms in length and width before cutting the fabric to ensure the pillow forms will fit inside a pillow cover that is 14" square from seam to seam. There is wiggle room in the fabric length and width for adjustments to be made if needed. Mark the fabric to create two pieces 30" long (this leaves a generous 1" seam allowance at each end). Mark both cut lines on the color stripe you want meeting the zipper. Machine stitch straight across the fabric at one end, and on either side of the 30" lines. Cut the fabric apart into two 30" pieces.

7 Fold a pillow cover in half, right sides together. Mark both ends of the fabric 14" from the fold. Baste by hand along this line. Press the

seam open. Center a zipper face down on this basted seam and stitch in place (see Resources). When you are satisfied that the zipper is correctly installed, complete the seam on each end of the zipper by hand or machine. Remove the basting and open the zipper slightly.

8 Mark the width of the fabric at 14" and pin along the sides. Test-fit the pillow form and adjust the width as needed. Pin sides, aligning the fabric stripes. Stitch by hand or machine. Hand stitching, while slower, may make it easier to align the stripes. Open the zipper and turn the pillow cover right-side out. Stuff with the pillow form. Repeat for the second pillow.

# **RESOURCES**

Instructables Craft. "How to Sew a Zippered Pillow Cover." instructables.com /how-to-sew-a-zippered-pillow-cover.

ANGELA K. SCHNEIDER enjoys the problemsolving aspect of weaving and playing "what-if?" with weave structures.





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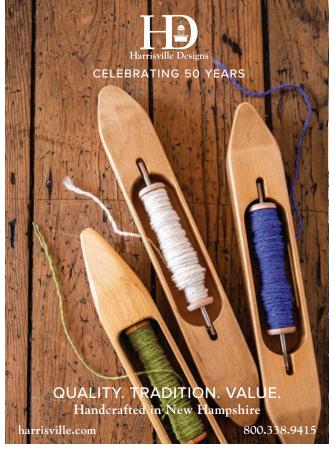
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# **Shadow Play Kitchen Towels**

BARBARA GOUDSMIT

## **STRUCTURE**

Shadow huck.

## **EQUIPMENT**

4-shaft loom, 18" weaving width; 10-dent reed; 2 shuttles; 2 bobbins.

## **YARNS**

Warp: 8/2 organic cotton (710 yd/100 g; Venne), #4077 Deep Plum, 550 yd; #4048 Iris, 553 yd. Weft: 8/2 organic cotton, #3020 Raspberry and #4048 Iris, 412 yd each.

#### **WARP LENGTH**

315 ends 31/2 yd long (includes floating selvedges; allows 8" for take-up and 31" for loom waste).

#### **SETTS**

Warp: 171/2 epi (2-2-2-1 ends/dent in a 10-dent

Weft: 171/2 ppi for towel body and 15 ppi for the hems.

#### DIMENSIONS

Width in the reed: 18". Woven length: (measured under tension on the loom) 87". Finished size: (after wetfinishing and hemming) three towels. 141/2" × 211/2" each.

Shadow weave is one of my favorite weave structures, especially for four-shaft projects. The structure of a shadow-weave design is quite simple: it is made up of sections of plain weave and two-end floats. However, simply by alternating two colors in warp and weft, intricate patterns are possible, even on four shafts. I find this interplay of colors and pattern magical.

I remember when I first saw the Bejeweled Throw by Nancy Dunlap in Handwoven, January/February 2020. Nancy's throw was shadow weave, yet it also contained deflecting floats. Standard shadow weave does not have long floats and hence gives little to no room for the threads to deflect. The combination of the neatly structured shadow weave with playful float sections intrigued me. I later learned that this technique is referred to as shadow huck while browsing through Carol Strickler's A Weaver's Book of 8-Shaft Patterns.

The theme of this *Handwoven* issue inspired me to apply the shadow-huck technique myself. As a starting point for the towels' design, I referred to my Delft Blue napkins in Handwoven, September/October 2020. I altered that standard shadow-weave pattern to shadow huck, giving the design a completely different look and feel.

Note that the threading of the first and last four warp ends deviates from the rest of the warp. This alternate threading ensures that the weft floats do not extend all the way to the edges. In fact, these edge warp ends are threaded as "regular" shadow weave, with its characteristic absence of long floats. I also added a separate treadling sequence for the hem so that the hems are float-free. As a result, the towels have a sturdy frame, while the weft threads are free to deflect within the body of the towel.

# Notes on color choices

Shadow weave's patterning comes from the interplay of dark and light values in both warp and weft. Using warp colors that are different colors than the weft colors but keeping the values similar adds interest to the finished cloth.

Wind a warp of 314 ends  $3\frac{1}{2}$  yd long, holding both warp colors together with a finger between them to keep them from twisting. Set aside 1 end of Iris to use as a floating selvedge, and then wind an additional end of Iris for the other floating selvedge. Warp the loom using your preferred method following the draft in Figure 1. Centering for a weaving width of 18", sley 2-2-2-1 per dent in a 10-dent reed for 171/2 epi. Sley the floating selvedges in an empty dent on each side of the warp and weight them over the back beam. Note: In an 18" reed, you may need to sley 1 floating selvedge in the same dent as the edge warp end.

2 Wind bobbins with each of the weft yarns. Spread the warp with scrap yarn.



3 Weave towel 1 following the draft in Figure 1. Weave a pick of scrap yarn to separate the towels. Weave towels 2 and 3.

4 Weave a few picks with scrap yarn to secure the weft and remove the fabric from the loom.

**5** Zigzag or machine stitch on either side of the scrap yarn picks and on the ends. Cut the towels apart.

**6** Wet-finish in warm water by gently agitating and then leaving the towels to soak for 20 minutes. Line-dry.

7 Fold the hems of the towels over twice and press to get a flat edge. Pin along the sewing line. Stitch the hems by hand or machine.

#### RESOURCES

Dunlap, Nancy. "Bejeweled Throw." Handwoven, January/February 2020, 30-32.

Goudsmit, Barbara. "Delft Blue Napkins." Handwoven, September/October 2020, 38-40.

Strickler, Carol, ed. A Weaver's Book of 8-Shaft Patterns. Loveland, Colorado: Interweave, 1991.

BARBARA GOUDSMIT is a passionate weaver located in the Netherlands. She loves to experiment with different weave structures and yarns on her floor, rigid-heddle, and inkle looms. She writes about her weaving adventures at awovenworld.com.

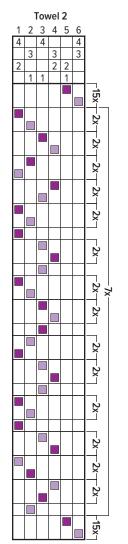
#### **HEDDLE COUNT** 1. DRAFT

Shaft 4 92 Shaft 3 74 Shaft 2 55 Shaft 1 92 Total 313

⊢2x¬ \_2x\_\_2x\_ \_2x\_\_2x¬ \_2x\_\_2x\_ \_2x\_\_2x¬ ⊢2x¬ -2x⊤ -2x-2 3 4 5 6 4 4 4 2 2 1 1 0 ← cont'd

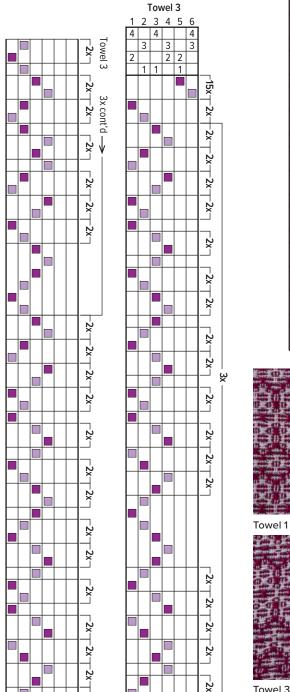
floating selvedge ■ ○ Iris

Deep Plum Raspberry



A close up of towel 2 can be found on page 32..

2x⊤15x



Towel 1

×

× ×

×

-2x

-2x-

× ×

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×

×

×

2 X

×

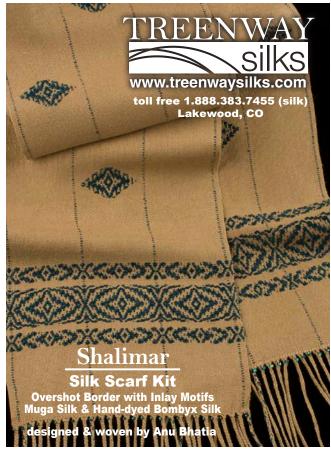
-15x

Towel 3

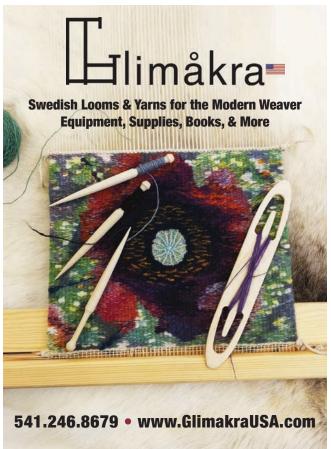
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\_2x\_











## Take Your Turn

LIZ MONCRIEF

#### **STRUCTURE**

Turned M's and O's.

#### **EQUIPMENT**

4-shaft loom, 16" weaving width; 12-dent reed; 2 shuttles; 3 bobbins.

#### **YARNS**

Warp: Onyx runner: Nile (100% organic cotton; 2,100 yd/lb; Silk City Fibers), #360 Onyx, 419 yd; #061 Dark Taupe, 99 yd; #209 Siren, 90 yd.

Weft: Onyx runner: Nile, #360 Onyx, 380 yd; #061 Dark Taupe and #209 Siren, 11 yd each. Black sewing thread for hems, 60 yd.

**Warp: Siren runner:** Nile, #360 Onyx, 90 yd; #061 Dark Taupe, 99 yd; #209 Siren, 419 yd.

Weft: Siren runner: Nile, #209 Siren, 380 yd; #061 Dark Taupe and #360 Onyx, 11 yd each. Red sewing thread for hems, 60 yd. Note: Weft yardages are approximate and are dependent on treadling and color choices during weaving.

#### WARP LENGTH

272 ends 2¼ yd long (includes floating selvedges; allows 5" for take-up, 26" for loom waste; loom waste includes fringe).

#### **SETTS**

Warp: 18 epi (2-1/dent in a 12-dent reed). Weft: 19 ppi.

#### **DIMENSIONS**

Width in the reed: 152/12". Woven length: (measured under tension on the loom) 50".

Finished size: (after wetfinishing and hemming) 13" × 41".

If you've become complacent with your current portfolio of weaving drafts and need a little nudge to try something new, consider turning a draft to take a horizontal orientation and switch it to vertical. For these runners, I wanted a strong line that ran the length of the piece rather than short horizontal lines, and turning the draft produced that.

Harriet Tidball described M's and O's as a Swedish weave structure but also referred to it as a classic colonial American linen draft. Woven on just four shafts, but with a complex feel to it, the structure was used extensively for table linens, although today it is used for other items including scarves and towels. In my turned M's and O's draft, both plain weave and a type of rep rib appear at different points in the treadling. The deflection of the warp and weft threads after wet-finishing gives the cloth a unique quality.

You can easily turn a draft using a weaving program but you can also use graph paper and a pencil. Simply rewrite your draft as if you had turned it 90 degrees counterclockwise so that the threading becomes the treadling, and the treadling becomes the threading. Then adjust the tie-up so it is the inverse of itself. (See Resources for more detailed instructions.)

When drafting M's and O's patterns, consider the width of your blocks, because the wider the blocks, the less deflection. Narrow blocks seem to bend and deflect more easily. For this yarn sett at 18 ends per inch, a block larger than 24 ends or  $1\frac{1}{3}$  inches is not effective. You can follow the treadling shown here, but once you understand the sequence of the weft picks, it's easy to strike out on your own. If you do, remember to balance warp-float blocks with plain-weave blocks; otherwise, you might throw off your warp tension.

#### M's and O's selvedges

A characteristic of M's and O's cloth is wavy edges. You can mitigate that somewhat by using two additional shafts for plain-weave selvedges, but the wobble will still exist.

I used a 100% cotton ribbon yarn because I wanted shrinkage and deflection to occur during wet-finishing. For a ribbon yarn, it's best to use a boat shuttle and bobbin rather than an end-feed shuttle and pirn. Unwinding a ribbon yarn from a pirn produces unmanageable twist.

I Wind a warp of 270 ends 21/4 yd long following the warp color order, Figure 1. Wind 2 additional ends of Onyx 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 15<sup>2</sup>/<sub>12</sub>", sley 2-1 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. *Note:* These steps and the treadling draft in Figure 2 apply to the



Onyx runner. If weaving the Siren runner, use Siren for your floating selvedges and treadle using the Siren weft predominantly, with stripes of Onyx and Dark Taupe.

 $\mathbf{2}$  Wind bobbins with each of the weft colors and wind one with black sewing thread. Spread the warp with scrap yarn.

**3** Using sewing thread, weave 3" of plain weave for the hem. Switch to Onyx and begin the pattern treadling. Weave following the draft, Figure 2. After the color stripes, continue weaving for about 47" from the beginning, alternating blocks A and B in lengths of your choice. End with 3" of plain weave using sewing thread.

4 Weave a few picks of scrap yarn to protect the weft and remove the fabric from the loom. Turn the ends under twice to make a 1" hem and stitch by hand or machine. Wet-finish in warm water by gently agitating and then leaving the runner to soak for 20 minutes. Line-dry.

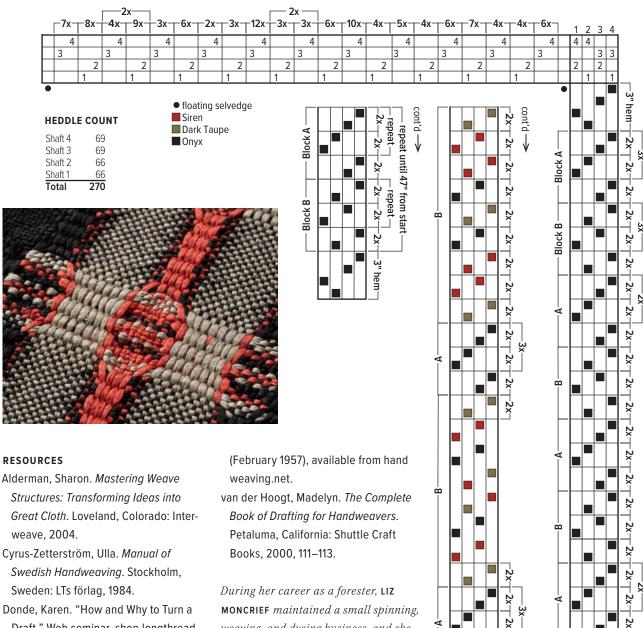
#### 1. WARP COLOR ORDERS

Onyx	rui	nne	er				[	-10	)x-			<b>_2</b>	x-							
40		2		12		2			1		2			2			10			Siren
44			14		14			1					1			2		2		■ Dark Taupe
186	38					8	8			18		1			12				28	Onyx

186 38	88	18   1	12	<u>28</u> <b>■ O</b> nyx	
270 ends total					

Sirer	ı ru	nn	er				<sub>[</sub> 1	0x-	]		<b>−2</b> x	٦					
40		2		12		2		1		2		T	2		10		Onyx
44			14		14		1				1			2		2	■ Dark Taupe
_186	38					88	3		18		1		12			2	28 ■ Siren
270	270 ends total																

#### 2. DRAFT



Alderman, Sharon. Mastering Weave Structures: Transforming Ideas into Great Cloth. Loveland, Colorado: Interweave, 2004.

Cyrus-Zetterström, Ulla. Manual of Swedish Handweaving. Stockholm,

Donde, Karen. "How and Why to Turn a Draft." Web seminar. shop.longthread media.com/products/how-and-why-to -turn-a-draft.

Selk, Karen. "Set Limits and Gain Designing Confidence." Handwoven, September/October 2002, 40-43.

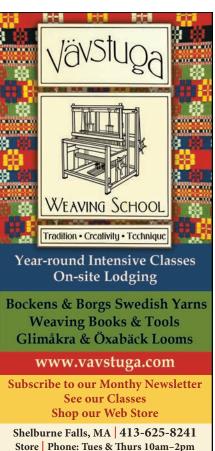
Tidball, Harriet. "The Classical M's and O's Weave," Shuttle-Craft Bulletin

weaving, and dyeing business, and she has exhibited several woven pieces in Colorado, Wyoming, and Washington galleries. In addition to teaching weaving and spinning in Skagit Valley, Washington, she repairs looms and spinning wheels and revels in bringing an "old dame" back into useful service.













## Reflecting Pool **Bed Runner**

CHRISTINE JABLONSKI



Spot Bronson variation.

#### **EQUIPMENT**

4-shaft loom, 26" weaving width; 12-dent reed; 2 shuttles; 2 bobbins.

#### YARNS

Warp: 18/3 linen (2,961 yd/lb; Gist Yarn), Arctic, 1,495 yd; Silver, 196 yd. Weft: 18/3 linen, Arctic, 1,030 vd; Silver, 93 yd.

#### **OTHER SUPPLIES**

Fray Check or fringe twister (optional).

#### WARP LENGTH

455 ends (483 threads total) 31/2 yd long (includes doubled floating selvedges; allows 7" for take-up, 26" for loom waste; loom waste includes fringe).

Warp: 18 epi (1-2/dent in a 12-dent reed). Weft: 15 ppi.

**DIMENSIONS** Width in the reed: 255/12". Woven length: (measured under tension on the loom) 93". Finished size: (after wet-finishing) 22" × 89" plus fringe.

Jane Patrick's Weaver's Idea Book was my stalwart companion for the better part of a year while I developed a rigid-heddle subscription box for Gist Yarn. Although I didn't use it in the series, I kept coming back to Jane's deflected-warp example, thinking it might inspire a future project. When *Handwoven* published the Reflecting on Deflecting call for submissions for this issue, it seemed kismet had struck.

At the time, I desperately wanted to stretch the physical scope of my weaving: I wanted to go big. But how could I create a large, allover pattern that would remain interesting for the weaver and viewer? My daily walk to the river behind our house provided the answer—a design that reflected upon itself at the sides, but not in the center.

This particular river is tidal, meaning that at slack tide, the center of the river is completely calm but the water ripples at the edges as it bounces off the banks. Knowing this project would be a rectangle, and thus more structured than a natural waterway, I considered where in the man-made world one might see such a phenomenon of stillness bordered by movement. Then it struck me: a reflecting pool moments after a stone or coin has been tossed in, when the middle has settled but the ripples continue lapping at the edges.

By using a contrasting yarn sparingly and at specific points in the threading repeat, the deflected warp yarns mirror each other across a "still" center. I applied the same concept to the treadling sequence—throwing picks of the contrasting color at points where the "ripples" reflect across a clear middle section. The result is truly a reflection of deflection!

#### Spot Bronson variation?

The deflection of the warp and weft in this fabric creates a lacy fabric that resembles spot Bronson, although the tie-up and treadling are nontraditional.

 $\mathbf{I}$  Wind a warp of 453 ends  $3\frac{1}{2}$  yd long following the warp color order in Figure 1. Note that all of the Silver ends are doubled threads. Wind 4 additional threads of Silver to be used as doubled 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 255/12", sley 1-2 per dent in a 12-dent reed (counting the doubled Silver threads as single working ends). Sley the doubled floating selvedges through an empty dent on each side of the warp and weight them over the back beam.

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

 $oldsymbol{3}$  Leaving a tail 3 yd long for hemstitching, weave 4 picks of plain weave, then begin the pattern treadling. Use the tail to hemstitch 75 groups of 6 working warp ends, except for the middle group, which has 9, and the edge groups, which include the selvedge threads.

4 Continue weaving following the draft in Figure 2 for about 93". The Silver picks are doubled: throw a pick of Silver, leaving long tails on each side of your warp and beat. Open the same shed and bring the tails around the floating selvedges and into the shed, overlapping the tail ends by about 1". Bring the Silver tails up through the warp and leave for trimming after wetfinishing. End with 4 picks of plain weave and hemstitch as you did at the beginning.

5 Leaving at least 8" for fringe on both ends, cut the fabric from the loom. Prepare a twisted or braided fringe using 3 hemstitched groups in each bundle or trim the fringe to desired length (shown at 11/2" on each end) and dot ends with Fray Check.

**6** Wet-finish in a washing machine on delicate cycle in cold water. Line-dry. Press.

#### **RESOURCES**

Patrick, Jane. The Weaver's Idea Book. Loveland, Colorado: Interweave, 2010, 129.

CHRISTINE JABLONSKI is a weaver, fiber artist, and the director of operations at Gist Yarn. You can find her on Etsy and Instagram as @soulspaceart.

#### **HEDDLE COUNT**

#### 111 114

Shaft 2 226 Shaft 1 Total 453

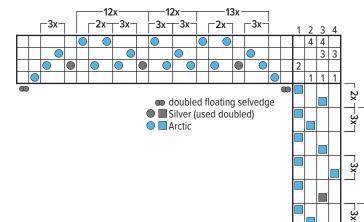
Shaft 4

Shaft 3

#### 1. WARP COLOR ORDER

			<sub></sub> 12	X		٦13	3x-		
26		1		1			1		Silver (doubled, treat as 1 end)
427	7		11		138	11		7	■ Arctic
453	enc	ls t	ota	I (4	179	thr	ead	ds)	

#### 2. DRAFT











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## **Honeycomb Throw**

MARCIA KOOISTRA



#### STRUCTURE

Honeycomb.

#### **EQUIPMENT**

8-shaft loom, 58" weaving width; 15-dent reed; 2 shuttles; 2 bobbins.

#### YARNS

Warp: 22/2 Organic Cottolin (60% cotton/40% linen; 3,000 yd/lb; Venne), #4007 Turquoise, 2,880 yd. Ripple (100% cotton; 1,100 yd/lb; Made in America Yarns), Natural, 576 yd. Weft: 22/2 Organic Cottolin, Turquoise, 2,300 yd; Ripple, Natural, 450 yd. *Note:* This throw was woven with Cotons Nature (100% cotton; 126 yd/50 g; Bergère de France), Stuc. This yarn is no longer available—Ripple is a comparable yarn.

#### WARP LENGTH

864 ends 4 vd Iona (allows 10" for take-up, 32" for loom waste).

#### **SETTS**

Warp: 15 epi (1/dent in a 15-dent reed). Weft: 15 ppi.

#### **DIMENSIONS**

Width in the reed: 57%15". Woven length: (measured under tension on the loom) 102". Finished size: (after wetfinishing and hemming) 46" × 79".

A few years ago, I bought the Technique Series eBook Best of Handwoven: *Honeycomb*. I fell in love with a particular sample (Swatch #3) but was not very happy with the long floats on the back of the fabric. Using weaving software, I changed the draft to minimize the floats and used that new draft to weave this throw. Although I wove a wide throw, the draft can also be used for cushion covers or runners. It's also possible to make the cells smaller—for example, 6 ends and picks instead of the 10 ends and picks I used, although I quite like the contrast between the large circles and squares in my design.

I used cottolin for my main warp and weft, and cotton bouclé for outlining the blocks. For this project, using a thicker yarn for outlining as well as a yarn with shrinkage similar to the warp and weft is important. The combination of this structure and the cotton yarn resulted in significant shrinkage of about 17 percent.



#### Notes on weaving honeycomb

In honeycomb, the outlining weft moves during wet-finishing and creates undulations in the cloth. To accommodate that movement, use a larger than usual weaver's angle for the outlining weft picks.

■ Wind a warp of 864 ends 4 yd long following the warp color order in Figure 1. For a narrower fabric, eliminate one or more repeats of 40 ends of cottolin and 8 ends of cotton bouclé. Warp the loom using your preferred method following the draft in Figure 2. Centering for a weaving width of 57%, sley 1 end per dent in a 15-dent reed.

**2** Wind bobbins with each of the weft yarns. Spread the warp with scrap yarn.

**3** Using Turquoise, weave 10 picks alternating treadles 1 and 2 for the hem, then begin treadling the pattern following the draft in Figure 2. Carry the outlining weft up the selvedges. Leave the outlining weft tails hanging at the selvedges; they will be hidden in hems during finishing.

#### **HEDDLE COUNT**

Total	864
Shaft 1	180
Shaft 2	180
Shaft 3	180
Shaft 4	180
Shaft 5	36
Shaft 6	36
Shaft 7	36
Shaft 8	36

#### 1. WARP COLOR ORDER

		-7:	2x-							
1	44	2		Ripple bouclé Natural						
7:	20		10	22/2 Cottolin Turquoise						
864 ends total										

4 Continue weaving for about 100". End with 20 picks, alternating treadles 1 and 2 for the hem. Weave several picks of scrap yarn to protect the weft.

**5** Cut the fabric from the loom. Secure the warp ends with knots or wide zigzag stitch.

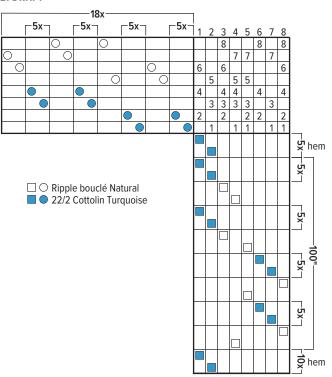
6 Machine wash in warm water. Line-dry. Iron on medium heat on the wrong side, then hem all sides starting with the selvedges. Fold the selvedges under ½", hiding the cotton bouclé tails in the hems and stitch by hand or machine. Fold the other hems under ½" twice and stitch by hand or machine.

#### RESOURCES

Best of Handwoven: Honeycomb.
Loveland, Colorado: Interweave.
shop.longthreadmedia.com/products
/best-of-handwoven-honeycomb
-technique-series.

MARCIA KOOISTRA, a weaver from Normandy, France, loves the process of textile-making and its history.

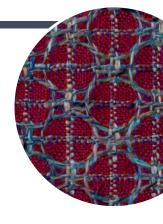
#### 2. DRAFT





## **Blue Circling Embers**

ANNETTE SWAN SCHIPF



#### STRUCTURE

Honeycomb.

#### **EQUIPMENT**

8-shaft loom, 10" weaving width; 12-dent reed; 3 shuttles; 3 bobbins.

#### YARNS

Warp: 8/2 Tencel (100% lyocell; 3,360 yd/lb; WEBS), Spice and Red Purple, 215 yd each. Bambu 7 Variegated (100% bamboo; 2,100 yd/lb; Cotton Clouds), #984 Blue Cloud or #647 River Bed, 156 yd. Weft: 8/2 Tencel, Spice and Red Purple, 212 yd each. Bambu 7, #984 Blue Cloud or #647 River Bed, 141 yd. **Note:** The scarf shown alternates two colors of Tencel in the weft, but you can choose to use only one of the Tencel colors for weft to simplify the weaving. Bambu 7 is a substitute for the 5/2 rayon that Annette used. That yarn is no longer available.

#### **OTHER SUPPLIES**

Mild no-rinse fabric detergent such as Soak; dye-trapping laundry sheets (optional).

#### WARP LENGTH

180 ends 31/4 yd long (includes floating selvedges, allows 8" for take-up. 31" for loom waste; loom waste includes fringe).

#### **SETTS**

Warp: 19 epi (fine warp. 2/dent; heavy warp, 1/dent) in a 12-dent reed. Weft: about 25 ppi.

#### DIMENSIONS

Width in the reed: 96/12". Woven length: (measured under tension on the loom) 78". Finished size: (after wetfinishing) 8" × 72" plus 7" fringe.

I love how the weave structure of honeycomb creates rounded medallions. Although normally honeycomb is used for home decor or lined objects because of long floats on the back, for this project, I chose yarns and setts that make it possible to use the structure for a scarf. Yes, there are floats on the back, but by weaving the fabric firmly (while still retaining drape), the threads are held in place and the floats do not snag easily. If a float does happen to snag on something, you can simply snap the fabric firmly, and the snagged thread will slip back into place. The scarf could be easily enlarged into a shawl by increasing pattern repeats in the warp.

f I Wind a warp of 178 ends 31/4 yd long following the warp color order, Figure 1. Wind 2 additional ends of Bambu 7 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 96/12", sley the Tencel at 2 ends per dent and the Bambu 7 at 1 end 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.



#### Notes on sampling

If you haven't previously woven with Tencel, put on an extra 1/4 yd of warp and weave a small swatch before beginning the scarf. Cut the sample off and wet-finish it to determine if your beat is producing the drape you desire with stable floats.

2 Wind a bobbin with each of the weft colors. Allowing at least 9" of unwoven warp for fringe, spread the warp with scrap yarn.

 $oldsymbol{3}$  Leaving a tail 1 yd long for hemstitching, weave 2 picks of plain weave, then begin the pattern treadling in Figure 2. Use the tail to hemstitch in groups of 1 Bambu 7 and 3 Tencel ends. (You will have an extra Bambu 7 end in the edge hemstitching groups.)

4 Continue weaving, alternating the two colors of Tencel following the draft in Figure 2 for about 78". Weave one



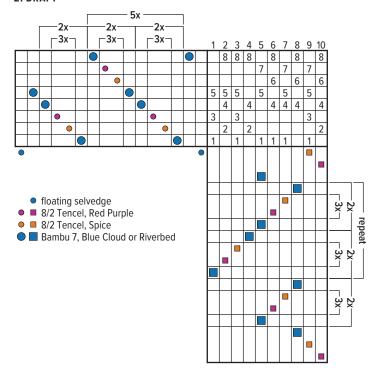
#### **HEDDLE COUNT**

Total	178
Shaft 1	12
Shaft 2	36
Shaft 3	36
Shaft 4	12
Shaft 5	11
Shaft 6	30
Shaft 7	30
Shaft 8	11

#### 1. WARP COLOR ORDER



#### 2. DRAFT





additional block to balance the scarf ends. Finish with 2 picks of Tencel and hemstitch as you did at the beginning.

**5** Leaving at least 9" for fringe on both ends, cut the fabric from the loom. Trim the fringe to 9". Prepare a twisted fringe using 1 hemstitched group in each fringe. To create thicker fringe, Annette added 1 length of each color of Tencel to each fringe group so they each contain 1 Bambu 7 end and 5 Tencel ends. She cut two 18" lengths of both Tencel warp colors and then used a tapestry needle to thread both strands up into one hemstitched group and down into the next group.

Wet-finish in cool water with a mild no-rinse fabric detergent by gently agitating and leaving the scarf to soak for at least 20 minutes. Add one or more dye-trapping laundry sheets to the water if desired. Roll the scarf in a towel to remove excess water, then place it into a lingerie bag in the dryer on gentle cycle. Remove while still damp and press the scarf until dry with a medium-hot iron. Tencel can feel stiff before wet-finishing, but after drying and pressing, it becomes more flexible with good drape. Pressing the Tencel hard enhances the drape and shine.

ANNETTE SWAN SCHIPF lives on a ranch in Montana and has taught weaving for over 30 years. Beautiful mountain views in one direction and wide-open prairies in the other direction inspire her weaving.



## **Bumple Scarf**

NANCY PECK



#### **STRUCTURE**

Integrated plain weave and basketweave.

#### **EQUIPMENT**

Rigid-heddle loom or 2- or 4-shaft loom, 8" weaving width; 8-dent heddle or reed; 2 stick or boat shuttles; 2 bobbins (if using boat shuttles).

#### YARNS

Warp: Fashion Arizona (100% cotton; 109 yd /50 g; Schachenmayr), #00080 Memphis Mix, 96 vd. Bamboo Pop (50% cotton/50% bamboo; 292 yd/100 g; Universal Yarn), #123 Fuchsia, 96 yd. Weft: Fashion Arizona, #00080 Memphis Mix, 68 yd. Bamboo Pop, #123 Fuchsia, 71 yd.

#### **WARP LENGTH**

Riaid heddle: 64 ends 96" long (allows 8" for take-up, 18" for loom waste; loom waste includes fringe). 2- or 4-shaft loom: 64 ends 3 yd long (allows 8" for take-up, 30" for loom waste; loom waste includes fringe).

#### **SETTS**

Warp: 8 epi. Weft: 8 ppi.

#### DIMENSIONS

Width in the heddle or reed: 8". Woven length: (measured under tension on the loom) 70". Finished size: (after wet-finishing) 6" × 60" plus 21/2" fringe.

This is a remarkably simple weave that gets its interest from both the weave structure and the colors, as well as from the combination of thick and thin yarns. Ena Marston, author of the article that inspired this piece, "More Integrated Weaves," calls it an unbalanced integrated weave. In her words, "the basic weave becomes dominant and the second weave produces an overlaid web which becomes an accent." In this scarf, thick cotton yarns weaving basketweave form the base, and a thinner cotton/bamboo blend weaving plain weave forms the web.

While the original Marston draft was written for four shafts, I discovered it can be reduced to two shafts or it can be woven on a rigid-heddle loom with no pick-up sticks, string heddles, or heddle rods. Directions for this wonderfully "bumply" scarf are included for rigid-heddle, two-shaft, and four-shaft looms.

■ Rigid-heddle loom: Set up your loom for direct warping 64 ends 96" long following the threading diagram in Figure 1 and centering for a weaving width of 8".

2- or 4-shaft loom: Wind a warp of 64 ends 3 yd long following the warp color order, Figure 2. Warp the loom using your preferred method following the draft, Figure 3. Centering for a weaving width of 8", sley 1 end per dent in an 8-dent reed.

f 2 Wind shuttles or bobbins with each of the weft yarns. Allowing at least 5" of unwoven warp for fringe, spread the warp by weaving 4 picks with scrap yarn without beating and then using the reed or the heddle to push the weft into place. If you still have gaps from your tie-on, repeat the process.

#### Notes on memory aids

Develop a mantra of sorts to remember your sequence when threading the rigid heddle. For instance, for this scarf, working right to left it could be: Two thin, one hole, one slot; two thick, two holes. Two thin, one slot, one hole; two thick, one slot.

3 Leaving a weft tail of Fuchsia about 5 times the width of the warp for hemstitching, begin weaving following the draft in Figure 3 or the rigid-heddle weaving sequence in Figure 4. As you weave, catch the weft not in use with the active shuttle to carry it up the selvedge. When there are 2 subsequent picks in the same shed, wrap the weft around the selvedge warp end to secure the picks. After about 1" of weaving, hemstitch over the first 2 weft picks in bundles of 4 warp ends.

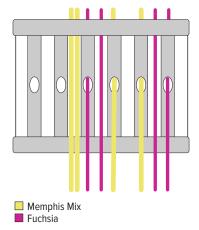
4 Continue weaving for about 70" or until you can no longer get a shed. Following the last repeat, weave 2 more picks using Fuchsia, then hemstitch as at the beginning.

#### **HEDDLE COUNT**

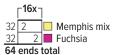
4-shaft:	
Shaft 4	16
Shaft 3	16
Shaft 2	16
Shaft 1	16
Total	64

#### 2-shaft: Shaft 2 Shaft 1 Total

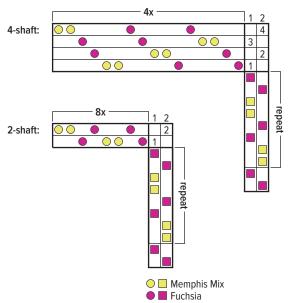
#### 1. RIGID-HEDDLE THREADING DIAGRAM



#### 2. WARP COLOR ORDER



#### 3. 2- AND 4-SHAFT DRAFTS



#### 4. RIGID-HEDDLE WEAVING SEQUENCE

- 1. Up heddle with Fuchsia.
- 2. Down heddle with Fuchsia.
- 3. Up heddle with Memphis Mix.
- 4. Up heddle with Memphis Mix.
- 5. Down heddle with Fuchsia.
- 6. Up heddle with Fuchsia.
- 7. Down heddle with Memphis Mix.
- 8. Down heddle with Memphis Mix.

**5** Remove the scarf from the loom and trim the fringe to 5" or desired length. If you choose to twist the fringe, twist in groups of 4 (twisting 2 bundles of 2) and tie the fringe ends to secure.

**6** Wet-finish in warm water, then roll in a towel and lay flat or hang to dry. Once dry, lightly steampress. Trim fringe ends.

#### **RESOURCES**

Marston, Ena. "More Integrated Weaves." Shuttle Spindle & Dyepot 30 (Spring 1977): 20-21.

NANCY PECK'S weaving emphasis is on fashion and home decorator fabrics. She has worked extensively on rigid-heddle and multishaft computer-aided looms.



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## **Clouds of Alpaca Scarf**

SUSANNAH DAY



#### STRUCTURE

Spot Bronson.

#### **EQUIPMENT**

4-shaft loom, 13" weaving width; 10-dent reed; 1 shuttle; 1 bobbin.

#### YARNS

Warp: Prime Alpaca (100% alpaca; 1,320 yd/lb; Galler Yarns), #306 Nutmeg, 375 yd.

Weft: Prime Alpaca, #314 Champagne, 275 yd.

#### **WARP LENGTH**

125 ends 3 yd long (allows 7" for take-up, 29" for loom waste; loom waste includes fringe). Note: An 8 oz skein of Prime Alpaca contains enough yardage to warp

5 yards for two scarves with allowance for 12" of unwoven warp between the scarves for fringe.

Warp: 10 epi (1/dent in a 10-dent reed). Weft: 10 ppi.

#### **DIMENSIONS**

Width in the reed: 125/10". Woven length: (measured under tension on the loom) 72". Finished size: (after wetfinishing) 103/4" × 64" plus 4" fringe.

Weaving with deflection can be a bit like baking one of those magic pudding cakes. What you put in the oven, so to speak, doesn't resemble what comes out. On the loom, this scarf looks like a classic spot Bronson; off the loom, it takes on a whole new look, developing wavy lines and spots in unexpected places on both sides.

The first time I wove spot Bronson with alpaca yarn, the deflection that happened during wet-finishing was a complete surprise. After that experience, I tried using different types of yarn, and I found that it was the slipperiness of 100% alpaca combined with the lace structure that caused the deflection.

You can wind a 5-yard warp as noted in the instructions to weave two scarves and experiment with different treadling patterns for the second scarf. Make sure to treadle the pattern in pairs (as in the original draft), or you may find you have warp floats on the back that are either too short or too long.

Alpaca is fabulously soft but can also pill a bit if you aren't careful. If you're warping back to front, keep an eye on your lease sticks to prevent a buildup of fuzz. To minimize the problem, try forcing your lease sticks apart a bit with leftover bobbins or small skeins of yarn. For a treadling error back farther than a couple of picks, cut the weft and pull it out. Unweaving can cause the warp to become too sticky to work with.

■ Wind a warp of 125 ends 3 yd long (or 5 yd if weaving two scarves). Warp the loom using your preferred method following the draft in Figure 1. Centering for a weaving width of 125/10", sley 1 per dent in a 10-dent reed.

#### Notes on structure

Spot Bronson is one of the few weave structures that allows three pattern blocks from only four shafts. Plain weave is woven by alternating between raising shaft 1 and the three other shafts.

 ${f 2}$  Wind a bobbin with Champagne. Leaving at least 6" of unwoven warp for fringe, spread the warp with scrap yarn.

 $oldsymbol{3}$  Weave following the treadling in Figure 1. To keep track of the treadling, it is helpful to start your shuttle on the left with treadle 1 and begin treadling with your left foot. The other three treadles will correspond to the shuttle entering the shed from the right and can be treadled with your right foot.

4 Repeat the treadling pattern 13 times, or for about 72" measured under tension. Beat evenly at 10 picks per inch.

 $\mathbf{5}$  Weave several picks of scrap yarn to protect the weft. Leaving at least 6" on both ends for fringe, cut the fabric off the loom. Trim all the fringe ends to 6". Twist the fringe using 2 groups of 3 ends for each fringe.

**6** Wet-finish in very warm water by gently agitating and then leaving the scarf to soak for 20 minutes. Gently squeeze out the excess water, roll the scarf in a towel, and then lay it flat to dry.

#### **RESOURCES**

Atwater, Mary M. "The Bronson Weave-Four Ways." *The Weaver 6*, 2 (1941): 9-17.

Davison, Marguerite Porter. A Handweaver's Pattern Book. Rev. ed. Swarthmore, Pennsylvania: M. P. Davison, 1950, 83-92.

Scorgie, Jean. "Barleycorn." Weaver's Craft 23 (August 1, 2007).

SUSANNAH DAY is a passionate new weaver whose favorite thing to weave is whatever she hasn't tried yet. She can be found most days at Eugene Textile Center, where she does a bit of everything.

#### **HEDDLE COUNT**

Total	125
Shaft 1	63
Shaft 2	20
Shaft 3	24
Shaft 4	18

#### 1. DRAFT

Γ.	2x-	_2x_	_2x_	_2x-	_2x-	_2x_	_2x-	_2x-	]		1	2	3	4								
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## **Hashtag Deflected Doubleweave**

JILL STAUBITZ

#### **STRUCTURE** Deflected doubleweave.

#### **EQUIPMENT**

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

#### **YARNS**

Warp: 2/14 Alpaca Silk (80% alpaca/20% silk; 3,472 yd/lb; Valley Yarns; WEBS), Fawn, 480 yd. 8/2 Tencel (100% lyocell; 3,360 vd/lb; Valley Yarns; WEBS), Shale and Dark Teal, 288 yd each; Grey Blue, 144 yd. Weft: 2/14 Alpaca Silk, Fawn, 262 yd. 8/2 Tencel, Dark Teal, 436 yd.

#### WARP LENGTH

400 ends 3 yd long (allows 6" for take-up, 26" for loom waste; loom waste includes fringe).

#### **SETTS**

Warp: 32 epi (4/dent in an 8-dent reed). Weft: 24 ppi.

#### DIMENSIONS

Width in the reed: 124/8". Woven length: (measured under tension on the loom) about 76". Finished size: (after wetfinishing) 101/2" × 73" plus 5" fringe.

For this project, I was excited to try Marian Stubenitsky's divided method for threading and tie-ups when designing deflected doubleweave (see Resources). I wanted to design a bold graphic, highlighting two blocks while letting the other two blocks act as background. I alternated threading the Alpaca Silk with the Tencel in the A and C blocks and the B and D blocks, placing the Tencel A and B blocks next to each other. The alternation emphasized the strong contrast and directional changes of the A and B blocks compared to the C and D blocks threaded with Alpaca Silk. Elisabeth Hill's method for carrying up the inactive weft at the selvedges as I wove was handy as well (see Resources). I used Alpaca Silk and Tencel for weft and was very pleased that the Alpaca Silk fulled nicely, creating deflection in both directions.

f I Wind a warp of 400 ends 3 yd long following the warp color order in Figure 1. Warp the loom using your preferred method following the draft in Figure 2. Centering for a weaving width of 121/8", sley 4 per dent in an 8-dent reed.

 ${f 2}$  Wind a bobbin with each of the weft yarns. Leaving at least 8" of warp for fringe, spread the warp with scrap yarn.

 $oldsymbol{3}$  Weave following the draft, Figure 2, for about 76", ending with the last completed pattern repeat. Note: The Alpaca Silk may be sticky, so Jill recommends using a pick-up stick to help clear your sheds.

#### Notes on deflected doubleweave

Deflected doubleweave can look bold, graphic, and contemporary. It is a structure that really makes a statement, which is what designer Jill Staubitz loves about it.

4 Leaving at least 8" for fringe on both ends, cut the fabric from the loom. Twist the fringe using 2 groups of 4 ends in each fringe.

 $\mathbf{5}$  Handwash and agitate in a basin of moderately warm water for about 10 minutes. Jill recommends using a dyetrapping laundry sheet in the wash. Spin in the washing machine to eliminate excess water. Hang to dry.

#### HEDDLE COUNT 1. WARP COLOR ORDER

Shaft 8	32
Shaft 7	32
Shaft 6	48
Shaft 5	48
Shaft 4	48
Shaft 3	48
Shaft 2	72
Shaft 1	72
Total	400

		<sub>-</sub> 2	х -		- 2x -	]	<b>⁻ 2</b> x ⁻		<b>⁻ 2</b> x ⁻		<b>⁻ 2</b> x ⁻	
48						16	16					8/2 Tencel Grey Blue
96				16	16			16	16			■ 8/2 Tencel Dark Teal
160		16			16		16		16		16	2/14 Alpaca Silk Fawn
96	16		16							16	16	■ 8/2 Tencel Shale
400 ends total												



#### **RESOURCES**

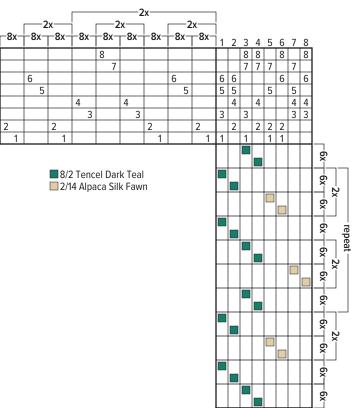
Hill, Elisabeth. "Selvedge Technique for Deflected Double Weave." YouTube, March 17, 2013. youtube.com/watch?v =K8XflOgcOMU.

Simpson, Janney. "Deflected Double Weave." Mini workshop at Handweavers' Guild of Connecticut, April 23, 2018. Stubenitsky, Marian. Double with a

Twist. Randwijk, Netherlands: selfpublished, 2019.

JILL STAUBITZ is fascinated with designing fabric and loves understanding weaving structures of all kinds! She recently started teaching online Zoom classes, available on her website, modernweaver.com.

#### 2. DRAFT





## O' So Beautiful Scarf

MERRIEI MILLER

#### STRUCTURE

Compound weave with deflected doubleweave.

#### FOILIPMENT

8-shaft loom, 12" weaving width; 10-dent reed; 2 shuttles; 2 bobbins.

#### **YARNS**

*Warp:* 2/18 Superfine Merino (5,040 yd/lb; Jagger Spun), Vanilla, 423 yd; French Blue, 299 yd. *Weft:* 2/18 Superfine Merino, Vanilla, 175 yd; French Blue, 328 yd.

#### **WARP LENGTH**

222 ends  $3\frac{1}{4}$  yd long (includes floating selvedges; allows 7" for take-up, 35" for loom waste; loom waste includes fringe).

#### **SETTS**

Warp: 20 epi (2/dent in a 10-dent reed).
Weft: 17 ppi in the deflected-doubleweave sections and 24 ppi in the twill/plain-weave sections.

#### **DIMENSIONS**

Width in the reed: 11½/10". Woven length: (measured under tension on the loom) 75". Finished size: (after wetfinishing) 9" × 65" plus 6" fringe.

This scarf is the result of me expanding my weaving repertoire in three ways. It started with seeing some of the extraordinary work other weavers have done with deflected doubleweave, a structure I had not tried before. I was intrigued, so I set off to design a project and developed a pattern of interlocking squares that deflect into O's when wet-finished.

About this same time, I was also eyeing the wonderful Jagger Spun Superfine Merino yarns. They are delicate but full beautifully during wet-finishing. I decided they would be perfect for my deflected-doubleweave project and purchased cones of Vanilla and French Blue.

I paired the deflected-doubleweave squares in my design with sections combining plain weave and twill. I love the raised stripes the warp floats create and how the weft floats combine with plain weave to produce areas of halftones. The latter reminds me of

my most comfortable, wellworn jeans and give some separation from the doubleweave sections.

I Wind a warp of 220 ends 3¼ yd long following the warp color order in Figure 1. Wind 2 additional ends of Vanilla to be used as floating selvedges and set them aside. Warp the loom using your preferred



#### Notes on design

The twill and plain-weave sections can be added to or subtracted from this design. Increase your warp length for sampling to determine the combination that most pleases you.

method following the draft in Figure 2. Centering for a weaving width of 11²/10″, sley 2 per dent in a 10-dent reed. Sley the floating selvedges through empty dents on each side of the warp and weight them over the back beam.

**2** Wind a bobbin with each of the weft colors. Leaving at least 10" of unwoven warp for fringe, spread the warp with scrap yarn.

3 Leaving a tail 1 yd long for hemstitching, weave 4 picks of plain weave using treadles 1 and 10, then begin the pattern treadling. Use the tail to hemstitch in groups of 12–14 warp ends.

4 Continue weaving following the draft in Figure 2 for about 75". End with 4 picks of plain weave and hemstitch as you did at the beginning.



 ${f 5}$  Allowing at least 10" for fringe on both ends, cut the fabric from the loom. Trim the fringe ends to 9". Prepare a twisted fringe using 1 hemstitched group in each fringe.  $\boldsymbol{6}\,$  Wet-finish in warm water by gently squeezing and then leaving the scarf to soak for 10 minutes. Line-dry.

 $Look \ for \ {\tt MERRIEL \ MILLER} \ on \ Facebook$ @Handwoven Designs by Merriel.

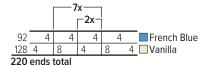
#### **HEDDLE COUNT**

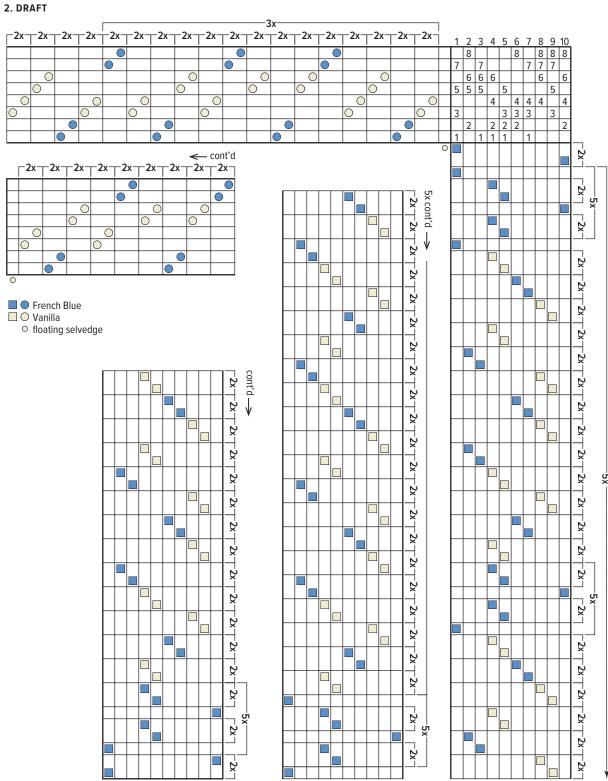
#### Shaft 8 22 22 Shaft 7 Shaft 6 32 Shaft 5 32 Shaft 4 32 Shaft 3 32 Shaft 2 24 Shaft 1 24

220

Total

#### 1. WARP COLOR ORDER





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### Cool Breeze

NATALIE DRUMMOND

#### **STRUCTURE**

Deflected doubleweave.

#### **EQUIPMENT**

8-shaft loom, 10" weaving width; 12-dent reed; 2 shuttles; 2 bobbins.

#### **YARNS**

Warp: 5/2 Tencel (prewound hand-dyed warp; 100% lyocell; 2,100 yd/lb; Blazing Shuttles), Iris, 414 yd. 20/2 tussah silk (5,000 yd/lb; Jane Stafford Textiles), Felicitations, 378 yd.

Weft: 5/2 Tencel (100% lyocell; 2,100 yd/lb; Teresa Ruch Designs), Steel Blue, 232 yd. 20/2 tussah silk, Felicitations, 215 yd.

#### **OTHER SUPPLIES**

Mild no-rinse detergent, such as Soak; 12" of smooth cord about the weight of bulky yarn to use as a spacer.

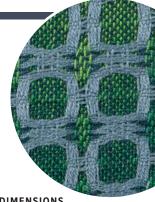
#### WARP LENGTH

176 ends (92 ends Tencel and 84 ends tussah silk) 4½ yd long (allows 7" for take-up, 79" for loom waste; loom waste includes fringe).

Note: The warp length is set by the prewound warp. To wind your own Tencel warp, use 176 ends (92 ends Tencel and 84 ends tussah silk) 3¼ yd long (allows 7" for take-up, 34" for loom waste; loom waste includes fringe).

#### SETTS

Warp: 5/2 Tencel, 16 epi (1-2-1/dent in a 12-dent reed); 20/2 tussah silk, 24 epi (2/dent in a 12-dent reed). Weft: 20 ppi.



**DIMENSIONS** Width in the reed: 93/12". Woven length: (measured under tension on the loom) 76". Finished size: (after wetfinishing) 8" × 74" plus 61/2" fringe.

*Nearly everything I weave* is the result of mixing space-dyed warps and hand-dyed fibers. I love the interaction of warm and cool colors, but for this project, I focused on using different values of cool tones.

In 2016, I took a weaving class from Kathrin Weber of Blazing Shuttles where I learned an "organic process" of weaving with multiple space-dyed warps. Since that time, I have been working with two to four hand-dyed warps in a single project as well as exploring the use of different fibers together. In particular, I love the areas of pure color that result from the long floats inherent in the deflecteddoubleweave structure.

Tussah silk is one of my favorite yarns to pair with Tencel in deflected doubleweave. Not only does it have a wonderful hand, but it seems to move and naturally fill in the spaces created by the structure during wet-finishing. My hope is that you will enjoy mixing these fibers and colors together as much as I did.

lacksquare Wind two separate warps  $4 \frac{1}{2}$  yd long, one with 84 ends of 20/2 tussah silk, and the other with 92 ends of Tencel. Warp the loom following the draft in Figure 1. Centering for a weaving width of 93/12", sley the Tencel ends 1-2-1 per dent and the tussah silk 2 per dent using the draft as a guide. Note: When combining two warp chains, warp front to back, arranging the warp ends in the reed, or use a secondary back beam for working back to front. Rather than sleying the warp ends simultaneously, you may

#### Notes on structure

Areas of plain weave stabilize the long weft and warp floats of deflected doubleweave. Colors mix in the plainweave areas but remain solid within the floats.

find it easier to fully sley one warp in the reed, leaving empty dents to be filled in with ends from the second warp.

2 Wind bobbins with each of the weft yarns. Leaving at least 8" of unwoven warp for fringe, spread the warp with scrap yarn.

3 Weave in a spacer of smooth cord to help you during hemstitching. Leaving a tail 1 yd long of Tencel, begin treadling following the draft in Figure 1 for 10 picks. Use the tail to hemstitch in groups of 4 warp ends, pulling out the spacer as you work (see Resources). Continue weaving following the draft in Figure 1 for about 76".

#### **HEDDLE COUNT** 1. DRAFT Shaft 8 Shaft 7 10 2x 3x 2x Shaft 6 12 Shaft 5 12 Shaft 4 36 0 Shaft 3 36 5 Shaft 2 30 4 4 Shaft 1 30 3 3 Total 176 2 ● 5/2 Tencel, Iris □ 20/2 tussah silk, Felicitations ■ 5/2 Tencel, Steel Blue √ denting group

End with the last pattern picks of Tencel and hemstitch as you did at the beginning. Refer to Resources for tips on how to handle your weft at the selvedges.

4 Leaving at least 8" for fringe on both ends, cut the fabric from the loom. Prepare a twisted fringe using 2–4 hemstitched groups in each fringe.

**5** Wet-finish in cool water with mild no-rinse detergent, gently

agitating, and then leave the scarf to soak for 15 minutes.
Line-dry. Press when damp to bring out the fabric's beautiful sheen.

#### RESOURCES

Hill, Elisabeth. "Selvedge Technique for Deflected Double Weave." YouTube, March 17, 2013. youtube.com/ watch?v=K8XflOgcOMU.

Knisely, Tom. "Notes from the Fell: Finishing Tips." *Handwoven*, September/ October 2021, 16–18. Strickler, Carol, ed. *A Weaver's Book of* 8-Shaft Patterns. Loveland, Colorado: Interweave Press, 1991, 236.

van der Hoogt, Madelyn: "Ask Madelyn: Deflected Doubleweave Selvedges." April 12, 2018. handwovenmagazine .com/ask-madelyn-deflected-double weave-selvedges.

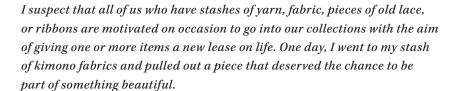
NATALIE DRUMMOND is a weaver based in Fremont, Indiana. She enjoys sharing her love of weaving and fiber art at the Orchard Gallery of Fine Art in Fort Wayne, Indiana.



Kimono silk.

## Inspired by Sashiko

BY PHYLLIS MILLER



The fabric was a five-color silk dyed in the kasuri style with a matte finish, slight slub, and, although thin, not much drape. Its compelling feature was its intricate design. Kasuri, like double ikat, is a design technique in which warp and weft threads are independently resistdyed with repeating sequences that don't reveal the complete design

until they interact with each other in the woven cloth. There wasn't enough of the 14-inch-wide fabric to make a complete garment, but if I complemented it with a piece of handwoven cloth, I knew something unique was possible.

Previously, I had spent some time translating traditional sashiko embroidery patterns into weaving

drafts that use supplemental warp and weft for vertical and horizontal lines, with hand embroidery on the loom for diagonals when needed to complete the pattern. I was eager to see how I might use this technique to produce a companion fabric for the silk.

#### **ANALYSIS OF THE KIMONO**

The primarily black kimono fabric had five distinct colored figures: bamboo stems and leaves in gold and green; butterflies in orange and gold; well curbs (a motif similar to a hashtag) in orange, white, and gold;

small flowers in green and white; and the character +, or ju (10), in white. There were strong vertical lines in the bamboo stems, groups of +, and strong diagonals crossing each other made by the bamboo leaves, well curbs, and butterflies. Additionally, there were two-pick weftwise stripes in the figures. It appeared that the weaving had two rows of black weft that alternated with two picks of pattern-dyed weft.

### PLANNING THE HANDWOVEN COMPANION

I started by choosing the woven sashiko-inspired pattern. I have developed over 50 sashiko-inspired drafts. For each, the final scale of the pattern depends on the sett of the fabric and how long the stitch floats need to be to make a readable design without being too long for practical wear. I decided I wanted a unit of the repeat that was larger than the small + in the kimono fabric but smaller than the large butterflies and well-curb elements. I also wanted a sashiko-inspired pattern that was mutable—one that I could weave and embellish with hand-embroidered diagonals that I could vary selectively.

I looked first at the sashikoinspired drafts that represented the same symbols in the silk fabric. Among my sample drafts, I had well curb, bamboo, and + patterns.

I estimated a sett of 18 ends per inch, and upon inspection, it

appeared that at this sett, the well curb would be too big. Bamboo and 十 were too small. However, if I used the rice pattern, 米, I could satisfy both my criteria. The figure size would be smaller than the large elements and larger than the small ones. If I removed the diagonals in places, what was left was a large version of the 十.

My next decision was about ground and figure colors. I've often found it frustrating to look for contemporary yarns in colors of the traditional Japanese palette. Ideally, the ground would be black with the sashiko figures in a strongly contrasting white or gold. However, the black in the kimono silk had a slight green cast and would have seemed a dark gray next to a large amount of modern true black. I decided on gold, largely because the orange was too vivid and the green was going to be hard to match. Black for supplemental warp and weft would contrast well with a gold ground cloth.

Now it was time to plan the ground cloth. With a tentative color plan, I began to look for both shiny and matte yarns in something similar to the gold in the kimono fabric. I wanted to create an illusion of some texture while producing a smooth fabric that wouldn't distort the placement of the supplemental yarns. Shiny combined with dull could do just that. I was lucky to find a honey-colored bamboo and a mustard 8/2 cotton that, together, made a nice gold. For my supplemental warp and weft, I chose a black soft cotton, slightly heavier than size 8 pearl cotton.

I also wanted to create a subtle stripe to echo the two-pick stripes in the silk. I decided to simplify the



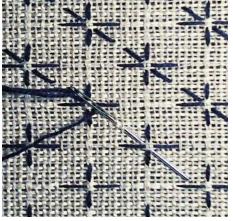
Bamboo stitch sample.



Well-curb stitch sample.



Ju stitch sample.



Embroidery in progress.

three-shuttle weaving by consistently alternating one pick of the shiny bamboo with one of the matte cotton. Each supplemental warp end was bordered with either two shiny or two matte warp ends. These warp pairs wove as one in the plain-weave areas. The result was a mix of subtle vertical and horizontal striped blocks in the ground cloth.

The weaving went smoothly but not swiftly. I could weave five repeats of the pattern in 5 minutes, and then it would take me 40 minutes to embroider the diagonals. Still, the exactness of the pattern satisfied my desire to create precise sashiko-style designs, and the embroidery became a meditative exercise.

#### **COMBINING NEW AND OLD**

Finishing the woven fabric was uneventful: I washed it gently in warm water, put it in the dryer on low for a bit, and then pressed it. I had to piece the silk with a half width to complete the sleeve and match the diagonal line of the design. After that, construction of the top was straightforward, with the exception of lining the handwoven fabric with a lightweight batiste. I lined it to protect long weft floats on the wrong side and cover places where supplemental diagonals were going to be removed.

Taking out some of the embroidery I had so painstakingly stitched was a way of accenting the relationship between the rice stitch and the + stitch and highlighting the subtle difference in visual density between those two stiches. I wanted to echo the diagonal lines of the kimono fabric by creating diagonal shifts in the sashiko-style patterns. On the front, which I wanted to be more subdued, I took out some of the rice diagonals in the lower third and even some of the remaining + stitches at the very

bottom. On the back, the areas where I removed embroidery were more extensive. If I could have anticipated where these areas were going to be on the finished garment, I could have avoided stitching the diagonals there in the first place, but I was not confident I could do so. I picked out selected areas and secured the ends on the back of the fabric.

As a final embellishment, I made three padded flowers using the remnants of the silk and attached them at the neckline beside the front seam.

All in all, I'm grateful to the unknown dyers and weavers who made my bit of kimono fabric and pleased I could contribute to the next phase of its history. I've become even more enthusiastic about exploring woven sashikostyle design applications in combination with other fabrics, as well as its potential all on its own.



The front of the finished top.



Close up of the top's front.



Flower embellishments.



# Sashiko-Style Flower Scarf

PHYLLIS MILLER

#### **STRUCTURE**

Plain weave with supplemental warp and weft.

#### **EQUIPMENT**

8-shaft loom, 8" weaving width; 15-dent reed; 2 shuttles: 2 bobbins: 9 hanging weights of about 3 oz each.

#### YARNS

Warp: Ground: Nature Spun fingering weight (100% wool; 310 yd/1.75 oz; Brown Sheep Company), #158 Fanciful Blue, 377 yd. Supplemental: Folio (65% superfine alpaca/35% rayon; 219 yd/1.75 oz; Berroco), #4501 Pearl, 108 yd.

Weft: Ground: Nature Spun fingering weight, #158 Fanciful Blue, 195 vd. Supplemental: Folio, #4501 Pearl, 45 yd.

#### **WARP LENGTH**

143 ends total. Ground: 116 ends 31/4 vd long (includes 8" for take up, 32" for loom waste; loom waste includes fringe). Supplemental: 27 ends 4 yd long.

#### SETTS

Warp: 15 epi (1 ground warp/dent in a 15-dent reed). Supplemental warp ends are sleyed in dents with adjacent ground warp ends.

Weft: 12 ppi.



#### **DIMENSIONS**

Width in reed: 711/15". Woven length: (measured under tension on the loom) 761/2". Finished size: (after wetfinishing) 7" × 681/2" plus 4" fringe.

*I have been intrigued for some time* by the patterns of sashiko stitching. The day I looked at the guide-thread arrangement for the persimmon flower pattern and saw the resemblance to a simple supplemental warp repeat, an interesting question arose in my mind. There are embroidery weaves common to many cultures, and if one could weave them and even weave shibori gathering threads, why couldn't sashiko patterns be woven, too? I began drafting eight-shaft and sometimes four-shaft sashiko patterns and weaving samples. After more than 50 drafts, I found a few surprises. In some samples, one side of the fabric had its own unpredictable design that arose from deflection of the warp and weft from the right-angle alignment seen on the other side of the fabric. This scarf is a practical expression of one of those surprising discoveries and shows just how different the two sides of the fabric appear. In this instance, the traditional flower diamond pattern is the more subdued, undeflected side.

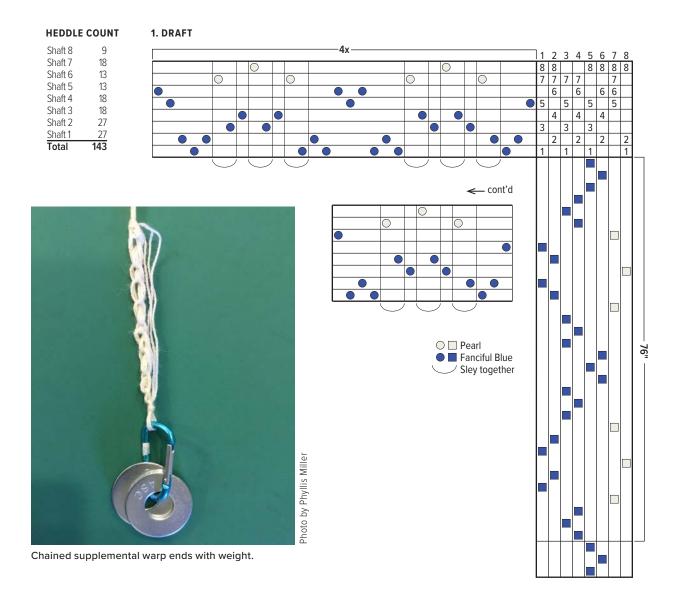


#### Notes on yarn choice

The yarns used in this scarf full slightly during wet-finishing, thereby stabilizing the floats in warp and weft and reducing their tendency to snag.

f I Wind a ground warp of 116 ends 3¼ yd long using Fanciful Blue and prepare a supplemental warp of 27 ends 4 yd long using Pearl. Warp the loom using your preferred method following the draft in Figure 1, winding the ground warp on the warp beam and resting the supplemental warp on the back beam. Centering for a weaving width of 711/15", sley 1 ground end per dent and add the supplemental warp in dents with a ground warp end to their right as shown in Figure 1. After tying all ends to the front apron rod, pull the supplemental warp gently and chain it in groups of 3 ends. Add weights, about 3 oz per chain, to hang behind the loom over the back beam.

f 2 Wind bobbins with each of the weft yarns. Leaving at least 6" of warp for



fringe, spread the warp with scrap yarn.

**3** Weave the scarf following the treadling sequence in the draft, taking care to catch the Pearl weft with the Fanciful Blue weft along the selvedges. Continue weaving for about 76". As weaving proceeds, unchain more supplemental warp and reattach weights. Phyllis beat lightly to achieve a ppi of 12, preferring the designs to be slightly elongated rather than perfectly square.

4 Weave several picks of scrap yarn to protect the weft. Leaving at least 6" of unwoven warp on each end for fringe, cut the fabric from the loom. Remove the waste yarn. Knot bundles of 4 ends into fringe on both ends. Do not trim.

5 Wet-finish in warm water with mild detergent. Gently agitate with your hands for 2 minutes, then rinse thoroughly. Roll in a heavy towel to remove excess water, then line-dry or dry flat.

**6** When dry, press with iron on wool setting, straightening the fringe ends. Trim fringe to 4".

#### **RESOURCES**

Briscoe, Susan. The Ultimate Sashiko Sourcebook. Blue Ash, Ohio: F&W Media International, 2004, 106.

PHYLLIS MILLER has been weaving for 50 years and has nurtured a particular interest in Japanese textiles. She weaves happily in Austin, Texas.

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# A Fine Line

Silk City Fibers

BY ELISABETH HILL



Photo courtesy of Silk City Fibers

When I received sample cards from Silk City Fibers, I immediately gravitated to the mouthwatering array of fine yarns in natural fibers. I figured that the gorgeous plumpy and textured yarns that are plentiful on Silk City's site have an army of knitters poised to make them into beautiful knitted items, but the fine Linen 14, Nature's Way 2/30 Merino, and Wool Crepe Deluxe 80/20 were calling for weavers to make the most of them.

I wove all the samples on an eight-shaft loom. I handwashed the samples in warm water, rolled them in a towel to remove excess water, and then laid them flat to dry. The only samples that needed pressing were the pure linen samples.

#### THE YARNS

*Linen 14:* (100% linen, 7,000 yd/lb), 31 colorways.

This lustrous, fine linen comes in a wide range of colors and makes a sturdy warp when sett tightly.

#### Nature's Way 2/30 Merino:

(100% mulesing-free ultrafine merino, 7,500 yd/lb), 10 colorways.

I loved the opportunity to work with "mulesing-free" merino. The movement to pay close attention to how

our yarns are made, their impact on the environment, and the treatment of our beloved fiber animals is close to my heart. If you are not familiar with the term, mulesing is the removal of strips of skin from around the backsides of lambs to create scar tissue that has been thought to prevent flystrike. The current understanding is that it is a cruel practice, and it has been banned in several countries.

Wool Crepe Deluxe 80/20: (80% merino/ 20% viscose, 2,100 yd/lb), 30 colorways. The Wool Crepe Deluxe is an absolute joy to weave with: textural, sturdy, and with a light, but very pleasant, spongy hand off the loom.



Back

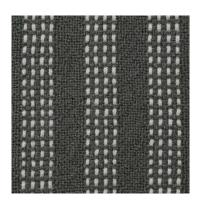
## **Deflected doubleweave**

Warp and Weft: Wool Crepe Deluxe, #114 Fisherman. #300 Mushroom.

Setts: 15 epi; 15 ppi. Shrinkage in width: 20%. Shrinkage in length: 23%.

I found the sett of 15 epi was difficult to beat to square in deflected doubleweave—I had to use a very tentative beat. Even so, the fabric has a light, springy hand that might be perfect for a tunic or a wrap for cool evenings.

Front



# Plain weave with warp floats

Warp and Weft: Wool Crepe Deluxe, #114 Fisherman, #300 Mushroom.

Setts: 15 epi; 15 ppi. Shrinkage in width: 16%. Shrinkage in length: 16%. The light springiness of this fabric and its resistance to wrinkles makes me think of garments for warm spring days or the start of school. This sample looks the same on both sides.



Front



Back

# **Deflected doubleweave**

Warp and Weft: Wool Crepe Deluxe, #114 Fisherman, #300 Mushroom.

Setts: 20 epi; 20 ppi. Shrinkage in width: 15%. Shrinkage in length: 15%.

I changed the sett for this and the next two samples from 15 epi to 20 and found it much easier to maintain my beat. The fabric, while slightly firmer, still has the wonderful flex and spring of the samples sett at 15 epi.



# Plain weave with color-and-weave

Warp and Weft: Wool Crepe Deluxe, #114 Fisherman, #300 Mushroom.

Setts: 20 epi; 20 ppi. Shrinkage in width: 15%. Shrinkage in length: 17%.

The tighter sett in plain weave yielded a firm cloth with textural interest and a lot of spring along the bias. This sample looks the same on front and back.



Front



Back

# **Deflected doubleweave**

Warp and Weft: Wool Crepe Deluxe, #114 Fisherman, #300 Mushroom.

Setts: 20 epi; 20 ppi. Shrinkage in width: 19%. Shrinkage in length: 19%.

Using this yarn with a float-rich interlacement is great. The sample is drapable and stretchy, while popping right back into shape after being handled roughly.







Back

# **Deflected doubleweave**

*Warp and Weft:* Linen 14, #014 Teal, #045 Olive, #151 Penny.

Setts: 48 epi; 48 ppi. Shrinkage in width: 8%. Shrinkage in length: 9%.

I wove this sample and the sample below using only linen for warp and weft. Varying the treadling created two very different fabrics, both of which had interesting reverse sides.



Front



Back

# **Deflected doubleweave**

*Warp and Weft:* Linen 14, #014 Teal, #045 Olive, #151 Penny.

Setts: 48 epi; 45 ppi. Shrinkage in width: 8%. Shrinkage in length: 7%.

The fine linen, sett close but let loose in a float-rich structure such as deflected double-weave, creates a delicate and flexible fabric that could be used for table linens or shirt fabric. I pressed both of these samples on a linen setting to bring out the shine of the linen.



Front



Back

# Honeycomb variation

Warp and Weft: Linen 14, #045 Olive, #151 Penny; Silk City Nature's Way Merino, Camel.

Setts: Working epi, 44. Linen 14, 48 epi; 44 ppi (used singly); Nature's Way Merino, 24 epi with 4 threads used as 1 end (2 ends [8 threads]/dent), 44 ppi (used quadrupled).

Shrinkage in width: 17%. Shrinkage in length: 17%.

The tight sett of the linen combined with the soft fulling of the merino work together to create a highly textured fabric. The fabric is not reversible; the long floats on the back are unattractive, but the cloth would make wonderful cushions or lined objects that hide the back.

#### FINAL THOUGHTS -

Working with these fine yarns was inspiring to say the least (there are quite a few more samples, structures, and combos that I liked but are not shown here). I found the linen to be very easy to work with, and the only time I had breakage was when I tried to weave

plain weave on the dense sett meant for the deflecting structures. At a more relaxed sett, it wove up like a dream. I hadn't woven with wool crepe previously, and I feel like I have a new friend. It has the lively springiness of singles without the (sometimes) temperamen-

tal behavior. Nature's Way Merino is lovely and soft in addition to being produced more humanely. Even though it is thin at 7,500 yards per pound, I used four ends as one and got the equivalent of a fingering-weight yarn to use alongside the slender linen.

#### PROJECT DIRECTORY

Designer/Weaver	Project	Pages	Weave Structure	Shafts	Level
Day, Susannah	Clouds of Alpaca Scarf	54–56	Spot Bronson	4	All levels
Drummond, Natalie	Cool Breeze	64-66	Deflected doubleweave	8	I, A
Goudsmit, Barbara	Shadow Play Kitchen Towels	32-34	Shadow huck	4	AB, I, A
Jablonski, Christine	Reflecting Pool Bed Runner	40-42	Spot Bronson variation	4	All levels
Kooistra, Marcia	Honeycomb Throw	44-46	Honeycomb	8	I, A
Miller, Merriel	O' So Beautiful Scarf	60-62	Compound weave with deflected doubleweave	8	I, A
Miller, Phyllis	Sashiko-Style Flower Scarf	70-72	Plain weave with supplemental warp and weft	8	I, A
Moncrief, Liz	Take Your Turn	36-38	Turned M's and O's	4	AB, I, A
Peck, Nancy	Bumple Scarf	50-52	Integrated plain weave with basketweave	RH, 2, 4	All levels
Schipf, Annette Swan	Blue Circling Embers	47-49	Honeycomb	8	I, A
Schneider, Angela K.	Sawtooth Stripe Pillows	28-30	Deflected doubleweave	4	AB, I, A
Staubitz, Jill	Hashtag Deflected Doubleweave	58-59	Deflected doubleweave	8	I, A

Levels indicate weaving skills, not sewing skills. AB = Advanced Beginner, I = Intermediate, A = Advanced. "All levels" includes very new weavers. RH = rigid heddle.

#### **SUPPLIERS**

Berroco, berroco.com, (401) 769-1212 (P. Miller 70-72).

Blazing Shuttles, blazingshuttles.com (Drummond 64-66).

**Brown Sheep Company Inc., 100662** County Rd. 16, Mitchell, NE 69357, (800) 826-9136, brownsheep.com (P. Miller 70-72).

Camilla Valley Farm Weavers' Supply,

PO Box 341, Orangeville, ON, Canada L9W 2Z7, (519) 941-0736, camillavalleyfarm.com, nmanners@camillavalleyfarm.com (Schneider 28-30).

Cotton Clouds, (928) 965-5482, cottonclouds.com (Schipf 47-49).

Galler Yarns, galleryarns.com (Day 54-56).

Gist Yarn, gistyarn.com, (617) 390-6835, hello@gist.com (Jablonski 40-42).

Jagger Spun, 5 Water St., Springvale, ME 04083, (207) 324-4455, (800) 225-8023, jaggeryarn.com (M. Miller 60-62).

#### Jane Stafford Textiles,

janestaffordtextiles.com, (250) 537-9468, inquiry@janestaffordtextiles.com (Drummond 64-66, Goudsmit 32-34, Kooistra 44-46).

#### LavenderSheep's Fiber Garden,

lavendersheep.com, (541) 392-1828, LavenderSheep@gmail.com, (Ellsworth 24-26).

#### Made in America Yarns,

madeinamericayarns.com, (215) 425-5656, info@madeinamericayarns.com (Kooistra 44-46).

Schachenmayr, schachenmayr.com, endverbraucherservice@mezcrafts.com (Peck 50-52).

Silk City Fibers, silkcityfibers.com, (800) 899-7455, (973) 942-1100 (Hill 74-76, Moncrief 36-38)

#### Teresa Ruch Designs,

(503) 235-9300, teresaruchdesigns.com, teresa@teresaruchdesigns.com (Drummond 64-66).

#### Venne-Colcoton Unikat,

vennecolcoton.com, info@vennecolcoton .com (Goudsmit 32-34, Kooistra 44-46).

WEBS, 75 Service Center Rd., Northampton, MA 01060, (800) 367-9327, yarn.com (Schipf 47-49, Staubitz 58-59).

Three deflected doubleweave scarves: Left to right: Hashtag Deflected Doubleweave, pages 58-59; Cool Breeze, pages 64-66; and O' So Beautiful Scarf, pages 60–62.

#### ERRATA

There is an error in step 4 of the Mid-Mod Coasters by Yvonne Ellsworth in the March/April 2021 issue.

The 3-pick weaving sequence should read as follows:

- a Both heddles up.
- b 10-dent heddle down and 5-dent heddle in neutral.
- c 5-dent heddle down and 10dent heddle in neutral

## **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.)

#### 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, 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.

#### 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 righthanded, 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.

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# **Reflections** on Deflection

Janney Simpson

Throughout many years of weaving and teaching, one of my favorite phrases has been "Stay on the trail." Winding a warp, threading heddles, and following treadling sequences at the loom all require following a path of sorts. When we "deflect" off that trail—lose our place or run into an obstacle—sometimes it causes problems. However, often those deviations lead to more interesting places. In my case, they led to my journey with deflected doubleweave.

Deflected doubleweave on eight shafts is nothing more than warp and weft floats connected with plain weave. Sampling is quite fun as you toggle between pattern blocks resulting in unique shapes. The possibilities seem endless. You can find many published examples of deflected doubleweave.

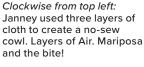
One of my first aha moments was the possibility of weaving two traditional layers of cloth on any deflecteddoubleweave threading. By changing the treadling order, I could also swap the layers and have the opposite layer on top. I was thrilled, as was my curious young golden retriever, who took one big bite out of my first finished sample.

I still have the sample—and the golden—almost nine years later. From that sample on, I have woven most of my deflected-doubleweave scarves with connections, layers, and pockets.

Another unexpected deviation led me to the Layers of Air deflecteddoubleweave scarf. I began by warping my loom with a four-color gradation of 18/2 wool/silk. After sampling









unsuccessfully with several wefts, I transferred the warp to an eightshaft loom and added sections of 60/2 silk. To my surprise, the silk behaved beautifully with the wool/ silk when woven in deflected doubleweave. Small, lacy squares appeared in the traditional layers. Off the loom, it was light as air.

More ideas followed on 4 to 16 shafts. I tried many combinations of layers and deflected doubleweave, wove deflected doubleweave as crimp weave with polyester sewing thread, used deflected doubleweave for indigo-dyed weft-faced shibori, and wove deflected doubleweave on 16 shafts using 2/2 twill in lieu of the traditional plain weave.

Recently, I was intrigued by a draft in Double with a Twist by Marian Stubenitsky with remarkably different front and back colorways. In a point-twill ABCDCBA block warp order, Blocks A and D were

wool/silk and Blocks B and C were Tencel. This is unusual because, typically, wool/silk and Tencel blocks would alternate.

The deviation of placing Tencel blocks next to each other led me to weave three layers of cloth connected to deflected doubleweave. I separated out the wool/silk yarns for the top and bottom layers and wove the Tencel yarns together in the middle layer. There were four colors and four edge flanges to manage. I reversed the tieup to see the flanges develop on the top surface. The result was a delicate three-layer cowl that can be worn with two layers in the front and one layer in the back. This step off the trail led to the opportunity for additional design options.

"Stay on the trail" makes good sense most of the time, but when we deviate and ask "What if I take the path ahead?" it might actually turn out just fine!