An Ode to Floats and their connection to deflection

by Madelyn van der Hoogt

We think of warp threads and weft threads as vertical and horizontal elements in the cloth. With washing, however, even in plain weave, threads can move away from strict vertical and horizontal lines. Some interlacements actually cause threads to deflect—sometimes dramatically—away from the usual grid. The November/December 2021 issue of *Handwoven* features pieces in which the deflection of both warp threads and weft threads is deliberately produced by the selected weave structure.

The three most common types of weave structures that cause threads to deflect are spot weaves (such as huck lace and spot Bronson), deflected doubleweave, and honeycomb. In all three, the deflection is caused by warp and/or weft floats. The projects featured in the November/December issue are grouped in this article according the type of interlacement that produced them.

SPOT WEAVES

In spot Bronson and huck lace, within a group of five (or more) threads, a plain-weave interlacement is skipped in alternate picks. Weft floats on the face allow warp threads on the back to slide together and vice versa. When this group of threads alternates with a group weaving plain weave, the denser plain-weave interlacement pushes into the float area, causing curves and sometimes circles.

2. Deflected doubleweave



1. Spot weave (huck lace)



3. Honeycomb



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Spot Bronson

The drawdown in 4a and the photo of the cloth on the loom in 4b show weft floats over five threads. On the other side of the fabric, 5-thread warp floats occur. On the loom under tension, warp and weft threads maintain their vertical and horizontal positions. Off the loom, especially after wet-finishing, the two weft floats slide together (and on the back, the two warp floats slide together). The alpaca yarn in Susannah's scarf is especially slippery, not only causing the floats to slide together, but also distorting the spaces between them along diagonals. Compare the section outlined in red in 4b and in the finished cloth in 4c. Susannah figured out exactly where these distortions occur during finishing and created her draft to produce the specific design that appears in the finished scarf.

In her Reflecting Pool runner (**5a** and **5b**, page 3), Christine Jablonski uses a variation of spot Bronson that shows groups of three floats over seven threads in each block (instead of the usual two floats over five threads). In her draft, float blocks and plain-weave blocks alternate throughout. She places a thread in a





4b. On the loom



4c. The finished fabric



2 © 2021 LONG THREAD MEDIA LLC. COPIES MAY BE MADE FOR PERSONAL USE ONLY. NO UNAUTHORIZED REPRODUCTION OR SALE OF THIS PATTERN IS PERMITTED. HANDWOVENMAGAZINE.COM | LONGTHREADMEDIA.COM contrasting color at the beginning of each 2-block repeat in both the warp and the weft. In the finished fabric, these outline threads move into the groups with floats and are pushed out around the group weaving plain weave to create waves; compare the drawdown of the threads in **5a** and the finished cloth showing the same interlacement in **5b**.

Barbara Goudsmit uses a structure that is a combination of shadow weave and spot weave, sometimes called "shadow huck." Usually, the floats in this interlacement are created by altering the treadling order for a standard shadowweave draft. Instead, Barbara altered the threading draft to produce her version of shadow huck. Her Shadow-Play kitchen towels are woven using three different treadling orders resulting in three unique designs.

M's and O's is a spot weave that usually shows alternating sets of weft floats. When these weft-float groups alternate with groups of threads weaving plain weave, the plain-weave areas form circles and ovals. Liz Moncrief turned an M's and O's draft for her Siren and Onyx table runners. Turning an M's and O's draft causes its characteristic ribs to run horizontally in the cloth rather than vertically.

7a. Turned M's and O's drawdown for Liz Moncrief's table runners



5a. Spot Bronson drawdown for Christine Jablonkski's Reflecting Pool bed runner



6a. Shadow huck drawdown for Barbara Goudsmit's Shadow Play kitchen towels



5b. The finished fabric



6b. The finished fabric



7b. The finished fabric



7c. The finished fabric (Onyx runner)



DEFLECTED DOUBLEWEAVE

In most forms of doubleweave, a thread from one of the weaves alternates with a thread from the other in both warp and weft. In deflected doubleweave, more than one thread from each weave alternates with more than one thread from the other, usually four threads (as in 8a) or more. Otherwise, the basic principles of block doubleweave apply: As each weave is woven, warp threads of the opposite weave are either up or down depending on whether they are intended to show on the face or the back.

For example, in the draft for Merriel Miller's scarf in **8a**, as the white weft weaves for the first four picks, blue warp threads on shafts 1 and 2 (Block A) are up (blue therefore shows on top in Block A); blue warp threads on shafts 7 and 8 (Block D) are down (white shows on top in Block D). In deflected doubleweave, unlike in typical block doubleweave, the blocks that are the same color as the weft that is weaving usually show that color



8a. Deflected doubleweave draft for Merriel Miller's Oh So Beautiful scarf

on top (white is therefore on top in Blocks B and C for the first four white picks). For the next four blue picks, white is up to show white in Block B, but down to show blue in Block C. Blocks A and D both show blue on top.

On the loom, the threads in deflected doubleweave look very much the way they do in a drawdown. When the cloth is removed from the loom and wet-finished, both warp and weft threads slide into the float areas to create waves and circular shapes. The rectangles in 8a become the ovals in 8b. The squares in the drawdown for Natalie Drummond's Cool Breeze scarf become circles (9a and 9b, page 5). In some cases, warp and weft threads slide to completely cover threads from the other layer: the green warp and weft form a complete circle in the cloth in 9b, sliding over the blue warp and weft that show in the drawdown. This is even more apparent in the draft and finished cloth for Angela Schneider's Sawtooth Stripe pillows (10a and 10b). The plain-weave sections spread into the float areas wherever their corresponding floats are on top. In Jill Staubitz's scarf (11a and 11b), 16 threads from each weave alternate, creating small circles where they interlace with each other that form a contrast in texture with the floats that join them.

8b. The finished fabric



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9a. Drawdown for Natalie Drummond's Cool Breeze scarf



10a. Drawdown for Angela Schneider's Sawtooth Stripe pillows



11a. Drawdown for Jill Staubitz's Hashtag scarf



9b. The finished fabric



10b. The finished fabric



11b. The finished fabric



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12a. Draft for Annette Swan Schipf's Blue Circling Embers scarf

HONEYCOMB

In honeycomb fabrics, groups of threads weaving plain weave alternate with groups of threads that float. A heavy weft is inserted before and after these sections that then outlines the sections, bending around the plain-weave groups and down into the float groups. (A typical honeycomb fabric is shown in **3**, page 1.) Annette Swan Schipf's draft in **12a** is a variation on this theme. Usually in honeycomb, the thick outline threads are placed in plain-weave sheds. In the draft in **12a**, they float. The circular shape is still formed as the

thick threads interlace with each other and with the warp threads in the plain-weave and float groups (see the face and back of the Blue Circling Embers scarf in **12b** and **12c**).

In Marcia Kooistra's draft for her throw, only the outline threads alternate sections of plain weave with sections of floats. Even that small difference causes them to collapse where they float and spread out where they don't. The draft for Kooistra's throw is the same as the draft in **12a** except that there are no floats (only plain weave) where the red threads float in **12a**.





12b. Finished fabric, face



12c. Finished fabric, back







OTHER DEFLECTIONS

The examples in **14a–b** and **15a-b** show two unusual ways of causing threads to deflect. In the draft for Phyllis Miller's Woven Sashiko scarf in **14a**, supplementary warp threads float on a plain-weave ground cloth. The deflection in the pairs of warp floats comes from being pulled together by the supplementary weft as it crosses over them but under the supplementarywarp thread that floats between them.

14b. Finished fabric



15a. Draft for Nancy Peck's Bumple scarf



14a. Draft for Phyllis Miller's Woven Sashiko scarf



Nancy Peck's draft can be classified in several ways. It has been called an "integrated weave" —both sets of threads (the magenta threads and the yellow threads) weave basket weave. It can also be considered a doubleweave (there are two separate sets of warp and weft). The magenta threads could even be considered a supplementary warp and weft on a basket-weave ground cloth. The deflection is subtle, but the texture very appealing. The amazing thing about this draft is that Nancy discovered that it can be woven on two shafts or on a rigid-heddle loom.

15b. Finished fabric



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