Weaving Innovations from the Bateman Collection

Dr. William G. Bateman's interest in hand weaving began at an early age. When he was five years old he attended kindergarten in Salt Lake City, Utah. On his way home from school, he regularly passed by a weaving shop where the rhythm of the weaving attracted his attention. Many years later, he told his daughter he cleared a small place on the window to see what was causing the noise. The peephole was used frequently to satisfy his curiosity as he watched the weavers at work.

Many years later, when Mrs. Belle Bateman assisted Mary Atwater at a summer workshop, Dr. Bateman had an opportunity to learn more about weaving. However, years were to pass before he could begin to satisfy his curiosity with a concentrated study of weaving.

Originally, Dr. Bateman intended to prepare a weaving reference collection to be used for classes in weaving, textiles, design, and as study materials for weaving organizations. He planned to weave samples and variation of all the known weaves. Weaving on an eight-shaft Missouri table loom, he produced over eight file storage boxes of samples, beginning with plain weaves and progressing through overshot, twill, crackle, tied weaves, weaver-controlled weaves, and others.

The Bateman Collection - Dr. Bateman kept the warp, weft, threading and treadling information for the samples he wove. He numbered the warps and each sample woven on that warp. There were a total of 389 warps with six to twelve samples on each one, although the total of samples he wove is unknown. At the present time, Dr. Bateman's samples are divided among four collections. One collection contains the samples illustrated and discussed in the monographs edited by Virginia Harvey and owned by the Handweavers Guild of America (HGA). One set was given to Montana State University. Another set of samples is owned by the Whidbey Weavers Guild.

Dr. Bateman's personal collection and manuscript were passed to Virginia Harvey with the anticipation it would be made available to weavers. Virginia Harvey verified and mounted the samples and drawdowns were prepared by Luise Ziegler. When this task was completed after several years, the collection was offered in 1994 to the Seattle Weavers' Guild. At the present time, there are a total of 1,473 samples organized chronologically in 45 notebooks housed in the Seattle Weavers' Guild library.

The Bateman Weaves – It's difficult to separate the Bateman weaves from each other because most of them are related and all of them were developed by Dr. Bateman. They differ from other weave systems because most of them do not have traditional sequence that gives a classic texture or pattern.

All of Dr. Bateman's weaves may be considered unit weaves because they are composed of blocks that can be drafted from a profile. Classifying Dr. Bateman's original work is challenging. He took his original blocks of each of the systems and extended or transposed parts of the block(s) or expanded the entire block until some of the blocks bear little resemblance to the original version.

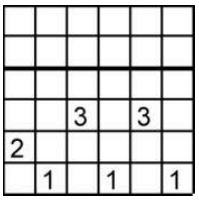
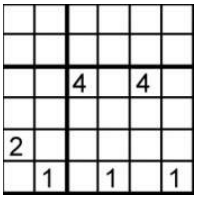
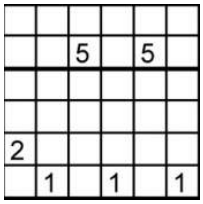
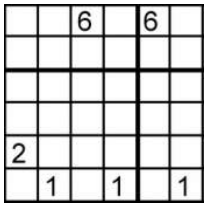
Several of Dr. Bateman's weaves would fit into another class in addition to the unit weaves. For example, Extended Divided Twill and Extended Manifold Twill would fit in the twill class. The drafts of Multiple Tabby weaves would fit with its relative, the M's and O's weave. The Bateman Blend, Park, Boulevard, and Chevron weaves are the only weaves that fit only in the Bateman unit weave class.

Bateman Blend – One of the weaves developed by Dr. Bateman is a unit weave created from a blend of the Atwater-Bronson and Summer and Winter unit weaves. Dr. Bateman originally called this system the ***At-Win*** weave; however Harriett Tidball changed it to ***Bateman Blend***.

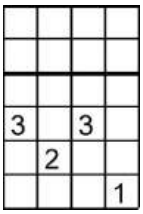
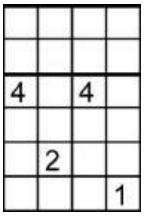
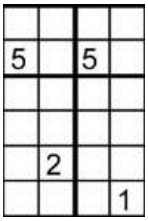
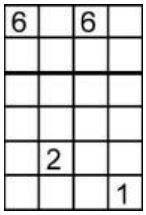
All Bateman Blend blocks are composed of three elements: the beginning tie group, the tie-downs, and the pattern sheds. All except a few expanded blocks have shafts one and three for the tie group and one and two for the tie-downs. The remaining shafts carry the pattern threads. One tabby is shafts one and two, the other is shaft three along with all pattern shafts.

Most of the Bateman Blend blocks use eight shafts and they vary in size from six-thread to twelve-thread blocks.

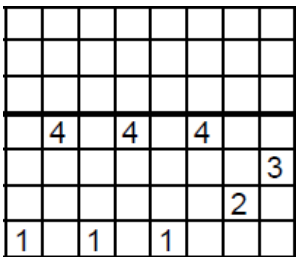
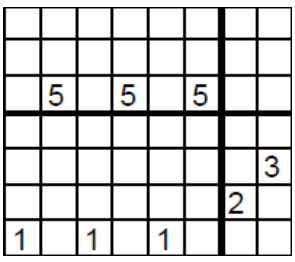
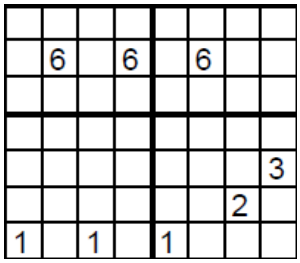
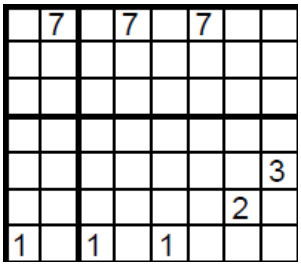
Blocks for Atwater-Bronson lace require six ends.

Block A	Block B	Block C	Block D
			

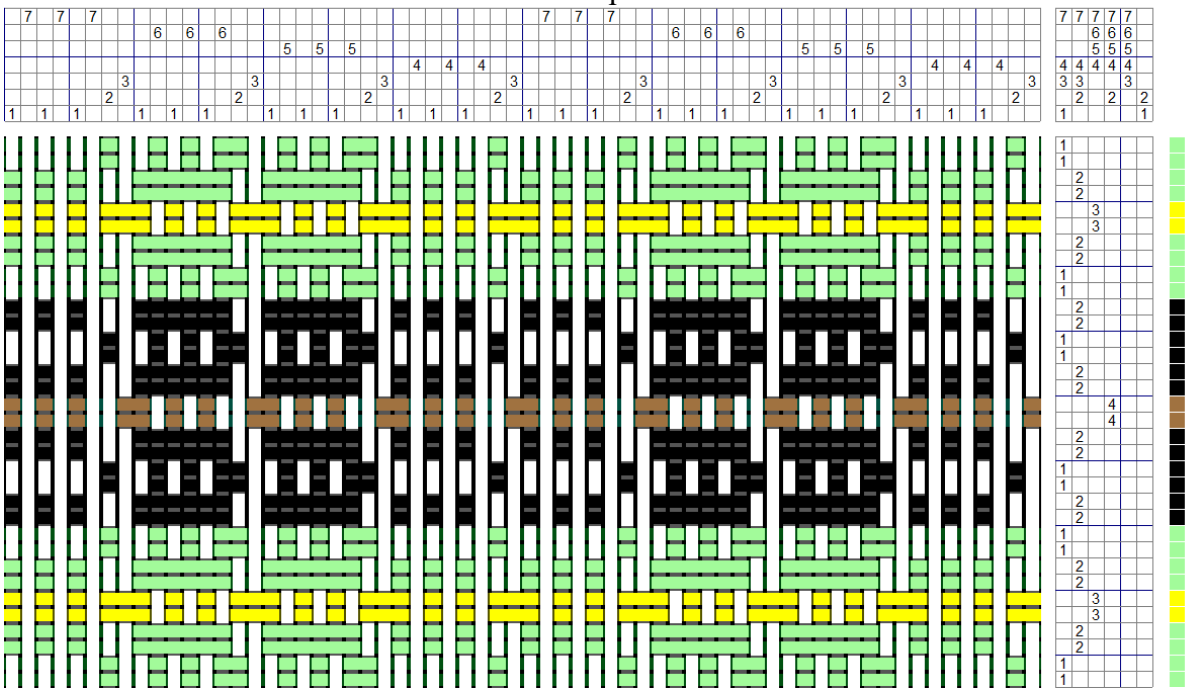
Blocks for Summer and Winter require only four ends per block

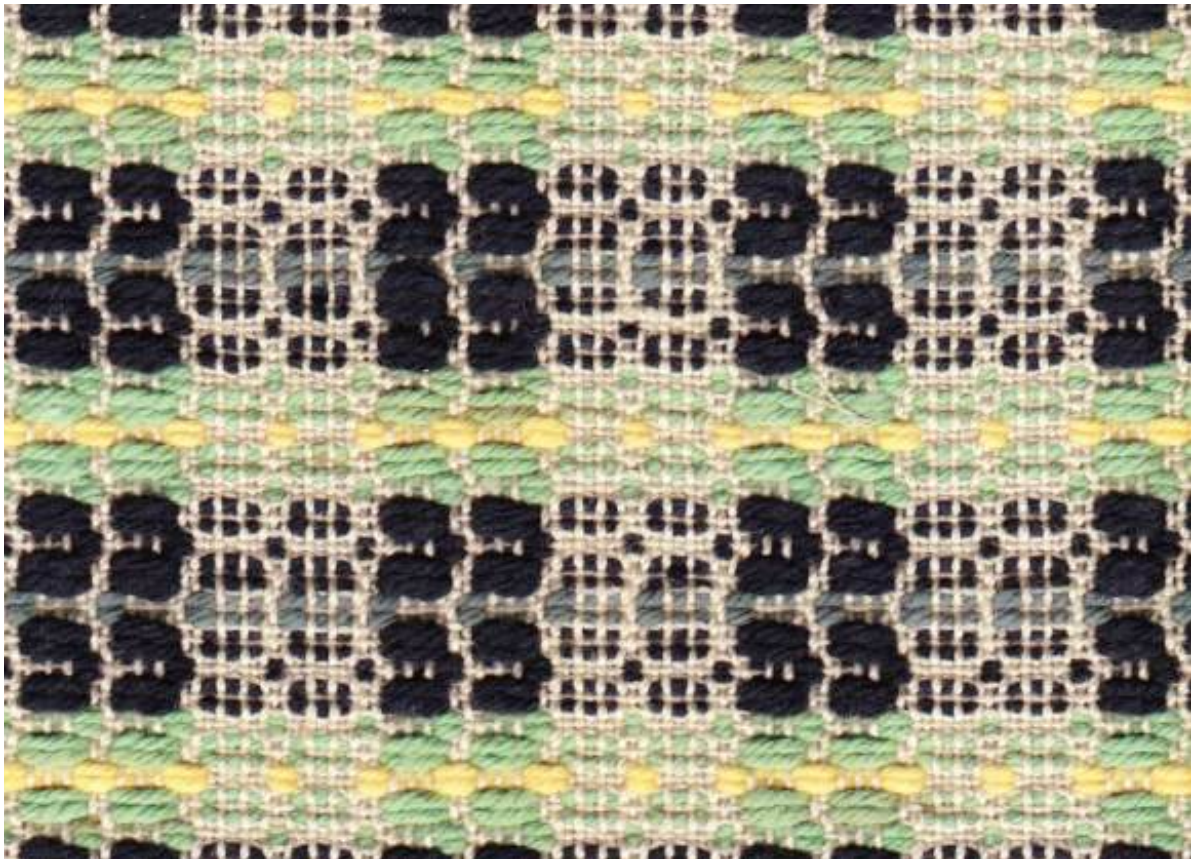
Block A	Block B	Block C	Block D
			

The eight-end blocks for the Bateman Blend weave on the following page are as follows:

Block A	Block B	Block C	Block D
			

Bateman sample 263F – 2

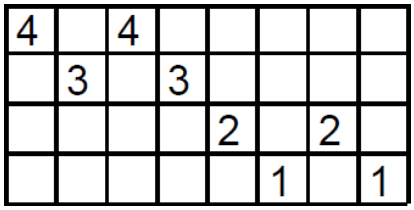
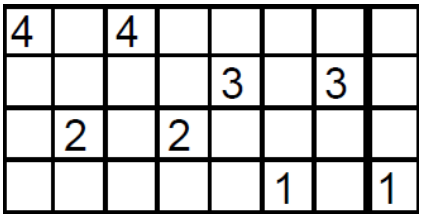




Multiple Tabby – The basic blocks developed by Dr. Bateman for the Multiple Tabby system are related to M's and O's. Like M's and O's, each block has a different tabby. Blocks using four, six, and eight shafts were designed and used by Dr. Bateman. He developed other drafts by expanding and rearranging the threading within the original blocks. Some of Dr. Bateman's samples resemble M's and O's; however, most were treadled so there is no resemblance to the original inspiration weave.

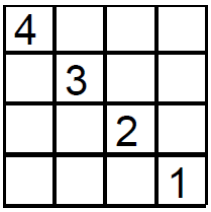
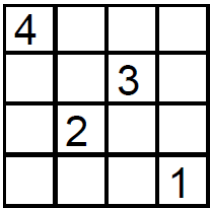
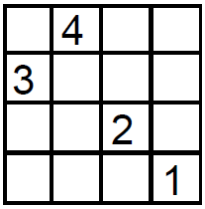
Dr. Bateman chose to call these weaves Multiple Tabby system because each block has a different tabby.

M's and O's Blocks

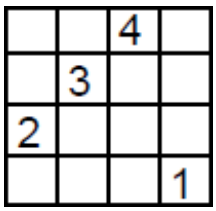
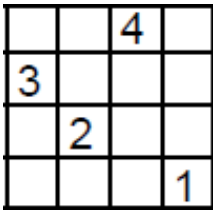
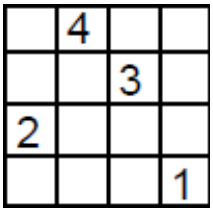
Block A	Block B
	

The four-end blocks used for the Multiple Tabby weave on the following page are below. They were threaded in the following order A1-B1-C6-A6-B6-C1. Note – each block for this draft begins on shaft one.

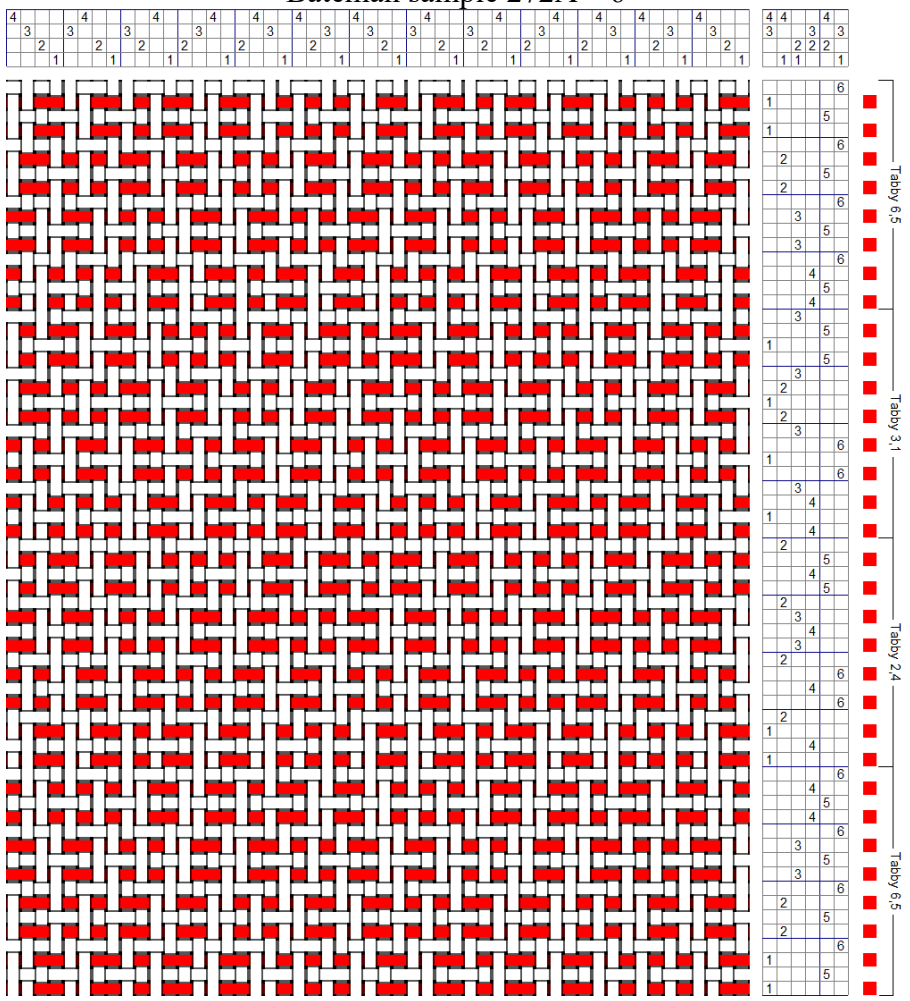
Original Multiple Tabby Blocks

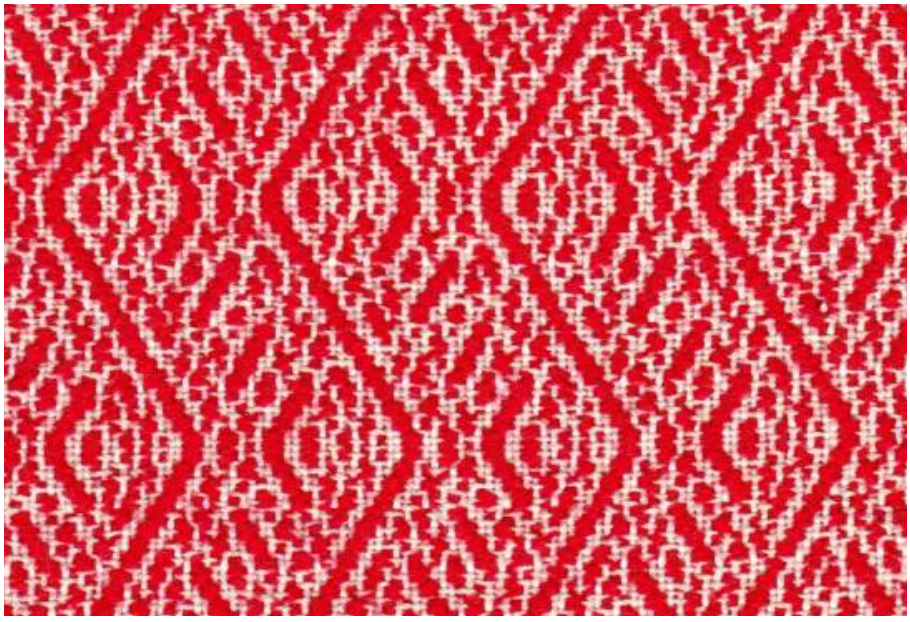
Block A1	Block B1	Block C1
		

Rearranged versions of the original Multiple Tabby Blocks above

Block A6	Block B6	Block C6
		

Bateman sample 272A – 6

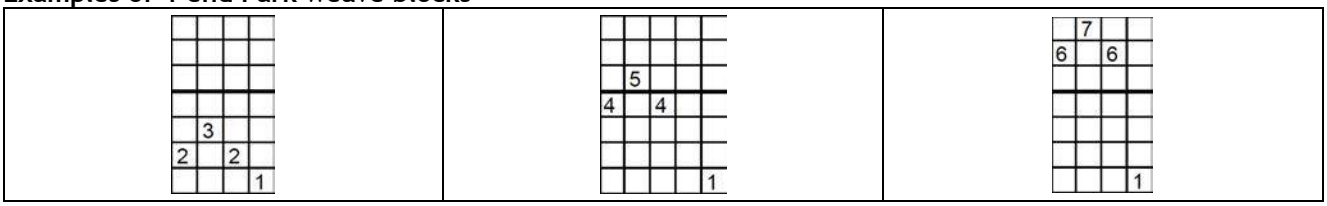




Park, Boulevard, and Chevron - Park, Boulevard, and Chevron weaves are closely related. Each has a tie unit and a pattern unit. The Park weave is a one-thread unit. The Boulevard weave is a three-end tie unit. The Chevron weave, an extension of the three-end Boulevard tie unit tie, has a five-end tie portion of the unit. Some of the pattern units of these three weaves are interchangeable.

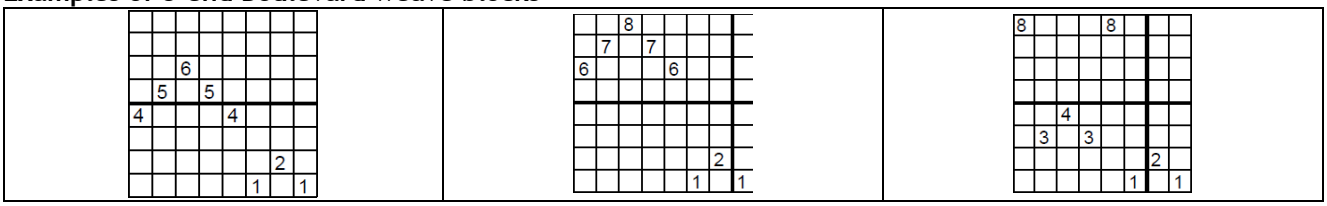
Park Weave – Park weave blocks consist of one tie end and pattern ends. The tie portion of the unit is one thread on shaft 1 at the beginning of the block. The remaining threads in the block are the pattern threads and consists of an odd number of threads (e.g., 3, 5, 7) which begin and end on the same even-numbered shaft. The pattern threads create a symmetrical chevron form. The tabbies are always odd and even. All of Dr. Batemans' Park weaves are threaded on seven or eight shafts and the blocks vary from four to fourteen threads. Larger blocks and blocks using more shafts are possible.

Examples of 4-end Park weave blocks



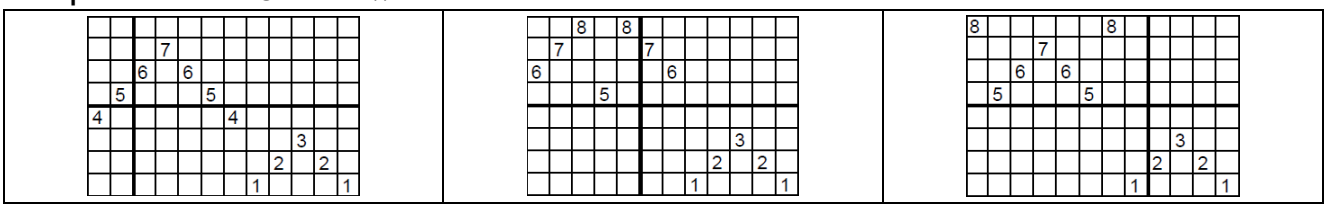
Boulevard – The Boulevard weave is the same as the Park weave except the block has three tie ends, which are threaded 1-2-1. The pattern ends and tabby picks are managed the same way as in Park weaves, except shaft two may not be used for pattern ends. Six-thread, eight-thread, ten-thread, and twelve thread blocks were drafted by Dr. Bateman; however, larger blocks may be drafts, as well as blocks for more than eight shafts.

Examples of 8-end Boulevard weave blocks



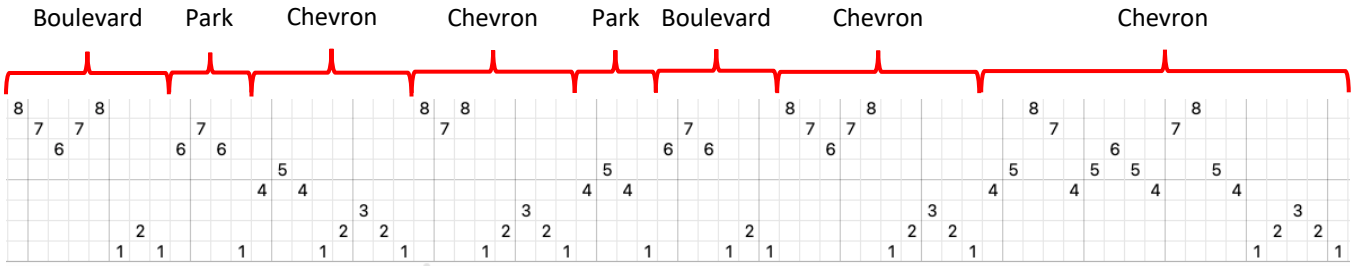
Chevron – The Chevron weave is an extension of the Boulevard weave. Shaft three is added to the tie sequence making it a five-end chevron threaded 1-2-3-2-1. The pattern ends in the block are the same as the Park and Boulevard weaves, except the number of ends is limited because there are three shafts required for the tie ends. Dr. Bateman drafted eight-shaft blocks with ten, twelve, fourteen, sixteen, and twenty threads; however, larger blocks or drafts on more than eight shafts are possible. Like Park and Boulevard weaves, the tabby picks are woven on odd and even.

Examples of 12-end Chevron Weave blocks

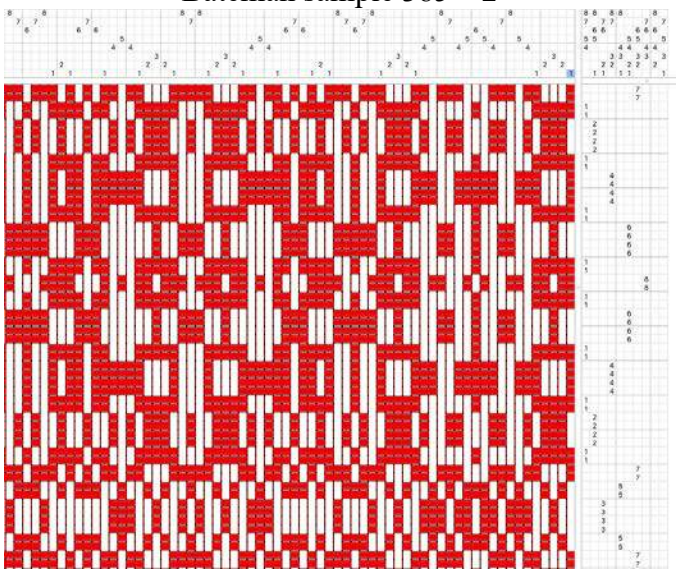


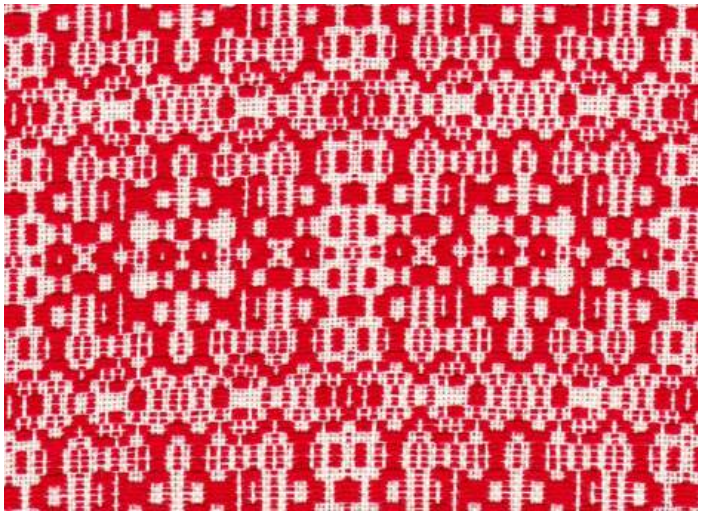
The Park, Boulevard, and Chevron weaves, as defined by Dr. Bateman, were woven individually to create some of his samples. He also combined two of more of them with each other and other weaves (e.g., divided twill) in a single draft.

Below is the threading sequence for the Bateman sample warp #385 draft shown on the following page. It combines Park, Boulevard, and Chevron threading sequences. Brackets label the blocks and show their arrangement.

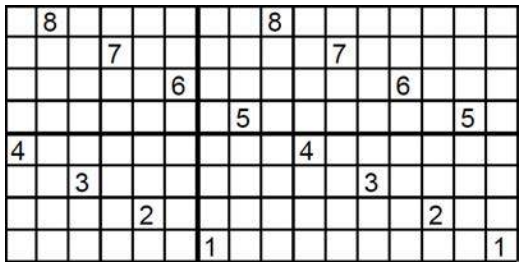


Bateman sample 385 – 2



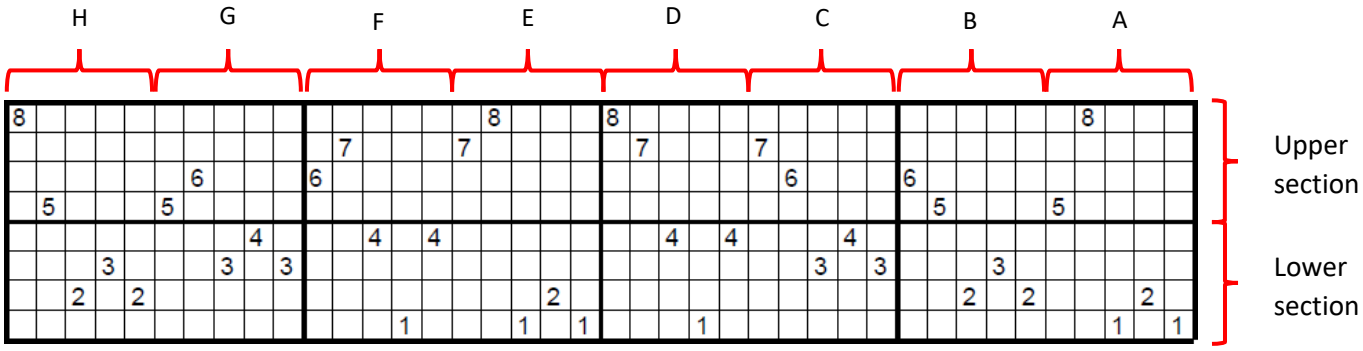


Extended Divided Twill – Dr. Bateman developed the Extended Divided Twill system by dividing an eight-shaft draft into two sections; the lower section with shafts one through four and the upper section with shafts five through eight. The threads are then alternatively are placed in the two sections. A simple divided twill, only one thread is placed in each section and they are threaded in a twill progression as shown below.

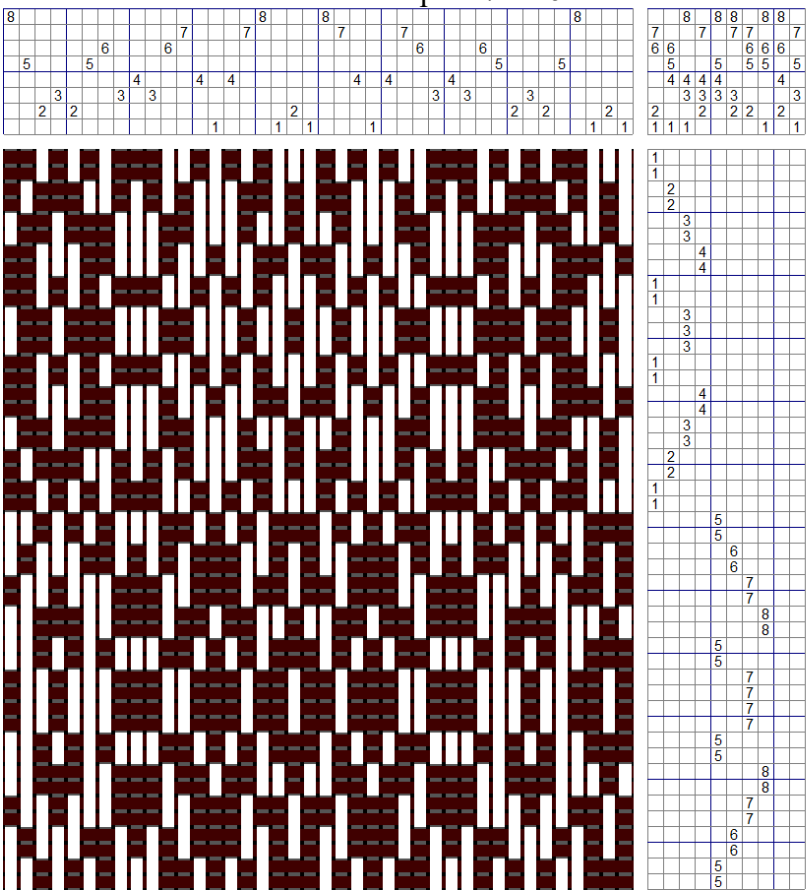


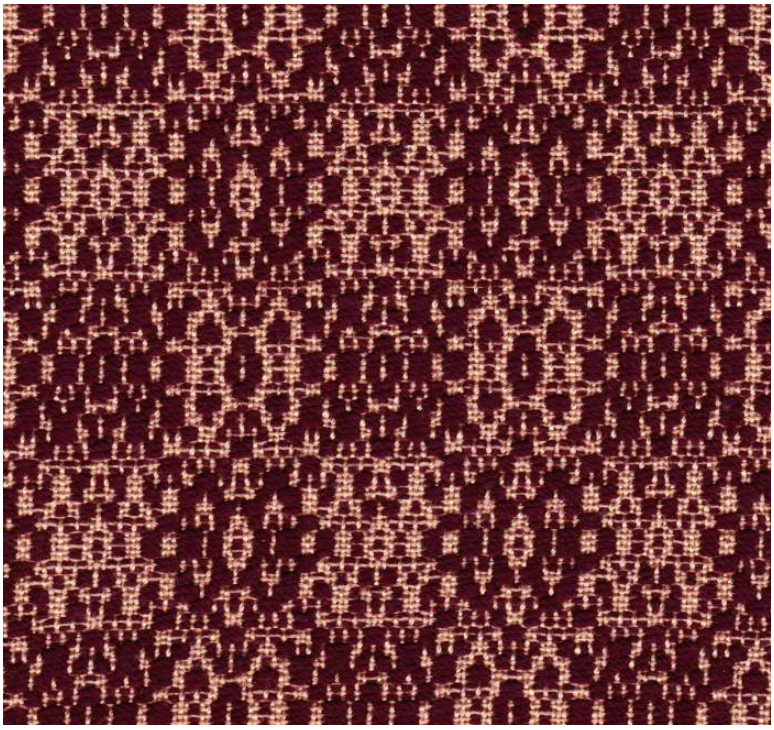
Dr. Bateman extends the divided twill by drafting more than one thread in the lower section before he places a thread (or multiple threads) in the upper section or vice versa. The Extended Divided Twill is always drafted so the tabby picks are woven odd-even. Blocks vary from three to eleven threads with straight twills, chevrons, and crackle units drafted as sections of the blocks.

Below are the five-end threading blocks for the Bateman sample #274 draft shown on the following page. For each block, there is a three-end chevron threaded in the lower section followed by a two-end straight threaded in the upper section.

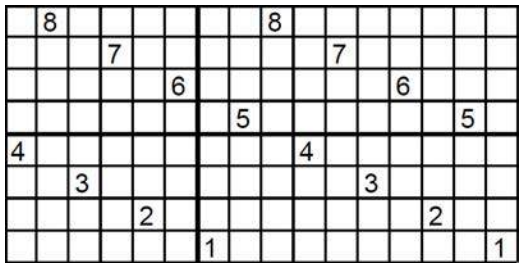


Bateman sample 274 – 6





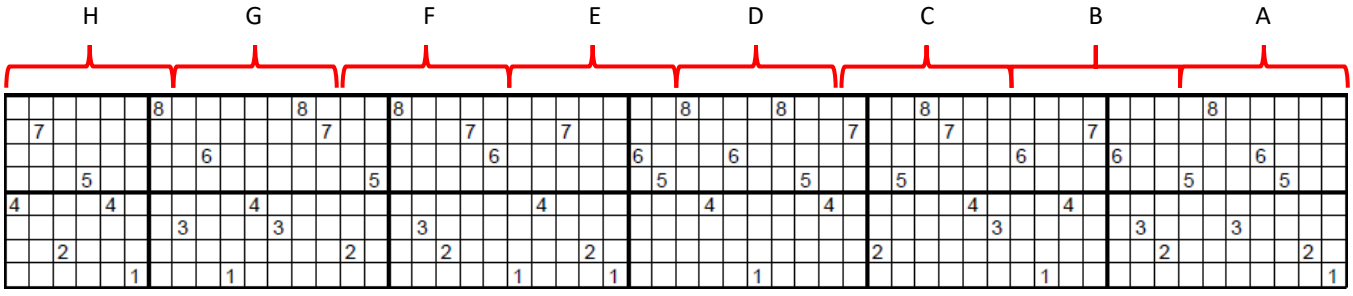
Extended Manifold Twill – A Manifold Twill is a sequence created from more than one twill sequence. In the example below, it is developed by placing a twill threading sequence on shaft 1 and another twill threading sequence that begins on any other shaft except 2. Both threads begin a straight twill that extends through a given number of shafts and then a repeat begins. Below is an example of a manifold twill with an eight-shaft straight draw twill with the first thread on shaft one alternating with an eight-shaft straight draw twill that begins on shaft five. Unlike the Extended Divided Twill, there is no lower or upper section.



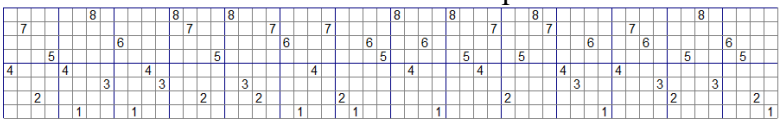
Dr. Bateman extended Manifold Twills by adding one or more threads on adjacent shafts to one or both of the original threads. The sequences create twills, chevrons, crackle groups, or other arrangement that are drafted so they have tabby picks woven odd-even.

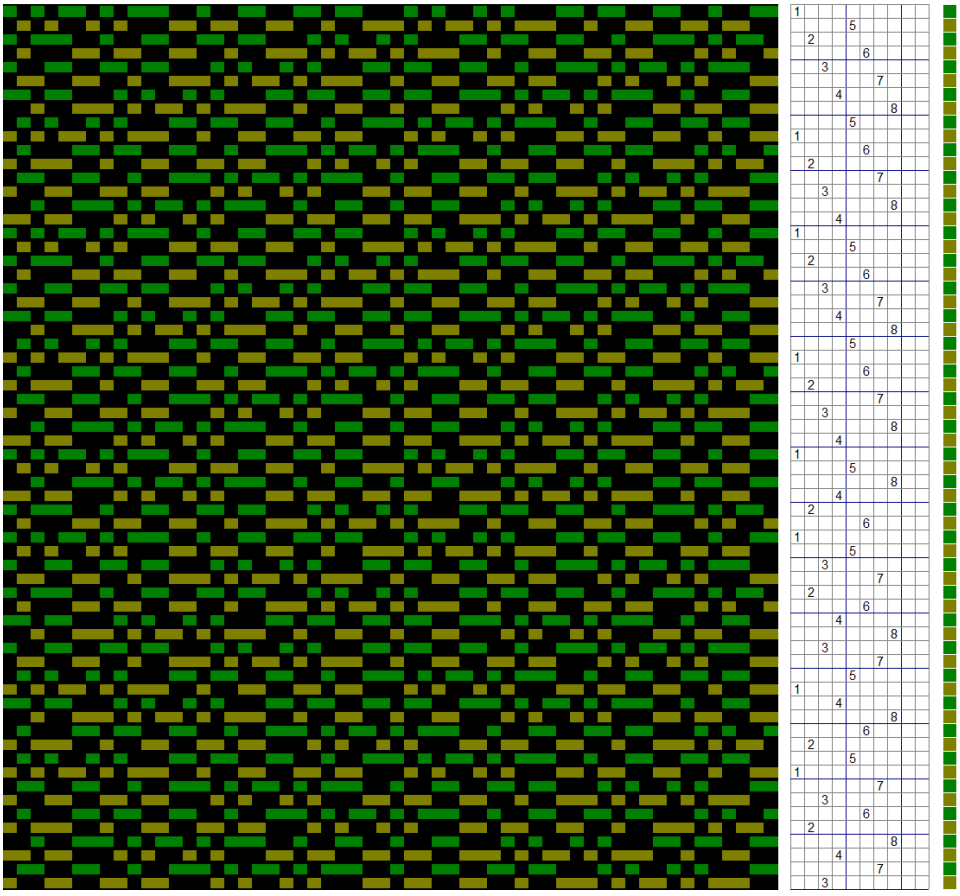
Dr. Bateman stated that Extended Manifold Twills were related to the Extended Divided Twills. Extended Manifold Twills are based on manifold twill drafts which resemble divided twill drafts except that they have more than two lines of threads within a draft.

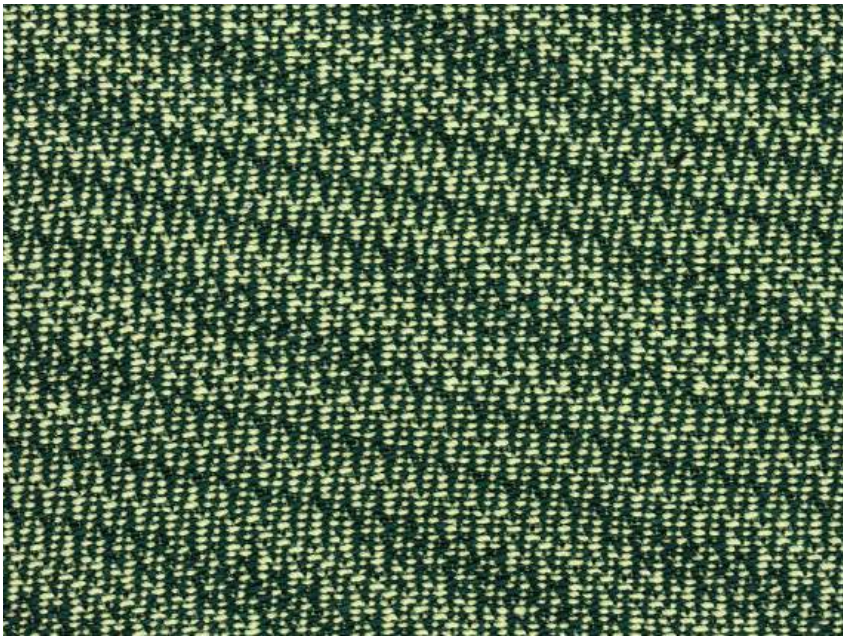
Below is the seven-end threading blocks for the draft Bateman sample 330 shown on the following page. For each block, there is a two-end straight draw followed by a five-end sequence. The seven-end threading sequence repeats with an offset of one end.



Bateman sample 330 – 4



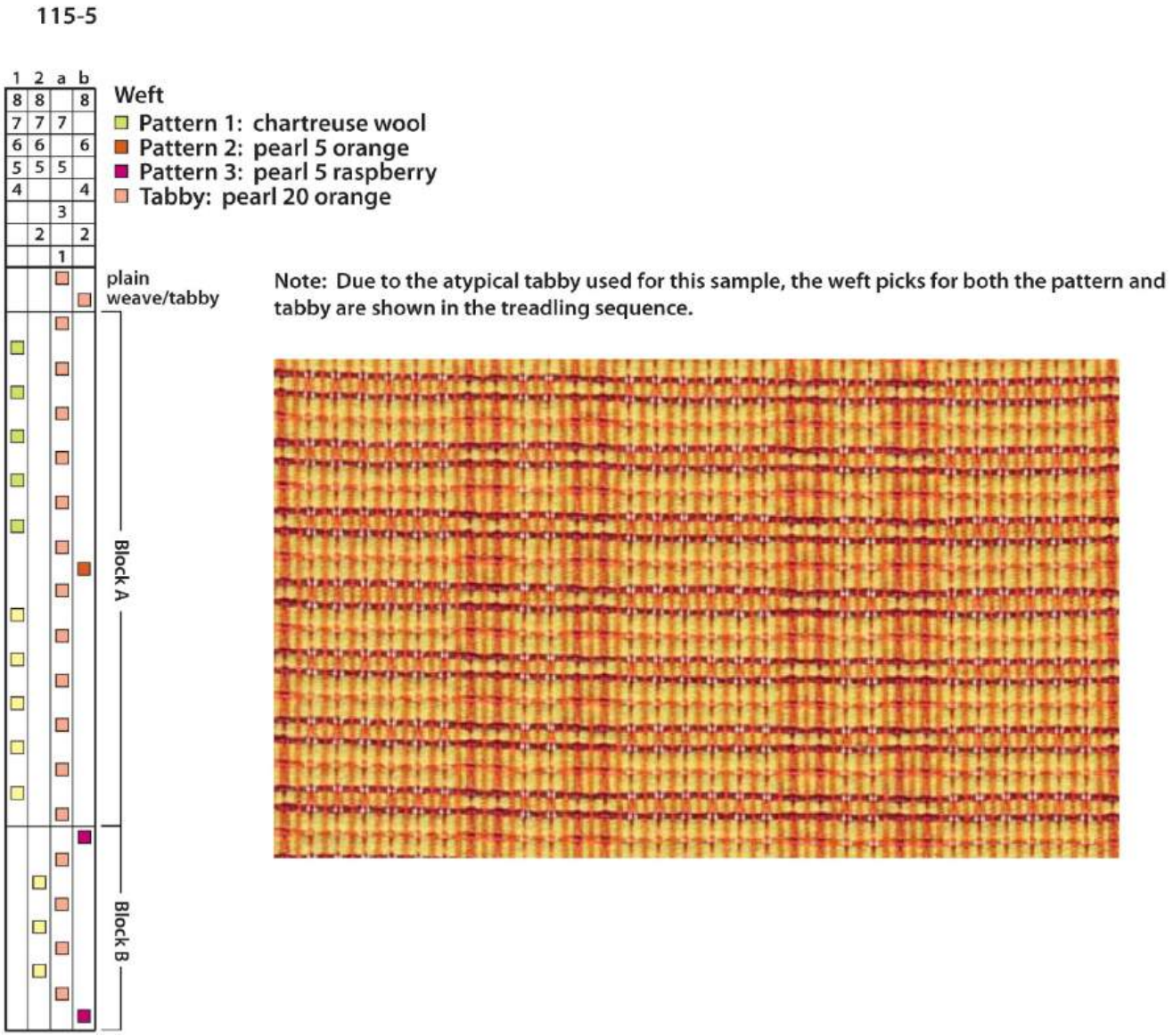




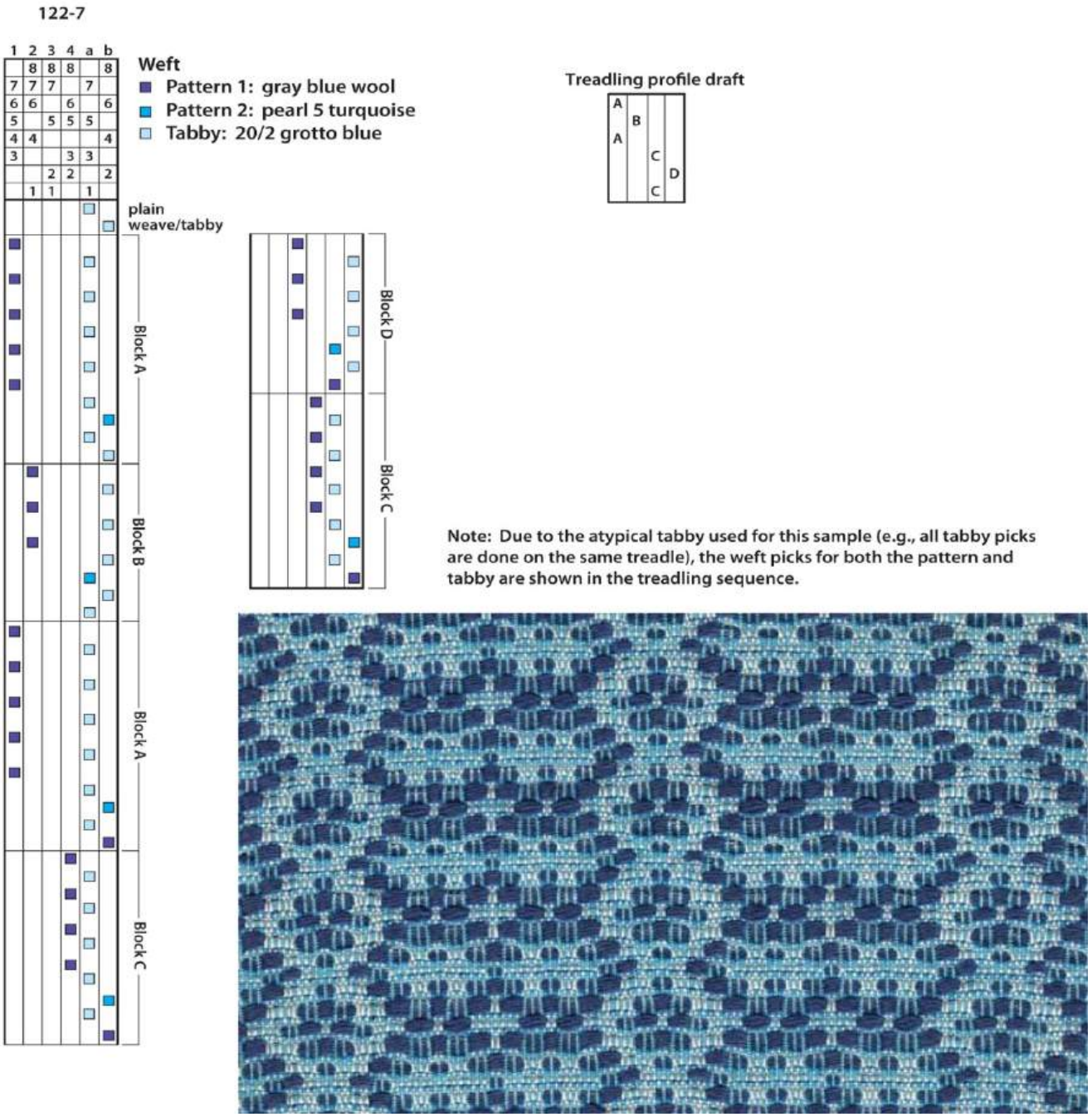
Tabby

Many of Dr. Bateman's weaves were woven with tabby. In the most traditional sense, tabby refers to alternating plain weave weft picks before or after pattern weft picks. Among the samples in the Bateman collection, are some treadling variations with a non-traditional tabby. Sometimes referred to as an *irregular* or *false* tabby.

Below is an example of a treadling sequence for a Bateman weave showing the tabby picks completed on the same treadle throughout the entire treadling sequence.

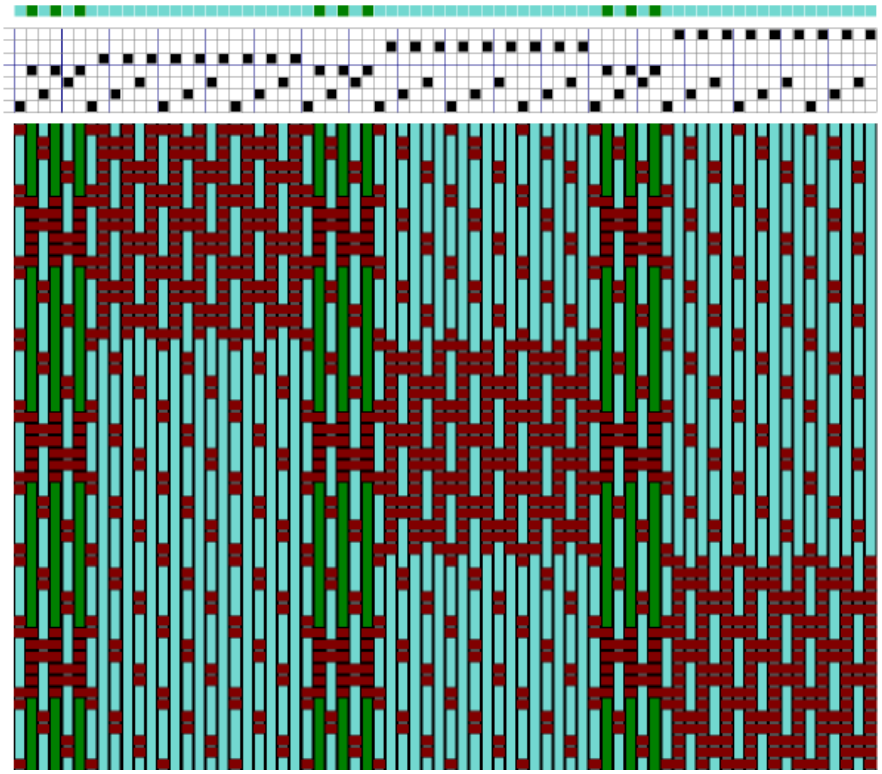


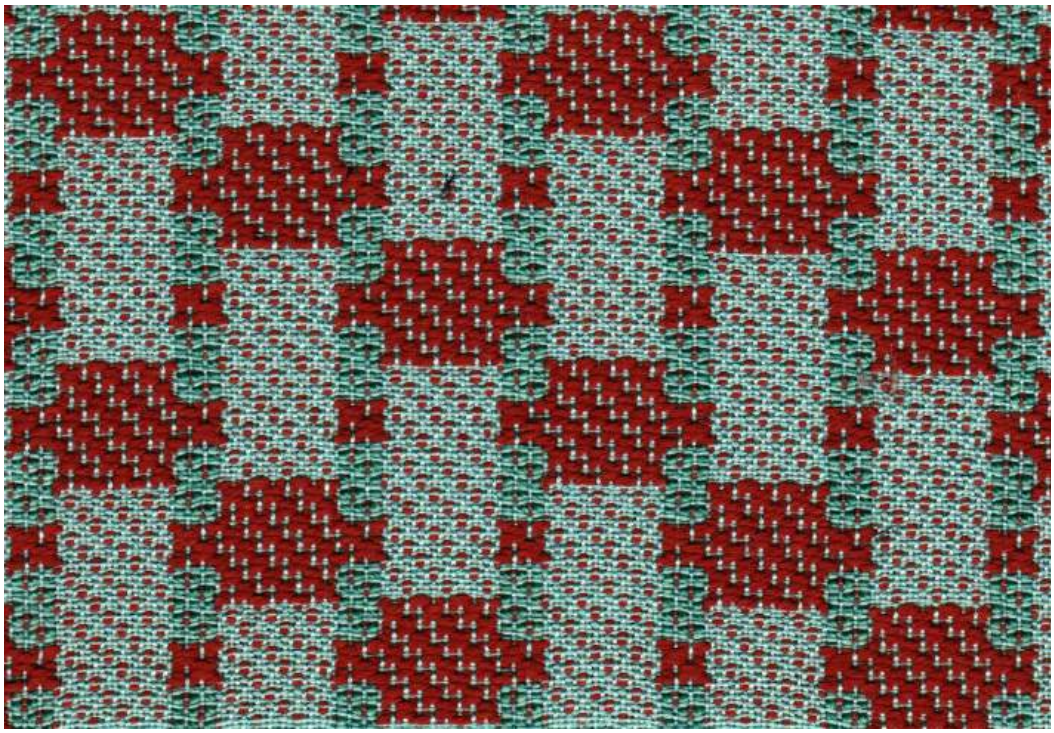
Not only did Dr. Bateman weave tabby picks on the same shed, he would also change the color of the tabby weft or shift the tabby to a different shed (as shown below).



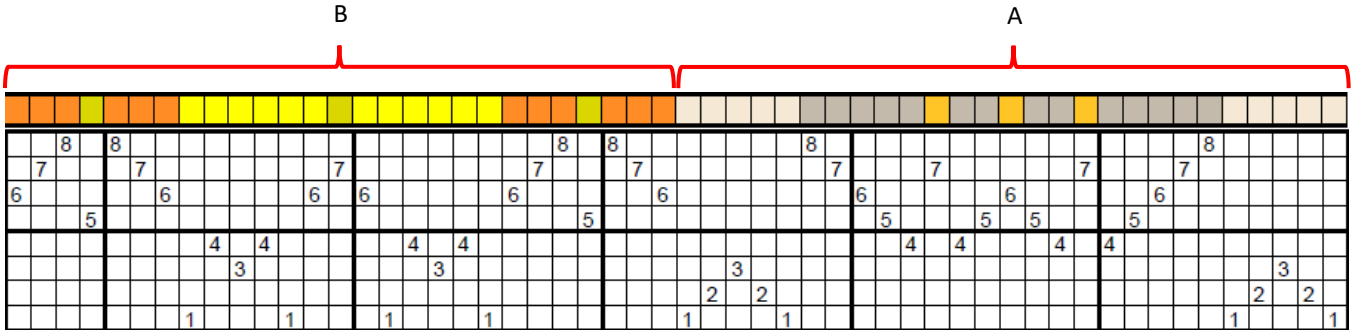
Dr. Bateman inserted color in a variety of ways. For example, the pattern shafts for Block A are in a slightly darker green compared with the rest of the warp ends.

Bateman sample #139 – 1
(Seven-shaft tied weave - single three-tie in straight draw order)





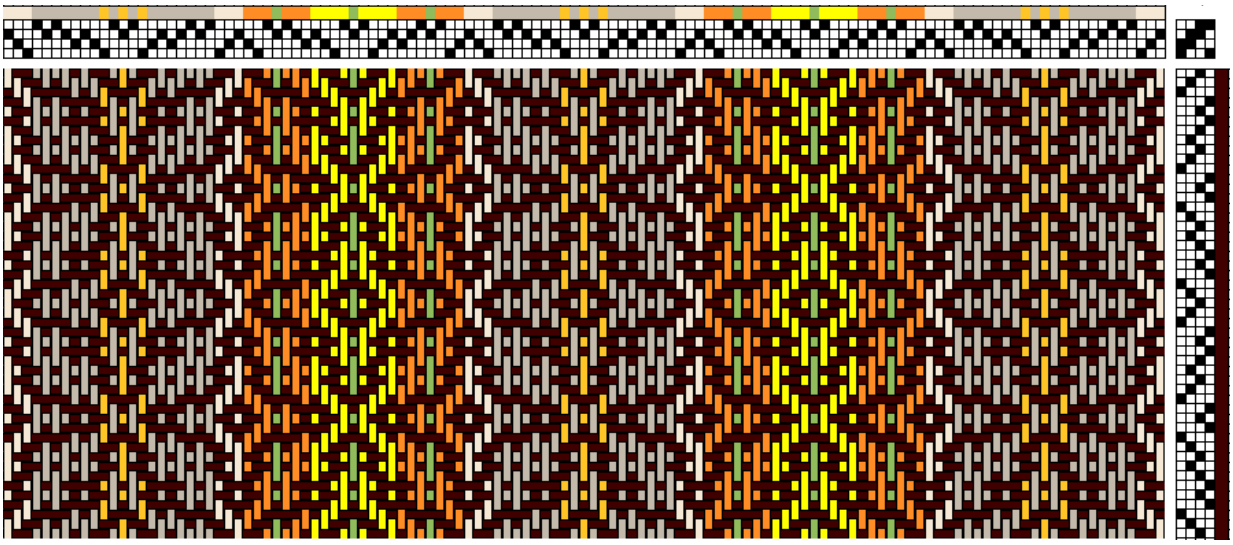
Color – In a number of samples, Dr. Bateman did some interesting things with color. In sample warp #386, a Park-Chevron combination draft, there are six different colors used in the threading sequence. Below is the threading sequence and color bar for the draft on the following page.



What is particularly intriguing is how the colors are arranged.

- Block A
  - Dark ecru is threaded on threading sequences for 1-2-3-2-1
  - Gray is threaded on the first and last five-end consecutive threading sequences on shafts four through eight and the middle sequence on shafts four through six.
  - Gold is threaded on remaining three threads on shafts six and seven
- Block B
  - Burnt orange is threaded on the three-end consecutive threading sequences on shafts six through eight
  - Yellow is threaded on the remaining threads except for the three light olive threads
  - Light olive threads are threaded on shaft five between the burnt orange three-end consecutive threading sequences and on shaft seven in the center of the yellow threading sequence

Applying this kind of idea may be done to other threading sequences and produce a limitless number of possibilities. Below in a four-shaft draft that applies a similar approach to the color sequences used in draft #386-1 shown on the next page.



Bateman sample 386 – 1