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ON THE COVER

Rabari women examining bangles for sale. They use their lodis to veil their faces.  
The article begins on page 28. Photo by Judy Frater.
FROM THE EDITORS

Dear Readers,

Conference season is upon us. We plan to be exhibitors at several regional conferences this summer, and look forward to meeting many of you. Talking with you is one way that we can assess the job we’re doing for you, the readership survey that accompanies this issue is another. Please help us by taking a few minutes to fill it out and send it in. It will help us to get to know you better.

In this issue we look at ethnographic textiles from Bolivia, Egypt, Greece, India and Japan. Dr. Homossani’s article examines weave structure of striped satin-weave fabrics for kaftans and puts the weaving of these fabrics into a historical perspective. Linda Weltsen shows us the various ways Greek chemists were constructed in relation to loom-width of fabric, as an inspiration for garment weavers. Judy Frater tells us about the fascinating inter-cultural dealings necessary for the manufacture of shawls for the Rabari women of Kutch. Descriptions of the production of two very different ikat weavings are given by Lynn Meisch (Bolivia) and Alison Mitchell (Japan). In “Finishes/Shared Traditions,” Adele Cahlander looks at the colorful loop-braids that decorate the ends of many Andean belts, and we are especially honored that renowned Swiss braid expert Noemi Speiser, author of The Manual of Braiding, has elaborated on this theme with a thorough analysis of these braids for us.

Other articles in this issue include a profile of Native American weaver Ramona Sakiestewa by Margot Schevill, and “Notes of a Pattern Weaver” by Phil Alvic. Some projects incorporating design features from the ethnic textiles are also featured.

The final installment of An Ounce of Prevention, our series of articles on textile conservation, also appears in this issue. We are grateful to Lotus Stack and Mary Ann Butterfield for sharing this information with us. They will write occasional future columns based on reader inquiries. If you have questions about conservation, please send them to us.

A new series of articles will begin in the Fall issue: “Color Theory for Weavers” by Pat Boutin Wald. We think you will find it enlightening and a valuable reference.

This issue marks the beginning of Volume X, and our first anniversary as editor/publishers of The Weaver’s Journal. (An index to Volume IX is included in this issue.) We deeply appreciate the patience and support of our readers during what has been an exciting learning period for us. We know that some of you have been dismayed because your issues have arrived late. We apologize and are working on the problems that have delayed us.

Sincerely,

Karen Searle & Sue Baizerman
As far as computers are concerned, it is
good to know what and how useful they are
but does the average weaver have access to
one? [Editor: Help us find out. Send in your
questionnaire.]
I like “Meet the Authors.” Good luck
with your undertaking.
   Betty Layton
   Sautergies, New York

THANK YOU for the excellent review of
The Handloom Weaves in the Spring ’85 issue
of The Weaver’s Journal. Good reviews and
good sales of the monographs (a result of
good reviews) proved that the work is worth
the effort.

It is always traumatic for me to change
any part of Harriet’s text, but it was necessary
in this instance, even though her text came
directly from Dr. Bateman. A few Bateman-
Tiddball letters were found in her papers, which
was fortunate because she seldom saved any
of her correspondence. Unfortunately there
was nothing that explained the errors in her
information.

In your review you mention that a para-
graph on weaves systems vs. weaving methods
was added. The only changes made in the text
were a few corrections in drafts and the addition
of the Bateman chapter, so I am wondering
what you were referring to. It is in the page
12-14 area. There is no new text there, but
page 12 should be page 14 and page 14 should
be page 12.

   Virginia L. Harvey
   Freeland, Washington

Editor: Sorry for the error.

I’M VERY GLAD not to have so much computer
information—even though we have one
for our business. I really do not feel tempted
to use it with my weaving. I feel quite comfortable
using my own brain for weaving.
Keep up the great work.

   Debbie Loosley
   High River, Alberta, Canada

I DON’T WANT a whole magazine of com-
puter weaving, and I appreciate your careful
blending of ethnic and contemporary con-
cerns, but one article a quarter on various
computer applications would be useful and
interesting to me.

   Deborah Robson
   Amherst, Massachusetts

MY CHOICE, as is Dora Swart’s choice.
would be for less computer related articles.
It only seems fair, if computer weaving is so
popular, however, to include articles about
it. What I would love to see in your magazine
is lots of articles on weavers in South and
Central America and plenty of rugs from
anywhere!

The Weaver’s Journal has become a very
beautifully done publication with lots of valu-
able information. If the Spring 1985 issue is
any indication of how you would carry out
other special theme issues, I would like to vote
for more.

Thanks for giving “us weavers” a quality
magazine.

   Donna Martin
   Monticello, New Mexico

TIME TO RENEW and I do so with pleasure. I
really enjoy your magazine.

You ask articles on computer weaving. I think, perhaps, an article every
other issue is okay. I don’t have a computer
but perhaps one day I might. I enjoy your
articles on textile history and prominent
weavers but my main thrust is on contempo-
rary weaving and the “how to’s” of it. Your
magazine, I’d say, covers it all and I really
appreciate that.

Keep up the good work.

   Sandy Farmer
   Kemp, Texas

I JUST RECEIVED my Spring issue and found
it very interesting. I rarely write “letters to
the editor,” but I feel that I must comment
on the letter by Dora Swart.

If a computer is used for every function
from designing through weaving, I consider
that industrialization. Most use computers to
speed up the tedious, time consuming pro-
cesses which occur before a thread is ever put
on the loom or a shuttle is thrown. I use my
computer for record keeping, calculations,
designing patterns and analysis. Record keep-
ing is now faster, easier and more accurate.
The computer even prints up all my record
keeping forms which I later fill out.

Many weavers (indeed, many people in
general) are not the best record keepers. But
it is necessary, especially if you want to duplic-
ate something you did five years ago, or if
you are weaving items for sale. Memory just
cannot hold all the small details that come up.

Many "records" I have are written on the back of
an envelope, on scratch paper, or a page of
paper, or the side of a box. In fact, anything that
was in hand at the moment. Unfortunately,
such notes invariably get lost, misplaced or
thrown out. With the help of a computer, my
notes are now in a notebook—nicely neat.

I also use the computer to help with my
yarn and equipment inventories. I used to
dig through my boxes of yarn every time I
planned a project, just to find out what yarns I had avail-
able. It was very time consuming and frustrat-
ing to dig everything out and then put it all
back. Now I have a complete list in the com-
puter that is updated every few months. I can
sit down and in five minutes or so to know what
I have on hand—fiber, size, color, quantity, yds/lb, cost, etc.

Another function the computer has taken over is calculating how much yarn is needed for a given project and the total costs of that yarn. I used to spend hours figuring out warp, weft, sett, etc. only to find out that not enough of the right yarn was available. Then all calculations had to be done over. (And sometimes, over and over and over until the figures and the yarn matched or at least came close.) With the computer doing the arithmetic, one calculation can be done in as little time as one minute with no mistakes (if you have entered the correct figures). How many times does this happen when calculating by hand? What it does is free up time to play “what if.” What if this yarn is set at 24 e.p.i. instead of 18 e.p.i.? How many dish towels can I fit into 9 yards of warp? If there is not enough 1/2 cotton, do I have enough 2/2 cotton to make the same dish towels? All this can be done in a matter of minutes not the hours or sometimes days it takes to manually compute this information. The computer can free up your time for more creativity and weaving by doing these tasks. Don’t forget that it’s the weaver who decides what the project will be, what yarn is used, what colors are used, and all the other design factors involved.

Other time-saving functions the computer can do are analysis and pattern designing. By designing, I mean for the most part drawdowns. Think of how long it takes to do a name draft by hand, or even a drawdown of a traditional overshot pattern. It takes quite a while, and counting correction time for the inevitable mistakes. The computer can do this in a fraction of that time, with no mistakes. Some programs not only let you see the pattern as drawn in, but also show color effects, differences for rising and sinking sheds, and allow you to change treadlings. While it does not replace sampling, it does allow you to “play” with a pattern. And if you are working with an expensive yarn of which you may have only a limited quantity, it makes it much easier to decide what pattern to use without having to use up a single thread of that expensive yarn.

Let’s say that you’ve come across an old scrap of blanket at a garage sale which has a beautiful pattern in it. It’s 4 harness, 8 harness or more! How did the weaver make this pattern? With the computer you can do a “draw-up” much easier and faster than can be done by hand. And you can turn the fabric around, so that the warp can become weft. This is especially useful if you are not sure which way is which on a fabric scrap.

So you see, computers do have a place in handweaving, if for no other reason than saving time. I find my projects are no less creative for having done the planning on a machine. And that is all a computer is—a machine just like your loom. In fact your loom is a computer. Think about it: both machines simply make doing a task faster, easier and with fewer mistakes. This seems to fit right in with what Allen Fennin was speaking of in his article (“Looming Thoughts,” Spring 1985). Rather than condemning the use of computers, find someone who has one and try it.

Thank you for letting me “spout off” for so long. My computer is now as much a part of my weaving as my shuttles.

Sandy Frediani
Calistoga, California
An Ounce of Prevention
Preservation and Storage
by Mary Ann Butterfield and Lotus Stack

We can't see it, but it is continuous, and this is the real danger of textile disintegration. It is an interior process that moves slowly but surely for a long time before it can be seen. Textile conservation is the step taken after deterioration has become obvious, and the purpose of these articles has been to suggest preventive measures that will delay the need for such treatment as long as possible. While the works of contemporary artists may or may not be considered worthy as historic objects in the future, at least they should be made and cared for in such a way that they will still exist when the time for judgement comes.

Survival precautions include the choice of materials and structure that are compatible with the planned end use, mounting and display systems that are properly supportive, and a viewing environment that is as free from contamination as possible. Finally, long term care is a serious consideration for extending the life of a textile.

No matter how well conceived and carefully installed, a textile suffers stress during exhibition. Thus rest periods are necessary. One can think of it like the human body: at intervals a person must lie down and relax the muscles and the frame. Just so with a textile. The strain of the downward pull in hanging, the abrasion of fibers as movement occurs, the assault of light rays and polluted air must be alleviated from time to time. All textiles need a good night's sleep in a comfortable place.

The rest aspect of care is so important that it should be considered along with initial design concepts: The structure of the textile and its mounting system should be designed so that it is possible and reasonably convenient to remove it from exhibition for rest. In addition, the purchaser should have considered the availability of storage space in advance. All textiles, be they old family heirlooms or new creations, must rest.

Safe storage provides protection from physical stress, photochemical degradation (light), chemical contamination and insect damage. Under ideal conditions, for perfect rest, a textile would lie flat on a padded horizontal surface in total darkness. There would be no air currents or vibrations to cause movement. The temperature would be stable at about 65°F and the relative humidity would be an unchanging 55 percent. There is probably no place in the world that can provide this kind of perfection for much more than a pocket handkerchief, but by knowing what perfection is, our compromises can be made with intelligence.

Physical Stress
Physical stress includes anything that causes strain to either the weave structure or the fibers themselves. For example, hanging stresses the fibers as they elongate, and it stresses the structure as the weight of the textile constantly pulls down and tends to separate the threads from each other. This is an almost invisible process until breakage begins.

A second example of stress is bending or
folding which stretches the fibers on the outside of the bend and crushes them together on the inside of the bend. As with a metal wire that can be broken by continued bending back and forth, folding and unfolding a textile will eventually break the threads. We frequently see the result of this in old quilts that have been folded along the same lines time and time again and the faces have split along the fold lines in quarter sections.

A third, and less obvious, cause of stress is repeated change in temperature and humidity. Fibers absorbing and releasing moisture swell and shrink, thus moving within themselves, abrading and wearing away.

Reduction of Stress in Storage

If a textile is mounted in a frame or a plexiglass box it is only necessary to shield it from light and lay it in a horizontal position where the temperature and humidity are as controlled as possible. If the textile is free hanging, but not too large for flat storage, it can be laid on a shelf, placed in a drawer or in an acid-free box. Without the box, protection from wood acids and abrasion should be provided by means of thin mylar sheets, acid-free rag board or acid-free tissue. Lightly padded surfaces are more protective than hard surfaces in most cases, and a cover is needed to block out light as well as dust. Such storage should be in infrequently used areas so there will not be constant movement from opening and closing drawers and doors. A very clean storage area that is kept cool and dry reduces the possibility of insect damage and the growth of mold and mildew.

When space is not available for flat storage, rolling may be a reasonable compromise. It is usually safe to roll single-layered, pliable pieces, but when a textile has several layers in its construction, or heavy embellishment, rolling becomes inappropriate. Acid-free paperboard tubes are best, but mailing tubes, carpet rollers or tubes from fabric stores can be made suitable.

In selecting a tube one must consider the stress to the textile as related to the diameter of the tube. The intent is a gentle bend that puts a minimum of strain on the weave structure and the threads. The inner surface of the textile should not be crushed against itself as it circles the tube, nor should the outer surface be excessively stretched.

Preparation of Non-Acid-Free Tubes

(Acid-free tubes need no preparation)

1. Select a tube of suitable diameter and about three inches longer than the textile width. (Textiles should be rolled in the warp direction)

2. Wrap the tube with a layer of polyethylene plastic sheeting, tucking the ends into the tube. This seals acid away from the textile.

3. Add a wrapping of acid-free tissue, well washed muslin or other undyed cotton fabric. This, too, tucks into the tube ends.

Rolling a Textile

The rolling process is best accomplished on a padded, fabric covered surface, which prevents slippage and thus helps control the tension of the rolling.

1. Lay down a cloth or acid-free tissue leader that is slightly wider than the textile and long enough to make one and a half or two turns around the tube before the textile starts to roll.

2. Lay the textile down so that it overlaps the end of the leader by one full circumference of the tube.

3. Lay the prepared tube across the free end of the leader and begin to roll taking up the textile when it is reached. Continue rolling the full length of the textile, using extreme care to maintain the original alignment of the weave structure while keeping the warp perpendicular to the tube. Even tension must
be maintained, neither too tight nor too loose.

4. A cloth or acid-free tissue wrapping is added and tucked in at the ends.

5. A final cover of polyethylene plastic may be added, but do not tack this covering into the ends of the tube. The textile needs to breathe, so air must not be excluded. In addition, a sealed package could cause a build-up of moisture.

6. Flat tape ties are used to hold all layers in place. These ties should be placed over ragboard collars so that they will not cut into the textile. (See drawings for step by step procedure. The article by Nobuko Kajirani noted later gives a more detailed explanation of correct rolling.) Rolled textiles are best stored suspended. A wooden dowel or metal rod can be slipped through the tube and suspended from hooks or pegs. This rod should be strong enough to bear the weight of the textile without flexing or sagging. When a rolled textile is stored on a flat surface, it bears its own weight as it presses down. If this is a necessary compromise, the surface should be padded. Polyester quilt batting covered with a piece of muslin provides a soft cushion.

Acid-free boxes, which are available in a variety of sizes, make excellent storage containers and need no acid buffering inner linings. When a non-acid free box is used, it must be lined with mylar, polyethylene plastic or acid-free tissue. Textiles may be stored flat, rolled or folded in covered boxes and are thereby protected from light and dust. Layering of flat textiles in one box is not recommended as the weight of one bearing down on another causes stress. In addition, retrieval of one necessitates the disturbance and handling of several. However, if this is a necessary compromise, be sure to place the heaviest piece on the bottom with a sheet of acid-free tissue between each.

Several rolled textiles can be stored in one box side by side. A roll of crushed acid-free tissue placed under the extended ends of the tubes allows the textile to be suspended.

**Folded Storage**

Space considerations sometimes require the folding of a textile for storage. While this is the least comfortable position, stress can be alleviated to a degree by careful preparation of the textile. The largest possible box should be used to reduce the number of folds and each fold should be padded with rolls of crushed acid-free tissue. An old textile should not be folded along previously weakened fold lines. An article by Patsy Orlofsky in the 1984 *Quilt Digest* gives an excellent illustrated description of proper folding technique.

**Photochemical Degradation and Chemical Contamination**

Even though the textile has been relieved of all possible stress by its positioning, invisible interior degradation continues to be caused by exposure to light and chemicals unless protection is provided. Coverings are essential to block light as well as airborne particles. Packing materials must be carefully chosen so that acids in wood and wood-pulp cardboard and paper are eliminated or buffered. Paints and varnishes used on shelves and drawers contain harmful chemicals, as do plaster walls. It may become monotonous to hear the words 'acid-free' in every sentence, but acid and other chemicals, especially because they can't be seen, are extremely dangerous elements in the destruction of textile fibers.

**Three-Dimensional Textiles**

Costumes and other three-dimensional objects present additional and individual problems for reducing stress in storage. Taking into account the various methods and materials discussed above, the owner must devise a system that is appropriate for each piece. Padded hangers, crushed acid-free tissue in sleeves, bodices, garters and folds, support
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Preservation and Storage cont.
for the skirt of a hanging garment; coverings against light and dust; protection from abrasion—all of these must be considered.

Ultimately, the responsibility for the continued existence of a textile lies with the present owner. It is important, however, for the artist or craftsman to provide information to the gallery owner or buyer regarding proper installation, safe light levels, shipping, cleaning and general long-term care.

In these articles we have discussed some principles involved in textile preservation and the probable result of careless handling. While some suggestions have been specific, basically these are broad principles intended for intelligent application to individual pieces in particular situations. We can't keep them alive forever, but one thing is sure, even as we make compromises—
each small effort to reduce stress increases the life expectancy of any textile, old or new. If we do enough of these things we will have added years.

References

Suppliers of acid-free tissue, boxes, tubes:
Sun Archival Products, P. O. Box 8916, Minneapolis, MN 55408. (612) 822-6973
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Mylar sheets and rag board are available at most art supply stores.

This article concludes our series on Textile Conservation. If you have questions on these articles or other conservation issues, please direct them to Mary Ann Butterfield and Lotus Stack, eds. The Weaver's Journal.
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**SUMMER 1985**
11
A Detective Story:
Unravelling the Mystery of a 7-Loop Braid

by Adele Cahlander

As part of her research for a book on Andean knitting, Cynthia Gravelle LeCount requested my help in identifying some woven and braided techniques combined with the knitting in some of her examples. Among the pieces she sent me was a Bolivian monedero or money pouch, with a doll-type pocket (figure 1) that she had bought in Cochabamba.

Its braided strap intrigued me. Because of my familiarity with Bolivian 5-loop braids, I suspected that it might have been manipulated on the fingers as a 7-loop braid, using 3 light loops and 4 dark loops (figure 2a). There was something about the pattern on one side of the braid that I found attractive, and different from those I knew (shown in figure 2b), so I got out some yarns and tried to reproduce it.

Figure 1. A Bolivian monedero.
7-Loop Braid Strap on a Bolivian Monedero

Starting Position
(palms up)

Right index finger #1 goes through loop #2, over loop #3 and upper shank of #4 and hooks lower shank of #4 of opposite hand.

Shift loops to #s 2, 3, 4 on opposite hand.
Repeat in mirror image.

After numerous trials, I thought I got it right, but then I noticed that in some ways it was not exactly like the original.

I wrote about my problem to Cynthia in California, and she urged me to feel free to loosen one end of the strap to examine it. After much hesitation, I finally did. Stretching a very small area apart, I carefully pinned each yarn turn at its edges to a cork board to analyze it. I then discovered the clue. My method had not been quite right, because I had not realized that one loop in the sequence needed to be turned upside-down when manipulated! (My previous efforts had resulted in my doing a braid like the one shown in figure 1b in the following article by Noémi Speiser. Now I realized that it should be like the variation in figure 11b.)

My experience with such finger-manipulated loop braids had been chiefly with various color effects achieved in Bolivian 5-loop braids, worked with open loops like figure 7a in Ms. Speiser's article. Some of these braids are worked with open bi-color loops, with one color on top, the other on the lower level. By working one repeat (3 passes) with crossed loops according to Speiser's figure 7b, these colors are made to exchange faces by plan, then the first method with open loops is resumed until another color change is desired.

Such braids are commonly used in Bolivia, not only for straps, but also in a group, tacked side-by-side, at the final end of belts in warp-faced double cloth (figure 3). The manipulations are rhythmic, and even my younger grandchildren have had fun working this braid.

I wrote to braid expert Noémi Speiser in Switzerland about this project. We had corresponded about braids before, and I respected her expertise as shown in her Manual of Braiding. Although she is also interested in the exciting possibilities for different color effects with these braids, she excels in her understanding of their structure. She originated the concept of the track plan to demonstrate variations possible with braids of five or seven loops. We are pleased that Noémi agreed to explain these complex but enjoyable braids in depth for us. Her article, "Unusual Braids Produced by Loop Manipulation" follows.
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Unusual Braids Produced by Loop Manipulation

by Noémi Speiser

This article represents a supplement to one particular section in my book The Manual of Braiding. This special subject is indeed so complex that to include all of it would have exceeded the scope of the Manual, which was meant to give a synopsis and not to dive into every byway. A recent discovery by Adele Cahlander, however, (see the preceding article) has prompted me to reconsider the subject.

1. The Fundamental Rules for Creating Narrow Flat Fabrics of Oblique Interlacing

For clarity I will begin by introducing the simple structures of plain and twill oblique interlacing. Work proceeds either with loops or with free ends, on oblique fells, and in each of the compound structures produced with loops, you will be able to recognize two fabrics of the simple type shown in figures 1, 2-1 and 2-2 interconnected.

To work flat braids on a V-shaped fell with selvedge-to-center passages the cycle of movements reads:

1. Take the outermost element from the left selvedge, work it through the remaining elements of the left group and deposit it as the innermost element in the right group.

2. Take the outermost element from the right selvedge, work it through the right group and deposit it as the innermost element of the left group.

3. Repeat steps 1 and 2.

This process is shown in figures 1 and 2. If you turn the pictures upside down, you can see an A-shaped fell with center-to-selvedge passages. This cycle of movements reads:

1. Take the innermost element of the left group, work it through the elements of the right group and deposit it as the outermost right element.

*Not illustrated in this article.*
2. Take the innermost element of the right group, work it through the elements of the left group and deposit it as the outermost left element.

3. Repeat steps 1 and 2.

Braids made with free ends are normally worked on a V-shaped fell; our loop-manipulated braids grow from an A-shaped fell.

Each passage (the path of a temporarily active element, led at a right angle through a group of passive elements) forms a number of crossings.

The rule for flat braids in oblique interlacing is: An odd-numbered total of elements gives you an even number of crossings; an even number of elements gives an odd number of crossings in one cycle. In other words: the number of crossings in one cycle plus one equals the total number of elements.

Crossing is a neutral expression which needs further explanation. Each crossing in the course of a passage can be either over or under. In a finished braid the working process is not obvious; therefore the crossings can be described as S or Z.

Over-and-under alternating one-by-one creates a plain interlacing. Two or more adjacent over or under crossings, repeated consistently in subsequent passages, create longitudinal twill ridges in a structure of oblique interlacing.

Figure 1 shows various flat braids in plain oblique interlacing, twill is shown in figures 2-1 and 2-2. Note that some of them have an odd, some an even number of elements; and note that some of them have a central mirror-axis, i.e. they are symmetrical, and some do not.

The theorem is as follows:

In order to create bilateral symmetry, you need an odd number of elements.
With an even number of elements any structure will necessarily be asymmetrical.

2. The Track-Plans

With each loop braid pattern presented here I have given the corresponding track plan. The track plans are thoroughly explained in my manual; here I will merely give a concise description.

In a fabric of flat oblique interlacing a series of threads, evenly spaced, holds a zigzag position. In a cross-section of the finished braid seen end-on, the group of threads will logically appear as a closed curve, crossing its own path one or more times, thereby forming "eyes." In the braiding process the thread-ends theoretically circulate on these closed curves, in a manner similar to the ribbon-dancers around a maypole.

These closed curves will be called tracks. The threads, seen in cross-section, figure as dots on the tracks. The number of threads floated on each ridge of the braid equals the number of dots on the corresponding eye. The plus one element is provided with an arrowhead which marks the end of the passage and, at the same time, indicates the direction in which the whole series moves.

Remember that the track-plans provide a mental picture; they figure nowhere in reality. But they can give you an almost complete idea of the finished structure plus some notion of the process of production.

Try to understand this system of representation in connection with the simple flat braids shown in figures 1 and 2. The two-layer patterns which will be introduced in the course of this article represent some of the most complex constructions in the field of oblique interlacing. The track-plans, therefore, are accordingly confusing. But however bewildering they may seem to you, you will be able to see that all of our loop-manipulated braids are made up of two elementary flat braids, interconnected.

3. A General Description of Loop Manipulation

Loop manipulation means that instead of cut ends, you handle loops, i.e. doubled elements. When doing so in appropriate movements, each loop will act not as a single paired element, but as two separate elements. This allows you to achieve reciprocal effects.

There are several subgroups of loop manipulation, all of which are described in my Manual of Braiding. Here I will deal only with the type called finger-held loops. This method of working allows any novice to achieve dazzlingly complicated braids even without understanding how they come about. I hope to shed some light on this process.

4. Some Practical Advice on Making Samples

You can use almost any type of yarn, as long as it is not too coarse. The special properties of the loop method allow for using even very fine materials that
would be difficult to handle as free ends. If the material is very delicate, you can knot in a length of sturdier thread to serve as the apex of the loop, as shown in figure 3d. Your own experience will tell you what thread brings out the pattern to the greatest advantage.

I imagine that you will be very eager to try out all the variations, and will try a series of variations on one sample braid. Since, with loops mounted on all of your fingers you will be unable to take any notes, the resulting length of braid will be a medley of only slightly differing variations which are of no use for study and documentation. Such, alas, is my own bad habit!

Therefore, I advise you to prepare a short set of elements for each pattern. Work down the whole length without interruption, because picking up the loops once they are dropped from fingers is an all but hopeless affair, and a single mistake in the structure will mislead a later analysis. When your loops are too short to be handled any further, release them. Now you can glue them in the correct order and position onto a piece of cardboard. Such an arrangement allows you to see the working edge as well as the structure. Or, you can fix the top and bottom of the braid with constrictor-knots as shown in figure 4c. Add a label with the code of the sample.

5. Preparing the Set of Elements

In order to reveal the internal construction of our braids, we will use bicolor loops for all of the following experiments. Traditionally, bicolor loops are prepared by linking the tips of uncut warp ends (figure 3a); this can be seen frequently as a fringe treatment on woven fabrics from South America. The paired elements resulting from linked loops are, however, rather confusing for a later analysis. Therefore we will join two colors by knots (figure 3b):

Take two colors in your right hand. Pinch the cut ends at a distance of about 4½ inches (12 cm) with index and thumb of your left hand. Wind the two colors around your left hand and elbow three times for five loops, or four times for seven loops (figure 4a). Then tie both ends of the two colors tightly around that “hank” (in figure 4b the two colors acting together are shown as one element for the sake of clarity).

Since in the course of the braiding there will be a separate pull on each loop, the far ends have to be fixed very firmly. Fold your hank and apply a constrictor-knot. Pull it as hard as possible,
thus forming a kind of "neck" and "head." This fastening should be sufficient for any material which is not exceptionally stiff or sleek (figures 4c-1 and 2).

Attach the head of the set to a table clamp and cut the tips of all loops. Apply another clamp at the appropriate distance and combine your bicolor loops by tying square or overhand knots around the second clamp. Note: loops of unequal length are unwieldy to handle, therefore adjust them as evenly as possible, and pull the knot tightly. Since you need an odd number of loops (5 or 7), one cut end of each color is left over (figure 4d).

6. Mounting the Loops and Working the Basic Movements

For a set of five loops (figure 5): furnish the left middle and ring finger and the right index, middle and ring finger with one loop each; left index is free.

Now contract your palms and curve the fingers until the loops, in vertical position, are as close as possible to each other. Try to distinguish an upper and a lower layer of threads, formed by the shank nearest to the thumb and the shank nearer to the little finger of each loop respectively.

Then with your left index reach forward through the loops on the left middle and ring fingers and catch the

Figure 3. The basic movements of loop manipulation. a: Starting with three loops on the right index, middle and ring fingers, and two loops on left middle and ring fingers, left index reaches through its neighbor's loops to get the loop from the right ring finger, hooking its upper or lower shank. b, c: Transfer the loop on right middle to right ring finger. d: Transfer the loop on right index to right middle finger. Now you are ready to repeat the process with the hands reversed.
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"You've gotta be kiddin!"
ONCE AGAIN it's time to change the seasons. Directions in fashion for Fall '85, however, are not exactly changing. Instead they are following a previously established course with just a few deviations.

While certain fibers will always be associated with particular seasons, inroads are being made into convincing consumers to change their attitudes. Growth is seen through promotions of lightweight wools as cool enough for spring and summer. These are even woven (though not spun) to resemble typical linen and cotton suitings and shirtings. Conversely, cotton, until now held to denims and corduroys for cold weather, should move into the areas of sweaters and dresses. Blends of the finest cottons and wools are coming into their own, producing supersoft yarns and fabrics. Linen and linen blends will also move into year-round acceptability.

Exciting yarns for the new season are contrasts of smooth and textured, shiny and matte. Cotton, linen, wool, raffia, rayon, silk and mohair are blended or twisted together in an incredible array from which to choose. Other luxury fibers used more and more are superkid mohair, cashmere, angora, llama, and alpaca, even in sportier looks. There are tweeds, boucles, colored or shiny nubs, contrasting colors twisted together, thick-ands-thins, piles of differing lustres, and chenilles. Ribbons and leather strips are available, too.

Color runs the gamut of the spectrum in both hue and intensity. The autumnal tones

Illustration by Barbara Roche
Fabric by Susan Hick
are warm and rich: russet, mustard, olive, and pumpkin. Lush jeweltones are ruby, lapis, jade and emerald.

The bright colors to watch for are tomato red, turquoise, electric blue, ultraviolet, marigold yellow, orange, hot pink, and magenta. Navy, brown, purple, wine and plum, and teal, pine and forest greens are the darks.

In contrast to all these are cool, frosted pastels in blue, sage, pink, violet, yellow, gray. Further to choose from are such feminine shades as rose, mauve, muted blue, and coral. Finally, pick from the naturals of pearl, string, and a yellowed beige like antique lace.

The variety of ways to put colors together is headspinning, but at least the choices offer a way to suit every taste. Each can of course be used alone as a separate block of color. More provocative are combinations. Select a neutral, a light, or a dark background, and add a contrast from a different group, especially a bright, for accent. Olive with fuchsia is good, as is rose on navy or pearl and violet or turquoise.

More complicated combinations are prominent, too. Almost anything goes. Consider rust, mustard and violet; coral, pine and mustard; plum, wine and orange; pumpkin, rich brown, pine and sage. We are limited only by time, imagination and what's at hand.

We as handweavers have always been taught that when a yarn is a powerful element in a fabric, the weave must be kept simple. Now is the time to take liberties with that maxim. Vibrant colors, textured yarns and fancier weaves can tastefully be used at once. We'll see why shortly.

The influence of handwovens is clearly felt this season. Designers like their drapability and surface interest. Many fabrics are inspired by the fabrics of the 50s, especially those that were used by Chanel. They might be thick basketweaves or textured all-over broken twills, with the important shiny and dull yarns playing against one another and with lots of color.

Novelty fabrics are the rule. This observer defines them as "the classics gone innovative." For instance, select a Scottish tartan sett and change one or all of a number of factors: enlarge it proportionally; use a textured yarn in a stripe; alter the colorations; add something for shine.

The same can be done for blanket checks (use a lace weave in some of the boxes; add an overcheck in a different texture). There are oversized houndstooth checks, silk tartans, plaids made glittery with metallics, wide-and

narrow mixed stripes, hairy tweeds sparked with a boucle or with smooth and shiny rayons, chenille tweeds, even bubbly surfaces formed from yarns that shrink differently.

Be aware of Old World tapestry looks, pictorials and florals, in soft, subtle colors. Special mention goes to the fabric called astra-khan. Its a loopy pile that's woven to look like curly lambskin and shown as vests and fronts and backs of jackets.

Prints persist, most notably as cabbage rose and upholstery florals, giant paisleys, and foulards. The interest for us is that they co-mingle nicely with the texturals, the stripes, and the plaids to become an eclectic mix in one outfit.

Fabrics can have a lot going on because fashion silhouettes are kept simple. The basic shape from top to bottom is wide to skinny, with the description "oversized" always avoided.

Coats have full, rounded shoulders and taper to the hem. The longer they become, the more likely they are to be wrapped. A short shoulder cape or matching scarf may be attached.

Jackets either follow this form or take another. One might be a boleto, another a long cardigan. Some are soft and fluid with a drape effect in the back much like a cocoon. Blazers are apt to be nipped in at the waist. The cardigans don't button, while the others are often double-breasted. Zippers are possible, too.

Skiwear hits the city streets. Touted as a must are lean stirrup pants or second-skin knit leggings. Note that the pants are worn with Big Shirts over them, also a must, with exaggerated skirttails and dropped shoulders. Pants without stirrups might have a little cuff. There are still classic pleated trousers, cut with narrower legs. Lengths that cover the calves but bare the ankle don't seem so awkward any more.

Slim skirts may be short and straight or long and flared at the hem. The rest are long and full, and there seems to be no in-between. Wear with jacket or matching scarf. Dresses emphasize waists and hips, shapely yet sensible.

Layering this season means to mix lengths, either short over long or long over short. A richly patterned vest goes with a Big Shirt or a long tunic. A seven-eighths coat is worn over a shorter matching jacket and a knee-skimming skirt. Abbreviated wide-angle tops look fresh over pants and tube skirts with high ribknot waists.

So keep shapes simple and be bold with fabrics. Above all, have fun!

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Portrait of a Southwestern Weaver

by Margot Schevill

Anglo-American handweavers have long viewed Native American weavers and their work with respect and admiration. Over the years, however, a stereotyped image of the Native American weaver has evolved: an image of a simple, rural, isolated individual working at her loom. Such an image is being challenged by a new generation of Native American craftspeople who are redefining their role. One prime example of this new type of craftsperson is weaver Ramona Sakiestewa of Santa Fe, New Mexico. The following is a glimpse into her recent professional life.

Recently, Sakiestewa has been preparing for three major exhibitions. Gallery 10 in Scottsdale, Arizona, and Indian Market East, Gallery 10 in New York City presented her work in February and April of 1985. The third exhibition opened on June 4 at the American Indian Community House Gallery, continuing through June 27. It is entitled Sweetgrass, Cedar and Sage: Contemporary Native American Women Artists and will tour the United States for the next two years.

Another aspect of Ramona’s creative life is her collaboration with New Yorker Gloria F. Ross on a project uniting weavers and painters. Colored drawings are produced by the painter and executed by the weaver after negotiations take place regarding scale and color. Ross exhibits and sells these paintings. Ramona has transformed drawings by Kenneth Noland into textile art and is now working with Paul Brach. She is represented by the Bernice Steinbaum Gallery in New York.

This year the Conference of Northern California Handweavers invited Ramona to be one of five clinic leaders at their conference in April, 1985. She lectured on the Pueblo textile tradition and demonstrated Pueblo weaving techniques. Ramona is currently pursuing two research projects as a result of receiving...
ing in 1984 fellowships from the Southwest Association on Indian Affairs (SWAIA) and the Katron H. Lamon award from the School of American Research (SAR). The SAR fellowship was for research on historic and contemporary Pueblo embroidery. For this project, Ramona is collaborating with Southwest textile expert and anthropologist Kate Peck Kent, who has published extensively on Pueblo prehistoric and ethnographic textiles.  

Sakiestewa spent the fall of 1984 interviewing living Pueblo embroiderers. Textiles from the SAR collections were utilized as vehicles for discussion of technique and iconography. Sakiestewa, with Kent, hopes to publish the research results, noting that the last book on Pueblo embroidery was published in 1943. She intends to establish iconographic differentiations by tribe within a hundred-year time span.

The use of natural dyes has interested Sakiestewa for some time. She has mastered the use of indigo, cochineal, madder root and lac. Her cochineal recipes have evolved from experimenting with all the recipes she could find including some she learned from native weavers in Peru. For her indigo dyeing she follows Anne Bliss’ recipes. A rug in which she combined a delicate cochineal lavender with indigo and natural gray won a blue ribbon at the SWAIA sponsored Indian Market last summer.

Recent dye analyses conducted by Dr. David Wenger and Robert Carlsen at the University of Colorado have revealed the use of a mixture of lac and cochineal in early Southwest weavings. Sakiestewa has successfully experimented with this combination and been satisfied with the results.

Ramona used the SWAIA fellowship to explore Japanese dye extracts in order to broaden her color repertoire. She is attracted to the hues used by the Japanese artist Hiroshige in his prints. Through her research, she has learned that logwood will produce shades of purple, fusic gives yellows, kebracho golds, radaiku reds and liquid lac pink or orange-red. The problem now is to find a good and inexpensive source for these extracts.

Although Ramona’s father was a Hopi Indian, she was raised by her step-father and her German-Irish mother in a non-Indian environment. Her parents had an impressive collection of Navajo weavings which must have influenced Ramona’s visual sensibilities. As a teenager she worked in an Albuquerque trading post, close to the arts and crafts of Native Americans, and tried to stay in touch with her Pueblo relatives and heritage. In 1966 when she was eighteen, she taught her-

Pueblo by Ramona Sakiestewa. Wool dyed with indigo and cochineal, plus natural white and black.
self to weave while attending Santa Fe Preparatory School. At twenty-one she went to the reservation to meet her father again and become acquainted with her large extended family.

During the 1970s Sakiestewa wove mainly as a hobby, utilizing a vertical loom and adding basketry and natural dyeing to her textile skills. During this period, she served as Minority Affairs Coordinator for the New Mexico Arts Division. For five years she placed artists in rural and reservation schools throughout New Mexico. One of her responsibilities was to encourage and assist Native Americans in grant applications to the National Endowment for the Arts and the New Mexico Arts Division, a state arts agency. Other activities included the presidency of SWAIA and work on a Native American resource director for the arts. Ramona curated the exhibition “Trader Influence,” held at the Wheelwright Museum in Santa Fe. She also successfully helped the Española (New Mexico) Weaver’s Guild to organize and promote theiravings.

In 1975 and again in 1979 Sakiestewa was commissioned by the Bandelier National Monument, Los Alamos, N.M., to create two turkey feather blankets. The turkey feather blanket is a variation of a prehistoric weaving blanket, not unlike down jackets of today. Flaments of these textiles have been excavated from cave sites in the Southwest, providing knowledge of techniques and materials. In addition, anthropological research on historic Pueblo peoples has supplied descriptions of the actual preparation and weaving process. Ramona utilized this information and added some touches of her own. The entire process took three hundred and sixty hours. Her work has been documented in a twenty-three-minute video entitled The Turkey Feather Blanket.*

Ramona is shown gathering yucca fibers which then she scours, spins, plies and finally wraps with turkey feathers, which are commercially available. Next she sets up the horizontal loom and the wrapped strips are twined together by means of yucca cording that Ramona has prepared. This amazing textile won first prize in the 1983 Annual Hopi Show sponsored by the Museum of Northern Arizona.

Eventually Sakiestewa decided to take the advice she had been giving to organizations and individuals and become her own boss. After a period of careful planning and research, she began her own small weaving business in 1981, purchasing a three floor looms and renting a studio adjacent to her home. Observing that few of the weavers in the Santa Fe area were actually making a living, she decided to design textiles with function as the focus and drawing from Southwest weaving of all traditions for ideas. Her iconography was derived from a variety of prehistoric sources such as rock art and Mimbres pottery, as well as ethnographic Navajo, Pueblo, and Hispanic weavings.

Production began in two textile categories: one that utilized commercially produced Halcyon and Hartzville yarns; the other, one-of-a-kind or custom textiles woven with yarns dyed from natural extracts. Two part-time weavers produced the commercial category with Ramona weaving the exclusive textiles.

In 1982, Ramona made her first sales and received her first commissions at the Santa Fe Indian Market, an immense yearly juried crafts fair restricted to Native American craftspeople. Local interior designers, gallery owners, and other retail outlets took notice. Prices were established, not by the piece, but by the square foot which ran from $55 to $115. Surprisingly, the one-of-a-kind category was more successful and the decision was made not to pursue the commercial line with such intensity.

I had the opportunity to spend two days with Ramona and her husband, Arthur Sze, during Indian Market last summer. We set of at 5 a.m. with the full moon setting in the

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west. Ramona was wearing her traditional Hopi costume. By 5:45 her booth in the plaza of Santa Fe was ready. She had planned the environment carefully, drawing on the past two years of experience. White muslin was used to cover the walls, with willow boughs placed at each end of a frame on which the weavings were exhibited. A hammock stuffed full with pillows and "petrogriphs"—stuffed prehistoric animals—made of custom yardage hung in mid-air. Ramona was receiving her blue ribbons when the first client appeared looking for her at 6 a.m. He had purchased one of her rugs through Gallery 10 and had been inquiring locally about her work, some of which was on exhibition at the Bank of Santa Fe. In ten minutes, he bought two rugs and commissioned a third.

And so the day went. By 5 p.m., Ramona was nearly sold out. Friends, gallery owners, admirers and colleagues called on her during the second day of Indian Market, as her textiles disappeared one by one from the booth. Ramona's young son, Micah, came with his grandmother to join in the activities. It was a social event as well as a triumphant business accomplishment, the result of a year of weaving and careful planning.

Sakiestewa utilized ancient weaving techniques for her entries in the competition "Handwoven Fibers for the Interior," judged by Jack Lenor Larson and sponsored by the Handweavers Guild of America at 1984 Convergence. Two examples from Kent's book Prehistoric Textiles of the Southwest were used as inspiration for a floor covering and upholstery yardage.

The floor covering was influenced by a diamond twill interlocking tapestry fragment from the Grand Gulch archaeological site (1132–1135 A.D.) and the upholstery fabric derived from a plain weave and twill combined from the Wupatki archaeological site (1070–1205 A.D.). The tapestry technique was applied to a 6 x 9 foot rug of soft muted colors utilizing a 3-ply rug wool weft. The twill was woven with Linney warp, and silk and Linney weft. Sakiestewa prepared watercolor renderings and wove samples of each entry. She received an Honorable Mention for the twill because of her use of natural fibers and color choice of light against a dark background.

In the future, Sakiestewa's plans include iconographic adaptations of Plains Indian bead work and Navajo wearing blankets similar to her black/white/red/blue striped textile entitled 49er. Sakiestewa's weavings combine elements of past and present. Her rugs are objects for aesthetic contemplation as well as functional use.

Notes
4. S. W. Productions, 723 Meadow Lane, Los Alamos, N.M. 87544. 24 minutes, $25 rental fee.
The Rabari Lodi
Creating a fabric through social alliance
by Judy Frater

Throughout the world, garments are a primary means of expressing identity and reflecting a sense of aesthetics. This is especially true in India, where it is important to distinguish caste, and where many people own little more than what they wear.

Rabaris, semi-nomadic people who live in Gujarat and Rajasthan, are quickly identified by their colorful embroidery and by their handspun, handwoven wool textiles. The blankets carried by men, and the predominantly black, often embroidered skirts and headcovering lodis of women distinguish the Rabaris from other tribal groups. The style of dress has been passed down for generations and to a large extent defines the Rabari sense of aesthetics.

Variations within the limits of tradition occur, for example, in the embroidery stitches and in the cloth used for blouses. More significant alterations may seem to arise quite suddenly and simultaneously among the whole group. Women start to wear black satin tie-dyed blouses instead of embroidered ones, to prefer tick-rack instead of zigzag chain stitch embroidery, and cotton skirts instead of wool.

These "sudden changes" have their root in economic realities. Black satin is a fabric available in the market, tick-rack is expedient, wool is becoming expensive. Rabari dress follows tradition to maintain identity, but also responds to the immediate environment.

Rabaris alone do not produce the textiles which constitute their garments. The Rabari garment is produced through a system of specialized craftpeople and merchants. The craftpeople and merchants, in turn, adapt environmental influences to Rabari traditions. The successful relationships in this system are of necessity personal as well as commercial. The groups join to produce the textile but otherwise avoid contact. Weavers, dyers, merchants and tailors follow Rabari customs and tastes, and introduce acceptable variations to them. Ultimately, the groups shape each other's sense of aesthetics.

The lodi traditionally worn by Kachi Rabaris illustrates how the system works. Kachis are a subgroup of Rabaris whose home is in the western part of the Kutch desert. A Kachi woman wears a 50 × 140 inch rectangular lodi draped from her head over her back. The lodi must be worn because women are required to cover their heads in ritual respect. Kachi blouses are backless and backs must not be seen. A Kachi woman must hide her face from most adult males, and she uses her lodi as a veil. The garment also serves as a blanket and a means to carry bundles. Lodis are traditionally black because centuries ago a king died to save Rabaris and they continue to mourn him.

The custom and uses of a lodi are shared by many communities. However, the Kachi lodi is unique. It is woolen, with supplementary weft patterning in cotton in the border. It is black, often with designs in saffron or red, and has embroidered accents. Wool is the essential material. It was made sacred by the Rabari goddess, and given by her solely to the Kachi Rabaris. Although the price of wool is rising and its best to sell what they produce, Rabaris can still afford to use some wool; besides, wool is a good insulator.

Although Rabari women card fleeces for their

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lodis and spin it on wooden, hand-propelled spinning wheels, they have never woven the fabric. In India, weaving is the occupation of professional castes. Moreover, weavers are untouchables because they work with the “waste” of animals. (Because spinning is not their profession, but a sideline, Rabaris escape this stigma.) Still, it is the job, not the product which is untouchable. Families of weavers in Kutch have for generations specialized in weaving lodis and other garments for Rabaris.

The Kachi lodi is done in simple tabby weave, and must have a patterned border in a cotton supplementary weft. When the piece is dyed, the cotton weft accepts the dye differently. The Kachi border pattern is distinct from those of other Rabari subgroups. Its motifs are similar to those of tattoos favored by Rabaris. They represent temples, ritual drums and altars, and are believed to protect the wearer from dangers.

The handspun yarn produced by Rabaris, and
Weavers of Kutch who are "untouchable" use a 2-harness pit loom to make Rabari lodos. (above)

The design of the Kuchi Rabari spinning wheel remains virtually unchanged from that of the wheel which migrated with groups who left Kutch generations ago. Here a Bhopa Rabari in Saurashtra uses the wheel (below, right).

Traditional prescriptions regarding color in lodos have restricted the weavers' use of color and texture. Those of young women are woven in natural white wool and dyed; those for elders are made from natural black. In the last few decades, innovation has come from the outside. Merchants attracted by the traditional style have commissioned weavers to do variations, and they in turn have begun to alter color and design. The weavers have not attempted to introduce these variations to Rabaris in deference to legend and custom. Weavers produce them in addition to the traditional pieces.

Though the lodi must be black to signify mourning, it can be decorated with color in ritual designs. These are done in patterns composed of small dots. Like the border designs, these patterns also use the motifs of the Rabari tattoos. On a lodi these motifs are achieved by tie-dyeing tiny portions of fabric along pattern lines. This dyeing is the traditional occupation of Khattris, the majority of whom are Muslim. Hindus and Muslims don't usually have social relations, but the Hindu weavers sub-contract to Khattris, and Khattris must know the customs of Rabaris (also Hindu) in order to execute their designs.

Young Rabari women are believed to be vulnerable to the evil eye, to invaders. Therefore the geometric grid patterns of their lodos must be interspersed with protective zigzag symbols (kungsi) and scorpions. The importance of beauty and fertility is signified by peacock motifs. For middle aged women these are no longer of concern, so ornamentation is avoided; the grid is enough. Color is also significant. Unmarried girls can wear bright saffron or red dots on deep maroon as well as black. After the birth of several children, a woman must wear deep maroon on black and forego the display of saffron and red.

Because dyes may become unavailable and colors may change, Khattris must make appropriate substitutions. Recently, like the weavers, Khattris have gained access to a variety of colors and designs through commissions from designers to dye shawls based on lodos. They have introduced brighter saffrons and reds to the Rabaris. They have also simplified designs and enlarged the dots. The Khattris have not, however, varied the combination of color and design in lodos. They know that unless this is correct, Rabaris won't accept the piece.

Despite close contact, Khattris and weavers remain for Rabaris untouchable. The Rabari woman Lassu and male weaver Haja Suja may joke and argue and know the details of each others' lives, but Lassu will still take the wool she has spun for a lodi just to the edge of Haja Suja's compound. Face covered, she will toss the wool inside. When the lodi is woven, and dyed by Khattris, Haja Suja will come to the edge of Lassu's compound and toss it back. How can a Rabari use this essential garment, twice polluted by untouchables? The solution is simple: Lassu douses it with water, and it is purified.

The lodi is received in two pieces, each 25 inches wide, the width of the two-harness pit loom on which it is woven. Rabari women, reknown experts in embroidery, stitch the pieces together with an overhand, satin, or tight buttonhole stitch. They finish the warp fringes by twisting and felting them, and then embellish the lodi with embroidered medallions and corners.

The embroidery is done in the distinct Kuchi Rabari style. The two medallions are motifs of peacocks, temples and trees radiating around a square, done in open chain, buttonhole, interwoven, and sometimes running stitches. The four corners are bracketed with abstract motifs done in the same stitches.

The embroidery threads used by the Kuchi Rabaris have traditionally been red, orange, yellow, light green, white and black cotton. Recently, their range has begun to include magenta, hot pink, dark green-blue and purple. The group still concurs about which colors and shades are acceptable, but their sense of aesthetics in color has changed. This is due largely to the influence of the thread mer-
chant. For generations, Kachi Rabaris have dealt with only one merchant, the family of Khoja. Khoja can recite their legends, and can pull out of rainbow tangles what a Rabari woman wants. Because he is Muslim, Rabaris must douse his threads before use. When colors in the wholesale market began to change, Khoja skillfully gauged Rabari taste, and gradually introduced some new colors, which were adopted.

Within the last twenty or thirty years, another element has been added to the system of production of the Rabari lodi: the tailor. The lodi has been traditionally joined by embroidering in a variety of colors. However local tailors observing this style, began to join fabrics by machine zigzag in variegated threads. Their work was fast, pretty and not too expensive, so Rabari women began to go to them for finishing work.

The system characterized by interdependence, close contact, and mutual influence among Rabaris, craftspeople and merchants evolved generations ago through the need for traditional textiles. Now, as weavers and Khatri have begun to produce textiles for other markets, new links in the system have in turn been added. This is not allowed to alter social relations, but further strengthens interdependence and extends contact beyond the traditional context.

For example, the following drama may ensue. Haja Suja the weaver receives an order from a wholesaler in Bombay for dhabla blankets to be joined by hand and shawls to be embroidered. He calls Lassu the Rabari. Face covered, she squats at the edge of his compound and discusses with him the styles and colors of stitching she must do, and the commission she will get. The price is acceptable; although the embroidery is strange, it is after all for outsiders. Slowly, however, these simple "strange" daisy motifs begin to show up on lodis for young girls. They will never be seen on a wedding lodi because they are not "traditional." But, gradually because they are quicker to produce than brackets of interwoven motifs, these new patterns will show up in Rabari embroidery.

Among the Rabaris the desire to maintain identity through garments is strong. Yet the definition of identity, and the sense of aesthetics which complements it are not static. Understanding the dynamics which shape the Rabari iconography can help illuminate similar dynamics in our own situations, and offer us an opportunity to consciously utilize and manipulate them.

Notes

1. It must also be noted that untouchability is a ritual, not an economic classification. Ironically, Kutch weavers have risen economically, while Rabaris have not.

Woven border pattern of a lodi, c. 1972. Note also machine joining.
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Qotny & Alaga

Traditional striped fabrics for the middle eastern kaftan

by M. M. El-Homossani

During the last two decades, the kaftan has been widely publicized and promoted in Western countries as a popular garment, especially for women. Designers have been concerned with the cut, lines and fashion aspects of Middle Eastern dress. Virtually every kind of material has been used: from light to heavy-weight fabrics; natural to synthetic fibers; plain to geometric and floral designs.

Very little has been published with regard to the traditional fabrics associated with the kaftan, and indeed, little attention has been paid to their design and weave structure. These fabrics, with their distinctive warp stripes, are known as Qotny and Alaga.

Qotny and Alaga were used extensively until the late 19th century in the making of the kaftan, a garment worn by both men and women in urban centers of the Middle East. The increasing influence of Western culture in the region made many of the upper and middle classes replace their traditional kaftans with the European style of dressing. Consequently, the demand for Qotny and Alaga fabrics rapidly declined. These fabrics continue, however, to be used for the kaftan officially worn by the Moslem hierarchy of El-Azhar in Egypt, and in other sectors of neighboring countries.

Qotny and Alaga fabrics are handwoven. They are sold in pieces five to six meters long, and can be obtained in the old bazaars of Cairo and Damascus. The two cities were and are the main centers for producing such fabrics.

The Middle Eastern Kaftan

The word kaftan is derived from the Turkish qafın. The garment was used in many regions ruled by the Islamic Empire. It was illustrated in Persian miniatures and drawings, dating back to the middle ages. Kaftans came into use in Persia at the time of the Mongol invasion, during the 13th century, which suggests a strong influence from the East. The kaftan (figure 1) has been described in literature in many ways. Some references have emphasized its shape, others have included hints as to its material, design, place of origin, etc. A few definitions may reveal a comprehensive description of the garment, and provide some idea of its related fabrics.

Cafanny or kaftan: Long coat-like garment fastened with a long sash, having extra long sleeves. Usually of cotton or silk-cotton mixture in stripes, worn by higher and middle classes throughout eastern Mediterranean countries. Kafan (kaftan): A long, coat-like oriental garment with long sleeves covering the hands, worn by both sexes throughout the Levant. It was often worn under an outer cloak, and usually made of handsome cloth in striped or brocaded silk, held by a cummerbund and hizam wrapped around the waist.

Cafanny: An Arab and Turkish undercoat which has long sleeves and girdles with a sash. The coating appears at present in a side-slit effect. Little or considerable embellishment appears on the garment to suit the whim of fashion and style.

The mention of Qotny and Alaga fabrics appears in some texts and references dealing with the history of oriental fabrics. Qotny—also written kutny, Qutni—was defined as "a stuff of silk and cotton." This is in agreement with the Arabic meaning of Qotny, a material which has cotton intermixed. Qutni was translated from Persian to English as: made of cotton, a garment of silk and cotton. Apparently the term was known in Persia and used to mean satin. It is possible that this was a satin-striped cloth. Alaga, variously trans-literated as: alaca, alichah, alajah, alajah; is

Figure 1. The traditional kaftan.
translated to mean variegated, or a cloth with stripes of many colors. In Description de l’Egypte, published as a result of Napoleon’s Egyptian campaign (1798-1801), Qoyny and Alaga were listed among the principal products of Cairo and Damascus. They were recognized as important items for export to North Africa and other parts of the Middle East. The same publication also contained illustrations of Egyptian resources, drawings of ancient monuments, and thorough documentation of practically every activity of Egyptian society at this particular time of history. Figure 2 shows some of these drawings, indicating that by the 18th century the traditional kaftan and its related fabrics were the garments of choice worn by the citizens of Cairo and other capitals in the region.

The Traditional Fabrics

Qoyny and Alaga are fabrics exclusively designed for the traditional kaftan. They are distinguished by narrow colored warp stripes. The stripes may contain fine geometric motifs, which are entirely created from the special arrangements of the weave structures and the color order of the warp ends. The fabric structure is based on the principles of satin weave, but it is often combined with other weaves such as warp-twill. The cotton weft yarns are completely covered by the silk warp threads, thus producing a shiny warp surface effect.

Most of the references have mentioned Qoyny and Alaga together, probably because both fabrics were intended for the same end, the traditional kaftan. In analyzing the fabrics, other technical reasons may be deduced. Both types are formed on the same principles, using the same production methods and woven by the same group of weavers. The distinction between the two fabrics lies in their construction. A Qoyny fabric is entirely constructed using long-float weaves to achieve a smooth and lustrous surface. An Alaga fabric combines stripes of long-float weaves with alternate stripes of plain weave (twill), resulting in a different texture. Examples of Qoyny and Alaga fabrics are shown in figures 3 and 4.

The Concept of Stripes in Middle Eastern Textiles

The arrangement of design elements in the form of bands, borders, or stripes is a logical and natural choice especially for woven fabrics. It corresponds in a direct way to the basic perpendicular array of yarns in a woven construction; vertical yarns (warp-wise), and horizontal yarns (weft-wise). In eastern Mediterranean regions, particularly in Egypt, the development of designs in horizontal bands was predominant, at least until the 19th century. This was the case whether the technique employed was a tapestry or a weft-faced compound weave. Both techniques provide a construction where the warp yarns are almost completely covered by the weft yarns.

In Egyptian Islamic textiles, incorporating an Arabic inscription into woven designs necessitated the arrangement of designs in horizontal bands. It was customary for the inscription to include the name of the sovereign, his titles and a praise for him. These fabrics were intended either for the ruler’s personal use or as royal gifts. They were woven in state controlled factories called tīrūz, after which this group of textiles are named.

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impose a ban on the representation of naturalistic objects, and on the use of silk, especially in clothing. The former concept was avoided by creating and improving abstract ornamentation. The latter precept was evaded by combining silk threads with yarns made of other textile fibers, so the resulting fabric could not be denounced as silken, no matter how high the silk content might be. Egypt did not become a major center of silk weaving until the 11th century. The high standard of Fatimid textiles (909-1171), and the richness of materials, including silk, during this period, is known from numerous descriptions in Islamic sources. Under Mameluke rule (1250-1517), silk weaving attained a high level of excellence. Textiles woven in the state factories at Alexandria were known for their aesthetic qualities. There is evidence, however, of Persian and Chinese influence on the technique and style of some of the Egyptian textiles made during this era.

Fabrics made of silk and characterized by colored warps bear a strong influence of the East. Sericulture originated in China, and Chinese weavers were the first to utilize warp-faced structures effectively. They were highly skilled in the preparation of polychrome warps, an essential process for weaving vertical stripes. In the 13th century, the Mongols extended their empire to the west and reached the frontiers of the Levant on the Mediterranean. In spite of the tremendous destruction caused by their invasion, they also made contributions in arts and crafts, including some additions to the textile resources of Persia. For instance, stripes, the unfailing choice of all the East from Egypt and Arabia to India, were as popular as ever, but narrow stripes replaced the very wide bands that were prevalent. They appeared in combination with lines, in ingeniously varied groupings. Stripes seem to have been more popular than spotted designs. This is very conspicuous in garments intended primarily for male usage.

Examples of garments from the Islamic Middle Ages with fine vertical stripes are known from manuscript illustrations and from extant items of clothing. The increasing contact and flourishing trade between China and the Middle East in the 13th and 14th centuries led to exchanges of knowledge and experience, thus benefiting and influencing one another.

Qotny and Alaga fabrics share many common features with the striped fabrics described in the 13th and 14th centuries. Determining the origin of Qotny and Alaga, however, is beyond the scope of this article. It may be stated with certainty, though, that these fabrics have been developed through the ages by many generations of Egyptian and Syrian handweavers. They are the original fabrics used extensively for the kaftan, and reached their full potential during the 18th and 19th centuries.

**Weave Structures and Designs of Qotny fabrics**

Qotny fabrics may be classified into three categories based on the interrelationship that exists between the design and weave structures: 1. Fabrics woven with colored warps, usually in two contrasting colors, forming a simple striped design in satin weave (figure 5a); 2. Self-colored fabrics. The stripe effect is achieved by combining the base satin weave with plain (tabby) and/or warp-rib weave, providing variation in texture (figure 5b); and 3. Fabrics woven with multi-colored (dyed) warps and applying more than one weave to achieve striped designs. The stripes may contain fine geometric motifs, which are typical characteristics of Qotny fabrics (figure 5c).

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**Figure 5. Classification of Qotny fabrics.**

A. Simple striped design in satin weave.

B. Striped design combines satin and warp-rib weaves.

C. Striped design combines satin, warp-rib and corkscrew weaves.
It is apparent that this group of fabrics is basically constructed on satin weave principles, which are suitable for displaying colors in stripe form. When the warp material is made of silk, satin weave has the advantage of emphasizing the silk filaments' light-reflective properties. This is due to the particular distribution of interlacing points in satins, which allows the formation of long floats on the fabric surface. This results in brilliant effects and bright colors.

The regular 5-shaft satin has been used to a certain extent in Syria. Egyptian weavers, however, have employed the irregular 6-shaft satin to form the foundation structure. Irregular satins possess the advantage of being entirely free of any traces of twill lines. This feature favors the choice of irregular satins, especially when a high sheen, smooth fabric surface is desired.

The fine geometric motifs of Qotny fabrics are formed by using ordinary warp-rib weaves—mainly 3/3 warp-rib in combination with 6-shaft satin—and other special weaves, such as warp-corkscrew. These weaves lend themselves naturally to a 1-and-1 order of coloring in the warp.

In a warp-rib weave, if the warp is arranged in sections in which the color order of the warp is 1 dark / 1 light for a certain number of ends, followed by the same number of ends but in 1 light / 1 dark order, the arrangement produces small block effects as shown in the fabrics appearing in group II, figure 6.

Similarly, when a warp-corkscrew weave
is employed in weaving a warp which has a color order of 1 light end followed by 1 dark end, diagonal lines are produced in two alternating colors. On the same basis chevron, wavy and diamond motifs, as shown in group III to VI, figure 6, are obtainable by applying the appropriate draft and treadling plans. A variety of designs can be developed by combining and rearranging these simple elements.

Weaving analysis of each of the basic geometric units is shown in the schematic diagrams of figures 7 and 8. Each of the diagrams shows the set-up in which the warp ends are drawn-in (drafted), on the top left; the treadling order appears on the right, and the resulting design structure is shown below the draft.

Only one repeat of 6-shaft satin weave is shown in conjunction with the weave structure of the basic unit, but, obviously, the satin weave unit would be repeated as many times as the width of the satin stripe would require. Note that the fabric design is shown with the face up. This is due to the type of shedding created during the weaving process. Figure 9 shows that pressing a certain treadle results in lowering the attached harness frame, thus a lower shed is obtained. As a very dense warp sett—72 to 84 ends/cm—is essential for achieving warp-faced structure with satisfactory weft covering, it would be impossible to judge from the back whether the surface of the fabric were weaving properly or not. Therefore, it is advantageous to plan to weave the fabric face-up.

Two variations of the draft and treadling plans may be used for weaving the diagonal lines and chevron units shown in figure 7.

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**Figure 7.** Weave analysis of diagonal and chevron designs.

**Figure 8.** Weave analysis of wavy and diamond designs.

**Figure 9.** The formation of the lower shed.
Figure 10. Fabric analysis of a Qotny fabric.

**Satin Weave**

According to Emery in *The Primary Structure of Fabrics*, satin refers to a type of fabric distinguished by a smooth lustrous surface. The term is also used to describe a type of weave characterized by long floats of one set of elements more or less evenly distributed by single "ties" of warp floats on one face and weft floats on the other. "The points at which floats are bound are dispersed so that successive wefts never bind or are bound by adjacent warps." The even distribution of the tie-down points produces a diagonal effect in regular satin weave. In irregular satin weave, these tie-down points are unevenly distributed and the appearance of swill lines is minimized.

The term *satin weave* often refers to a warp dominant fabric in which the smooth unbroken "satin" surface is produced on the warp float face by the closely set warps.

The term *satin* often refers to a fabric in which the satin effect is produced by weft floats on the weft float face.

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One method uses a sateen draft and straight treadling order, (diagrams b and d). Once the proper drafting of the design unit is considered, in accordance with the satin weave draft, the same result is achievable from both methods. They allow the threading of the satin weave, as well as the corded weaves, to be combined on the same shafts, thus limiting their number to six. Twelve ends are required to achieve the diagonal line effect. Both are arranged in two colors with 1-and-1 order.

Figure 8 illustrates why it is necessary to increase the number of shafts to twelve when a vertical wavy line effect or a diamond unit is included in the design. In this case, a separate set of six shafts has to be assigned to the satin weave, and the rest used for the special weaves of the patterned units. Twelve treadles are employed to permit development of a sateen tie-up independent from the reverse order required for the other weaves. To avoid undesirable extension of warp end floats which would result from reversing the tie-up, it is necessary to use a 2/4 order for the reverse tie-up. This arrangement adds acceptable firmness to the fabric construction. Diagram C, figure 8 shows that it may be possible to reduce the number of treads to six, and achieve similar effects as shown in diagrams A and B. In this case, a reverse treadling order must be employed. This method does, however, affect the relative regularity of the interlacing points in the satin weave, where every end passes over 5 and under 1 weft. The reverse treadling develops floats of unequal length on the fabric surface, which adversely affects the quality and appearance of the satin stripe.

Fabric analysis shows clearly that in Qotny and Alaga fabrics, design and weave structures cannot be separated. The design is dependent on weave structures and related factors such as color order of the warp, draft, and treadling plans. Egyptian weavers have, with great skill, manipulated and controlled these fundamental technical factors, and used them to full advantage. The result is unlimited design possibilities. Intricate forms and shapes can emerge by careful managing, combining and rearranging of basic design elements. The fabric analysis shown in figure 10, which relates to the fabric shown in figure 3, is only one example to demonstrate the instinct, knowledge and imagination of the weavers. It is hoped that their approach to designing woven fabrics may be useful, inspiring and of mutual interest to other weavers. Qotny and Alaga fabrics are a unique group of textiles deserving the attention of those concerned with textile design and history.

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Notes

3. Mary Brooks Picken, *The Fashion*
Satin Weave Evening Bag

This project uses a regular weft-faced satin weave to emphasize the brilliant colors and sheen of perle cotton. It was designed and woven by Jean Lodge.

**Warp:** 10/2 perle cotton  
**Weft:** 10/2 perle cotton, rayon, metallic  
**Warp sett:** 24 epi  
**Width in reed:** 10 inches. (Two or more bags may be cut from wider fabric).  
**Threading:** 2–3–2–3 etc. per dent using a 10 dent reed.

**Assembly**

The bag is lined with commercial satin in a contrasting color. Press under hem allowances at each end of bag. Sew side seams. Sew lining seams and insert in bag. Hand stitch lining to bag hems and flap area.

**Handle**

Use a sturdy cord, such as fiber rush for the core. Wrap tightly in perle cotton changing colors at regular intervals. Trim the ends with beads. Whipstitch to bag near each end.
Greek Chemises

Cut and Construction

by Linda Walters

The connection between the shape of garments and the width of the woven cloth from which they were made has been of interest to scholars and weavers for some time. Widespread attention was focused on this theory with the publication of Cut My Cote. Author Dorothy Barnham of the Royal Ontario Museum in Toronto proposed that the cuts of garments from diverse cultures and civilizations were related to the use of skin or cloth. Clothes from skins were originally cut and sewn because of the limitations of skin size, whereas clothes from rectangular loom-woven cloth were draped and wrapped. Later, these two traditions merged into one when garments first made from skin were cut out of cloth. In addition, changes in loom technology required seaming of narrow widths of cloth to render them wearable.

Since Cut My Cote was first published in 1973, other members of the Royal Ontario Museum staff have applied this theory to specific garment types. John Vollmer examined the cut of Chinese robes for In the Presence of the Dragon Throne. Veronika Gervers studied Hungarian Szűts, Balkan and Romanian shirts, and Turkoman coats in relation to cut and construction.

A study of the cut and construction of Greek women’s chemises in American museum collections revealed new information on this theme. The chemise can be described as a type of dress common to women’s folk costumes all over Greece. It was the first garment a woman put on every day, and was often visible at neck, arms and hem from underneath the various coats, jackets, overdresses and aprons worn in traditional Greek costumes. The cut of the chemises varied considerably, however, depending on type of fabric, width of the cloth, and traditional construction methods evolved over time. An example of a Greek Sarakatsani chemise can be seen in the Summer 1984 issue of The Weaver’s Journal (Smith).

After analyzing 78 Greek chemises of varying cut and construction, it was apparent that the garments could be divided into four categories based on cut. These categories are: sleeveless tunic (19 examples studied), sleeved tunic (42), eastern cut (3), and western cut (14). Within each of these categories, especially that of the sleeved tunic, further distinctions are possible due to loom and fabric variation.

Sleeveless Tunic

The manufacture of chemises of the sleeveless tunic type was confined to the district known as Attica, of which Athens is the center, and
in a few villages of the adjoining region to the north, Boeotia. The fiber content was always cotton, which was and still is a common crop on the plains of Attica and Boeotia. Yarns were Z-spun singles woven into rather coarse, heavy cloth (17 warps x 11 wefts per centimeter). Fabrics ranged from 45 to 57 centimeters wide.

The cloth was cut economically to avoid waste. A single loom width made up the front and back, with angular pieces added in for width. Note in the diagram (figure 1) that in addition to identical gores in the back, there are side pieces which add width. The left and right side pieces are of nearly equal size in Attica chemises. One side is cut from a single piece of cloth, the other side from two pieces so as not to waste cloth. It did not matter whether the pieced section was on the right or left side.

It took approximately five meters of cloth to make the chemise in the figure 1. Although the fabric was cut economically, the layout shows a wedge shaped piece left over. The remaining piece could conceivably make two gores for a second chemise, which indicates that enough cloth (10 meters) was woven for two chemises at one time.

The chemise was sewn together with sturdy, flat felled seams before it was embroidered in polychrome silks. Selvedges were used whenever possible to make neat seams finish, and where there was a cut edge it was turned over before being sewn. Neck edges were folded over and hemmed, and sometimes finished with a pair of ties or a button and thread loop. Only the armseye area was cut out, leaving a finish treatment. Vertical edges were selvedges, but the edges of the side pieces remained as cut, and subject to raveling.

These sleeveless chemises were worn with a bodice having upper and lower sleeves. The overall appearance of these two components when worn was similar to that of the sleeved tunic type.

**Sleeved Tunic**

This category of cut was by far the most predominant, and was found in both mainland Greece and the islands. It consisted of a continuous loom width for the front and back of the chemise, with angular side pieces for width much like the sleeveless tunic cut. Sleeves were made from one, one and one-half, or two loom widths. Because the wearing of this type of chemise was so widespread, there was great diversity in material used, cut, construction techniques and embroidery.

The chemise illustrated in figure 2 is attributed to the Argolis-Corinthia district of the Peloponnesian peninsula. Like the chemises of nearby Attica, it was made from coarse cotton cloth. The embroidery of stylized flowers arranged in columns was worked in cotton, primarily red with touches of blue. The cut has angular side pieces extending all the way to the shoulder, a common feature in chemises from this area. The narrow sleeves were made from a single loom width of fabric which was sewn into tubular tubes before being attached to the body of the chemise. It is interesting to note that the yardage (five meters) required for this chemise is identical to that of the sleeveless chemise of Attica.

A chemise from Macedonia, in northern Greece, illustrates a second type of sleeved tunic (figure 3). Fabric woven on the looms of central and northern Greece was narrower (30-35 cm) than other areas. Consequently, the chemises were narrower than similarly cut garments from wider fabric. The Macedonian and Thessalian chemises made from narrow fabrics also seem to be constructed in a different order than their counterparts in other areas. Sleeves were assembled and joined to side pieces before being sewed to the central front-back panel. This indicates that these chemises developed along a different line than others of the sleeved tunic cut. It is probable that sleeves were an integral part of the garment rather than being "added on" to a sleeveless chemise such as those from south-central Greece (figure 2). Other features peculiar to chemises from northern Greece are stand-up collars, embroidery in wool yarns, and embroidery on sleeves and back seams.

The chemise which represents a third variation of the sleeved tunic cut is from the

![Figure 2. Chemise, Argolis-Corinthia, 19th c. Heavy white cotton with red and blue cotton embroidery. Metropolitan Museum of Art, New York. L41.11.44.](image-url)
island of Skiathos in the Sporades (figure 4). It is made from a sheer silk fabric probably purchased from a tradesman rather than woven at home. The underarm guesses are purple shot silk, most definitely a commercially produced fabric. The color is deep red which symbolized that the wearer was a new bride. It should be mentioned here that the ground fabric of most Greek chemises was white, with the exception of those from the Sporades Islands and the nearby mainland town of Trikeri. In fine silk chemises from this region, seams were joined by decorative insertion stitches in contrasting silk thread. This one was finished in green, navy, gold and white. The two widths making up the sleeve were joined at the top by a band of gold lace insertion, making for an emphasized decorative seamline. All edges were rolled and finished with a delicate picot embroidery stitch, well suited to the lightweight fabric.

to the body through cut, a development in fashion linked to the early Renaissance. These chemises have skirts of three or four loom widths gathered to a bodice at a defined waist-line. The sleeves are full, and often gathered across the shoulder area, a characteristic also associated with 15th century Italian dress.

A chemise from the Dodecanese island of Trílos is shown in figure 6. The skirt is made of four loom widths of a cotton fabric, and is joined to a cotton bodice. Note that in this layout not all pieces were cut on the straight grain. The bodice front and back yoke piece was cut on the cross, and the back piece was cut on grain. The sleeves of this particular chemise are probably of earlier manufacture because the fabric is linen. It was common to remove embroidered parts in good condition from worn-out chemises and reuse them. The full sleeves seen here were embroidered in green silk and cartridge-pleated to the top of the armseye, typical of chemises in the Dodecanese.

**Eastern Cut**

A chemise of unusual cut was sometimes found in areas under the political influence of Turkey. This cut is characterized by a continuous front and back loom width, with a continuous loom width comprising the side panel and sleeve undersection (figure 5). A half-width of cloth was used for the top of the sleeve. This type of chemise was worn under heavy silk caftans in Epirus, and with the “Turkish fashion” of pantaloons adopted by some women in Crete in the 19th century. Because they were not very visible when worn, they were rarely embellished with anything other than a needlelace edging at neck and sleeve hem.

The fabric from which this type of chemise was made was unusually elastic to eliminate bulkiness under the arm and to achieve a close-fitting body. The 19th century chemise from Crete in figure 5 was made from a linen-woven crepe, achieved by over twisting the yarns. The fiber content of the warp yarns alternates from silk to cotton, with cotton selvage stripes. All wefts are silk. Stretched, the fabric measures 48 centimeters; relaxed it is 37 cm wide. Other authors cite similar use of “elastic” fabrics for this type of chemise (Burnham, p.23; Gervers, 1975, p. 71).

**Western Cut**

Women’s costume showed influence from Italian Renaissance fashion in some of the Aegean islands where Venice held political power. An examination of chemises worn on certain islands in the Dodecanese or Sporades groups reveals attempts at shaping garments
The island of Skyros in the Sporades also came under Venetian influence in the 15th century, and adopted western cut costumes. The skirt and bodice in figure 7, although not part of the same garment, are typical of the western cut chemise as found in Skyros. The skirt consists of three loom widths of cotton fabric with silk selvedges. The pieces are joined with silk insertion stitches and at the hem there are little gores of needle-woven metallic and silk threads. Floral sprigs in embroidered silk embellish the hem. The bodice was made from a deep red silk fabric similar to the chemise from nearby Skiathos (figure 4). The front and back of the bodice were cut from a single loom width, the sleeves from two loom widths. Normally, bodices and skirts were joined by gathering the skirt and seaming it to the bodice with a whipstitch.

Weavers interested in creating loom-shaped garments as well as scholars of textile and costume history should find this data useful. Using shaping techniques that provide a garment having little wasted material is a lesson learned early on in clothing history and one which is still relevant to modern designers.

Bibliography

Figure 5. Chemise, Crete. 19th c. Creped silk and cotton mixture. Museum of Fine Arts, Boston. 05.1081.

Figure 6. Chemise, Tilos, Dodecanese Islands. 19th c. Heavy cotton with silk embroidery; sleeves are linen. Metropolitan Museum of Art, New York. 53.21.7.

Figure 7. Blouse from chemise, Skyros. Sporades Islands. 19th c. Sheer red silk with metal thread embroidery. Museum of International Folk Art, Santa Fe, 1840.

Skirt from chemise, Skyros, Sporades Islands. 19th c. White cotton with silk selvedges, silk embroidery. Museum of International Folk Art. 2042CE.
9. Ibid., 2167.
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Designed for Narrow Looms

A summer shirt inspired by the Macedonian chemise

by Mary Temple

A SUMMER SHIRT, a variation of the Macedonian style chemise illustrated in Dorothy Burnham's *Cut My Cote* came about as the answer to a number of design needs. I had been teaching a class at the Weaver's Guild of Minnesota that involved both the hand-manipulated openwork or lace weaves and summer shirts. I felt the personal need for an elegant, yet casual shirt which I could enjoy wearing with either slacks or a skirt. It would have to be cool and comfortable for the inevitable hot and muggy weather we sometimes “enjoy” in Minnesota. Ideally it would make use of one of the open work techniques as a richly textured embellishment, and would provide a vehicle for color experimentation.

Natural materials and a relatively loose set would provide the coolness and comfort. My students were working mainly on twenty-inch rigid heddle frame looms so a narrow width was a built-in design limitation. I wanted to have a garment they could easily adapt to their own measurements and needs. The proverbial “happy accident” occurred one night as I held up a long sample of lace weaves about ten inches wide. Wouldn’t a similar narrow panel, perhaps a student’s tour de force, be ideal for the center panel of a Macedonian-style shirt? I remembered a similar shirt in Virginia West’s book *Weaver's Wearables*. The beauty of Virginia’s adaptation was that even though the front and back center panels were a bit narrower than the traditional style, one did not have to worry about cutting or shaping a neckline: these panels were simply hemmed back into facings that became part of the neck edge. My intermediate students rejoiced in the idea of avoiding neckline cutouts. If this was to be one’s first handwoven garment, there were plenty of other imponderables to deal with!

Previous sampling had shown that a tabby weave of cottolin warp (50% cotton, 50% linen, Borgs) sett at 12 e.p.i. combined with a weft alternating rows of cottolin with rows of Queen Anne's Lace (100% cotton, Henry's Attic) washed well, had a soft drape or “hand” and did not wrinkle outrageously. Approximately twelve ounces of cottolin and four ounces of Queen Anne’s Lace were used in this shirt. In addition, small amounts of Cascade (100% silk, Henry's Attic), six-strand embroidery floss (cotton, D.M.C.) and 3/2 perle cotton (Lily) were used for the areas of Danish Medallion embellishment. The assortment of colors chosen were closely related in both hue and value. A pleasing effect might also be achieved by using a relatively smooth gradation from dark to light values, or from one hue to another.

Size: A maximum of 48-50 inches at the bustline may be cut down at the underarm seams. To assure an easy fit, measure your bustline, add four inches plus seam allowances, then divide the total evenly between front and back, after the pieces have been washed and steam pressed.

Sleeves are 3/4 length with one-inch hems. If you wish to have longer sleeves or cuffs, please make the necessary allowances when figuring your warp measurement.

Allow at least 10% shrinkage if the garment is to be handwashed or dry-cleaned; up to 30% if it is to be machine washed and dried.

Warp: 244 ends 22/2 cottolin sett at 12 e.p.i.; minimum size 20 inch rigid heddle frame loom or harness loom threaded to straight draw and tied up to
Danish Medallion
1. From the left, throw one shot of contrasting weft.
2. Weave 1/2 to 3/4 of background tabby.
3. In next shed weave through a group of warp ends with contrast weft and pull shuttle out of the shed.
4. Insert a crochet hook below first shot of contrast tabby and hook the contrast weft from the shuttle. Pull a loop of contrast weft up to the surface.
5. Put shuttle through this loop and pull loop as tight as desired.
6. Without changing, continue in this manner across the web.

weave plain tabby. Double the selvedge threads.

Length of warp: 152 inches. If you make alterations, please add or subtract to meet your requirements. The length given includes a 15 inch loom waste allowance. If your loom requires more or less, please take that into account as well.

Weft: Alternate shots of 22/2 cottolin and Queen Anne's Lace. Additional yarns for Danish Medallion or other embellished weaves.

Weaving: Center back and front panels: Refer to diagram of warp. Begin with 1 1/4 inches plain tabby in cottolin weft for lower hem. Weave 20 inches in the embroidery or open work weave of your choice. Here random sized Danish Medallions were balanced overall with a variety of textures and colors. Each color was introduced early in the weaving, then brought back throughout the center sections in random order. Your work could be very free or totally planned out ahead of time, as you wish. The last 2½ inches for the neckline and facing were woven with Queen Anne's Lace. (30 inches total front panels length).

Two side sections: Begin each with 1 1/4 inch plain tabby in cottolin weft for lower hem. Then weave 10 1/2 inches, alternating one weft row cottolin, one weft row Queen Anne's Lace. At the end of each section, weave in two picks of any contrasting scrap yarn as a separation, before you start the next section. Remember to take measurements of the weaving when the loom is off tension. (22 inches side panels length.)

Two sleeve sections: Begin with two inches tabby for hems, alternating wefts. Weave four inches random Danish Medallion, 13 inches plain tabby alternating wefts, 3 1/4 inches Danish Medallion, and 1 1/2 inches plain tabby using only Queen Anne's Lace for weft. (25 inches total sleeve length.)

Finishing: When all the weaving has been completed, handwash gently, rinse well, and hang over a towel to dry. Steam press when fabric is still slightly damp. Machine stitch or zigzag finely wherever the sections are to be cut. Cut front and back panels, as well as side sections exactly in half in the warp direction, and overcast with zigzag stitching as well. All seams are machine stitched with a 1/2 inch seam allowance, pressing center panel seams toward the sides. All hems are handstitched. Be sure to adjust the width at the bustline to your measure plus four inches ease. The finished neckline will measure approximately 4 x 9 inches.

Enjoy the connection you have made with your Macedonian shirt to the historical past we share as weavers.

Bibliography
The Weaver's Journal became the custodian of treasures for a short

time last winter, as entries to our Fiber Jewelry Contest began to

arrive at our offices.

The twenty-three entries received from throughout the U.S. and

Canada, were executed in a wide range of techniques: Basketry,
tapestry, warp-faced pick-up and miniature overshot were some of
the methods used, along with embroidery, crochet and wrapping.
Many types of yarns were used, with silks, rayons, metallics, cotton
and linen predominating. Pieces were enhanced with beads, shells and
ceramic pieces.

Entries were judged on craftsmanship, design and wearability by
noted jewelry designer Mary Ellen Stewart. She deftly narrowed the
field to the six outstanding pieces shown on the following pages,
whose creators received cash awards and Weaver's Journal subscrip-
tions.
First Place
Selma Grossman

"Everything I create is totally unplanned allowing me a continuous creative experience." The first place winner is a necklace fashioned in a technique called knotless netting. Selma Grossman uses the human form as a starting point in her work. She has christened her sculptural people Homunculi, defined as "diminutive humans, little men, manikins." Ms. Grossman lives in Pleasant Hill, California and has exhibited widely throughout California.

Third Place
Ross Virsunen

Ross Virsunen is from Toronto, Canada and has exhibited her work widely there. Her current fiber interests are concentrated on gold and silver metal threads such as those she used in the warp of her prize winning brooch. She has developed a woven structure using both tapestry and fabric weaving techniques together in one piece. Her flat-woven brooch was constructed by hand using a needle on a small frame loom. Both warp and weft use gold and silk threads. Military medals awarded for bravery and/or social achievement inspired this piece.
Second Place
Joan Renne

Ms. Renne is a talented musician and weaver from Indianapolis, Indiana. She became interested in weaving as a child because of her mother’s friendship with Harriet Tidball. Now Joan Renne concentrates on off-loom techniques such as the knotting she used in her prize-winning necklace. She was inspired by the porcelain pieces created by Bonnie Deutsch of Cambridge, Massachusetts. Ms. Renne used silk cords with rayon and metallic to create an “appropriate” setting for the porcelain. The technique is basically macrame using double half-hitch knots which she then manipulated further.

Three entries received Honorable Mention.

Linda Hanna’s (Vina, California) bracelet was inspired by techniques used by the Bolivian Indians and was woven on an 8-harness loom using a pick-up technique. Fine, 2-ply Natesh rayon supplied the warp and 30 gauge stainless steel wire was used for the weft. A marquesite bead was added with each weft pass. A sterling silver clasp completed the piece.
Elmyra Tidwell (Hermann, Missouri) calls her necklace "Oriental Guardians." This bib necklace has a warp of very old black silk with weft of #70 cotton and silk sewing thread plus lurex. The piece was woven using different tapestry techniques. As she wove, Tidwell added additional overlaying warp threads allowing weaving of raised parts of the tapestry. Her title recalls the intricately decorated fabrics of Chinese embroideries, woven by children. Tidwell tried to capture their youthful and naive world view. The top portion of the piece has the traditional character border of oriental art.

Thelma Pederson's (Woodburn, Oregon) pendant was constructed using 3-ply white mulberry silk which she spun on her great wheel. What gives the piece strength is its base of galvanized, spot welded wire, sprayed with clear lacquer. Double buttonhole stitch covers the wire rings. Teneriffe embroidery technique was used in needle weaving the design. It is intended to be worn on a chain.

About Our Juror

Mary Ellen Stewart is the founder of M. E. Stewart, Inc., a Minnesota based fashion accessories company. Ms. Stewart has studied fine arts at Drake University, the University of Minnesota and engaged in independent study in London. She perfected her craft during a six-year teaching stint where she initiated and developed extensive design programs emphasizing creating jewelry and belts from natural materials, as well as traditional metals.

With her special interest in jewelry, Ms. Stewart designed and crafted one-of-a-kind quality pieces from natural materials like ivory, horn, bone and wood. These unique items were in high demand in galleries and fine jewelry departments. As interest in and demand for her jewelry grew, she stopped making one-of-a-kind items. Her company is now the only large scale jewelry production firm that specializes in high-quality jewelry from natural materials and metals.

Today her wearable fashion ornaments are carried coast to coast in leading fashion retailers such as J. Magnin, Lord & Taylor, Bendel, Dayton's, Hudson's, Nordstroms, Charles A. Stevens and Marshall Field. Ms. Stewart's exquisite designs have been featured in Vogue, Harper's Bazaar, Glamour and Women's Wear Daily.
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EVERY TIME an old, consistent tradition disappears, we are the losers. That is why it is so important to make adequate sound and film records as a way of providing a treasury on which arts and crafts can draw in the future." Margaret Mead's statement in Some Personal Views is a cogent explanation of the reason for my research on traditional textile techniques in the Andes of South America, although certainly the traditions are worth preserving and recording for their own sake.

In the case of the ikat blankets, called fullus, woven in Tarabuco, Bolivia, they are part of a warp-faced, four-selvage weaving tradition which dates back at least 3,000 years and still used by contemporary weavers who use or adapt the technique. Anyone who wants to go about this the hard way can start by spinning 12 pounds of sheep's wool on the drop spindle and then plying it. I started by buying one dark and two light sheepskins at the Sunday market. I cut the fleece off Tarabuco style—with a sharpened sardine can lid—and spun and plied for 8 months, joined at the end by my teacher Doña Guadalupe (Gualala) Barja de Miranda and her 14-year-old daughter, Benigna. In the Tarabuco area spinning and weaving are women's work. Yarn is always spun with a particular project in mind. The blanket, for example, would have 32 epi (120/10 cm) while a shoulder wrap had 72 epi.

Virtually every home in Tarabuco has fullus on the bed. They provide warmth in the cold nights at 11,000 feet, and color in a landscape that is mainly brown earth and adobe. In most families, the mother weaves a blanket for each family member with his or her name tie-dyed into the warp, and the children take their blankets with them when they marry.

Since ikat (or waturu, as it is called in Tarabuco from the Quechua, watay meaning to wrap or tie) is a dyeing rather than weaving
Fullus
of Tarabuco, Bolivia by Lynn A. Meisch

The warp cross for each section was tied at the far end of the loom and the shed rod inserted. Then Benigna climbed inside the loom and began wrapping, sitting on the floor. Each section (white, yellow and rose) was divided in half, since the blanket is woven in two identical halves which are later sewn together. Each stripe is tied with its own ball of brown yarn, and four pairs of warps from each shed (that is, 16 2-ply yarns) were picked up and wrapped together. A length of brown yarn was doubled, wrapped from left to right and back again and tied with a half-hitch, then moved up to wrap the next design, uncut. Although the motifs are traditional, the choice of which ones to use and the selection of colors is up to the weaver.

Because textile production is organized around regular household chores, Benigna and her mother took turns wrapping. Each ikat stripe was between 4 and 5 inches wide. The pink stripes had a zig-zag motif (kinkus) with little stars (estrellitas). The yellow stripes Benigna wrapping patterns. She is forming the letters of my name on the yellow stripes.

The women spin and ply yarn while the boys look on.

The actual technique of wrapping the yarn to form the design interested me greatly since I had studied ikat in Ecuador. Wrapping was an 11 hour marathon. Both the warping and weaving were done on a large frame loom with adjustable bars set about six feet apart; the loom was set on large rocks parallel to the floor. Benigna and Doña Guadalas each sat at one end of the loom and tossed balls of yarn back and forth in a figure-8. In Tarabuco spinning and weaving much of the measuring is done by hand and eye, from the diameter and twist of the yarn, to the width of the ikat stripes, although the family had another fullu nearby for comparison.
Doña Gualala explained that without the yellow the green turned out too blue. Unwrapped white skeins and wrapped white and yellow skeins were dyed in this bath. The resulting colors and combinations were red and bright pink, green and yellow, green and white, and yellow and white. In Tarabuco these cheery neon colors brighten dark rooms. The blankets are so decorative that they are gathered in the middle to look like butterflies, and hung from ropes strung across the streets of the town during major fiestas. Some people also nail them to the wall for fiestas or, as Doña Gualala did, put them up as a backdrop for photographs of the family. Doña Gualala says her colors are firm and do not "pintar" (paint or run).

The next day Benigna and Doña Gualala set up the loom, arranging the ikat stripes for one blanket half on the loom bars, and unwrapping the resist yarn part way. The loom bars were tightened and the two women warped the plain stripes between the ikat sections. To add variety Doña Gualala pulled some bright orange yarn from her basket for several narrow stripes.

The warps were carefully arranged in order, the shed rod inserted and the heddle strings attached and looped over a metal rod. Doña Gualala made a heading cord, attached a permanent bottom loom bar, and wove in the heading cord as the first pass of the weft. She then used some of the unwrapped brown yarn wound on a bamboo stick as the weft.

The use of the dark yarn is ingenious for several reasons. Wrapping dark yarn over white makes the pattern easy to follow while working. Unwrapping the resist yarn little by little when the warp is on the loom keeps the ikat motifs from shifting. In a poor country with scarce resources very little is wasted; reusing this wrapping yarn as the weft wastes nothing. Andeans are experts at recycling. Because of its dark color the wrapping yarn doesn’t pick up much dye. This isn’t a problem, however, since the blanket is warp-faced and weft is hidden. All these techniques can be used or adapted by contemporary weavers for floor, frame or backstrap looms.

The weaving of fullus has some unusual features. For wide textiles in Ecuador the sword is a long, flat piece of wood tapered at both ends. It is used turned on its edge to hold the shed open while the weft is passed, then it is held in both hands and pulled forcefully to beat the weft. In the Tarabuco region the sword is usually a round pole tapered at one end, and used only to hold the shed open. The beater is a sharpened llama thigh bone (a trade item since there are no camels in the area). The sword is pushed down against the
weft and the beater (held in the right hand) is bounced off the sword onto the weft with a resounding click that can be heard outside in the street.

The weft is beaten twice: once after it's been passed and a second time when the shed is changed. A novice weaver goes about with her right hand swollen, blistered and sometimes bandaged until she becomes accustomed to this arduous work. The beater is also used to strum the warps to separate them when the shed is changed.

As the weaving progresses the loom bars are occasionally loosened and the woven part is rolled around an additional wooden bar. The top loom bar is, of course, lowered and the weaver always works with the level of weaving between her knees and shoulders. When only about two feet remained unwoven, Doña Guadalu inserted a heading cord, lashed on a permanent loom bar on top, untied top and bottom loom bars and turned the whole apparatus upside down. She relashed the loom bars to the side poles and wove about four inches. Then she turned everything right side up.

Doña Guadalu had about 20 inches of warp left, which she wove using smaller shed rods until only three inches remained. She removed the heddles and threaded the weft through the eye of a long iron needle and used a thin wooden pick-up stick to pick every other warp. Finally the smallest shed rod was removed and Doña Guadalu continued picking until the weaving was complete.

When the second half was also woven Doña Guadalu sewed the halves together with the ancient, or "baseball" stitch, going over the same route three times before moving to the next stitch. She did this with yarn from the same bails used to make the warp, changing colors every 8 inches. Benigna, at age 14, was capable of making a fullu from start to finish. When she married and had a family, she would be able to teach the skills to her daughters.

Andean weaving appeals to me because it is an old, consistent tradition. Pre-Hispanic ikat textiles and fragments have been found in southern Ecuador, on the north and central coasts of Peru and in northern Chile, demonstrating that the technique was known in the Andes before the arrival of Europeans.

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A clue to the history of ikat in the Tarabuco area came from an old travel book containing photos of Tarabucoño Indians in costumes similar to those worn today. Another photo is of a Quechua Indian, Chiquisaca, wearing a poncho with warp stripes and one zigzag ikat stripe at each side selvedge. Parts of his costume resemble Tarabucoño dress, but he is definitely from another ethnic group. No one dresses like that in Chiquisaca today; the old costume, including the ikat poncho, has been abandoned. The use of ikat has persisted in the blankets, grain sacks and saddle bags woven by cholita women. Times and costume styles change, but the tradition survives, handed down from mother to daughter over the centuries.

**Notes**

KUMEJIMA KASURI
A visit to a remote Japanese silk center
by Alison Mitchell

THE TINY JAPANESE island of Kumejima is part of the Ryukyu islands, ninety miles west of Okinawa, in the East China Sea. The first time I went there in 1979, I traveled all the way from London overland on the Trans-Siberian Express. It was there that I had my first contact with Japanese weavers. I was impressed by their remoteness tempered with sophistication, illustrated for me by their use of vegetable dyes collected from the forested hills surrounding the villages, and the methods they used to produce silk. They make fine handspun silk cloth called Kumejima Tsumugi, using a technique called Kasuri. This technique involves tightly binding the silk threads in predetermined areas prior to dyeing or after the first dye has been applied. The binding repels the dye so that the pattern emerges when the threads have been unbound and woven into cloth.¹

I was very excited when I saw this weaving and knew instantly that my own work was going to change dramatically because of this visit. I was unable to stay long in Kumejima as I had a busy schedule and visited many more weavers in Okinawa and on the mainland, but never did I find the same subtle combination of colors and design as in the Kumejima Tsumugi. When I arrived home I started to experiment with kasuri and discovered many problems that I had not anticipated. I decided to return for a longer period to study this complicated process. In October 1982, I had my opportunity.² I arranged to stay with the Kinoshita family, who I had met on my first visit. They welcomed me and my eighteen month old son at the tiny airport when we arrived. They had two young sons so Danny made good friends with them straight away.

Yasako Kinoshita, the wife, is a minister at the only Baptist Church on the island and also a music teacher. Her husband, Manabu, is an English and math teacher. Without the help and support of the Kinoshita family my project would have been impossible to accomplish. Manabu often lent me his car or came with me as translator on my excursions to weavers’ houses. This assistance was invaluable. I could never have found out all I did without his help, but sometimes we both found it hard to understand all the different stages necessary to produce the colors and patterns. Whenever I visited a weaver without Manabu, I always took a written explanation of who I was and what I wanted to see.

I was very surprised to discover how different these islanders were from the mainland Japanese. Physically they are smaller and their features less oriental. They have their own language, but are bi-
Marking the pattern onto the warp is preparation to tying. The suguki trees on either side of the weaving room have a special bark which produces a bright yellow dye. (opposite)

Women taking a break from mudding. The silk skeins spread out on the ground in the background are laid in a special mud containing iron.

Traditional design depicting the bird, lantern and dog footprint motifs.

lingual. The women’s independence is very noticeable and most of them have part-time work which contributes to the family income. This is unusual in Japan where women are expected to be occupied in their homes raising children.

Very soon after my arrival I went to the Weaving Center. This is where all the 650 weavers on the island have learned the kasuri technique. The training which takes six months from July to December is free and given only to permanent residents of the island. The students at the Center are women of all ages and after they have finished the course they work at home on their own looms. They can use the Center’s equipment, such as the warping mill or winder which wraps the warp tightly and accurately round the back beam. This is then carried home and fixed onto the weaver’s loom. This arrangement is beneficial to everyone because when these students have become experienced they can sell their work to the Weaving Center, which then exports it to the mainland. Since only the best quality cloth is bought, however, the weavers cannot expect to sell immediately. For the first two or three years they practice the technique at home.

All kasuri is done according to an ancient tradition. The motifs depict birds, water movements, working utensils and almost anything the islanders see or use during the course of a day. Sometimes the number of times it repeats itself across the width of the fabric is important as it can indicate the age of the woman for whom it has been designed. If, for instance, a motif is repeated eight times in a horizontal line then she is in her eighties, or if it is large and only repeats itself twice then she is in her twenties.

In the seventeenth century all the women in Kumejima between the ages of fifteen and forty-five had to weave kasuri in an official weaving lodge under constant supervision. This was because there was a strict tax system and 70 percent of taxes were paid in silk cloth to the Satsuma clan who ruled the Ryukyu islands. The women also had to fulfill an obligation to weave kimono cloth for the feudal lord of the island who wanted the cloth to raise money for his coffers. In Kumejima there is an old marked poll stone that measures a person’s height. In those harsh times everyone, including their children, had to pay taxes according to their height. The islanders stopped weaving as soon as textile taxes were abolished in 1903, but a few years later they realised that the sale of this cloth could be profitable without incurring hardship. Hence weaving centers emerged on all the islands and now encourage the production of kasuri.

In Japan the elderly are very much revered for their knowledge and experience. When we went to see weavers, we always tried to first seek out the old people who could tell us most about their craft. Ushi-san is the most respected weaver on the island. She has been a weaver so long that she cannot stand straight and her body is permanently bent into the sitting position even when she walks. She is a marvellous old lady and I so wished I could have talked to her in her own language. She had so much to tell me that we both felt frustrated by my lack of Japanese. She is one of the nine professional weavers on the island who work solely on the production of cloth.

The weaving centers on each island in the Ryukyus encourage the production of their own particular brand of kasuri. The type of materials used differs from island to island as do the vegetable dyes. For instance, in Northern Okinawa cloth is made from the banana fiber and on another island a
give it a softness and slight sheen. To do so they wet the cloth in water and pleat it into a small flat parcel which is wrapped into two layers of heavy cotton and tied to a large rectangular stone. The cloth is then beaten twenty times with huge wooden mallets and unwrapped and stretched out, then pleated again and the procedure repeated until it is dry. The cloth is now ready to take to the Weaving Center for inspection. If it passes this test of quality the weaver will receive £200.00 for each ten-meter length and both lengths will receive the officially stamped paper proclaiming their authenticity as Kumejima Tsunugi. Without this paper attached alongside the weaver’s signature it is impossible to get a good price for the weaving.

The cloth at last leaves this remote island to be sent to Kyoto where it is made into kimono. These are sent to the fashionable shops throughout Japan and sold to the sophisticated Japanese public for about £500.00 each.

Notes

1. For a comprehensive description of this technique see “Picture Kasuri” by Jun and Noriko Tomita, Weavers Journal (UK) issue no. 119.

2. The author received funding through an Eastern Arts Grant.

Reprinted with permission from The Weavers Journal (UK) issue no. 130.

thread is split from the fibers of the ramie plant to produce a rare cloth called Jofu. These have kasuri patterns dyed in indigo. On Kumejima the distinctive beauty of the silk cloth lies in the variety of yellow and brown dyes which are extracted from various indigenous trees and plants. Each color takes at least a week to dye as the silk is dipped and then hung out in the sun to dry between twenty-five to eighty times, depending on the depth of color required. The heat of the sun is important to fix the dye. At 4 a.m. they are already at work. By starting this early they can dip dye the silk and dry it eight times a day. Since there are always four dyes used, the process takes at least a month. Finally the silk is immersed several times in a special mud found in the hills, which is high in iron content. This gives a marvellously rich brownish black used for the background color so that the white, yellow, and reddish brown Kasuri patterns shine out from this surface. This special dark background distinguishes the Kumejima Tsunugi from those produced on other Ryukyu islands which do not have the same quality of mud. During the dyeing season skins of silk of all these colors festoon bamboo poles along roof tops and roadsides as they dry in the sun.

The weavers nearly always combine their efforts if it makes a job faster and more fun. In one place in the village of Hiyajyo there is a line of shady trees. This is the favorite spot for the tying of warp kasuri, and a winder with a ratchet has been stretched out over twenty meters under the trees. This is the length of warp needed for two kimono and the standard practice is always to weave two identical lengths on one warp. The silk is stretched out between the winder posts and made taut and the patterned areas are lightly marked with a pen. This is then wrapped with strips of plastic sheeting and bound tightly with dampened cotton twine. This procedure is very painful to the fingers and they soon become blistered with the constant pulling of the twine. But despite this, any woman willing to tie her warp will always lend a hand to the one already occupied with this time-consuming task.

After the cloth is woven it has to be finished to
Weft Ikat

An Introduction

by Dee Burnlees

I have long been fascinated with the gently blotted patterns of weaving from Guatemala, Japan, Indonesia and other places, where pattern units are created from small sections of undyed yarn. Although each country has its own name for this process, in our country these are most recognized by the Malay term, ikat (ikat). In Japan the technique is known as kaisuri. The complexity of pattern achieved by primitive peoples around the globe using this basic method is astounding.

The process of making these intricate shapes remained a mystery to me until I attended a week-long workshop with the Japanese kasuri artist, Keiko Shintani. Here, in the practice of her simple method for ikat, I came to understand the technique and its many uses.

In warp ikat the warp threads are tie-dyed before weaving. Because the pattern is already built into the warp threads, no elaborate pattern treading is needed and the piece can be quickly woven in tabby. It is difficult, however, to keep the threads lined up when mounting the warp on the loom, and the pattern is uncontrolled.

Weft ikat, on the other hand, requires no special warp. The dyeing itself is done in small tied bundles, creating even colors. The weaving is tabby and requires some adjustment time to build the pattern. The weaver is in full control of the direction each new pattern takes.

To prepare a weft ikat, the yarn is wound out into bundles the width of the warp. These are then tied to resist the dye. When all the bundles are ready they are dyed together and dried, ready for use as the weft in weaving.

A jig is needed to measure the bundle accurately and to hold it steady. This is made on a piece of board by placing two finishing nails the same distance apart as the warp width. Twenty laps of the yarn around the nails creates a bundle. The end is tied to the beginning to maintain the tension, and two loose loops are tied so that the threads cannot stray out of the bundle. A mark is made halfway between the nails, and then at ¾" (one cm) on each side of the halfway mark. This center space is the portion of the bundle that will be wrapped and tied while it is in position on the jig.

Plastic the weight of dry cleaners’ bags is folded so that it can be cut into two inch (five cm) squares. Six inch (fifteen cm) ties can be cut ahead. Slide one plastic square under the bundle centered at the marks on the jig. Bring the far edge up tight to the bundle and hold it firmly until it is wrapped in as you roll the plastic over it and around the bundle several times. Hold the end of a tie under your thumb while you lash tightly several times around the bundle at the outside jigmark, overlapping the end you hold. Continue to wrap around the plastic to the other end mark. Lash the end tightly and draw the end of the tie through with the last lashing. This tight wrap around the plastic seals the yarn from the dye, so that the coveted portion will remain undyed. Slide the bundle off the jig and onto a cord which will hold all the bundles in the dye pot. If you are weaving at twelve threads per inch (five per cm), you will need one bundle for every three inches (eight cm) you plan to weave. You will want some to be left untied for unpatterned weaving intervals. Prepare all the bundles and store them on the cord.

In an enamel or stainless steel pot, prepare a good chemical hot water dye bath according to the package directions. The traditional colors used in kasuri are indigo blue or maroon. Tie the ends of the storage cord together and soak it and all the bundles in warm water and detergent for ten minutes. This will help the yarn receive the dye evenly. Place the well-soaked cord of bundles into the dye bath. Be sure there
is enough water in the dye bath to cover the bundles. If adjustments have to be made, lift out the cord with a glass or wooden rod, add the water and then replace the yarn. Increase the heat under the dye bath to bring it to a gentle simmer. Cover and let simmer for twenty minutes, checking from time to time to lift and move the yarn around gently.

When the dye has been absorbed to your satisfaction, remove the yarn from the dye bath and rinse it in equally hot, clear water, gradually cooling the rinses until the water runs clear. Undo the cord and stretch it out so that the bundles can hang from it to dry. Once dry, the bundles can be untied, freed from the plastic, and wound onto bobbins ready for weaving.

Weaving is done on a warp close to the color of the threads you have dyed. In weft ikat the pattern depends on how the tabby weft threads are laid in. The thread on the bobbin has evenly spaced, undyed, white spots where the plastic wrap protected the yarn from the dye. Center the first spot in the middle of the warp. To make a white square on a colored field, simply center each succeeding spot above the first.

This square design can be made into a circle by slightly offsetting the second and succeeding shots of thread. The white will come slightly to one side, and then slightly to the other side, the amount increasing with each repeat, until the circle has reached its maximum at the tenth shot and is starting to have a dark center. Repeat the process backwards, bringing the spot in from the maximum each time until it is back on top of itself, completing the circle.

If the spot is begun to one side, the second spot will fall to the other side. Gradually bring the spot in on each side until it overlaps solidly, and then gradually take it out again to form a cross. Parts of the cross, square and circle can be combined in a series of interesting shapes.

By not using every spot you can make a flying bird motif. Gradually move the "square" to one side for the lower wing, back again for the body, out for the upper wing shoulder and back for the wing tip. The alternate spots that you don't use for this can be left hanging from the edge. By cutting the weft thread and laying the spot in at will, more variety can be achieved. If you had dyed the bundle with two plastic resist wraps instead of one you could work two circles or crosses side by side. If the warp was ikat-dyed to create vertical spots, you could cross these with weft ikat spots to create solid, rather than half-tone shapes.

Actual practice makes this seemingly complex technique quite simple and allows the traditional patterns from ikat cloths around the world to be better appreciated. Ikat can be used for overall pattern, for borders, or for random accent. It can free modern weavers from the constraints of complicated threading and repetitious treadling patterns. With ikat, a stock of plain white yarn can become a kaleidoscope of color.
ONE OF THE very first choices made in the conception of the piece "Which Way?" was to use the weave structure Bergman. I will try to let you in on why that decision was made. In recalling the planning of a work, it is difficult to assign an order of emergence for different aspects of the piece. Many things are interconnected and usually come together as a package of ideas. I would place settling on Bergman somewhat after deciding on the arrow motif, but before any thought of color or the variegated warp. The spark that gets me going is often an undefined idea of something I would like to do—like arrows. After this initial idea has ignited the creative process, there are many things to consider before the piece is on its way to becoming reality. Decisions sort themselves into two types: visual or technical. Even with this division a choice rarely sits neatly within one category. The chosen weave structure is a technical decision, but it is one that may have tremendous visual impact, too. The piece illustrating this article is a good example of that relationship.

The arrows of "Which Way?" were conceived as a simple yet dynamic statement. This idea was developed through sketches into an interrelated positive and negative design. With the main concept defined in this way, a block weave seemed appropriate for execution of the piece because of the two distinct surface areas that always comprise weave structures in this category. Reviewing about a dozen block weaves with which I am acquainted, I decided to use Bergman for a combination of both technical and visual reasons.

Bergman is a block weave with an unusually large threading unit of 16 threads. Just one of these units worked very nicely for each step in the progression in the point of the arrow. Units were combined for the blocks that were to be activated for the background and the border. With the warp yarn sett at 15 e.p.i., each threading unit was approximately one inch wide after weaving take-up. Bergman is a close cousin of Summer and Winter in that all of one warp pattern block threads are carried on a single harness and that the tie threads make up one-half of the threading unit. The major difference is that the tie threads in Bergman are distributed on three harnesses in a diamond pattern instead of alternating on two as in Summer and Winter. Both of these weave structures are woven in the same way by alternating a weft pattern shot with tabby. This produces two blocks simultaneously: one of predominantly warp threads and the other mostly of the pattern weft. In "Which Way?" the arrow and border are woven

"Which Way?" Bergman, 15 e.p.i., 26" x 32" each panel. Photos by Gary Schroeder.
in weft blocks while the variegated background is composed of warp blocks.

In a piece such as "Which Way?" where I rely heavily on the visual impact of the large arrows, it is crucial that I build into the piece things that hold the viewer's interest after the dominant statement has been absorbed. The Bergman weave structure retains the viewer's attention by its rich and varied surface texture and by the diamonds. In Bergman the warp blocks can present a very different texture from the weft if yarns are selected to emphasize differences. In "Which Way?" the warp is variegated but not by using variegated yarn. To construct the warp, I first arranged most of the greens in my yarn collection from dark greens through bright greens to yellow-greens. The warp was wound with a small section of one color, then a section alternating that color with the next one before going on to the next. This gave the warp the impression of graduated value although comprised of yarns of constant color.

Since the yarns were chosen for their color without regard to texture, the warp represented a blend of textures. The weft yarns were chosen not only to contrast in color with the warp, but also in texture. The soft matte quality of the wool boucles and chenille of the weft set off the luminous green of the warp. But the real bonus in choosing Bergman was the diamonds produced by the tie threads. As has been previously mentioned, in Bergman there are two main design areas, the positive and the negative. However, within each of these two areas there are small continuous diamonds made by the patterning of the tie threads that hold the weft yarn in place. These diamonds seem to add more because they are not recognized at first, but emerge as one studies the piece. Because of the yarn selection, the diamonds are more apparent in the weft block areas of the piece illustrated.

One of the major drawbacks in selecting the Bergman weave structure to complete this piece was the difficulty in threading. Treadling required good leg muscles, two feet and a lot of concentration. The tabby used in between the pattern shots alternated between raising tie thread harnesses together and raising all the pattern block harnesses at the same time. Since the design employed nine blocks, this meant lifting three harnesses for one tabby shot and a very hefty nine harnesses for the other. (If you counted, you only got eight blocks translating into eight harnesses. A late design decision elimi-

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**The Bergman System** is "another of the three-tie weaves, this one introduced to the American weavers by the late Margaret Bergman. It has a sixteen-thread unit, the largest of all the units, but it is possible to reduce the block size by shifting the pattern-harness threading at the end of the eighth thread, though the pattern in the tie-downs must continue uninterrupted. The eight alternate threads which fall on the x, y, z tie-downs are arranged in this harness order: 1, 3, 2, 1, 3, 1, 2, 3. An end threaded to a pattern harness follows each tie-down. Variations of this basic weave texture may be devised by threading a different Extended Point Twill design on the first three harnesses."


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**Bergman**
(basic threading units may be extended to more harnesses)
nated the extra block from the design, but not the treadling.) The difference in the weight of the treadling of these two shots disrupts the rhythm of weaving. The pattern treadling required two feet, one operating the correct tie thread and the other stepping on the proper warp block or blocks. The major problem with the treadling was keeping everything in proper sequence. The "tie" foot needed to produce the diamonds progressing every second pattern shot while at the same time the other foot picked up the warp blocks that were required to be raised for the arrow design. Proceeding at two different paces with my feet while coordinating my arms with the correct weft shot required more mental power than I usually like to expend. But, the results were worth the effort.

When I now look at "Which Way?" I cannot imagine it being produced in another weave structure. Perhaps it was the intricate richly textured surface that suggested the simple presentation in the arrows rather than the other way around. The dependency of one element of the creative process on another is very complex and even though I don't completely understand the relationships, I am becoming better at working with them. I'm glad I stumbled onto Bergman and that it has entered my repertoire of weave structures. Understanding how to use its unique properties extends my creativity.

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innermost loop on the right hand (figure 5a). By hooking either the upper or the lower shank of this loop, you can influence the structure decisively, as will be explained later.

Now you have to shift the loops on your right hand in order to free the right index. Slip the ring finger into the middle finger's loop (figure 5b) and withdraw the middle finger (figure 5c); slip the middle finger into the index loop and withdraw the index (figure 5d).

This is a precarious maneuver. The movements will seem awkward at the beginning. If your fingers vary considerably in length, you may even need some help from the other hand. Take care: when the tension is slackened the loops are easily dropped, and the result is a disaster. But soon you will overcome your initial clumsiness and enjoy your increasing dexterity.

Then perform the same movements in mirror-image: right hand hooks up and the left hand shifts. This is one cycle of movements. Repeat.

With a set of seven loops the principle is the same, but the little finger is also involved in the process.

7. Tightening the Structure

In order to tighten the structure, draw your arms apart as far as you can. This means, of course, that your elements may not exceed arm's length. It also means that the top of the interlacement tends to be rather loose, then the structure becomes tighter, and at the bottom it is terribly cramped. I find that it is nearly impossible to counteract this unwelcome tendency.

I know that sometimes longer braids are worked with an assistant who transports the shed and beats the structure, or that a worker may use his foot as a beater, or that an upright pivoting sword mounted on a stand can be operated by the leg. But since this article deals only with technique, the many original solutions to this problem reported in ethnographic studies cannot be pursued any further.

8. About the Diagrams

The following diagrams show the hands furnished with loops, in connection with the track plan. Imagine the latter as if applied to the ceiling, the loops attached to it with their tips dangling down into the room. The next passage to be worked is indicated by a dotted line connecting the finger and the appropriate loop. It will drive both ends of the shanks along the segments of the tracks which terminate in arrowheads, i.e. from the center right across to the selvedge. The dotted line and the segments of the track-plan are perfectly congruent, but when in the lower part of the diagram a thread is shown in front of another one, in the upper part of the diagram it figures above it. When a thread is shown in the lower part of the diagram behind another one, it will appear below it in the upper part of the diagram. The braid which is about to grow has to be imagined somewhere up beyond the track-plan.

The dots representing each loop are shown in white on one track and black on the other track. (See color arrangement, section 9.)

But in order to stress the peculiarities of the plans, I advise you to mark the two tracks with different colors. Thus, you will achieve a profound understanding of all the intricacies and logic behind them.

In figures 6 and 8 the movement of the left hand and that of the right hand are shown beside each other. In all the remaining diagrams only the left-hand movement is shown. On the right hand you will see only the dots which are about to move. All the other dots and loops—an exact mirror image of the left-hand side—are omitted in order to bring out the shapes of the tracks more clearly. In all of the figures in this article, the open loop, type A is shown in the drawings above the crossed loop, type B.

9. Variations: Active Loop Crossed or Open

There are two ways to hook up the active loop which will create three different types of patterns.

1. Open loop, type A: hook the upper shank. By doing so with the right hand as well as with the left hand, two separate two-ridge twill braids will grow simultaneously (figure 6-1).

Observe the passages and check them on the track plan. The individual loop does not act as a unit of paired elements; on the contrary, both shanks behave as seemingly independent single elements circulating on their own tracks. But the two movements formed simultaneously are reciprocal, i.e. mirror-imaged on a horizontal axis.

2. Crossed loop, type B: hook the lower shank. This means that the upper shank on one hand becomes the lower shank on the other hand and vice-versa. Again the two shanks circulate on two tracks, but these are oval and cross each other diagonally. While in type A you
have two two-ridge flat braids, in type B you have one four-ridge tubular (or square) braid (figure 6-2).

A third pattern is created by loops that are crossed on one side and open on the other side, type C. A flat four-ridge braid results which will be discussed in section 17. It is shown in figure 6-3.

10. Color Arrangements

Our bicolor loops are intended to bring out the construction of the braids effectively. In order to achieve this result, follow the formula:

For all patterns with active loops open: arrange one color nearer to thumb, the other nearer to the little finger on both hands, as in figure 6a. This means that one color forms the upper plane, the other the lower plane.

For all patterns with active loops crossed: arrange one color on left hand nearer to thumb, on right hand nearer to little finger; the other color vice versa. This means that the color forming the upper plane on one hand forms the lower plane on the other hand.

In order to change from one arrangement to the other, you can apply a half-twist to the appropriate loops.

11. A Structural Feature

Typical for Loop Manipulation

Observe that the four-ridge tubular braid worked as shown in figure 6-2 has this gives a horizontal kink in the braid. Or you can hook up the loops open on one hand and crossed on the other hand until the new arrangement is established. You will have some structural irregularity, but not a disorder, interpolated between the two patterns. More on this subject is included in section 16.

not a square, but a trapezoid cross-section. This is due to the properties of the method: a loop, when active, performs two passages simultaneously. It crosses some passive loops, but at the same time one of its shanks crosses the other one, thereby adding a float to one of the superimposed selvedge-ridges. Note that it is not possible to form two equal selvedge-ridges with crossed loops. This knowledge is useful for identifying the working method in a finished braid.

12. Orthodox versus unorthodox structures

In the three patterns in figures 6-1, 2 and 3, the active loops are directed in such a way that the two shanks act not as one paired unit, but as two single, seemingly independent elements performing reciprocal movements simultaneously. Thus a two-layer structure with a horizontal mirror-axis builds up. Every ridge is of equal density, the surface is smooth and even, and the internal construction is well-balanced.

I decided to call these braids orthodox in contrast to the braids described in the following paragraphs, which do not share the mentioned properties. (Webster defines orthodox as: "conforming to the usual beliefs or established doctrines . . . approved or conventional . . . ")

In fact the braids in figures 6-1, 2 and 3 can be produced in many different methods, including the industrial braiding machine, whereas the unorthodox features of the following braids...
betray the method of finger-held loops quite unequivocally.

In order to achieve the orthodox patterns you have to be clearly aware of the two planes, upper and lower, formed by the shanks nearer to the thumb and the shanks nearer to the little finger, respectively. Yet this perception does not come naturally. A novice, his fingers furnished with loops, will be likely to spread out all the shanks in one plane, since he has no idea of the beautiful ability inherent in a set of loops to build up two reciprocal layers. With palms turned upward, it may become faintly evident; with palms turned downward it is totally blurred. The shed, therefore, will be picked at random.

But held in whatever position, the set of loops maintains its innate readiness to form two planes. If the shed is chosen without taking the two-plane potential into consideration, the loops will pass partly through, partly above or below each other. The two shanks of the active loops, prevented from taking reciprocal paths, join together, while the shanks of the passive loops are forced into positions where they do not naturally belong. The two faces of the resulting braids are not identical. The ridges are of unequal density, some show single, some paired elements, some are flat or sunken, and some bulge up. The corresponding track-plans lack a horizontal mirror-axis; they have bizarre shapes which clearly betray that they belong to somewhat irregular structures.

Some of these unorthodox patterns are more, some less satisfactory in looks and in hand and in use. All of them are fascinating, however. You will be thrilled with your experiments.

13. Unorthodox Patterns with Passive Loops Passed "Over"

The following instructions are for three unorthodox patterns.

Instructions

Variation 1: Set up five loops as described in sections 5 and 6. Work the passages through the outermost and over the inner passive loop: a) with active loops open; b) with active loops crossed (figure 7-1a, b).

Variation 2: Set up seven loops. Work through-over-over: a) with open loops; b) with crossed loops (figure 7-2a, b).

Variation 3: Set up seven loops. Work through-through-over a) with open loops; b) with crossed loops (figure 7-3a, b).

Braids worked by the methods shown in figures 7-1 and 7-2 have a very wide distribution; the variation in figure 7-3 is my own development.

Note: For all three versions the track-plan is the same, only the number and the distribution of the dots is different.

The general theorem for track-plans, whatever the method of thread manipulation is:

The same type of crossing, repeated, does not alter the topological quality of the track-plan, it merely extends the corresponding segments of the track-plan.

Figure 7-1. The unorthodox five-loop pattern, with movements through-over, a with open loops; b with crossed loops.

Figure 7-2. The unorthodox seven-loop pattern, with movements through-over-over: a with open loops; b with crossed loops.

Figure 7-3. The unorthodox seven-loop pattern, with movements through-through-over: a with open loops; b with crossed loops.
not withdraw the middle finger; you may even slip the thumb along into the same loop. Thus, the hooking-up is convenient even for clumsy hands, and work is sped up. Figures 9 and 10 show two more unorthodox patterns with loops passed through and over.

Discussion of the Patterns
The face of the braid toward the worker has four ridges. You can see paired elements on the central ridges: this is a typical feature for unorthodox patterns. The paired elements are, in fact, both shanks of an active loop which are forced to join together when crossing over instead of through a passive loop. The heavy paired-element central ridges are flanked by two weaker single-element selvage ridges.

The face turned away from the worker is more conspicuous and therefore usually regarded as the front. It has two large, bulging central ridges.

All of this is the same for both the open- and closed-loop types. Yet the construction of the two types is quite different. This is made evident at first sight by the color effect; the track-plan tells you further details, and if you unravel the threads of one color systematically, the remaining structure offers you convincing proof. (Coloring in the track-plan will also help you to see this.)

The crossed-loop type consists of two three-ridge braids which cross each other through the midline like an \( x \). The open-loop type is considerably narrower and thicker. It consists of a four-ridge and a two-ridge braid superimposed and linked to each other. You will notice immediately that the crossed-loop type works smoothly while the open-loop type is somewhat worrying. The reason: with crossed loops the two constituent parts are identical, with open loops they are different. The warp supply from both shanks of the loops is the same, while take-up for the two constituent braids is different: the two-ridge braid is bound to be loose, the four-ridge braid cramped. Therefore, while the crossed-loop type is perfectly balanced, the open-loop type is not satisfactory from the structural point of view.

Compare these two patterns with their orthodox counterparts in figures 6-1 and 2. This stupefying transformation is caused merely by the fact that one single shank of a loop on both sides behaves in a nonconforming way, i.e., it is forced into a plane it does not naturally belong to.

A somewhat rudimentary form of the above patterns is shown in figure 8. With a set of only four loops, the passage is through-over on one hand and only through on the other hand. As a result, if worked with active loops crossed, one of the tracks is only a circle, whereas the other is three-eyed.

At first sight, the braid looks like a four-ridge tubular type (as in figure 6-2). A close examination however, reveals its unorthodox feature: the central eye of the former track is entirely concealed by the latter track. I found this braid on an old European purse.

Given the considerable number of possibilities in unorthodox patterns, it is surprising that figures 7-1 and 7-2 prevail over all the others. They have literally a world-wide distribution. You can read more about this in section 18. But here I suggest some technical explanation: the somewhat awkward shifting of loops (figures 5b, c and d) is slightly facilitated with the formula "through the outermost and over the others." When introducing the index into the middle finger loop you must

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Figure 8. Four-loop braid, a left hand movements through-over, b right-hand movement through.

Figure 9. Five-loop braid, with movements over-through: a with open loops, b with crossed loops.

Figure 10. Seven-loop braid, with movements through-over-through: a with open loops, b with crossed loops.

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14. Patterns with Passive Loops Passed Upside-down

The passive loops have, so far, behaved in two different ways: either they were passed through in the way they offer themselves most naturally, or they were passed over. Obviously there is a third possibility: depress the upper and raise the lower shank, thus giving the loop an upside-down position. In figures 11 and 12, you see patterns with over, through and upside-down steps combined. You can see that where a loop is turned upside-down, the outward-tending segments of the tracks suddenly exchange faces in very steep reciprocal diagonals.

Patterns with only through and upside-down steps (figures 13, 14 and 15) lack the features described as unorthodox in section 12. There is the same number of elements above and below the passage of an active loop, and the typical ridges formed by the paired shanks are very narrow, deeply grooved or entirely concealed.
15. An Odd Type of Loop-manipulated Pattern.

Walter Roth (cf. bibliography) reports, along with the famous braid of figure 7-2, a singular four-loop braid.

Instructions

Furnish the index and middle finger of both hands with loops. Hold left palm up, right down. Now deposit both right-hand loops on top of the left-hand loops of the corresponding fingers and pick up the latter over and above the ones just deposited (figure 16a). This movement, repeated, creates twice two counterwoven cords. With another person introducing a weft it is a well known method for producing warp-twined tapes or edgings. For another effect, shown in figure 16b, instead of repeating this movement, perform the following maneuver: shift the left-hand middle finger loop to the ring finger, deposit the right-hand index loop to left middle finger and pick up with right index the loop which was formerly there (figure 7-2). This makes the two loops exchange hands one above the other, and thus interconnects the four cords. A ridge made up of paired elements, as is typical for unorthodox patterns, appears on one face; but it is deeply sunken. One single bulging ridge appears on the other face. The braid is made up of a three-eyed track and a circle; the same tracks are in figure 8, but the interconnection is different. By performing a considerably more tricky maneuver, you can exchange the two loops one through the other. The result: two superimposed separate braids (reported by Cardale, cf. bibliography).

16. Other Color Effects

The initial arrangement of bicolor loops as suggested in section 10 and shown in all the diagrams from figures 6–16, allows to each of the two layers its own color. This is meant to bring out the nature of the structure to best advantage.

A frequently used trick is to exchange the colors of the two layers in such an arrangement. The rule for doing so is:

For all patterns worked with active loops open: interpolate one repeat with crossed loops.
For all patterns with active loops crossed, interpolate one repeat with loops open.

This means: all the loops of the set will change the position of their shanks, one by one, in passages alternately from right and from left. Afterwards, all the ridges will have changed color.

This trick, applied to the famous structure and color arrangement shown in figure 7-1 is described in Cason & Cahlander (cf. bibliography). It is met with in innumerable Andean textiles, worked with the looped ends of the warps.

If, instead of bicolor loops, one-color loops are used in two or more colors, the color sequence will run in zigzag from selvedge to selvedge in both of the superimposed layers. Thus the fascinating peculiarities of the two-layer structures are not stressed nor exploited. Note: The Bolivian braid analyzed by Adele Cahlander is worked with three light and four dark one-color loops. Initial color arrangement: one color on left hand, the other on the right.

A special color effect can be produced with bicolor loops, if you arrange all the same color for one layer and several colors for the other layer.

Once the peculiarities of the structures are thoroughly understood, you are able to plan almost any desired color effect.

Remember: In order to explain any braid thoroughly, you need to, 1) describe the structure, 2) determine the number and color of the loops and whether they are bicolor or one-color, 3) state the initial arrangement on the hands, telling which colors are up and down. All of this can be diagrammed in a track-plan provided with colored dots.

Asymmetrical Patterns

Please go back to figure 6: active loops hooked up open on one hand, crossed on the other hand. You can unfold the seemingly two-layered structure, and it proves to be a flat four-ridge braid, based on one single track. Any unorthodox pattern with active loops hooked up asymmetrical will also be based on one single track, turning back on itself and meandering in intricate curves (figure 17). You will see, when working

Figure 17. Some single track plans, corresponding to figures 7, 11 and 14.
with bicolor loops, that however the colors are arranged, sooner or later each color will appear on every ridge: this is the characteristic for all single-track structures.

Of course, you can also pick a different shed with the left and the right hand and test the resulting braid, so the number of possible variations is multiplied. Truly there is no end to experiments!

**Annotated Bibliography**

Cardale-Schampje, Marianne. *Textiles of Colombia*. Unpublished thesis, 1972. The Cuna Indians prepare the braids 6-2 and 11b for funerary rites. Cardale cites in detail the function of these cords during the dead person's journey to the other world. She stresses the strong taboo on these cords; by no means should they be used in everyday life.


Gudjonsson, Eila. “Icelandic Loop-braided Bands.” *CIEA Bulletin*, 1979-1. The braid (Fig. 7b-2) as produced in Iceland. Used sometimes as a tying-tool, sometimes worked into some kind of Grapure lace.


Marston, Emma. “Five Finger Braid.” *Threads in Action*, Fall, 1971. Short article on the pattern in figure 7a or b, citing European reports; in particular evidence from Italy.


Scott, Susan Bernal. “Stirement Braiding.” *Shuttle, Spindle and Dyepot*, Spring 1978. Method learned in Denmark. (Stirement means swirling in Danish.) She explains her own experiments, works palme down.


Stromberg, Elisabeth. “Fyekantiga Snööder.” *BIG*, 1910, p. 35-36. Found braid in figure 6-3 with 5 loops in Abs, Finland, and with four loops in Uppsala, Sweden on ecclesiastical vestments. A good discussion of the popularity pointed out in section 11 of this article.

Handwritten pattern books, 19th-century English, in several museums and private collections. Directions for two or more persons cooperating, or one person patterns. Braids given in these books can be identified as drawings on old pages.

**Personal letters and oral reports**

Cahlander, Adele. USA: Many letters on her discovery of the pattern in figure 7b-2 on a Bolivian paste.


Romania, Maramuresch: The pattern in figure 7b was demonstrated to me, one woman manipulating loops, the other beating the shed with a wooden spoon in an upright position.

Greece: I frequently spotted figure 7b braids on old textiles in museums and shops.

Germany: Bude Godenburg: oral report from Annelise Seufert of an experience in Norway seeing braids worked palms down.

Note how frequently the pattern of figure 7 appears in all of these reports. Note also that only Scott and Seufert work palms-down! To me the palms-up and the automatically resulting palms-facing position is much more convincing. I am inclined to think that the palms-down method stems from a misunderstanding or a misremembering of tradition.

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THE WEAVER'S JOURNAL
76
Directory of Weavers and Spinners Guilds
published biannually

The next Directory of Weavers and Spinners Guilds will be published in the summer of 1986. We are attempting to list all guilds in the U.S., Canada and elsewhere. If your guild has not been included in the Directory, please send us the following information:

- name of guild
- contact person & address
- area served
- aim or goal of guild
- size of guild
- membership prerequisites
- dues amount
- number of study or special interest groups
- meeting day and location
- does guild publish a newsletter?
- visitors welcome at meetings?

Deadline for receiving information for the 1986-87 Directory is February 1, 1986. The 1986-87 Directory will be sent free to all current Weaver's Journal subscribers as of Summer 1986. Copies of the 1984-85 Directory are available at $2.50 each.

The Weaver's Journal
P.O. Box 14238
St. Paul, MN 55114
· MEET THE AUTHORS ·

BURNLEES
Fiber artist, teacher, writer Phyllis Alvie graduated from the School of the Art Institute of Chicago in 1967. Since that time she has frequently exhibited her work. At her studio in her home in western Kentucky, Phyllis weaves loom-controlled wall hangings and investigates weave structures. She shares her experience and opinions about weaving through lectures, workshops and writing.

C AHLANDER
Dee Burnlees spins, dyes and weaves on the shores of Lake Huron in her home "Cio Mhor" (Gaelic for "Big Cloth") at Sauble Beach in Ontario, Canada. She is the past president of the Portawatomi Spinners and Weavers of Grey and Bruce, which celebrates its 10th anniversary this year.

FRATER
Mary Ann Butterfield is Assistant Textile Conservator at the Minneapolis Institute of Arts. She holds an undergraduate degree in Museum Studies from Metropolitan State University, Minnesota, and has completed internships in the Textile Department at the Minneapolis Institute of Arts and the Textile Conservation Workshop in South Salem, New York. She is interested in the preservation of historic textiles, not only in the museum context, but by individual collectors.

MESCH
Adèle Cahlander has specialized in studying the techniques of Andean weaving and brading. In addition to various articles, she co-authored The Art of Bohin Haldong Weaving (1767), and is author of Bohin Tubular Edgings and Crossed-Warp Techniques (1978). Sing-Broiding of the Andes (1980), and of Double-Weave Treasures from Old Peru (1985), to be released this fall.

MITCHELL
Dr. M. M. El-Homossani has degrees in textiles from Helwan University in Cairo and a Ph.D. from the University of Strathclyde in Glasgow, Scotland. He is a former lecturer on Textile Design and Technology at Helwan University. He now lives in Canada and works as a textile consultant for Bectidain Simpson, Inc. in Montreal. He has published articles in British, Polish, Indian and Canadian textile journals. Dr. El-Homossani is a member of the Royal Chartered Textile Technologists, an Associate of the Textile Institute of Manchester, England and a member of the Canadian Institute of Textile Science.

Scheon
In 1970 Judy Frater was captivated by the fine folk embroideries of the Rabaris nomads of western India. Since 1974 she has been working with Rabaris, studying traditional textiles and the integral part they play in Rabari life, as well as their expression of aesthetics, values and history. She has produced a multimedia exhibit which portrays this theme. Judy is currently working on a book and exhibition based on fourteen months spent wandering with different branches of the tribe.

Mitchell
Susan Hick and the loom were first introduced in 1973, and they have been fast friends ever since. Researching "Fashion Trends" provides a bonus for Susan. Her special interest is in weaving yardage for clothing, which she sells through Fiber Matrix, a cooperative endeavor in Denver, Colorado.

MELCH
Jean Lodge has been weaving for nearly 18 years. She has taught classes in the St. Paul area. Her special interest is in tapestry, particularly Norwegian tapestry techniques.

MELCH
Lynn Mesch is a writer, photographer, spinner, weaver and ethnographic textile researcher, who has spent most of her time since 1973 with the weavers of the Andes of South America, especially in Ecuador, Peru and Bolivia. She is the author of The Traveller's Guide to Ecuador and the Inca Empire (Columbia, Ecuador, Peru and Bolivia), published by Penguin Books. Lynn leads textile tours and excursions to the Andes and sponsors scholarships for indigenous students through Fundacion Jatun. She is currently doing research in Bolivia, after which she will work for USAID on a textile improvements project in Oruavo, Ecuador, at the request of local weavers.

Mitchell
Alison Mitchell's work has been influenced by Japanese weaving and in particular the textiles created on the island of Kumejima which she first visited in 1979. Ms. Mitchell lives in London and has published several articles in the British Weavers Journal.

Schevill
Margot Blum Schevill became involved in weaving and the study of ethnic textiles after a successful career as an opera and concert singer. She is an anthropologist and research associate at the Hofstein-Museum of Anthropology, Brown University. She is currently preparing a museum catalog, Costumes as Communication: Ethnographic Costumes and Textiles from Asia Minor. It's a Central Andes from the Hafenreich Museum Collections. This project is partially funded by a grant from the National Endowment for the Arts.

Schevill
Noëemi Spelser of Basel, Switzerland, is an internationally known expert on off-loom techniques, in particular braiding and embroidery. She is author of the comprehensive work The Manual of Braiding. As part of her research on braids, Noëemi studied with Kumi-himo braiding masters in Japan and published the first information outside Japan on this specialized braiding. She assisted Peter Collingwood with researching and developing sprang techniques for his 1974 publication, The Techniques of Sprang. Noëemi teaches in the Allgemeinegewebeschule, an art school in Basel.

Temple
Lotus Stack is the Textile Curator at the Minneapolis Institute of Arts. Her undergraduate studies were completed in California and graduate work done at the University of Minnesota. Lotus was a National Museum Act intern in the Metropolitan Museum of Art Textile Conservation Department and has done further studies in Europe. Her special interests are woven structure and the history of textile technology.

Temple
Mary Temple is a fiber artist and weaver specializing in commissioned work for churches, offices, and individual environments. She is interested in the contemporary usage of traditional Scandinavian art weaves and tapestries with color and texture. She has taught weaving and basketry at the Weavers' Guild of Minnesota since 1971, and has given programs and workshops throughout the Midwest. She is currently working on a Masters Degree in Design at the University of Minnesota where she teaches color and design.

Welters
Linda Welters received her Ph.D. in Design from the University of Minnesota. She currently is an Assistant Professor in the Department of Textiles, Fashion Merchandising and Design at the University of Rhode Island. She is also the Director of a Historic Studies Program for graduate students at Rhode Island. Her primary research interest is in Greek textiles and folk costume.

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THE WEAVER'S JOURNAL

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from The Weaver's Journal

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Twill Weaving
by Constance Barrett
This book provides detailed instructions on twill weaving for beginners and advanced weavers. It includes over 100 twill patterns and weaving techniques. $25.00

Directory of Weavers and Spinners

This directory lists over 200 weavers and spinners from around the world, providing information on their techniques, materials, and sources. $12.00

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SUMMER 1985
**CALENDAR**

**EXHIBITS, FAIRS, FESTIVALS**

**ALABAMA**


**CALIFORNIA**

**Monterey:** Monterey County Fair Wool Show: Aug. 13–18, 1985. Events include wool judging, a fiber to fabric demonstration and fleece auction.

**COLORADO**

**Denver:** Denver Museum of Natural History: "Three Centuries of Navajo Weaving (The Durango Collection)," June 15–Aug. 31, 1985.


**DISTRICT OF COLUMBIA**


**ILLINOIS**

**Blooming On:** Ewing Arts Festival, Sept. 21–22, 1985.

**Chicago:** "Uncontained," is an invitational basketry show to be held at the Textile Arts Centre, 916 W. Diversey, Chicago, IL 60614 (312) 929-5776, September 7–27, 1985.

**Mt. Vernon:** Cedarhurst Craft Fair, Mitchell Museum, Sept. 7–8, 1985.

**Norma:** Sugar Creek Arts Festival, July 19–20, 1985.


**INDIANA**


**West Lafayette:** "Lafayette 1985," juried arts and crafts show will be held Aug. 31–Sept. 1, 1985.

**IOWA**


**LOUISIANA**

**New Orleans:** "A Show of Handweaving: Wearables and Wallpieces," by gallery artists and guest artists, will be held at the Weaver's Workshop Ltd., 716 Dublin St., New Orleans 70118, Sept. 21 through Oct. 4, 1985.

**MAINE**


**MASSACHUSETTS**


**MICHIGAN**

**Ann Arbor:** The Ann Arbor Street Fair will be held July 24–27, 1985.

**Plymouth:** PCAC Artists & Craftsmen Show, Sept. 7–8, 1985.

**MINNESOTA**


**St. Paul:** Minnesota National Crafts Fair, July 13–14, 1985.

**NEBRASKA**

**Omaha:** "NCC 6," Nebraska Crafts Council's Annual Show at The College of St. Mary's, Omaha, Sept. 8–26, 1985.

**NEW HAMPSHIRE**

**Concord:** League of New Hampshire Craftsmen, Nation Gallery, "A Garden of Roses," The New Hampshire Weavers Guild biennial exhibit will be held May 19–July 5, 1985 at the League Gallery, 205 N. Main St. Concord.

**NEW JERSEY**

**East Rutherford:** "Super Craftshow," will be held at The Meadowlands Stadium Club, Giants Stadium, Meadowlands Complex, Dec. 6–7, 1985.

**NEW MEXICO**


**Santa Fe:** Bellas Artes, 301 Garcia St., Santa Fe, NM 87501 (505) 983-2745, a gallery specializing in antique, antique and contemporary textile and ceramic art, announces "The Floral Motif in Textile Art," Aug. 12–Sept. 21, 1985.

**Santa Fe:** Bellas Artes, a gallery specializing in antique, antique and contemporary textile and ceramic art announces "Ancient Inspirations," an exhibition featuring the work of ceramist Joan Daub, weaver Ann Matlock and basketmaker John McQueen. The exhibition runs Sept. 23–Nov. 2, 1985 at the Bellas Artes gallery, 301 Garcia at Canyon Road, Santa Fe, NM 87501 (505) 983-2745.

**NEW YORK**

**New York City:** The Cooper-Hewitt Museum, "Timeless Sources: Rare Books from the Cooper-Hewitt Library," May 21–Oct. 6, 1985—will include fine and rare textile-related materials.


**Sand Point:** A Fiber Arts Forum and Exhibit will be held at Hemstead House, Sands Point Preserve, Oct. 18–20, 1985.

**OHIO**

**Willoughby:** Annual Outdoor Arts Festival, July 19–21, 1985.

**OKLAHOMA**


**PENNSYLVANIA**

**Pittsburgh:** "In Celebration of Weaving," the 1985 annual show of the Weavers' Guild of Pittsburgh will open Oct. 19, 1985 at the Pittsburgh Center for the Arts.

**RHODE ISLAND**

**Bristol:** The Haffenreffer Museum of Anthropology, Brown University, will be exhibiting a collection of contemporary art by native American women: "Women of Sweetgrass, Cedar and Sage," July 14 to Aug. 21, 1985. Also an exhibit of Southwestern Indian Art from the Greenfield Collection will be mounted by two interns from the Santa Fe School of Indian Art who are participating in a native American internship program at the Museum.

**TENNESSEE**

**Gatlinburg:** The Arrowmount Gallery at the Arrowmount School of Arts and Crafts, Aug. 19 through Oct. 5, 1985. "New Photo Graphics," and "Alabama Works on Paper," May 24–Aug. 16, 1985 are the dates of the Summer Faculty and Staff Exhibition. Works in clay, fiber, basketry, wood, paper, metals, photography and glass will be included in this mixed media exhibit.

**TEXAS**

VIRGINIA

WASHINGTON
Monroe: The Valley Spinners Guild of Snohomish is sponsoring their annual "Ewe to You" festival, June 29, 1985 at the Evergreen State Fairgrounds, Monroe.

WISCONSIN

CANADA
BRITISH COLUMBIA
Fort Langley: "Fibre Metamorphosis." From Nov. 3 through Dec. 7, 1985, the Langley Centennial Museum & National Exhibition Centre will be hosting an exhibition of recent work by the members of the Langley Weavers and Spinners Guild and by guest artists Pearl Maas and Jeanneca Miles.

ONTARIO

CONFERENCES
ALABAMA
Huntsville: "Star Wars," the 1985 Alabama Fiber Conference, sponsored by the Handweavers and Fiber Arts Guild of Huntsville, and the University of Alabama in Huntsville, Art Dept., will be held Aug. 17-18, 1985 at The University of Alabama in Huntsville, and the Sky Center Hotel, located in the Jepplex, 10001 Highway 20 West, Huntsville, AL 35806. For information: Elvira Glover, 1308 Pratt Ave., N.E. Huntsville, AL 35801 (205) 534-4642.

CALIFORNIA
Mendocino: Basketry Symposium. The Mendocino Art Center will host a basketry symposium, Aug. 28-30, 1985. For information: Mendocino Art Center, P.O. Box 765, Mendocino, CA 95460.

MICHIGAN

MINNESOTA
Rochester: Minnesota Federation of Weavers and Fiber Artists, Annual Conference. "Four Seasons in Fiber," Oct. 4-6, 1985 at the Radisson Inn. Featured speaker will be Mary Anne Wise of St. Paul on "Production." The conference will be hosted by the Fiber Arts Guild of Southeastern Minnesota. For information: Kathy Lovgren, 1503 19th St. N.E., Rochester, MN 55904.

NEW MEXICO

UTAH

WYOMING

CANADA
MANITOBA
Winnipeg: The Charles Babbage Research Centre is sponsoring the Third Annual Conference on Textiles and Complex Weaves, July 12-14, 1985, at the University of Manitoba in Winnipeg. For information: Dr. Heidi Arason, Conference Assistant, Faculty of Science, University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.

TO ENTER
Deadline August 1 Ballet of Banners II Competition. Any artist working in textiles is invited to submit up to two banners for hanging at Lafayette '85, to be held at The Greater Lafayette Museum of Art, 101 S. Ninth St. Lafayette, IN 47901. For information: SASE to Jane Ausman Mudawar, Lafayette Ballet of Banners, The Greater Lafayette Museum of Art.


Deadline August 16 Slides due for "Masks, Masquer, Maxx," a national juried exhibition of contemporary two- and three-dimensional masks in all media. Cash and purchase awards.

For information: Galeria Mesa, P.O. Box 1466, Mesa, AZ 85201 or phone (602) 934-2242. Exhibition dates are Oct. 25-Nov. 21, 1985.

Deadline August 23 for request for entry form. "Southern Fibers," a juried show and sale of fiber art, will be held at the Gertrude Herbert Art Gallery, 506 Telfair St., Augusta, GA 30901; during November 1985. Open to artists of the southeastern United States: Alabama, Georgia, Louisiana, Mississippi, North and South Carolina, Tennessee. Hosted by CSRA Fiber Arts Guild, categories include: mixed media, wearable art, practical art for the home. For information: "Southern Fibers," c/o Jane Waldrop, 340 Hackamore Trail, Martinez, CA 94559 (415) 863-3859.


Deadline Sept. 6 Slides due for "Boxes, Baskets, Containers," a national juried exhibition in any media. $500 in cash awards. For information: Galeria Mesa, P.O. Box 1466, Mesa, AZ 85201-0944 or phone (602) 834-2056. Exhibition dates are Dec. 3-28, 1985.

Deadline Sept. 6 Holiday Exposition of Crafts. Annual juried invitational exhibition & sale of all craft media. The Mill Gallery and The Shop at Guilford Handcrafts Center, Nov. 9-Dec. 24, 1985. For information: SASE to Holiday Expo & Sale 85, Guilford Handcrafts, Inc., P.O. Box 221, Guilford, CT 06437.

Deadline Sept. 9 Chicago Art Emerging, seeks works by Midwestern fiber artists for exhibition at The Weaving Workshop, Chicago, Oct., 1985. For information: CAE, Box 608127, Chicago, IL 60626.

Deadline September 13 for slides. The Fuller Lodge Art Center announces "Black, White & Red/Red, & White," a juried exhibition opening Oct. 25 and continuing through Nov. 17. Artists and craftspeople residing in northern New Mexico are eligible to submit work. For information: send stamped SASE to B&W, & R&R, Fuller Lodge Art Center, P.O. Box 790, Los Alamos, NM 87544.

Deadline Oct. 11 Slides due for "Sensational Art," a national juried exhibition of artwork...
PRODUCTS

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Now available from Fireside Looms is the Fireside Warping Carousel. This beautiful piece of equipment is collapsible for easy storage, has a four yard circumference and adjustable warp length. Dimensions are 37½” h x 58½” w. For information: Fireside Looms, 91600 West Fork Road, Deadwood, Oregon 97430 (503) 964-3771.

Wilde Yarns

Wilde Yarns has added two all wool novelty yarns to their line. PEBBLES is a nubby boucle with 408 yards per pound. TUMBLEWEED, 750 yards per pound, has spun wisps of wool loop rising off its surface at irregular intervals. A sample card is available for $0.25 from Wilde Yarns, 3705 Main St., Dept. W, Philadelphia, PA 19127.

Antoine Bordalo

Antoine Bordalo manufactures an armature (dobby) to mount on a handloom to increase its possibilities. It is very easy to use and is used both by amateur and professional weavers. It was invented in Lyon, the silk capital of France, by a jacquard engineer descended from a family of weavers.

The “professional” dobby is a valuable weaving accessory for harness control. Its proportions have been carefully engineered so that it can be attached to the majority of loom brands—French, Swedish, Finnish, Canadian—from 1 meter to more than 2 meters in width. It is sturdy built of the highest quality hardwood.

For more information on this portable dobbay attachment, contact Antoine Bordalo, 37, avenue Mathieu Misery, 69160 TASSIN- LA-DEMI-LUNE, France.

ANNOUNCEMENTS

Jeanne Hutchins will now be editing Yarn Market News fulltime and has resigned as Director of the Weaving and Spinning Council. Theresa Gaffey is the new director. Ms. Gaffey was senior editor at Handweaver.

The new address for Glimakra Looms 'n Yarns is 1304 Scott Street, Petaluma, CA 94952. (707) 762-3362.

The results of the first Quilt Teacher of the Year Award, given by The Professional Quilter magazine were announced in the May 1983 issue. Sharyn Craig of San Diego, California was named Quilt Teacher of the Year for 1983 and Elaine Capobianco of Hyde Park, Massachusetts received a special award for her classroom/shop concept.

Copies of the special Teacher of the Year issue of The Professional Quilter can be ordered from Oliver Press, Box 4096, St. Paul, MN 55104 for $4.00.

Nominations for the 1986 Quilt Teacher of the Year Award should be sent to: Teacher of the Year, Box 4096, St. Paul, MN 55104. Deadline is January 15, 1986.

for the senses: see, feel, hear, taste and smell. $500 in cash awards. For information: Galeria Mesa, P.O. Box 1466, Pilsen, AZ 85201-0904 or phone (602) 834-2056. Exhibition dates are Jan. 3–Feb. 1, 1986.

no deadline stated "NCC 6," Nebraska Crafts Council's Annual Show, College of St. Mary's, Omaha, NE. Sept. 8–26, 1985. Eligibility: Resident of NE. CO. WY. SD. IA. MO. KS working in craft related fields. Cash awards. For information: SASE to NCC, Box 1202, Kearney, NE 68847.

no deadline stated Kansas River Valley Art Fair, July 27–28, Gage Park, Topeka, Kansas. Juried art fair. Acceptable media includes fiber arts. No kits or patterns. $45 booth space. For information: Sandy Bryant, TPRD, Rm 259 City Hall, Topeka, KS 66603.

no deadline stated Fiber Arts Forum and Exhibit, Hempstead House, Sands Point Preserve, Sands Point, NY, Oct. 18–19, 1985. If you are interested in demonstrating a particular form of fiber art or exhibiting contact: Performing/Applied Arts Unit, Nassau County Dept. of Recreation and Parks, Eisenhower Park, East Meadow, N.Y. 11554 or phone (516) 542-4443.

no deadline stated "Wearable Art for the Collector," juried exhibition, fashion show and sale at the Evansville, Indiana Museum of Arts and Science. April 7–May 5, 1986. For information: SASE to First Additions, 920 North Commonwealth 487, Chicago, IL 60657.

THE WEAVER'S JOURNAL 82
STUDY & TRAVEL

ARIZONA
Mesa: The Mesa Cultural Program offers an ongoing series of classes in the fiber arts. For information: Mesa Cultural Program, P.O. Box 1466, 155 N. Center, Mesa, AZ 85201.


CALIFORNIA
Mendocino: The Mendocino Art Center, Textile Apprenticeship Program will have artists in residence during winter and spring. For information: Loll Jacobsen, Program Coordinator, Textiles, Mendocino Art Center, Textile Apprenticeship, 45200 Little Lake St., P.O. Box 765, Mendocino, CA 95460 (707) 937-0228.

ILLINOIS

IOWA

MAINE
Deer Isle: Haystack Mountain School of Crafts. 1985 Summer workshops. For information: Haystack Mountain School of Crafts, Box 87WW, Deer Isle, Maine 04627.

MICHIGAN

MINNESOTA
Duluth: The Split Rock Arts Program at the University of Minnesota. Duluth, will be held June 23-Aug. 10, 1985. For information: Split Rock Arts Program, 320 Westbook Hall, 77 Pleasant St. S.E., University of Minnesota, Minneapolis, MN 55455 (612) 373-4947.

MISSOURI
Fayette: Announcing the opening of The Weavers' School. In association with The Weavers' Store, The Weavers' School offers classes in complex weaves designed for students interested in expanding from four to more shafts. Send for class schedule and information to: Madelyn van der Hoogt, The Weavers' School, Route One, Fayette, MO 65248 or Barbara Overby, The Weavers' Store, 11 S. 9th, Columbia, MO 65201.

NEW HAMPSHIRE

NEW MEXICO
Santa Fe: Summer in Santa Fe. Fiber classes, June-Sept., 1985. For information: Santa Fe Center for Fiber Arts, Inc., 1201 Cerillos Road, Suite 7, Santa Fe, NM 87501 (505) 983-1168.
Santa Fe: Summer Classes. For information: Santa Fe Weaver's School, Box 9001, Santa Fe, NM 87504 (505) 983-8058.

NORTH CAROLINA
Brasstown: The John C. Campbell Folk School will offer classes in weaving, fabric crafts, spinning and dyeing, basketry, quilting, broom making and bobbin lace making, May 5-Nov. 23, 1985. For information: The Registrar, John C. Campbell Folk School, Route 1, Brasstown, NC 28902 (704) 837-2775.

OHIO
Oberlin: Charles Lemond offers a variety of workshops at the Loon Shed for 1985. For information: The Loon Shed, 278 S. Pleasant St., Oberlin, Ohio 44074.

OREGON
Portland: Children's Workshop Summer '85, including Beginning Weaving. For information: Oregon School of Arts and Crafts, 8245 S.W. Barnes Rd., Portland, OR 97225 (503) 297-5544.

 PENNSYLVANIA
Uniontown: Summer Fiber Workshops, June 17-Aug. 16, 1985. For information: Jill at The Pioneer Crafts Council, P.O. Box 2141, Uniontown, PA 15401 (412) 438-2811.

TENNESSEE
Gatlinburg: One and two week workshops for students of all ability levels and media interests. June 3-Aug. 16, 1985. For information: Arrowmont School of Arts and Crafts, Box 567, Gatlinburg, TN 37738 (615) 436-5860.

VERMONT
Middlebury: Michael Scott, editor of The Crafts Report, will conduct a seminar, Aug. 3, 1985 on crafts business management at the Vermont State Craft Center at Frog Hollow. For information: Vermont State Craft Center at Frog Hollow, Mill Street, Middlebury, VT 05753 (802) 388-3177.

WEST VIRGINIA

WISCONSIN

WYOMING
Clearmont: A workshop on Zapotec Weaving with Sw. Ernesto Martinez-Cruz will be held July 15-19, 1985 at the Ucross Foundation. For information: Heather Burgess, Ucross Foundation, Ucross Route, Box 19, Clearmont, Wyoming 82835.

TRAVEL
Morocco: Moroccan Craft Tour '85, led by Prof. Tom Wilson and Sherry Clark, Nov. 16-30, 1985. For information: Prof. Wilson, CRAFT WORLD TOURS, 6776 Warboys Road, Byron, NY 14422 (716) 548-2667.

Ireland: Crafts of Ireland, led by Prof. Tom Wilson and Sherry Clark, Aug. 9-24, 1985. For information: Tom Wilson or Sherry Clark, CRAFT WORLD TOURS, 6776 Warboys Road, Byron, NY 14422 (716) 548-2667.


THE WARP
by Blair Tate


This book focuses on a singularly important aspect of our work. Author Blair Tate says “the warp is a constant, affecting the whole of the weaving, while the weft is a variable, whose size, color, and texture can be changed at any point.” The Warp does not ignore the weft, but rather “focuses on the warp, recognizing its influence over the whole of the weaving.”

The Warp is divided into two sections and includes 41 black and white illustrations, nearly all of contemporary wall hangings. Part I covers the basics on many kinds of yarns, their characteristics, their size of numbering systems, factors determining sett or density, and warp finishing techniques once the weaving is off the loom.

Tate discusses warp face, weft face and balanced weaves, but goes on step further by also including warp-faced and weft-faced balanced weaves. As the terms imply, a warp-faced balanced is sett between a warp-faced and a balanced weave, and weft-faced balanced is sett between a weft-face and a balanced weave. These two weaves have qualities of their own.

Part II, Handling the Warp, begins with a description of a loom and weaving tools. Thirty-five pages, with good illustrations, are devoted to winding the warp, dressing the loom and starting the weaving process. Dressing the loom back to front, front to back and sectional warping are discussed thoroughly. This section is full of helpful tips that weavers learn only through years of experience.

There are a number of authors, i.e. Black, Garrett, Held, Regenstein and Straub, who have covered these topics in some detail, so if you have any of their books you may not find it necessary to buy The Warp. However, if you don’t have a book with adequate descriptions of warp yarns and, especially, of winding a warp and dressing a loom, this book is the most detailed and comprehensive I have read.

Tate’s book is designed for the fiber artist. One-third of her book is devoted to illustrations of contemporary (since 1976) fiber art. Descriptions of warp use and technique are related to producing woven art, not functional weaving. Hence, The Warp is more suited for the art student rather than the weaver of traditional table linens or clothing.

There are a few areas of interest that I would like to have been included in a book devoted to the warp. It would have been helpful to have a comparison of the various systems of threading and tie-up notations, with a more complete discussion of one commonly used. Instead, Tate only briefly discusses one threading draft which she repeats later on in the book.

I would also like to have seen a comprehensive chart listing appropriate sets for the commonly used yarns for balanced tabby, twill and pattern weaves, and approximate sets for warp and weft face weaves.

Some of the tables Tate includes are either confusing or not detailed enough. The table on warp and weft density in centimeters ignores the fact that metric reeds are designated in numbers of dents in ten centimeters, and that reeds are made in multiples of five dents per centimeter.

More examples of calculating the warp length might have been included so that new weavers could learn to include other factors such as hems, fringes, shrinkage due to offloom relaxing, and shrinkage due to washing. Some of her terminology is new for many weavers: loom loss factor refers to loom waste or trash, warp absorption allowance is take-up. And many of her explanations seem a bit wordy and confusing.

Despite these flaws, this book has more information on the warp than any other source I have seen, and I recommend it especially to any beginner in the fiber arts field.

Norma Smayda

AYMARA WEAVINGS:
Ceremonial Textiles of Colonial and 19th Century Bolivia
by Laurie Adelson & Arthur Tracht
Foreword by William J. Cankin


Here at last is an opportunity to become acquainted with the rich and ancient Aymara textile tradition of the Lake Titicaca Basin Plateau. The Aymaras were a group of Indian tribes in the Bolivian highlands which were eventually conquered by the Inca, although they resisted imposition of the Quechua language. As with other Indian tribes of the highlands, textiles had for the Aymara more than utilitarian significance. The specific textiles worn, how they were worn, certain colors, and the designs used all had significance. The finest, most elaborate items were woven for ritual, ceremonial purposes, and were preserved as heirlooms. There were symbolic textiles used for various phases of life from birth to death.

The textiles have been placed in historical perspective by showing their clear roots in pre-Columbian traditions. The authors have documented their findings from information in archives and Spanish chronicles in the countries of Aymara influence; Bolivia, northern Chile, and southern Peru. From this data,...
archaeological evidence, and extensive fieldwork of their own, the authors have made an extraordinary contribution, filling a gap left by a lack of historic research on the culture of the highland Aymara peoples. The exhibition includes fine examples of the textiles from the Colonial and 19th Century periods.

The textiles are classified according to the various forms in which they were woven, mostly as articles of clothing. According to Andean tradition, the pieces were rectangular, four selvage, warp-faced products of the simple two-bar loom. The larger pieces are chiefly pleasing arrangements of stripes, while the belts and bags have a variety of patterns. The great skill of the Aymara women at blending and composing colors is evident in the weavings.

While much research has been done on pre-Columbian textiles, and there have recently been several publications on contemporary weaving of Bolivia, this book focuses on an aspect that has, until now, been sadly overlooked.

Adele Cahionder

X BALAM Q'UE, EL PÁJARO SOL: EL TRAJE REGIONAL DE COBÁN
by Dr. Herbert Quirín Dieseldorff
Museo Ixchel, Guatemala City, Guatemala, 38 pp., $10.

This attractive publication, in Spanish, is the second part of a new series devoted to the costumes and customs of the Maya Indians of Guatemala produced by the Museo Ixchel del Traje Indigena. The high standards set by the first publication, Hiiere, Montañez y El Arbol de la Vida in San Pedro Sostecpeque, have been maintained. Cobán, located high in the perpetually green mountains of northern Guatemala in the department of Alta Verapaz, is the region of focus. Unfortunately, no maps are included to aid non-Guatemalan readers unfamiliar with the geography of the country.

The indigenous peoples of Cobán, descendents of the ancient Maya, are called the Kekchi, after the native language spoken. Although Spanish is the official language of Guatemala, twenty-three indigenous languages are still in use. This linguistic isolation has allowed native peoples to preserve their traditional way of life, or costumbre.

The author, Dr. Herbert Quirín Dieseldorff, is a third generation Cobañero, a biochemist who has been studying the Kekchi for over thirty years. He brings to this text, written in narrative form, his love and admiration for the indigenous peoples of his region. His knowledge of Kekchi adds immeasurably to the authoritative tone of the text. By including folk tales such as The Story of X Balam Q'ue, the Sun, and Po, the Moon, descriptions of customs such as courting and the preparation and significance of chocolate, the reader gains an unusual perspective into non-verbal implications of costume and associated textiles of Cobán.

The author's grandfather, Erwin Pablo Dieseldorff, emigrated from Germany in the nineteenth century to establish coffee plantations. He became involved in the Kekchi language and costumbristica and published several books, including one on medicinal plants.

The text is organized into seven sections: the history, geography and culture of the Kekchi area; costume at the beginning of this century; feminine, masculine, and children's costume and accessories; burial costume and jewelry. Anecdotes related to the textiles discussed are included as well as descriptive information. The glossary contains terms used both in Kekchi and Spanish. Thierry Delrue provided the contemporary photographs, and Rosario Dominguez coordinated the publication. A handsome color cover, a close-up of a regional textile, delineates each colorful supplementary weft thread against the dark blue background of the weaving. Color plates are excellent, but the print quality of the historic photographs in sepia tones is poor. The author continually emphasizes certain elements of costume represented in the photographs, but the reader unfortunately cannot verify these points. Photographic details of texture of the cloth and embroidery are clear as are the explanations of weaving techniques. Cobán is known for its fine gauze weaves produced on the backstrap loom. Weaving techniques described are associated with specific villages that utilize them in their textiles.

One might argue with the decision to photograph the costumed Cobañeros out of the context of her village, but these photographs do show costume, textiles and jewelry in use. Indeed, additional photographs illustrating masculine costume, the complete costume of San Juan Chamelco, and jewelry would have been welcomed. Dieseldorff's knowledge of the origins of the jewelry industry and its iconographic significance is of particular interest and not found in other publications that focus on Guatemalan costume.

A Cobañero takes great pride in the huipiles or blouses she weaves for herself or her family. The finest are woven with white singleply cotton threads. Gauze weave is combined with supplementary weft brocading. Variations of gauze techniques are employed. Sometimes two warp threads are crossed to create the open work. In other examples three crossed warps are combined with rows of plain weave and brocaded supplementary weft images. Dieseldorff states that these images, such as spiders, little ducks, wasps and birds, derive from mythological sources. The forms known as signos lunares have cosmological significance. A type of seersucker or shimmered weave called tzotz was popular in the past. Today it is still being produced in the village of Camat.

The existence of embroidery borders on huipiles has been documented from 1668, but the author assumes that this innovative technique originated twenty-five years earlier. Borders for the necks and sleeves are created of cotton and embroidered with silk and cotton threads, and then sewn onto the huipil. Formerly gauzy or seersucker were used, but in recent years commercially manufactured cloth such as organdy, satin, or cotton may be utilized. A Cobañero can commission a huipil to be embroidered to her taste and brightly colored flowers are now in fashion.

The traditional skirt or enagu is trelle-loom woven and measures six to eight varas (two-thirds of a yard). Indigo and white stripes are interspersed with ikat (tie-dyed) yarns. Most skirts of indigenous peoples of Guatemala are wrapped around the body in a sarong style. However, Cobañeros adopted the European style of a full skirt, placed at the waist by means of a cord. These pleats are maintained by carefully folding the skirt and placing it in the chest that contains all of a woman's precious possessions.

The author highlights one unique element of the Cobañero costume: a headdress called tupuy or coral snake. It is of great length and made of red yarn with additional fiber ornaments attached. An analogy is posed to images on a bas-relief of a pelota game at the Mayan site of Chichén Itza. The gushing of sacrificial blood of the victim—a member of the losing team—becomes transformed into red branches of a tree which then encircles the ruler-priest-executioner and his victim. Another visual message signaled by the tupuy recalls the relationship of the Maya to their gods: the coral snake is thought to be the god's messenger and if one is bitten, it is considered a god-inflicted punishment.

A prevailing theme, not uncommon in texts written by native Guatemalans who have experienced the changes brought about by cultural and social pressures, is the fear that native costume and costumbrista will disappear forever. It is frequently stated that contemporary weaving is inferior to what was created in the past. Dieseldorff laments the loss of the "old" ways and traditional costume as worn in the earlier part of this century. In spite of the tremendous upheavals within the last ten years that have affected the lives of indigenous peoples of Guatemala, beautiful textiles are still being produced for native use and for sale to outsiders wherever and whenever possible. Survival has been and still is the key issue in Guatemala and in other Central American countries.

A third publication in this series is planned for 1985. The weaving village of Comalapa will be featured.

Margot Schevill
Hoffnusen Museum of Anthropology
Brown University

SUMMER 1985
85
COLOR TRENDS
Edited by Michele Wipplinger
Michan Enterprises, Seattle, Washington

Color Trends, a color service for fiberists, is a new publication by Michan Enterprises. Its purpose, as stated by owner-editor Michele Wipplinger, assisted by Ann Kline: "Color Trends is a way of sharing with you our mutual excitement and continued research into color, its use, its history, and how it relates to fibers."

The attractive newsletter that has resulted from her efforts is geared to weavers, spinners and dyers, and contains insights with dye recipes and formulas, and dyed yarn samples on heavy paper that is punched for a three-ring notebook. The yarn samples are woven into a narrow warp and attached securely to the cards. Issue 1 contains wool and alpaca samples dyed with acid dyes. Issue 2 features silk samples dyed with natural dyes, and cotton and linen samples dyed with fiber-reactive dyes.

Color forecasting information based on fashion forecasts from the Color Association U.S. is included, as are inspirational articles on the use of color and dye. Additional articles in Issue 2 on silk dyeing, spinning and weaving by Cheryl Kolaneder-Williams, Jean Case and Karen Selk are a good complement to the silk dye recipes and samples. Book reviews are also included.

Wipplinger is well qualified in the color field. She is a colorist, dyer, weaver and spinner, and has researched native dyes and costume in Latin America. She has also studied with European master dyers and has apprenticed in a silk dye house in Switzerland. Contributing Editor Ann Kline, a spinner, dyer and knitter, writes a column for Spin-Off and has worked at cottage industry spinning, experimenting with color as a maker of rainbow batts.

Color Trends is an inspiring and informative publication which should prove extremely valuable to natural and chemical dyers, and others interested in color. Color Trends is published in the spring and fall. Single copies or one-year subscriptions may be ordered from Michan Enterprises, 8037 9th NW, Seattle, WA 98117.

Karen Scarfe

MAYA CULTURE & COSTUME:
A Catalogue of the Taylor Museum’s E. B. Rickelson Collection of Guatemalan Textiles
by Christine Conte

The Taylor Museum has produced an unusual catalogue focusing on an early-1920–1930 textile collection from the Highlands of Guatemala. Edith Bayles Rickelson, an archaeologist who worked with her husband, Oliver G. Rickelson, on archaeological projects sponsored by the Carnegie Institution, gathered this previously unpublished collection, one of three that she systematically compiled while in Guatemala. It includes more than three hundred textiles, many of which are components of complete male and female costumes. The idea of putting together complete costumes for research purposes was unusual in the 1920s, although the "diva" of Guatemalan textile studies, Lily de Jong Osborne, put together many collections and advised Guatemalan textile advocates over a forty year period.

Christine Conte, with the assistance of curators Jonathan Batkin and Cathy Wright, presents this material with an emphasis on stylistic trends from the 1900s to the 1970s. Emulating the model created by Lila M. O’Neale in her monumental work, Textiles of Highland Guatemala, Conte also utilized other collections for comparative purposes. She chose examples with a similar provenience that pre- and post-dated those in the Rickelson collection. Conte discovered that only seven of the forty major museum and private collections of Guatemalan textiles in North America had ever published their holdings or made them otherwise available to researchers. Selecting from a list that had been compiled by Dr. Hila Pang of Indiana State University, who was inspired by O’Neale’s scholarship and was a pioneer in Guatemalan textile studies during the 1950s, Conte chose textiles from nine well-documented collections. Photographs and data about these textiles in relation to the Rickelson material are included in the catalogue.

The value of Maya Costume & Culture as a research resource is enhanced immeasurably by this additional data since many Guatemalan textiles have entered museum collections without adequate documentation. Conte expresses her hope that when problems related to stylistic variability have been reckoned with, "attention can be turned to the more difficult and interesting problems of the cultural and societal meanings of the Maya weaver’s art in historical perspective." (p. 9)

The cultural history and textile development of Maya weaving is presented in an abbreviated, straight-forward manner. At times Conte’s scholarship is a bit slack. She sometimes misplaces citations (p. 13) or leaves them out completely (p. 25). To her credit, Conte has availed herself of the excellent scholarship of Patricia Anawalt, who has conceived of new ways for viewing Indian costume prevalent before Cortes. By utilizing an
The Descriptive Catalogue of the Ricketson Collection will serve Guatemalan textile researchers well. Conte presents a formal stylistic analysis with some ethnographic information about each village represented. The huipil or blouse is featured, being the most elaborately decorated textile and the most numerous in the Ricketson collections. Conte proposes that future research be addressed to questions of innovation.

The textiles are presented alphabetically by department (state) and village. Slightly blurred black and white plates are a visual problem for accurate identification since many of the textiles are being published for the first time. Detail is crucial when tracing stylistic trends in design motifs and patterning. Even the color plates of the textiles contain some reproduction problems, Figure 77, male and female costumes from Todos Santos Cuchumatán, suffers from a lack of definition that should outline a dark shirt or pants against a black background. The skirt fabric from San Pedro Sacatepequez, figure 113, appears dark and shaded instead of brilliant gold, the actual color. In other plates, costume elements recede into the background. The choice of not placing the illustration in relation to the catalogue entry makes the reader look frantically for information about the textile illustrated. The addition of an Index of Figures placed at the back of the catalogue helps to overcome this design error.

A bibliography and index complete the catalogue. Three excellent historic photographs from the Taylor Museum photo archives bring the textiles to life in context. There is a map at the beginning of the book that should have been larger in scale.

In spite of design and printing problems and some editorial decisions, one is grateful for the opportunity to become acquainted with this fine collection, assembled by a rare archaeologist, one who had an eye for the unusual as well as the training to include accurate documentation while collecting the material. All those interested in a textile tradition that has survived over several millennia, only to be threatened with extinction in the 1980s, will want to acquire Maya Culture & Costume for their libraries.

Margot Schevill

Notes

1. Osborne collections are in the University Museum, University of Pennsylvania, Mills College, Oakland, California, Museo Nacional de Antropología, Guatemala City, Archaeological Museum of Guatemala City.

2. 1945, Carnegie Institution of Washington Publication no. 567.

A MILLENNIUM OF WEAVING IN CHIAPAS

by Walter F. Morris, Jr.

San Cristóbal de las Casas, Mexico. Published by the author. Distributed in U.S. by Dos Tejedores. This charming, attractive publication was created to accompany an exhibition, with the same title, of Chiapas textiles collected by the author. This exhibition opens a new textile museum that will be part of the Centro Comunitario de los Altos de Chiajoro in San Cristóbal de las Casas that also houses the Maya weavers cooperative, initiated by Morris, called Sna Jolobil. The entire project, many years in the planning, is under the auspices of the Instituto Nacional de Antropología e Historia with the support of the Chiapas government.

Privately published by Morris, A Millennium of Weaving in Chiapas stands on its own as an introduction to the rich textile tradition of the Maya Indians of southern Mexico. The textiles featured in the exhibition and publication are from a collection endowed by the Italian archaeologist Francesco Polizzi. Profits from the venture go to Sna Jolobil and only 1800 copies were printed. Historic and contemporary photographs are juxtaposed with drawings from archaeological sources, enlarged photographs of actual weaving designs and drawings of the same motifs to aid in the explication of this complicated and ornate supplementary wheat weaving pattern.

Morris, aided by Francisco Alvarez and Carol Karask, writes in a clear, straightforward style, choosing to eliminate footnotes or other reference information. Should one want to pursue this topic further, the National Geographic Research Journal, Winter 1985, features a fine, scholarly article by Morris entitled "Saints, and Toads." (pp. 63-79) with an extensive bibliography. In this text, the reader is introduced to the background of Maya culture, and the relationship of textiles to nature, religion, and ritual beliefs.

In the textiles of Chiapas, the Maya concepts of time, space, and the mythological forces of nature are interwoven. Through repeated cycles of birth and decline, conquest and revival, weaving has preserved the design of the Maya universe. (p. 5)

In the section entitled "Ancient and Modern Maya Textiles" the authors present connections between ancient and contemporary designs. Fortunately, specially woven Saint's clothing has been preserved and serves as a source for a rebirth of old designs. Four basic weaving motifs are analyzed as seen in the imaginative organization on the huipiles (blouses). Mythical history is supposed to be woven into the textiles. For example, a drawing of the image of a vulture is accompanied by the following verse:

Notes

1. Osborne collections are in the University Museum, University of Pennsylvania, Mills College, Oakland, California, Museo Nacional de Antropología, Guatemala City, Archaeological Museum of Guatemala City.

2. 1945, Carnegie Institution of Washington Publication no. 567.

Summer 1985
**News**

**DESIGNER KNITTING** by Nina Shuttlewood and Janet Biggs is a new publication from ARCO Publishing. Black & white and color photos, cloth. 144 p. $14.95.

**THE RIBBON, A Celebration of Life**, published by Lark and edited by the Lark Books staff and Marianne Philbin, will be issued in August, 1985. The book will feature a representative selection of the banners which form “The Ribbon”; a collection of banners to be wrapped around the Pentagon to commemorate the 40th anniversary of the dropping of atomic bombs on Hiroshima and Nagasaki. Black & white, color photos, softbound. 160 p. $14.95.

**NEW DIRECTIONS IN FAIR ISLE KNITTING**, by Patty Knox is available in June from Lark. Black & white, plus color illustrations, hardbound. $22.95.

**THE GUILD**, edited by Toni Sikes will be published by Kraus Sikes Inc., New York. The Guild is a resource directory which will feature artists who create for both architects and designers. Scheduled for publication in June 1986, the book will sell for $75.00. For information: Toni Sikes, President/Kraus Sikes Inc., 19 E. 95th St., New York, NY 10128 (212) 289-5247.

**NATURAL DYES, FAST OR FUGITIVE** by Gill Dalby is intended as a comprehensive study of the light and wash fastness of natural dyes on wool. Published by Ashhill Publications, Ashhill Craft Studio, Brushford, Dulverton, Somerset, England, the paperback volume can be ordered for £2.95. Payment should be in Sterling.

**FAVORITE PATCHWORK PATTERNS**, Full Size Templates and Instructions for 12 Quilts, by Henry Louis Pelletier and FlorAL CHARTED DESIGNS** by Jana Hauschild are 1984 publications from Dover. Both are paperbound and illustrated. $3.50 and $2.50 respectively.

Dover also announces EASY-TO-MAKE CROSS-STITCH SAMPLERS AND MOTTOS: 24 Charted Designs by Barbara Christopher. This volume, published in 1984 has 32 p. and sells for $2.25.

**THE TEXTILE BOOKLIST** has recently published its first issue under new ownership. Karen Buffington and Kay Sennott Hofweber have purchase the publication from R. L. Shep. For subscriptions write: The Textile Booklist, P.O. Box 4392, Arcata, CA 95521. $12.50/year; $16 outside the U.S.

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**IN THE NEXT ISSUE**

**Series on color theory geared especially to weavers and others working with textiles.**

Other subjects will include figured boundweave by Phyllis Waggner, Japanese silk spinning by Alison Mitchell, a description of a medieval card loom by Andrea Cesarini, information on dying by Michele Wippinger, and an article on the Navajo Sheep Project by Dr. Lyle McNeal. We will also feature a special forum on equipment.

Our Meetings and Gatherings department will have reports on various regional weavers conferences that have been held this past spring and summer. We will also have a new contest to announce.

Plan to join us!

**THE WEAVER'S JOURNAL**
YARNS, FLEECE, FIBERS

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from Dos Tejedoras Fiber Arts Publications

Double-Woven Treasures from Old Peru

by Adele Cahlander

Dos Tejedoras
3036 N. Snelling
St. Paul, MN 55113

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By Walter F. Morris

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