Maori Textiles
by Nancy M. McKenna

The Field Museum of Natural History in Chicago has a very nice South Seas Island exhibit. (if you were a visitor 10 or so years ago, they also had shrunken heads and a hand taken out of a fire the day after a cannibal feast, but these are now in storage. Much to my chagrin, as that was my favorite part of the exhibit when I was in grade school) However, they now have a full size Maori lodge.

Anyway, the exhibit has textiles made of netting, feathers sewn onto a foundation fabric (absolutely beautiful!) and a fine “cloth” made of kapa/tapa fiber. This cloth resembles paper, and the process is similar to making paper. Here is the directions to make kapa/tapa cloth, derived from a handout I received from the Field Museum’s Harris Education Center.

HISTORY AND USES OF TAPA/KAPA
From the inner bark of the wauke plant come the fibers Pacific Islanders use to make their clothing. The product of these fibers is called “bark cloth” in English and “tapa” or “kapa” in Hawaiian, which means “the beaten thing”.

The early Hawaiians brought the wauke (mulberry) plant and the technique for making kapa from eastern Polynesia and developed it into an art of design, color, and texture. Kapa was used for clothing and bed covers. Kapa was an important article for exchange and gifts, as well as an indication of wealth and social status.

Styles of dress were very simple for both men and women. Women wore the pa’u, a straight piece of kapa 2 or 3 yards long, which was wound around the waist. The men wore the malo, a narrow straight piece passed between the legs and wound around the waist. A large shawl, kihei, was worn by both men and women for warmth. In addition to its uses, kapa was often saturated with coconut oil and used as protection from the rain, for fishing clothes, or for canoe covers. Polynesians covered kites with kapa, used it for wall coverings, twisted and braided it for use as hair and arm ornaments, or for wicks in oil lamps. Kapa was also woven and used to make sandals, tool handles, and bandages for wounds.

THE KAPA MAKING PROCESS
The wauke plant is ready for harvest at about 18 months. The plant is cut down at its base or pulled up for replant-
ing. A split is made all the way down the stem and the bark is removed in one piece and wound into a tight roll. The outer greenish-brown layer is carefully peeled away and the white, inner bark is soaked in sea (salt) water for 7 to 10 days. The fermented bark is then beaten with a round mallet called a hohon on a wooden anvil called a kua kuku, the product of the first beating, mo’omo’o, is laid out in the sun to dry.

WATERMARKING KAPA
The mo’omo’o is soaked in water and left to ferment until it is soft. The second beating is done with the i’e kuku, a square beater. The special function of the i’e kuku is to implant the watermark into the thin kapa by striking it, while wet, on the smooth surface of the kua kuku. I’e kuku has grooves on three sides; the fourth side has intricate designs, usually geometrical figures and forms from nature. The grooves and longitudinal lines in the early kapa beaters were carved with shark’s teeth, bone tools, and the blades of adzes. The watermark pattern indicated the village where the kapa was made as well as its maker. (the watermark pattern can be seen by holding the kapa up to the light.) The kapa is again laid out in the sun to dry. Once the kapa has dried it is ready to be dyed and printed.

Dyes
Dye sources are leaves, bark, berries, colored earth, and roots of indigenous plants. Kukui bark was used for rust browns, noni roots for red, tumeric for yellow, and akala berries for pink. Other colors include shades of orange, green, blue, purple, and gray. Kapa can be soaked in dye or dye can be brushed on with a pandanus of hala nut.

**I will return to the Field Museum at a later date, hopefully without my entourage of short persons, for the “open house” day and see if I can examine the feather textiles that are in storage. I will report how they are indicated the village where the kapa was made as well as its maker. (the watermark pattern can be seen by holding the kapa up to the light.) The kapa is again laid out in the sun to dry. Once the kapa has dried it is ready to be dyed and printed.

9000 Years of European Culture and Linen
by: Peggy Hoyt

The story of mankind’s cultural development from Neolithic times interwoven with development of flax-linen has been a fascinating subject I’ve been pursuing since delving into European history through the Medieval Textile Study Group. I wanted to find out where some of those Medieval animal motifs originated and tracked some to ancient 400 BC Pazyryk tombs of Central Asia. This Central Asian clue led me further back to the origins of our Indo-European heritage. Recent archeomythology digs have opened up a whole new chapter of prehistoric Europe. The evidence shows that a peaceful civilized agricultural society developed from 7000 BC to 2800 BC until Indo-European patriarchal warrior tribes from the steppes of Central Asia invaded and decimated these artistic egalitarian cultures.

In historic times, we find linen an important commodity in many cultures. We are particularly aware of it from Egypt because of the excellent conditions for preservation of artifacts. Unfortunately textiles do not survive like pottery so archeologists and historians have been unaware of the importance of textiles in the early history of mankind. The bast fibers were the first to be spun and woven. Wool came later since it took many generations of sheep breeding to develop a suitable fiber for spinning and weaving.

So for many thousands of years flax-linen has had an important place in our western culture both as a food and a fiber. It was the basis and ground of much of our clothing from Greek to Roman and through the Middle Ages into recent times with the beautiful linens produced in Europe in the 18th and 19th centuries. It lost it’s appeal recently when non-wrinkling synthetics were invented. But as a culture, we are looking back nostalgically in appreciation of the sensuousness and beauty of fine linen using it’s wrinkles as a stylish symbol along with the rich blues of indigo in the “blue jeans” we see dominating the racks of clothing in our “marts” today.

As we enter the new millennium, we are becoming
increasingly aware of the fragile beauty of this earth on which we live and the textile heritage from our ancestors. Consequently, I find it appropriate to close with a quote from an article by Mary Snyder.

“"The Earth does not belong to us—we belong to the Earth. Mankind did not weave the web of life. We are but one strand in it. Whatever we do to the web, we do to ourselves.”
Chief Seattle, 1844

References:
Marija Gimbutas, The Language of the Goddess
E. J. W. Barber, Prehistoric Textiles

General Information on Draw Harness
By Harry McCoy

The above title is deliberately not called General Information on Draw Looms since actually a draw harness may be applied to any loom. There are as many versions of draw mechanisms as there are requirements and usages for them. I hope to present here enough information to give you a clear concept of the possibilities.

TYPES OF DRAW HARNESS
FREE STANDING and BUILT ON
Draw harness can be built on a stand that goes over the top of a loom and is bolted or clamped to the side members of the loom to steady the mechanism. In some cases the weaver may prefer to remove the regular shafts and use only the draw. In other cases the preference may be to combine the two. This is a consideration that mostly applies to larger looms. The number of draw harness that may be used is a function of the depth of the loom from breast beam to warp beam. If retaining the original shafts to use as ground shafts, they need to be equipped with long eye heddles. These heddles may be either metal or string. I happen to use string heddles entirely by preference. For small looms the harness may be built directly on the loom as a permanent fixture or made to be removable by using bolts. For small looms it is more practical to use shaftless draws to save space. On very shallow looms it is sometimes desirable to extend the depth by attaching a warp beam extender so that there is sufficient length in the warp to raise easily.

There are many ways to arrange the pull cords to suit the individual weaver and make use of the mechanism as efficient as possible. The cords may pull down or forward. There is the option of putting on a catch bar which holds the cords in position, freeing the hand, or simple pulling and holding with one hand while shuttling with the other. If using multiple cord pulls the catchbar is the best arrangement.

In addition, it needs to be mentioned that draw harness may specialized or dedicated for a limited purpose, such as rigid sett mechanisms or they may be universal serving any sett. They may also be constructed for total width or more limited harness with a comber board to gain repeats across the fabric.

GENERAL USES FOR DRAW HARNESS
Draw harness may be used for the entire weaving process without ground shafts or may be used in addition for pattern and texture work only. In essence they function as pickup mechanisms or added shafts, however they have more flexibility than added shafts. For instance, overshot brocading is a natural for draw harness. Furthermore it makes possible the use of clear blocks without halftoning in overshot brocades. Considering the complexity of design possible with four shaft overshot, it can be imagined the possibilities with only ten draw harness in addition. With the long eye heddles any warp end may also be threaded on any number of shafts, allowing it to participate in more than one block or pattern row. Draw harness may be threaded to particular pattern or in straight draft, allowing design to change as the weaving proceeds. I alway use the latter. The harness may be used for extending any of the popular pattern weaves or actually creating new structures. Though primarily a pattern device the use of the harness as structure and texture manipulator is also important.

REMARKS ON BUILDING A DRAW HARNESS:
Draw mechanisms are actually very simple and may be constructed by anyone with basic wood working skill. The primary necessary tools are a table saw and a drill press. A router is sometimes handy as well but not totally necessary. Of course, if you have them, things such as sanders etc. are nice.

Materials and parts for draw harness are generic and readily available at the hardware and lumber supplies as well as weaving supplies. In some arrangements you may need to visit a hobby supply store for things such as grommets etc.

I generally use pine for my own applications, but if the builder wants to match an existing loom the sky’s the limit.

WEAVING CONSIDERATIONS:
Draw mechanisms are a natural for rising shed looms. They can be used over counterbalance or countermarch, but the opposing tensions can be difficult with more delicate warps. Usually when employed with countermarch or counterbalance it is necessary to put the draw harness in front of the ground harness which means that it may be necessary to extend the breast beam forward to allow sufficient weaving space.
Looms with draw capacity do not have to be the size of a small house. The huge oversized constructions often seen are the result of misengineering. For one application I put a 20 cord draw on a 24 inch table loom and it worked perfectly. Since that mechanism had a vertical draw the loom did not have to be bolted down to prevent “walking”.

GENERAL COMMENTS:
Though not as completely versatile as the Jacquard or Vaucanson mechanisms the draw harness can add greatly to individual weaver’s capacity for design and structure. Indeed, the Jacquard is really only a more mechanized version of the draw harness. Like the “drawloom” the Jacquard has been made entirely too great a mystery and I will go into that at greater length in a future article.

I hope I have stimulated you exploring this mechanism and its use. My own current use is to apply it to Lampas. Though I may not have it done when the rest of you do, I believe it will be interesting and will share the results later.

Bibliography
Continued from Issue 22

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The best book available on the subject, with an excellent bibliography. However, recent experiments with the loom have shed much light on the subject and disproved a few of Hoffmann’s theories. The NESAT proceedings are a good source for supplementary information.


An Alamannic warrior’s grave examined. Excellent diagrams of several variations on rosette twill.


Textiles from a proto-Viking Age town (6th to 8th centuries) in Schleswig, North Germany. Details a great variety of wool weaves, plus starting borders and selvedges. Lots and lots of weaving drafts, extremely clearly illustrated. Rare, but thrilling if you’re a lozenge twill or “Dark Ages” freak.


Another Alamannic-period grave. Best explanation of rippenköper I’ve seen.


Report on the textiles from an Alamannic warrior’s chamber grave, including wools, linens, and an unusual honeycomb weave.


Excerpts from guild requirements, giving names, widths, and setts for various Italian silks.


Technical details of several Byzantine and Merovingian textiles.


The most thorough write-up on the Chelles textiles associated with the relics of Saints Bathilde and Bertille. Many are seventh-century Merovingian or Byzantine; some are later medieval.


Technical details of several textiles, including many
silks, associated with the relics of Saints Bathilde and Bertille.


Has a useful section by John Hedges on finds of textiles from York dating to the ninth to eleventh centuries.


Weave and sewing details for a linen tunic with wool tapestry bands.


Some details of linen damask sets.


Very in-depth analysis of an Italian silk circa 1475, including drafts for three sets of warps and two figure harnesses.


Get both volumes: one is text and the other black and white plates. Covers royal and episcopal graves in Speyer Cathedral dating from tenth to early thirteenth centuries, including some Holy Roman emperors and empresses. There are all sorts of delicious surprises in it! (My favorite: silk episcopal boots embroidered with gold-thread daisies.)


Tenth-century Danish: a more recent analysis of the Mammen burial textiles than Hald’s.


In-depth consideration of a small group of inscribed Imperial lion silks of tenth-eleventh century date.


In-depth analysis of one Byzantine and one Islamic silk.


Details of the complete costume of an early fourteenth-century Swedish man found buried in a bog. Lots of comparative materials; English summary.


Includes a catalogue of “all Swedish textile finds from the Roman Iron Age and Migration Period [plus] [t]he Norwegian textile material relevant for comparison.” Lots of neat tablet weaving information too. It’s rare to find this sort of information in English.


Excellent photographs and tables, English captions, and a little intuition will get you through this Danish-language chapter. The best single source for the Mammen textiles.


Setts and weaves for several different types of textiles.


Photos, details of sett and weave (mostly tabbies) of several textiles. Some fun stuff, including checks and ikat.


Several workaday wool tabbies, a silk braid, and a piece of velvet from the late fifteenth century.

***Schlabow, Karl. *Der Thorsberger Prachtmantel*: Schlüssel zum altgermanischen Webstuhl
Very detailed account of the reproduction of a Prachtmantel, or elaborate man’s cloak, from the Roman Iron Age in Denmark. Great structural line drawings.


A number of tabby linen textiles from a tenth-century Viking cemetery in Schleswig-Holstein. Tidow includes the diameters of the yarns in his analyses, rare and welcome information.


A short section on early eastern Mediterranean “drawloom” textiles, possibly of use to advanced weavers.


Textiles from a Frisian woman’s burial, circa fifth century.


Details of two twelfth- to fourteenth-century children’s tunics, one of them cotton.

*** Walton, Penelope. “Dyes and wools in textiles from Mammen (Bjerringhøj), Denmark,” pp. 139-43 in Iversen, Näsman, and Vellev.

A technical report on results of several tested textile samples from Mammen; includes fleece types, fiber sizes, and some good in-depth information on red plant dyes.


A few textiles to add to the large catalogue in her 1989 book (see below). The rest of the book is even more riveting, the first book-length treatment of the history of textile production as it shifted from warp-weighted to horizontal loom technologies. Lots of useful information on tools and methods.


Chapters on weave structures plus a large catalogue of everyday textile remnants from York, England, during the Anglo-Scandinavian period (8th-11th centuries). Great for Danelaw Vikings!


Interesting discussion of some early silk two-block damask “drawloom” textiles dating to the late Roman empire.


An easy read, as these books go. Handy catalogue of textiles from the northern reaches of the Roman Empire.


Gives a diagram and the sett of the “Falkirk tartan,” for all you early British Celt types, and a drawdown of a late Roman silk damask.

A large number of wools, mostly indigenous broken lozenge twills, from Vindolanda, a Roman garrison in the north of England. Most are dated circa 90-105 C.E.


Translation of a French bill of sale dated 17 April 1458 with three samples of English broadcloth attached. The samples are briefly analyzed.

Collections of Articles (Festschrifts, Proceedings, etc.)

Many of these collections contain very rich sources of information on textile history. The articles mentioned here contain specific weave and sett information, but often the entire collection, although perhaps less technical, is nevertheless useful. The NESAT proceedings are especially rich in that regard; almost every article in every NESAT volume has some weave specifics in it. They are listed by volume only for reasons of brevity.


Contains several short articles, some in German.


Contains several short articles, some in German.


Contains several short articles, some in German.


Contains Granger-Taylor, Higgins, and Muthesius, above.


Contains Cyrus-Zetterström and King and King, above.


Contains several articles, most in German.


Contains several articles.


Contains Wolff, above.


Contains Munksgaard, above.


Includes Østergaard and Walton, above.


Contains several short articles, some in German.


Contains Endrei and Monnas and Vial, above.


Contains articles on figured silk weaves by Müller-Christensen and Schmedding.

Tissu et Vêtement 5000 Ans de Savoir-Faire. Guiry-en-Vexin, France: Musée Archéologique Départemental du

Contains LaPorte, above.


Contains several short articles, some in German.

Twill Project for the December 2000 Issue (Update):

Here are the types of samples that have been spoken for so far.
s-z twist interaction
(3/3 twill unless someone else really wants it)
Nancy M McKenna

Warp Ikat
Julie Hennessey

anyone? 2/1 twills, 2/2 twills, 3/3 twills, can be done with s/z yarn twist interaction or only with yarns of one twist direction. Anything else? Please let me know what you’re doing. We need 10 more people to sign up if its to be a calendar!

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Upcoming events:

Art Institute of Chicago
Appliqued, Embroidered, & Pieced Bedcoverings
a follow up of The Woven Coverlet
February 28-May 28, 2001
www.artic.edu/aic/general/applique.html

Convergence 2000
Cincinnati, Ohio
June 18-26, 2000
www.weavespindye.org/convergence/index.html

Complex Weavers’ Seminars 2000
Wilmington College, Ohio
June 26 - 28, 2000
www.complex-weavers.org/sem2000.htm