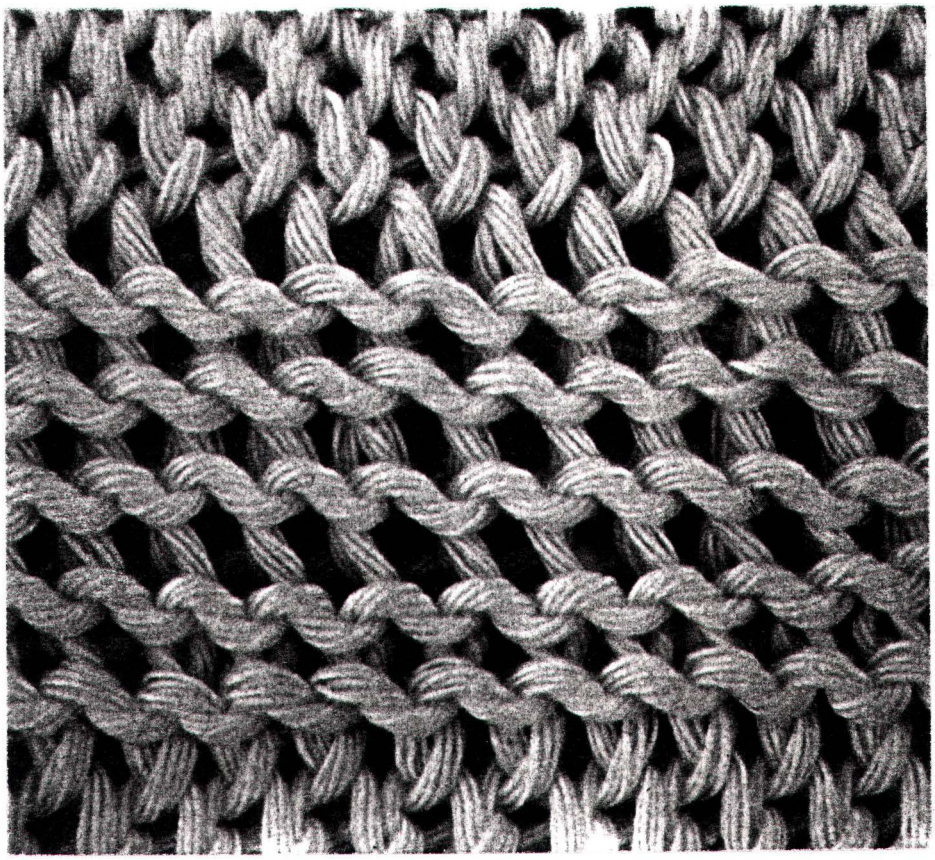
ARCHAEOLOGICAL TEXTILES NEWSLETTER



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Editorial

Born in the Netherlands, moved to Norway and now resident in Britain, *ATN* was always intended to be an international carrier of news. Yet despite some pressing invitations in past Editorials to contributors to write in another European language, *ATN* has remained (almost) monoglot. We are delighted that this number has broken the mould and carries three features in German. There will be another in *ATN* 34.

Advance notices of textile conferences and brief reports upon them after the event have regularly appeared in *ATN*. During 2001 conference-goers have been spoilt for choice, and the trend promises to continue through 2002. Not only have the familiar specifically textile-centred meetings such as those of CIETA (in Lyon) and Dyes in History and Archaeology (in Amsterdam) taken place, but there have been topic-oriented gatherings like 'Textiles *in situ*' in Riggisberg and 'Colours in Antiquity' in Edinburgh. Mainstream archaeological symposia like that of AGER ('Cultivateurs, éleveurs et artisans dans les campagnes gallo-romaines') increasingly have a textile imput. This is good for business; but there is still a need to convince the archaeological community as a whole that archaeological textiles matter.

Subscribers in Euroland will be able to send cheques to us written in Euros after January 2002, and - theoretically - we shall be able to accept them into the *ATN* Euro account in the UK without bank charges or deductions. Certainly, we have experienced no problems with such payments so far, and hope that the situation will continue.

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Features

Fibres in Iron Age Textiles from the Dürrnberg, Austria

Introduction

I have just completed an investigation of the fibres in some Iron Age textiles from the Dürrnberg salt mines in Austria. The samples were supplied from the excavation by Dr T. Stollner of Philipps-Universität, Marburg, via Katharina von Kurzynski of Osnabrück. The findings are here summarised in relation to the similar material of somewhat earlier date from the nearby salt mines of Hallstatt (Barth 1982; 1993/94; Ryder 1992; 2001).

Materials and Methods

The fibres in 84 yarns were measured. The material was better preserved than at Hallstatt; for instance the natural pigment and dyes were clearer. While sub-sampling to make microscopic preparations, the yarn colour observed by eye was recorded, the thickness of the yarn was measured and the direction of spin noted. The diameter of 100 fibres in each sample was measured using the International Wool Textile Organisation's standard method with a projection microscope at a magnification of 500x. Also recorded were the percentages of wool fibres with a central medulla which give a measure of hairiness and the percentages of pigmented fibres, which give an indication of fleece colour.

Results and Discussion

a Fibre and fleece types

Of the 84 samples investigated, 51 were wool from sheep, 31 plant bast fibres, either flax or hemp, and two of silk. Table 1a shows that unlike at Hallstatt there were no (true) Hairy fleeces. The other four main fleece types were represented on both sites. The 15 Hairy-medium wools included three of Primitive type; these have finer underwool and lack medium fibres and so lie in an intermediate position between the Neolithic coat (found on sheepskins at Hallstatt) and the Hairy-medium type.

The 15 Generalised-medium wools included five Fine Generalised-medium wools and the 11 Medium wools include seven of hairy Medium type. This type of fleece has the symmetrical fibre diameter distribution of the Medium wool plus some hairy fibres. There were 10 Semi-fine wools.

Table 1b shows that Dürrnberg and Hallstatt had a similar proportion of Generalised-medium wools, but that Hallstatt had many more of the more primitive Hairy-medium type. Likewise, Dürrnberg had more of the relatively more modern fleeces, 22% as opposed to 4% Medium wools at Hallstatt and 20% as opposed to 10% Semi-fine fleeces. The variants of these fleece types (above) have been included in these percentages, but the true Hairy type has been omitted.

b Natural pigment and dye

Table 1c shows the percentages of black, grey and white yarns in comparison with Hallstatt and it is interesting that each site had 51% of white wools (lacking natural pigment). Dürrnberg had more grey yarns (35% as opposed to 29% at Hallstatt) but fewer black ones (14% as opposed to 20%). Very few of the Hallstatt yarns had traces of dye, but the fact that 35% of the (white) wools at Dürrnberg had dye suggests that more of the Hallstatt yarns had been dyed, but that the dye had not survived. Nearly all the dyed yarns were blue, probably having been dyed with indigotin from woad as at Hallstatt (Ryder 2001). There was only one red yarn and this had been woven with a blue yarn in the other system. A red dye isolated at Hallstatt could not be identified by the analyst Penelope Walton Rogers. In another textile a blue yarn had been woven with a naturally black yarn in the other system.

c Silk

The finding of silk provides interesting support for the now well-known finding of silk as a luxury item in Hallstatt graves (Hundt 1969). The fibre measurements are typical of fine, cultivated silk and give no reason to suppose that the fibre (or textile) had not come from China. One of the silk samples had been dyed blue.

d The plant fibres

The large number of plant bast fibres

Table 1 (a)

The different fleece types represented (actual numbers)

	Dürrnberg	Hallstatt (Ryder 2000)
Hairy	0	3
Primitive Hairy-medium	3	16
Hairy-medium	12	128
Generalised-medium	10	59
Fine Generalised-medium	5	10
hairy Medium	7	10
Medium	4	2
Semi-fine	10	17
Fine	0	0

Table 1 (b)

The percentages of the different fleece types represented (comparison with Hallstatt)

	Hairy-medium	Generalised-medium	Medium	Semi-fine (Shortwool)
Dürrnberg	29%	29%	22%	20%
Hallstatt	55%	31%	4%	10%

Table 1 (c)

Percentages of naturally-pigmented wools

	Black/brown (> 95% fibres pigmented)	Grey (5 to 95% pigmented)	White (< 5% pigmented)
Dürrnberg	14%	35%	51%
Hallstatt	20%	29%	51%

contrasts with only three reported by Hundt (1969) and only one by Ryder (2001) at Hallstatt. The lack of plant fibres at Hallstatt is certainly real, but it is not clear whether the number at Dürrnberg was exaggerated by the sampling procedure - were all the examples of plant fibres supplied, but only a proportion of the wool samples? The distinction between flax and hemp provides a problem. For years every flax sample I measured had a mean fibre diameter not much more than 10 microns, with an upper limit of 15.6 microns (Ryder, Gabra-Sanders 1987). Hemp fibres on the other hand were coarser with mean diameters from 16.7 to 25.5 microns. Then in 1992 a group of bast fibre samples of Bronze Age date were found at St Andrews, Scotland, with means ranging from 15.1 to 20.6. Since these means were closer to hemp values than to flax values the fibres were identified as hemp (Ryder 1993; 1999). The mean fibre diameters of the Dürrnberg bast fibres have a wide range and it is clear that the finer ones are flax, while some of the coarser ones are probably hemp. It was decided on the previous evidence, arbitrarily, to identify as flax any fibre sample with a mean diameter of 15 microns and less, and there were 22 such samples. Then any bast fibre sample with a mean of over 16 microns was identified as hemp and there were five of these. This leaves four between 15 and 16 microns that are indeterminate. Lacking any other distinguishing feature, it is just possible that all the samples are flax with a much greater than usual range of mean fibre diameters. It is unlikely that all the samples are hemp.

Since the natural twist of hemp is Z, and it has been claimed that fibres are spun in the direction of the natural twist, the fact that the St Andrews' plant fibres had a Z spinning twist was used to support the identification as hemp. In fact spinning twist varies with factors such as geographical location (Barber 1991) and so the Z spinning twist of the Dürrnberg bast yarns is irrelevant to the identification of the fibre. My conclusion is that hemp as well as flax was used, but it is impossible to be sure of the proportions of each. It is interesting that in three textiles flax was used in one system and hemp in the other. It may well be that the spinners made no distinction between flax and hemp and used any fibre that was to hand.

e Cloth construction

1 Yarn thickness

Ideally one would expect warp yarns to be thin (tightly spun) and straight, and weft yarns to be thicker and wavy. In order to ascertain to what extent this was true the thickness of the yarns was noted when the fibres were being mounted. A cursory examination of the data revealed no pattern in the thickness between the two systems. At Hallstatt there was little evidence that warp yarns are necessarily thinner than weft yarns, but overall over twice as many textiles had yarns in which the thickness differed between the systems as there were in which the the yarns were the same thickness (Ryder 2001).

2 The fleece types in each system

Fifteen of the 21 textiles had a different fleece type in the warp and the weft and six had the same fleece type. The four textiles in which the warp and weft had been determined each had a finer wool in the weft than the warp. This suggests that a stronger wool was being used for the warp. The selection was probably made on the staple length of the wool rather than fibre diameter since the coarser the wool the greater the fibre length. At Hallstatt there was no clear evidence that the warp was coarser than the weft (Ryder 2001).

General Discussion and Conclusions

In general the wool fibres at Dürrnberg are less 'primitive' than those at Hallstatt. There are fewer of the primitive Hairy-medium and Generalised-medium wools and more of the 'modern' Medium and Semi-fine wools (Table 1b). This could be explained by the more recent date of the Dürrnberg finds. On the other hand each has the same proportion of non-pigmented (white) wools (Table 1c). It is interesting that each site has silk, but the significance of the greater proportion of plant bast fibres is not clear. Why the dyes are better preserved at this site than at Hallstatt is also not clear.

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Nadelbindung – Experimente im Museumsdorf Düppel

Angeregt durch viele in Museen befindliche Nadelbindungstextilien, deren Stichvarianten bisher nicht analysiert sind, habe ich systematische Nähversuche durchgeführt und denke, daß deren aufgezeichnete Fadenverläufe und fotographische Abbildungen als hilfreiche Vergleichsobjekte bei evtl. Stichanalysen dienen können.

Die in der Literatur gelegentlich geäußerte Meinung, bei den Stichen des Typs I (Bezeichnung nach M. Hald) sei die Anzahl der beim Nähen gekreuzten Fäden so gering, daß es nicht viele Variationsmöglichkeiten gäbe, hat mich zu einer Untersuchung der Variationsmöglichkeiten gerade dieses Stichtyps veranlaßt. Dabei hat mich die ungefähre Anzahl der denkbaren Varianten interessiert, ich wollte aber auch herausbekommen, ob sich darunter solche befinden, die aufgrund ihrer Fadenführung oder Struktur dem fertigen Textil für bestimmte Anwendungszwecke besondere Eigenschaften verschaffen.

Nadelbindung des Typs I wurde bisher überwiegend bei skandinavischen Haarsieben und einem großen Fausthandschuh aus Junsele in Ångermanland, Schweden, gefunden. Die Stichart wird mit 'I' bezeichnet, da die Nadel bei der Ausführung eines kompletten Stiches durch nur eine bereits existierende Schlaufe derselben Reihe geführt wird. Dabei gibt es vier Möglichkeiten des Fadenverlaufs, die man mit der Methode von E. Hansen mit O/UO, U/OU, O/UU oder U/OO beschreiben kann. Abb. 1 zeigt für diese Grundformen je eine Musterreihe, deren rechte Kante durch die Bögen der einzelnen Schlaufen gebildet wird und an deren linker Kante sich die Schlaufenbögen kreuzen, die von einer Schlaufe zur nächsten führen. Im allgemeinen wird Nadelbindung nicht in Hin- und Rückreihen, sondern in meist von links nach rechts verlaufenden Runden ausgeführt; es entstehen Textilien, deren Formen von schlauchartig bis flach rund variieren. Jeder Stich einer neuen Reihe (Folgereihe) wird zusätzlich an die Schlaufenbögen der linken Kante der Vorreihe genäht. Je nach Art dieser Verbindung ergeben sich unterschiedliche Stichvarianten. Man kann entweder den Schlaufenbogen einer Schlinge oder zwei Schlaufenbögen zweier

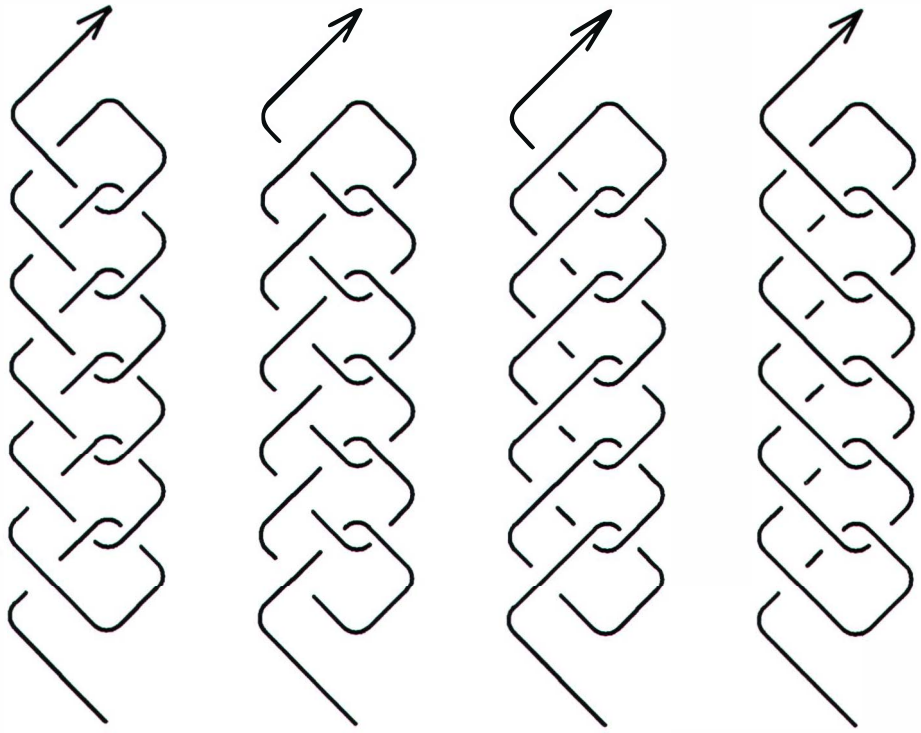


Abb.1 Grundformen des Stichtyps I

nebeneinanderliegender Schlingen aufnehmen und die Nadel von der Vorder- oder von der Rückseite her einstechen. Aus den anfangs vier möglichen Fadenverläufen ergeben sich so bereits 16 Stichvarianten, die sich im Aussehen zwar alle voneinander unterscheiden, bezüglich Dichte und Festigkeit aber Gruppen bilden. Auf die Dichte der Stoffe wirkt sich die Häufigkeit der Richtungswechsel der Nadel während der Ausführung eines Stiches aus, d. h. wie oft die Nadel von ober- nach unterhalb bzw. von unter- nach oberhalb eines Schlaufenbogens verlaufend wechselt. Bei diesen Sticharten kann man eigentlich nur von relativer Dichte innerhalb der Muster des Typs I sprechen, denn, verglichen mit z. B. Stichtyp III, erscheinen die Muster gitterartig und weniger dicht. Die Festigkeit wird durch die Art der Verbindung der einzelnen Reihen miteinander bestimmt; Verbindungen mit zwei Schlaufenbögen bei jedem Stich ergeben erwartungsgemäß eine größere Festigkeit, denn an den Verbindungsstellen liegen die Fäden dreifach. In Abb. 2 und Abb. 3 sind zwei Stoffe gleichen Fadenverlaufs (U/OU) gegenübergestellt, die das etwas verdeutlichen sollen. Die Probe in Abb. 2, bei der die Verbindung mit einer Schlaufe gemacht ist, wirkt flach, die Probe in Abb. 3 ist infolge der Verbindung mit zwei Schlaufen dicker; in den hervortretenden 'Horizontalen' liegen die Fäden dreifach. Bei den einfachsten Stichvarianten sind beide Seiten des Stoffes identisch.

Weitere 16 Variationsmöglichkeiten für die Ausführung der Stiche ergeben sich, wenn man die Nadelbindungsarbeit von rechts nach links ausführt (entgegen dem Uhrzeigersinn), also jede Folgereihe an die rechte Seite der Vorreihe näht. Dabei haben allerdings die vier Grundformen mit den beiden Verbindungsarten, bei denen eine Randschlaufe der Vorreihe von der Vorder- bzw. Rückseite her auf die Nadel genommen wird, die gleichen Muster wie beim Nähen 'von links nach rechts'. An einem Textilfragment kann man die Nährichtung nicht beurteilen, es sei denn, man kennt Anfangs- oder Endpunkt der Arbeit. Für die Verbindungsarten mit zwei Schlaufen der Vorreihe ergeben sich zwar 8 Stichvarianten, aber nur 6 neue Musterspielarten. Die Muster für die Grundstiche O/UO und U/OO sind denen gleich, die bei entsprechender Verbindungsart an der linken Kante

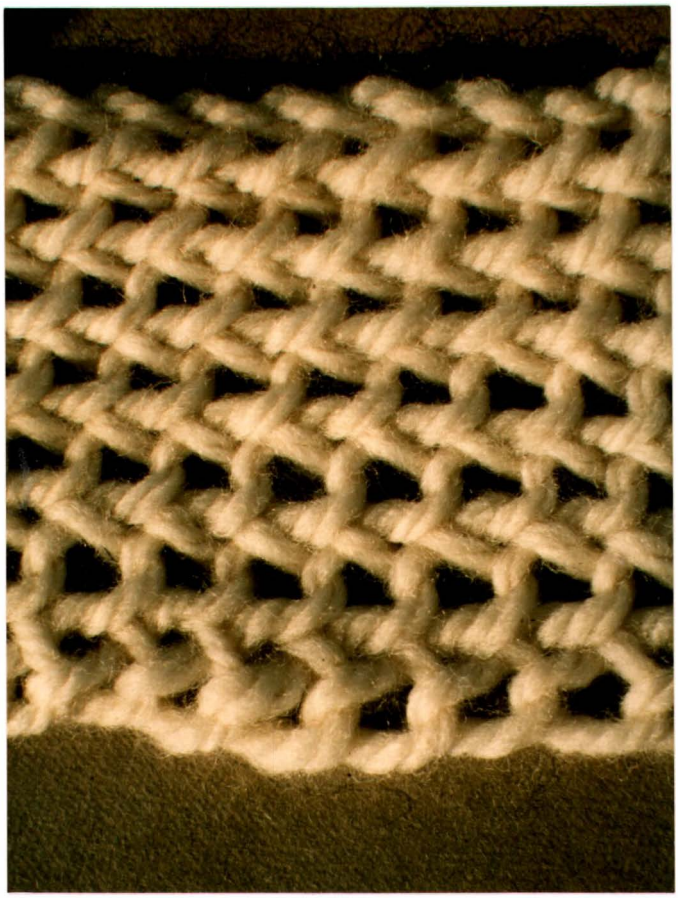


Abb.2 Fadenverlauf U/OU; flache, lose Struktur infolge der Verbindung jeder neuen Schlaufe mit nur einer Schlaufe der Vorreihe

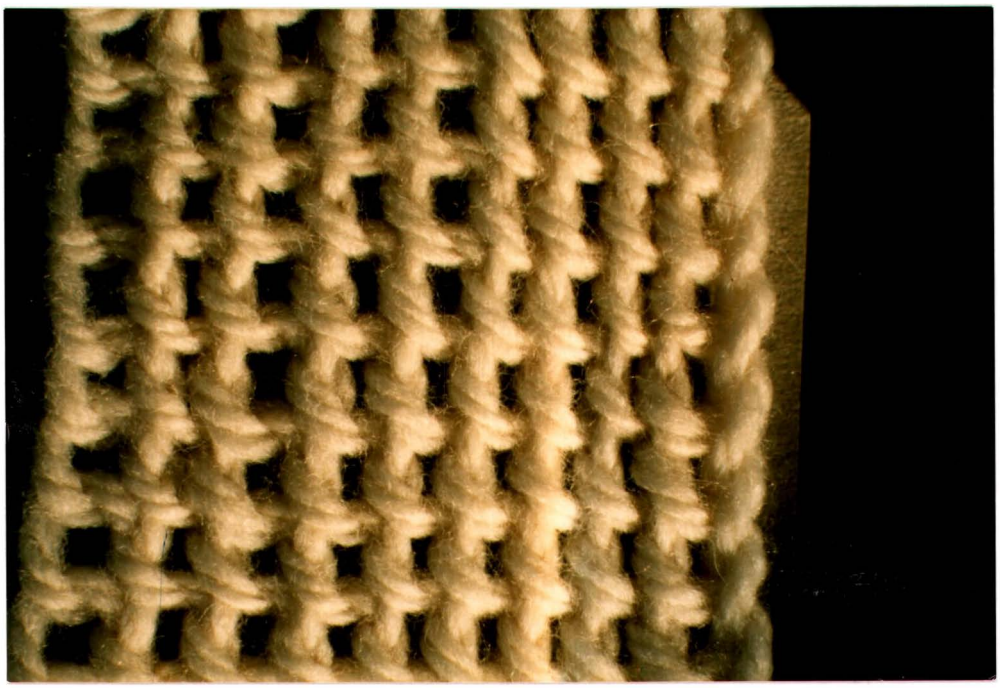
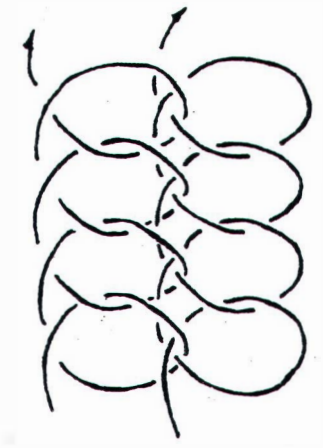
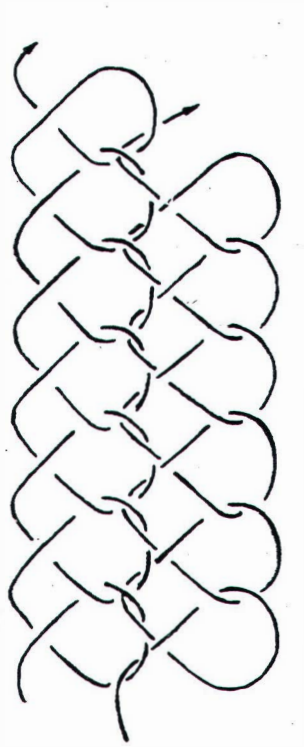


Abb.3 Fadenverlauf U/OU; größere Festigkeit, ausgeprägte Struktur durch Verbindung jeder neuen Schlaufe mit zwei Schlaufen der Vorreihe



2. Reihe 1. Reihe

Abb.4 Fadenverlauf U/OU: 2. Reihe an die linke Kante der 1. Reihe genäht



1. Reihe 2. Reihe

Abb.5 Fadenverlauf U/OU; 2. Reihe an die rechte Kante der 1. Reihe genäht

entstehen. Das ergibt sich dadurch, daß der Faden, der nach der Wendung (/) als zweiter gekreuzt werden soll (O), in der zweiten Verbindungsschlaufe des zuletzt ausgeführten Stiches liegt und, da diese die erste Verbindungsschlaufe für den neuen Stich ist, mit dieser zugleich gekreuzt wird. Die anderen 6 Varianten ergeben, wie bei Verbindungen mit zwei Schlaufen erwartet, feste Stoffe; sie sind sogar etwas dichter, als die Vergleichsstücke mit der gleichen Verbindungsart an der linken Kante. Der Grund ist anhand der Stichvariante U/OU in Abb. 4 und Abb. 5 dargestellt und leicht erkennbar. Abb. 4 zeigt die Stichvariante mit der Verbindung über zwei Schlaufen der linken Kante. Man sieht deutlich, daß die Verbindung die zweite Kreuzung 'U' von U/OU umschließt. Bei der Verbindung mit zwei Schlaufen der rechten Kante (Abb. 5) liegt dieser Kreuzungspunkt außerhalb der Verbindung der Reihen; er trägt zur Verdichtung des Textils bei.

Noch mehr Variationsmöglichkeiten beim Nähen 'von rechts nach links' ergeben sich, wenn die Verbindung zur Vorreihe nicht mit den Schlaufenbögen der Kante, sondern mit den weiter in der Mitte der Reihe liegenden Bögen ausgeführt wird. Hier kommen für jede einzelne Schlinge zwei Schlaufenbögen infrage, die von der Vorder- oder Rückseite her auf die Nadel genommen werden können, und die Verbindung kann wieder mit den Schlaufenbögen einer oder zweier nebeneinanderliegender Schlingen ausgeführt werden. Zu diesen Stichvarianten gehört die einer Kopfbedeckung im 'Het Admiraliteishuis' in Dokkum/Niederlande. Bei dieser hat der Ausgangsstich den Verlauf O/UO und die Verbindung zur Vorreihe wird mit den linken Schlaufenbögen zweier benachbarter Schlingen gemacht, die beide beim ersten Stich der zweiten Reihe von der Vorderseite her von rechts nach links auf die Nadel genommen werden (Abb. 6a). Zieht man den Faden etwas straff (allerdings ohne die zuletzt genähte Schlaufe zuzuziehen), so verformen sich die Schlingen der Vorreihe (Abb. 6b); der links unten liegende Schlaufenbogen wird nach rechts oben gezogen. Für den zweiten und alle folgenden Stiche wird, nachdem selbstverständlich zuvor der Stich O/UO für die entstehende Reihe ausgeführt worden ist, der zweite der für den zuletzt ausgeführten Stich aufgenommene Schlaufenbogen und ein neuer (der nächstfolgende) aufgenommen;

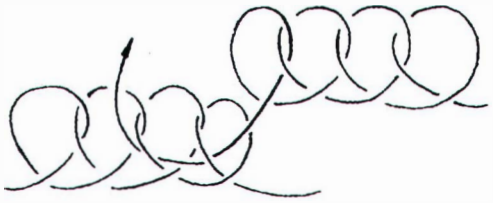


Abb.6a Verbindung der 2. Reihe mit den Mittelschlaufen der 1. Reihe

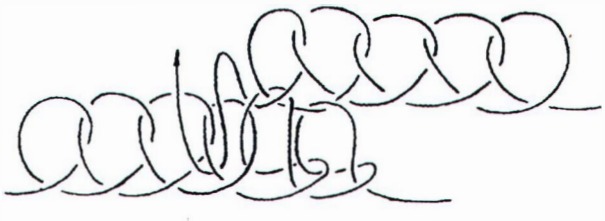


Abb.6b Durch das Anziehen des Fadens verformte Schlaufen

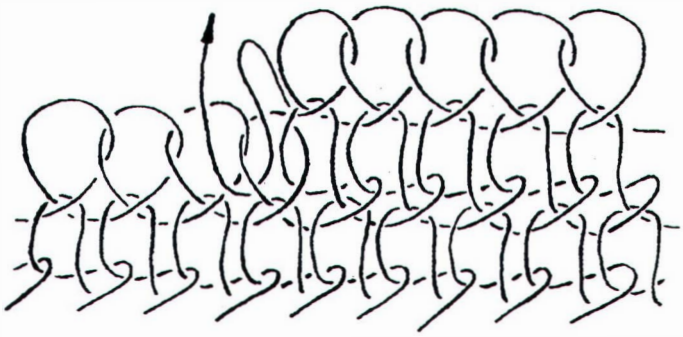


Abb.6c Drei Reihen der Stichvariante der Kopfbedeckung in Dokkum

dabei wird die Nadel von vorne nach hinten durch die 'verformte' Schlinge und von rechts nach links durch den neuen Schlaufenbogen geschoben. Abb. 6c zeigt drei Schlaufenreihen. Die untere Reihe ist abgeschlossen und alle Schlaufen liegen in der musterspezifischen Weise. Die mittlere Reihe ist ebenfalls abgeschlossen, aber nur die Schlaufen, die bereits mit denen der neu entstehenden dritten Runde (obere Reihe) verbunden sind, haben das stichspezifische Aussehen. Abb. 6d zeigt den genähten Stich der Mütze. Mit dem Ausgangsstich O/UO habe ich 10 verschiedene Proben dieser Verbindungsarten genäht; es sind aber viel mehr möglich. Rechnet man für die vier Ausgangsstiche hoch, so erhält man mindestens 40 Stichvarianten. Diese Gruppe ergibt Stoffe für ganz unterschiedliche Gebrauchszwecke; sie reichen von losen, durchbrochenen (Abb. 7) über sehr feste, dichte (Abb. 8) bis hin zu stark strukturierten, dicken, doppellagig wirkenden Stoffen (Abb. 9).

Die zuletzt beschriebenen Verbindungsarten sind alle auch für das Nähen von links nach rechts möglich.

Ich möchte noch den Nadelbindungsfund aus der Umgebung des Ladogasees erwähnen, den Toini-Inkeri Kaukonen (1960) beschreibt. Er ist in einer Art 'Dreh'-Technik gemacht. Bei dieser Technik wird die Schlaufe, an der der Richtungswechsel (zunächst entgegen der Nährichtung, dann in Nährichtung) der Nadel erfolgt, mit der Nadel so verdreht, daβ eine zentrale

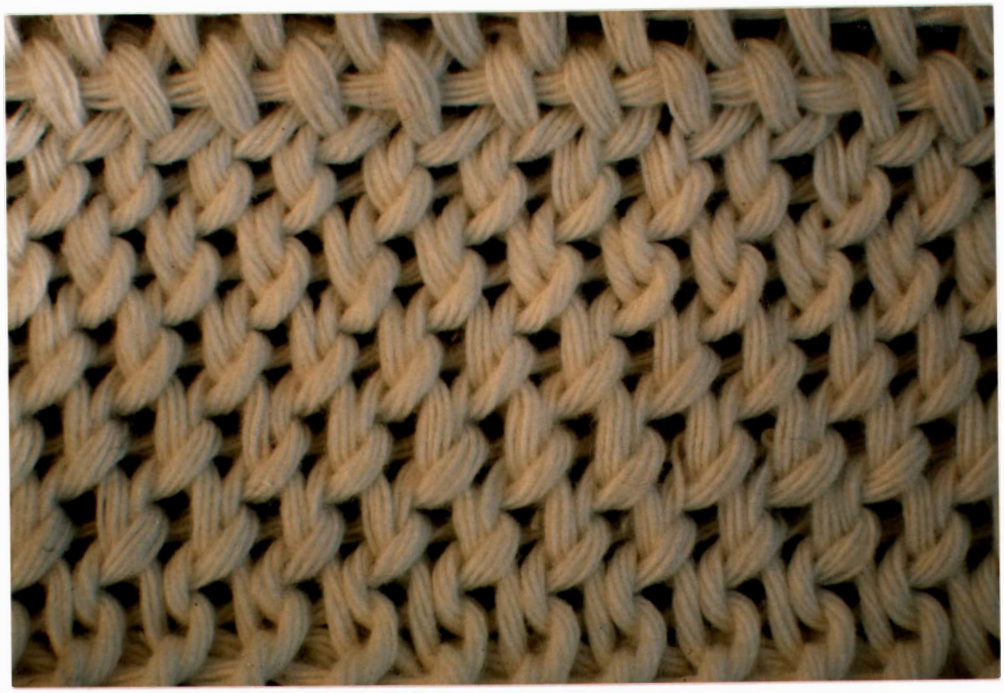


Abb.6d Nähprobe (Vorderansicht) des Stiches der Kopfbedeckung in Dokkum

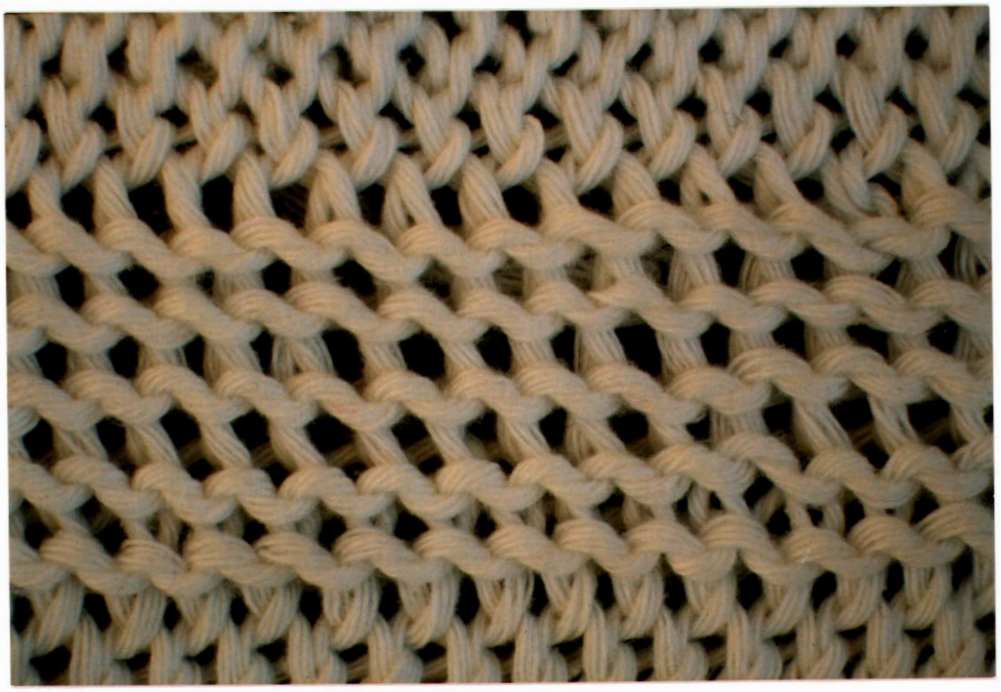


Abb. 7 Lose, durchbrochene Struktur einer Stichvariante

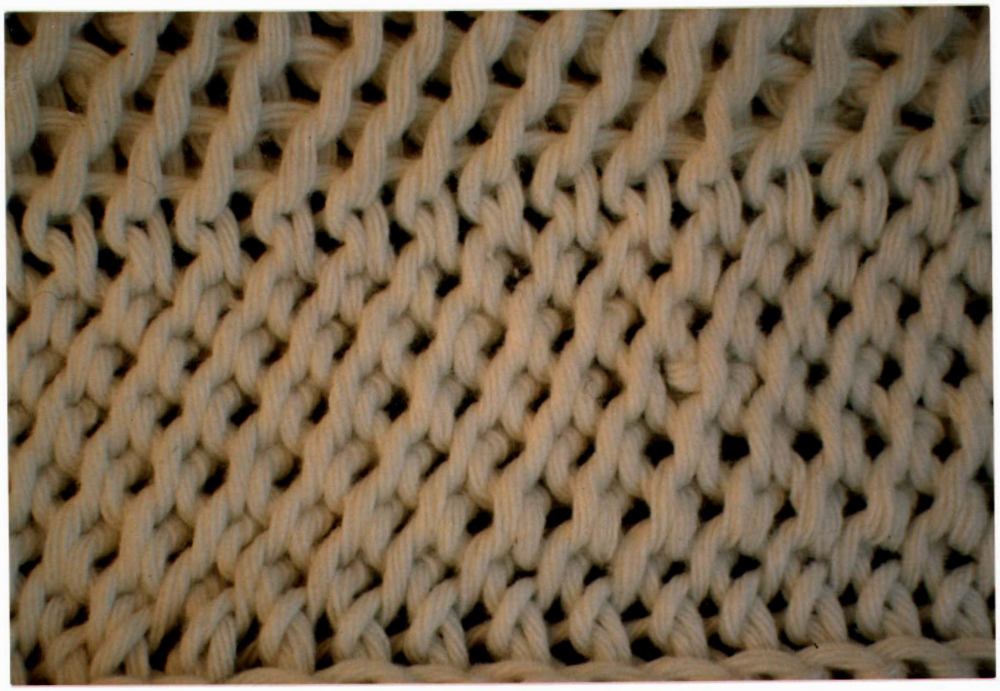


Abb.8 Festes, dichtes Textil durch eine andere Stichvariante

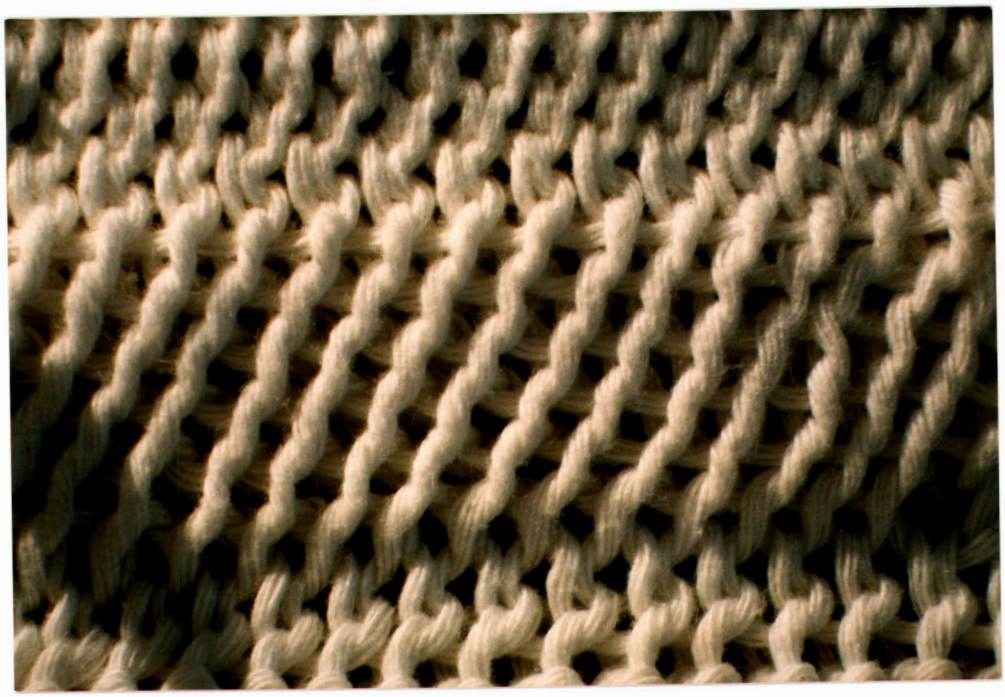


Abb.9 Stark strukturierter, dicker, doppellagig wirkender Stoff durch eine weitere Stichvariante

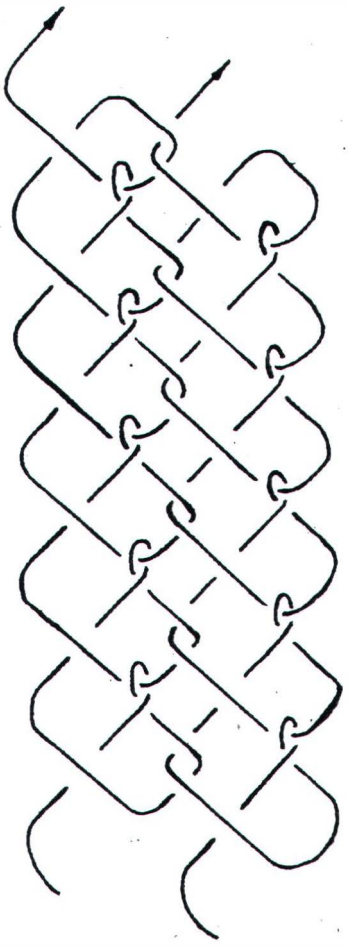


Abb.10 'Dreh'-Technik; Stichvariante mit verdrehter zentraler Schlaufe

Abb.11 rechts: Grundmuster O/UO, links: dichte Struktur der 'Dreh'-Technik

Schlaufe entsteht, durch die die Nadel dann gesteckt wird. Diese für den Typ V angegebene Technik läßt sich ohne weiteres auf den Typ I übertragen, was die Zeichnung Abb. 10 und das Foto einer Probe, Abb. 11, zeigen. Die Probe habe ich von links nach rechts genäht, d. h. eine Folgereihe an die linke Kante der Vorreihe gearbeitet. Ich habe zuerst einige Reihen im Grundmuster O/UO und in der Verbindungsart mit einem Schlaufenbogen der linken Kante genäht und dann zur 'Dreh' - Technik gewechselt, die einen deutlich dichteren Stoff ergeben hat.

Damit ergeben sich insgesamt über 100 Stichvarianten für den Stichtyp I. Einige Varianten lassen sich nicht besonders zügig nähen (sie werden daher für die Praxis keine Bedeutung gehabt haben), manche andere ergeben dieselben Muster, aber die Variationsmöglichkeiten für diesen relativ einfachen Stich sind trotzdem überraschend groß. Ebenso vielseitig sind auch die textilen Eigenschaften dieser Varianten: lose, gitterartige Stoffe ergeben ausgezeichnete Siebe und Netze, was durch zahlreiche archäologische Funde belegt ist, dichte, anschmiegsame sind z. B. für Kleidungsstücke geeignet, die zwar warmhalten, aber nicht sehr voluminös sein sollen, und dicke, doppellagig wirkende Varianten sind bestens für warmhaltende, schützende Winterbekleidung geeignet. Der Nadelbindungstyp I mit seinen zahlreichen Varianten ist also gezielt für Textilien unterschiedlichster Anforderungen einsetzbar.

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Mittelalterliche Webstuhlteile und Gewebefunde aus Braunschweig in Niedersachsen.

Bei Ausgrabungen in Braunschweig in der Langestrasse/Weberstrasse 7-12 wurden im Brandschutt eines Kellers und in mehreren Gruben und Kloaken Webstuhlteile und Gewebereste gefunden.

Die Webstuhlteile stammen aus der letzten Feuerung eines Ofens und sind mit anderen Funden vor Aufgabe und Verfüllung des Kellers nicht mehr aus dem Kellerraum entfernt worden. Aufgrund der mitgefundenen Keramik werden diese Funde in die erste Hälfte des 13. Jahrhunderts datiert. Die erste Durchsicht der Holzfragmente ergab, dass sich darunter auch Teile und Zubehör eines Trittwebstuhls befinden. Es handelt sich um mehrere Reste von Schiffchen (Abb.12), Schaftrollen und -hebeln sowie um einen Kamm (Riet oder Blatt).

Reste von Trittwebstühlen wurden in den letzten Jahren unter anderem in Riga und Winterthur ausgegraben. Sie befanden sich

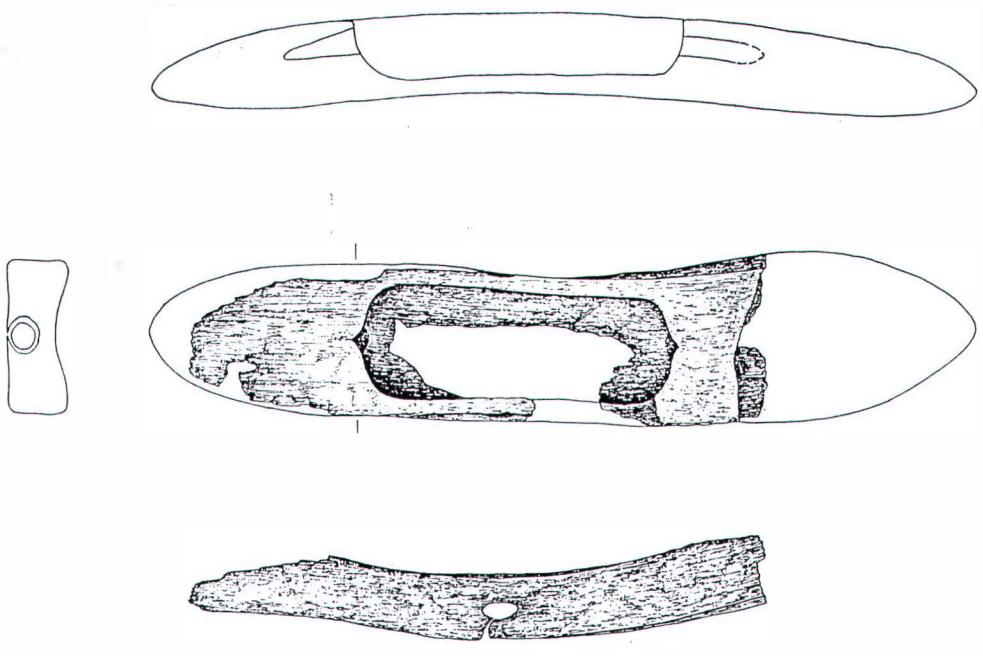

Abb.12 Webschiffchen (mitte 13.Jh.) aus Braunschweig (Weberstr. 11). Maßstab 1:2

in Webkellern und sind Leinenwebstühle, wie sie in Nord- und Mitteleuropa im 13. und 14. Jahrhundert weit verbreitet waren.

Die Webstuhlteile aus Braunschweig sind in diesem Zusammenhang von besonderer Bedeutung, da sie - abgesehen von einer Schaftrolle aus Haithabu - die frühesten Belege fur einen Trittwebstuhl in Norddeutschland sind. Ob es sich jedoch um einen Leinenwebstuhl handelt, müssen die weiteren Untersuchungen und die Vergleiche mit allen anderen bisher bekannt gewordenen Teilen von Trittwebstühlen und zeitgleichen bildlichen Darstellungen zeigen.

Unter den erhaltenen Textilfunden befinden sich verschiedene Wollgewebe in Tuch- und Köperbindung (K 2/1 und K 2/2). Sie stammen aus mehreren Kloaken bzw Gruben. Die ältesten Funde sind in das 13., die jüngsten in das 15./16. Jahrhundert datiert. Sie entsprechen von der Gewebequalität her zeitgleichen Funden aus anderen norddeutschen Städten. Die Reste eines Leinengewebe in Leinwandbindung stammen aus dem Brandschutt des Kellers und sind in die Mitte des 13. Jahrhunderts datiert. Ob dieses Gewebe jedoch auf dem oben genannten Trittwebstuhl gewebt worden ist, kann zur Zeit noch nicht gesagt werden, da die textiltechnischen Untersuchungen noch nicht abgeschlossen sind.

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Textilfunde aus Wiesloch in Baden-Württemberg

Beim Bau eines Regenüberlaufbeckens in der Baiertaler Strasse in Wiesloch stiess man auf eine Schlackenhalde. Sie liegt südöstlich vom mittelalterlichen Stadtkern und wird in der zweiten Hälfte des 11. Jahrhunderts oder im frühen 12. Jahrhundert benutzt worden sein. Unter den geborgenen Funden befanden sich auch Textilien. Es handelt sich um Garne, Filze und Gewebe. Sie sind unter 158 Fundnummern registriert. Es ist der erste grössere hochmittelalterliche Fundkomplex aus Süddeutschland, der für textiltechnische Untersuchungen zur Verfügung steht und einen Vergleich mit zeitgleichen Textilfunden aus Norddeutschland zulässt.

Aus der Baiertaler Strasse in Wiesloch sind ausser Garnen drei Filze und 157 Gewebe erhalten, die alle aus Schafwolle gewebt worden sind. Textilien aus pflanzlichen Fasern haben sich nicht erhalten. Es sind Gewebe in Tuch- und Köperbindung (K 2/1 und K 2/2) (Abb.13), während keine Ableitungen wie Panama, Rips, Fischgrat, Diamantkaro oder Kreuzköper nachgewiesen werden konnten. Sie sind überwiegend von grober und mittelfeiner Qualität, sehr grobe und feine Gewebe sind selten. Bemerkenswert ist, dass an keinem dieser Wollgewebe eine Gewebe-anfangskante bestimmt werden konnte. Einfache und verstärkte Seitenkanten liegen dagegen vor. Es ist davon auszugehen, dass alle Wollgewebe auf Trittwebstuhlen gewebt wurden - ob auf einem schmalen Wollwebstuhl oder einem breiten Zweimannwebstuhl kann allerdings nicht gesagt werden. Wo die Wieslocher Wollgewebe gewebt worden sind, wissen wir nicht, da Wollfeinheitsmessungen und Farbstoffanalysen bisher nicht gemacht worden sind. Sie würden möglicherweise Hinweise auf die Herkunftsarte bzw -gebiete geben. Zwei Gewebe sind stark verfilzt und als Tuche anzusprechen. Sie dürften Importwaren sein, während die groben und mittelfeinen Gewebe wohl die Produkte heimischer Weber sind. Eine Schafzucht ist für die Region um Wiesloch fur das späte Mittelalter nachgewiesen.

Unter den Wieslocher Funden fehlen Wollgewebe aus Kammgarnen (in Köperbindung K 2/1 mit grossen Einstellungsunterschieden im Verhältnis Kette : Schuss). Solche Gewebe sind aus Norddeutschland (Grabungen Emden und Schleswig) bekannt. Sie waren im 11.-13. Jahrhundert eine wichtige Handelsware.

Die Textilfunde aus Wiesloch werden zur Zeit vom Verfasser bearbeitet. Eine Publikation der Untersuchungsergebnisse ist vorgesehen.

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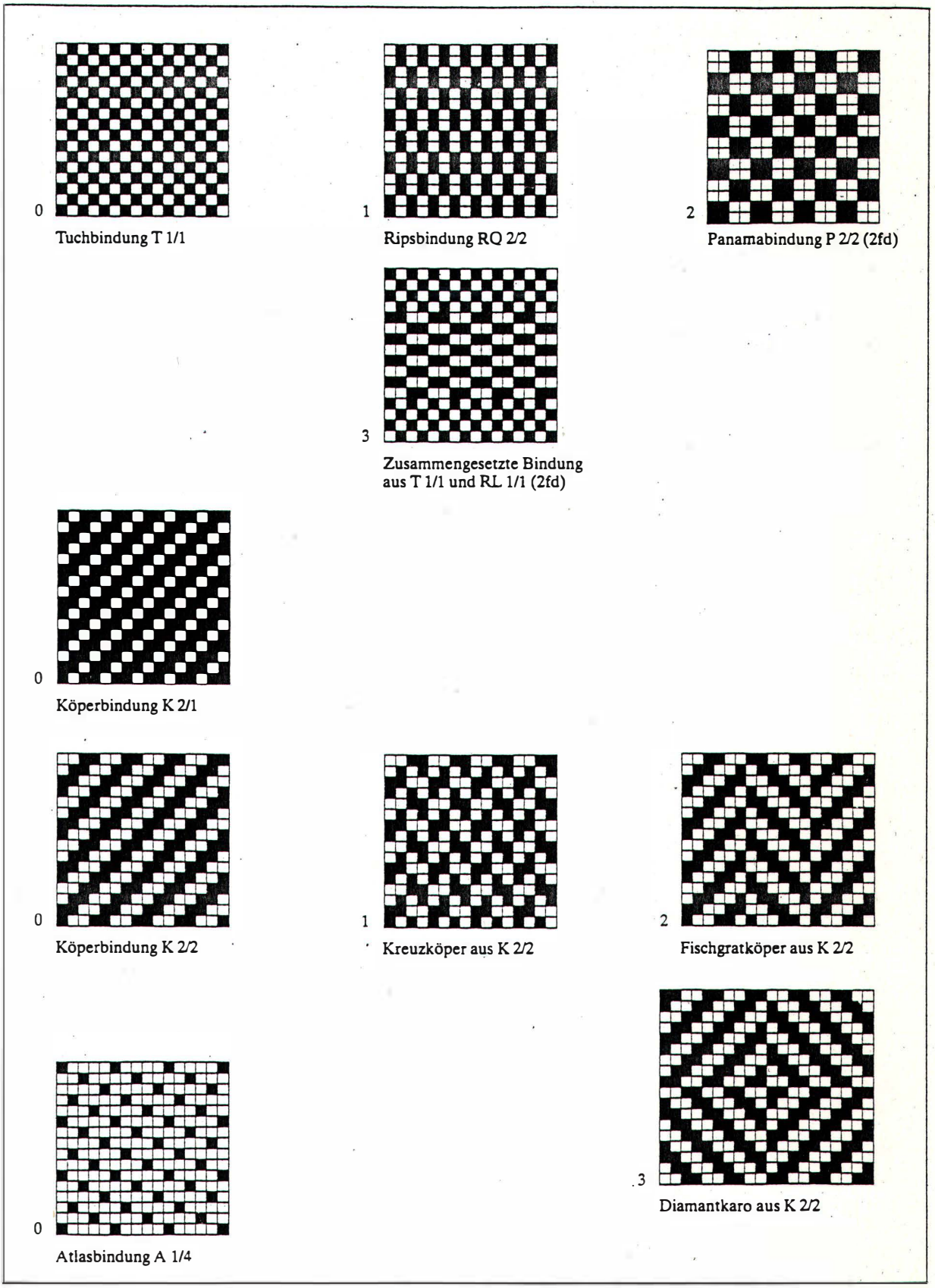

Abb.13 Bindungspatronen der Wollgewebe des 7.-17.Jh. (vereinfachte Darstellung)

Fig.14 Marta Hoffmann (in the middle) studying weaving on the vertical two-beam loom on a farm in Øvre Hålandsdal, Hordaland, Western Norway, 1956. (Photograph: Norwegian Folk Museum)

Obituary

Marta Hoffmann

The field of textile history lost an eminent scholar when dr. philos. Marta Hoffmann died in February 2001. She was born in 1913 and took her M.A. degree at The University of Oslo in 1939 with Art History as her main subject and Nordic Archaeology and German Literature as subsidiary subjects. In 1940 she started her professional career at the Norwegian Folk Museum in Oslo. When she retired in 1980 she was head of the Department of Folk Culture.

Marta Hoffmann's interest in textiles had its

origin in the large collection of textile tools at the Norwegian Folk Museum. Most of the tools were acquired from farms where they had been part of the necessary household equipment, but the knowledge of how they had been operated was almost forgotten. She felt the need to collect information on the tools and did it not only by studying written sources and old textiles but also by making and distributing questionnaires and by travels in the countryside. In several cases she succeded in finding old women who worked in the old tradition, or could tell her how it was done in their youth. They let her document the work in photos and film and the knowledge was thus preserved for future generations.

Marta Hoffmann published extensively on textile tools and their products in Norwegian, English and German. A bibliography of her writings up to 1984 is compiled in the yearbook of the Norwegian Folk Museum, *By og Bygd*, vol. XXX. The textile implements preserved in Norway are part of a common European heritage and many are of types which go far back into history or even prehistory. Her writings are therefore of particular interest to all dealing with archaeological textiles and textile production. Marta Hoffmann's dissertation *The Warp-weighted Loom* (1964) won her international acclaim and appeared in three editions. It is still regarded as a standard book on one of the oldest types of looms in Europe. In 1991, at the age of 77, Marta Hoffmann summed up much of her unique knowledge in the book *From Fibre to Cloth. Textile Tools and Implements and their Use in Norwegian Tradition.* The book was published in Norwegian but with an English table of contents, summary and captions.

Early in her studies of textile history Marta Hoffmann discovered the problems arising from the use of ambigous terms. She took an interest in terminology and from the end of the 1950s she worked on the Scandinavian version of the CIETA (Centre International d'Etudes des Textiles Anciens) vocabularies together with Elisabeth Strömberg, Agnes Geijer and Margrethe Hald. The first Scandinavian Textile Terminology appeared in 1967 in Lyon. A new enlarged edition, revised by Agnes Geijer and Marta Hoffmann, was published in Norway in 1974 and a third edition in 1979.

As a scholar Marta Hoffmann was thorough, critical and inexhaustible. She tried to get to the bottom of sources and was never satisfied just with the explanation of others. She prefered facts to speculations and often repeated to fellow researchers the question she once was asked by Professor Eleanora Carus-Wilson, one of the foremost authorities on medieval economic history: 'What do you have for evidence?'. The pursuit of evidence did not mean she never launched an hypothesis. However, she was eager for her hypotheses to appear just as that and not as the truth.

Through her research Marta Hoffmann became part of a large international network of scholars. Many people in that network became her lifelong friends. She shared her knowledge in a most generous manner not only with them but with all who called on her expertise. She was devoted to science.

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Reports

Berenike 2001

As in 2000 (*ATN* 31. 2000, 18-20), the material studied on site in February 2001 came almost entirely from a series of deposits in an early Roman midden, which (to judge by the associated dated pottery and documents (ostraka)) was no longer used after about AD 75. The midden lay NW of the heart of the later Roman town, but over and among early Roman structures. The messages on the ostraka suggest that a customs post lay nearby.

The Roman textiles, as opposed to textiles imported from overseas, fall into a relatively limited range of types. The wool tabbies (1/1) are mostly fine (*c.*11 by 18 threads per cm); a few very fine (*c.*24 by 25 threads per cm). Some are in check or striped; many carry tapestry-woven bands in dark blue or blue-green yarn. Selvedges round bundles of warp yarn with extra weft

wrapping are standard. Worn-out textiles, particularly of wool, were regularly recycled as padding, stitched together with goat-hair thread. Flax basket weaves (*c.*10 pairs by 6 pairs per cm) were common. Flax tabbies vary from very fine (*c.*30 by 10 per cm) through medium-fine to coarse (*c.*5 by 6 per cm). Some are even coarser, woven of incompletely prepared flax fibres. There is also flax webbing in basket and half-basket weave. The coarse but notably uniform goat-hair fabrics were presumably local products. Their plied yarns are dark brown to black, but darning is usually in a yellow goat hair. A heavily repaired ?camel-girth or carrying strap and the corner of a possible tent-panel are among the larger goat-hair items to survive.

The midden group compares well with the corpora of contemporary textile finds from the early Roman forts along the roads between Coptos and Myos Hormos (Quseir) and Berenike. Few of the really complex weaves, however, are represented at Berenike. It is evident that the sources of supply available to the Roman army and to the far-flung maritime centre at Berenike were limited in number and repertoire, although their quality was excellent.

The Berenike corpus on the other hand is unique in the high proportion of 'intrusive', ie imported, textiles present. The largest group by far are the cottons, amounting perhaps to half of the entire assemblage, and most of those are woven exclusively of Z-spun (clockwise spun) yarns. We have argued elsewhere (Wild and Wild 2000, 271-273) that they are of Indian origin: the supporting archaeological evidence for unequivocally Indian imports to Berenike (peppercorns, coconuts, Sri Lankan beads, semi-precious stones, teak) increases annually. It was encouraging to note that Sri Lankan beads were threaded on fine Z-spun - presumably Sri Lankan - cotton cord.

Most of the Z/Z cottons are fragments in plain tabby weave. Medium weight fabrics (*c.*12 by 6 threads per cm) and medium-fine fabrics (*c.*15 by 10 per cm) dominate. Again this season there were a handful of exceptionally fine tabbies (*c.*60 by 40 per cm), the best candidates for the traded cotton sheets mentioned in the contemporary *Periplus Maris Erythraei.*

Much of the medium cotton could have been sail cloth, although this season, by contrast to previous years, we found no certain example of the characteristic reinforcing strips which covered the sail in a grid pattern. Nevertheless, a few more loose pieces of cotton webbing with strong plied warp were recovered. To redress the balance, however, a large number of fragments of flax webbing were found, in four cases showing a pinkish-red pin-stripe near each selvedge, a type already well known from recent excavations at Myos Hormos. In two cases the webbing (one with pink pin-stripe, one without) was attached to medium-weight flax tabby, presumably the remains of the Mediterranean or Nile Valley linen sails, of which the absence has been so puzzling in the past. This added evidence may support the case for associating the cotton webbing, some with blue pin-stripes, with (Indian) cotton sails. The existence of sails of Indian cotton made to an apparent Mediterranean blue-print (grid pattern of reinforcing bands overall, a scheme *not* recorded in Indian sources) has considerable implications, not least for discussion of the character of Graeco-Roman settlement in the trading stations along the Indian coast.

It seems likely that a high proportion of the Indian cotton fragments at Berenike reflect items brought in by those directly involved in the India trade, and not intended for onward sale. This is probably true of the blue and white check fabrics discovered, a decorative style which can be paralleled in the art of the Ajanta Caves. It is even more likely to be true of the heavy cotton 'carpets' (*ATN* 31, 19), of which two more fragments were found this season.

There was also an opportunity this season to re-examine the earlier 'carpet' finds and record their structure. Four of them (1514, 1527, 1537, 2338) had multiple plied warp; weft shots were of from 4 to 8 single yarns each (not always consistent across an individual specimen). 1527 had a straightforward wrapped selvedge over 3 warp bundles, but the selvedge of 2338 was more complex. There was extra weft wrapping, but the warp bundles were supplemented on one side (perhaps for decorative effect) by additional dark brown warp yarns that had almost completely vanished. (They had probably been dyed red

with an iron mordant that hastened decay.) 1514 and 1527 were covered with rows of symmetrical ('Ghiordes') knots (1527 was double-sided).

The two new finds (3133, 3134) both had plied warp and grouped weft. 3133 had a knot best described as 'incomplete Ghiordes': it could have been a product of wear or damage (all the 'carpets' were heavily worn).

Another fabric of 'carpet' character (2134) had paired warp and weft. At first glance it seemed to have a pile of assymmetrical ('Persian') knots; but on closer inspection they proved not to be cut, but to be linked to one another by loops which once stood proud of the fabric surface.

The 'carpets' were once probably shipboard comforts that would have been equally welcome in the spartan conditions of a desert port. (They were probably not designed specifically to be laid on the floor.) Modern textbooks claim that carpets were first made in India in the sixteenth century under Persian influence: the Berenike finds demonstrate that this is inaccurate. Knotted carpets in antiquity had a distribution stretching from the Roman eastern provinces through Mesopotamia, Persia and into Central Asia. India can now be added to this list.

For good measure, from a late Roman context, we were able to add a further piece to the corpus of resist-dyed Z/Z cotton textiles. It showed (white, reserved) dot rosettes inside blue circles, an unmistakably Indian design.

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The Textiles from the 2001 Excavation Season at Quseir al-Qadim, Egypt.

The textiles from the 2001 excavation season totalled 294 examples: 231 Roman, 27 Islamic and 36 undatable, being from mixed contexts. The predominance of Roman textiles resulted from the excavation of Roman *sebakh* and occupation layers on high ground. The relationship between two of the trenches was neatly demonstrated by the discovery of a fragment of coarse goat's hair textile which is distinctively decorated with a dotted pattern in yellow goat's hair. Only two examples of this have been found at Quseir al-Qadim, one in trench 8 and one from the sebakh deposit directly down the slope from it. The few Islamic textiles came mainly from surface deposits, with occasional finds in the Islamic buildings which generally had a poorer preservation due to their lower stratigraphic level.

Roman Textiles

Wools. Like last year, there was a substantial proportion of twill weaves found, with 29 examples of 2/2 twill and ten examples of 2/1 twill. Of the more complex examples, 11 were found, mostly in a very fragmentary state, making precise analysis difficult, but incorporating some herringbone and chequer-board patterns. 17 examples of *clavi* were found in brown, green, red and purple. This year produced a variety of Roman wools with woven-in signs that also originated from tunics. Using Mannering's classification system (Mannering 2000), there were 11 examples that fell into the categories of either delta, gamma, iota or eta, but because of their fragmentary nature it was impossible to identify them exactly. To add to these, there was one swastika, one well-designed arrow and one very unusual piece combining many different motifs (Fig.15). Also of interest were the few fragments of a piece of woollen striped mat or rug, which with its stripes of green, brown and red, closely resembled Islamic textiles found in previous years. Of the many small coloured wool fragments, one especially stood out for its unusual bright orange colour.

Straps. There were nine bast webbing straps found this year, ranging in width from 1.8-6.5cm, though mostly between 3-4.5cm. Two of them had pink warp stripes, and one

was sewn to another piece of textile. This is especially interesting as this is the first example from Quseir of a piece of webbing attached to anything other than itself, and may reveal information about the webbing's possible function. It may possibly have been used for the reinforcing strips depicted on pictures of Roman sails (Wild and Wild 2000). However, our small piece probably does not illuminate this argument any further, as it is sewn to a piece of coarse, loosely woven bast that does not resemble sail fabric, which one would expect to have a reasonably tight, close weave.

Pile weaves. The excavations at Quseir have so far produced few examples of pile weaves. However, this season surpassed expectation as 6J 4040 produced five examples of Roman weft-faced pile weaves, four in cotton, one in linen. In one example the tuft of pile was under every fourth warp and every fourth weft. These will be examined in closer detail next year.

In terms of garments, there were the remains of a much-repaired tunic with gamma patterns and a sleeve constructed from fine 'Z' spun cotton that was very neatly tailored around the cuff, though extremely fragile. The origin of this shirt is of great interest, considering its high quality and unusual tailoring.

Islamic textiles

Of the Islamic textiles found this year, few were of note. The remains of a cap were found following the familiar pattern of a crown of eight segments in high quality blue and white checked or striped cotton, held with a 7cm band and lined with sturdier cotton fabric. There were three examples of resist dyed cottons found this year, all of the poor-to-medium weave and print quality we expect at Quseir, but each with a floral pattern new to the site. One unusual find was a warp-faced strap 20cm long and 2.5 cm in width, with multi-coloured warps in red, turquoise, yellow and purple. One interesting weave was an example of a brown cotton tabby with decorative weft stripes created through croisage of the warp threads. The crossing of the warps was held in place by two shots of weft and the pattern was repeated every nine wefts.

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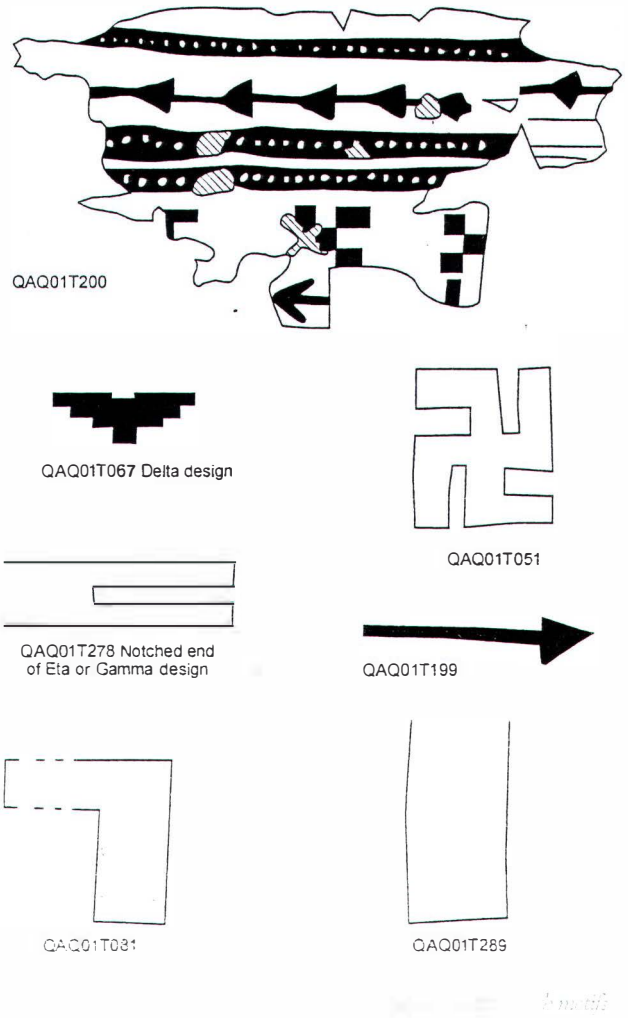

Fig. 15 Decorated Roman wools from Quseir al-Qadim

Reviews

The Textile Project Mons Claudianus: Borås, April 1-2, 2001.

As many as 50,000-100,000 textile fragments have been excavated from rubbish heaps, connected with the Roman quarries at Mons Claudianus in Eastern Egypt. For about 50 years (1st-3rd Century A.D.) this site in the desert was the working place for more than 900 persons: quarrymen, slaves, workers, administrators and architects, who assisted with the provision of marble for columns and buildings in Rome. The ostraca - potsherds with texts - tell us about a multifarious population, gathered from different parts of the Roman Empire, also including some women and children.

On April 1-2, 2001 a Seminar on Roman textiles, with special respect to the Mons Claudianus finds, was arranged at Högskolan in Borås, Sweden in cooperation with the Textile Research Centre - CTF and Väfskolan - the School of Handweaving.

An international team of archaeologists and papyrologists excavated at Mons Claudianus 1987-1993, under the aegis of the French Institute of Oriental Archaeology in Cairo (IFAO). Soon it became evident that a textile expert was needed, and in 1990 Danish archaeologist Lise Bender Jørgensen was invited to join the project and investigate the abundant textile remains. She, on her part, noticed the rich variations in the textile material and soon found it neccessary to involve craftspeople and hand weavers for the analysis and descriptions of these important artefacts.

At this point Väfskolan - the School of Handweaving - at the University College of Borås became involved. Two of Christina Rinaldo's students, first Lena Hammarlund and later Martin Ciszuk, became interested in reconstructing the fine fabrics of Mons Claudianus.

With the help of photo enlargements, Martin Ciszuk has investigated the woollen *taquetés* (6) and damasks (43). Samples have been woven on a modern Swedish draw-loom, but Ciszuk has also reconstructed a vertical two-beam loom, with the ancient zilu-loom from Iran as a model. It is very possible that the *taquetés* were produced on such a one. The pattern shafts are manipulated by hand. The Mons Claudianus *taquetés* are the oldest examples known of their kind.

Lena Hammarlund, now at the University of Göteborg, has analysed the woollen tabbies and twills. Twist and diameter of the yarns, weave, thread count and finishing of the fabrics have been closely studied. Sample webs were reproduced on a warp-weighted loom. Perhaps certain centres for the textile production could be determined in the future?

Research on dress and garments has been done by Ulla Mannering, archaeologist at the University of Copenhagen. Most of the textiles are heavily worn, patched and repaired. Knowledge of the clothing of Roman workers and slaves is quite limited, something that makes Mannering's work a challenge. Finds do, however, include at least two almost complete tunics for grown-up people and one child's tunic. About 240 tapestry woven bands (*clavi*), once woven into the garments, add further to this, as do a number of so-called gamma signs that served as decoration of cloaks. Had these designs a special social status and a symbolic meaning?

Ulla Viklund, postgraduate student at the Norwegian University of Science and Technology - NTNU - in Trondheim, has chosen colours and dyes as the subject for her research. She found purple to be the most common colour among the Mons Claudianus textiles, followed by blue and green.

During the Seminar Adina Ekbergh Mattsson from the Museum of Mediterranean and Eastern Antiquites in Stockholm showed examples of reconstructed Roman clothing and Lena Larsson-Lovén gave a lecture on "*Lanam fecit* - She worked with wool." Was it considered a moral principle in the Roman Empire that a woman should be skilled in textile crafts?

Professor Lise Bender Jørgensen, since 1996 at the NTNU in Trondheim, Norway, mentioned in her conclusion that the interaction of craftspeople and academics from different disciplines had proved invaluable for the Mons Claudianus Textile Project and made it possible to introduce new forms of knowledge into the field of

textile research. Funding has been generously granted by the Joint Committee of the Nordic Research Councils for the Humanities (NOS-H), Agnes Geijer's Foundation for Nordic Textile Research, G.E.C. Gad's Foundation and the Swedish Research Council for the Humanities and Social Sciences (HSF-R).

Other important news was that a Nordic Network for Material Orientated Textile Research had recently been founded at Högskolan in Borås. Emphasis is laid on a more serious approach to the textile material, to get a place for it as a primary source of research. A seminar is planned in the second week of April 2002 in Borås with the theme 'Development of Theory and Method'.

We are very much looking forward to further dialogues, as well as the arrival of a zilu-loom from Iran to Borås.

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Precolumbian Textiles in Barcelona
April 23-25, 2001

The Second International Meeting on Precolumbian Textiles took place in the Textile Museum in Barcelona-Tarrasa between 23rd and 25th April 2001. Professor Victoria Solanilla of the Department of Art History of the Universidad Autónoma de Barcelona was responsible for the excellent organisation. Financial support was provided by the University as well as the Instituto Catalán de Cooperación Iberoamericano and the Centro de Información Textil y de la Confección. There were three days of intense work and fruitful encounters in which various interesting themes were touched upon.

C.C.Oralia (Arizona State University) made an archaeological analysis of the textile-working tools found in Teotihuacan (Mexico) from the Classic Mesoamerican Period. Textiles from an archaeological context have added interest when accompanied by documentation and a direct reading of their history: the communications of M.Bambier on well- and chamber-tombs (tumbas de pozo y de cámara) with preservation of textiles from the Late Pre-Inca stage from San Juan, Argentina, and M.Jiménez Díaz (Universidad Complutense de Madrid) on the weavings of the Valle del Jequetepeque (Peru) illustrated this well.

The Classical Mayan royal costumes were analysed by Geneviève Le Fort (Université Libre de Bruxelles) with the aim of reconstructing ritual life and the symbolic thinking of the Mayas in the Classical Period and to elucidate the power of royalty through the use of the vestments of the gods.

Relying on written testamentary sources, Paulina Nümhauser (Jerusalem) brought to life the role in the local economy of some Chilean women from the sixteenth century. The sale of coca generated substantial wealth for these women which enabled them to keep a rich wardrobe for daily use and to bequeath to thier loved ones after death. Dr Jane Feltham concentrated on the textiles of the Late Intermediate Period (Periodo Intermedio) and the Late Horizon (Horizonte Tardío) proceeding from Pachacamac (central coast of Peru). The changes in the textile techniques of these periods were defined by means of formal comparisons. The analysis of some notes and calculations by the pioneer F.Uhle formed the basis for a virtual reconstruction of a possible Pachacamac textile by Alfredo Alberdi, and P.Eeckhoult (Université Libre de Bruxelles) presented the entire process of discovering and unwinding (desenfardelamiento) a mummy from the same area.

The technique of tapestry was reviewed in comparative terms by Rosa María Martín i Ros (Museo Textil i de Indumentaria de Barcelona) using beautiful Hispano-Arab and Precolumbian textiles. Tradition and change, the anthropological aspects which give life to textiles, formed the basis of Eva Fischer's contribution (Austria).

Precolumbian weavings are supreme examples of the beauty of colourist geometry. Artists like Klee and Picasso and so many others enjoyed their beauty and used them to inspire specific aesthetic constructions, as F.Anton (Munich) explained. Geometry, meaning, ideological background and forms of expression lit up the work of several investigators and are

worthy of close attention. Among them were Anne Paul (CNRS Paris), Margaret Young-Sánchez (Denver Art Museum, Colorado), P.Brugnoli y S.Hoces de la Guardia (Escuela de Diseño del PUCC de Chile), Heiko Prümers (KAVA Bonn), Osvaldo Granda (Colombia) and H.Gordon (Flinders University, Australia). Of these we would like to make special reference to the work of Dr Laura Laurencich Minelli (Università di Bologna), in which she made a connection between the knots of the mathematical *quipus* and the ideogram-numbers of the *tocapus*, following the interpretation of Blas Valera (sixteenth century) preserved in an unpublished manuscript in the Museum of Naples.

The subject of dyes used in Precolumbian textiles was investigated in depth. We were able to contemplate the long process, starting for the analysis of colour matching to a description of the interesting dyeing techniques still used in some Latin American countries. Recent studies show that Callium and Annto should be added to the better known range of red dyes, Cochineal and Reldbunium (Ran Boythner, UCLA Institute of Archaeology, Los Angeles). 'Reserved dyes' provide great beauty and variety which make formally simple materials stand out amongst Precolumbian Andean textiles (P.Brugnoli y S. Hoces de la Guardia).

The dyeing system of the Boruca people of Costa Rica was described by Ifigenia Quintanilla (Universidad Autónoma de Barcelona). They obtain the colour from the extraction of a purple liquid from a type of mollusc (without harming them). The dye is deposited on cotton skeins. The comparison of this form of labour with the dyeing techniques used by the ancient Phoenicians and Romans is of great interest.

The analysis of some collections of Precolumbian textiles kept in European and American museums was the focal point for various contributors. G.Esteban-Johansson spoke about the group of textiles from the Valle de Agarí (Peru) in the Gothenburg Museum, Sweden. L.Laurencich and M.Farnetti reviewed the Hugo Canepa Textile Collection (Dinz Rialto Museum of Rimini). Victoria Solanilla, organiser of the workshops, made a close study of nine extraordinary specimens recently acquired by the Barbier-Müller Museum, Barcelona. D.Biermann (Stuttgart) spoke about the Textiles of the Palpa Project (Nazca) and J.Juan-Tresseras (Universidad de Barcelona) analysed the imprint left by a piece of fabric on a ceramic pot from the Hacienda Moxitana de San Ignacio de Moxos, Bolivia.

The world of basketry, always a minority in textile studies, was tackled by C.Pérex de Micou (Universidad de Buenos Aires), relating to funerary finds in NW Argentina.

To offset the lack of a clear Spanish terminology, overall criteria for the classification of Precolumbian textiles were proposed in a marvellous talk by Dr R.Fung de Pineda (Lima). Before the next meeting it was also planned for work to be undertaken on a dictionary of textile terminology in which Spanish and English definitions and technical illustrations will feature.

And so, with much brilliance, fruitful discussion and good oganisation, the meeting came to a close. The results will be published as soon as possible.

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Textiles in situ: Their Find Spots in Egypt and Neighbouring Countries.
Abegg-Stiftung, Riggisberg, Switzerland (4-5.10.2001)

Despite the problems of the world situation and the grounding of Swissair the previous day, about sixty archaeologists and art historians from Europe, America and Israel gathered for a two-day Colloquium at the Abegg-Stiftung on 'Textiles in situ: their find spots in Egypt and neighbouring countries'.

In her introduction, the programme organiser, Sabine Schrenk, set the scene by stressing the importance of the context in which textiles were found in providing information on such aspects as date, function and technique. The first main session consisted of three papers on textiles from funerary contexts from sites in different parts of Egypt. Włodzimierz

Godlewski (Warsaw) discussed the material from Naqlun in the Fayoum, where a complex of hermitages and monasteries dating to between the 6th century AD and the Fatimid period produced some well-dated groups of textiles from burials. Béatrice Huber (Tübingen) compared the textiles from various contexts on three sites around Sharuna on the Nile, from burials dating from the end of the 3rd to the 8th-9th century AD. Finally, Nobuko Kajitani (Metropolitan Museum of Art, New York) reviewed the textiles from the excavations of 1930-31 in the 3rd-4th century AD cemetery of el-Bagawat in the Kharga oasis, now in the Metropolitan Museum.

The afternoon session, 'Textiles from Funerary and Domestic Contexts', dealt more directly with the contrast between these two types of find spot. In a number of the papers, the problems arose of dealing with material from old excavations with (by modern standards) inadequate records, making reevaluation difficult, if not impossible. This was particularly clear in the paper by Claudia Nauerth (Ernst Moritz Arndt-Universität, Greifswald) on the material from the town of el-Hibe and the cemetery at Karara. Cäcilia Fluck (Suderlügüm) presented her work on textiles from Arsinoe excavated in the 19th century, where, again, there were limitations as to what could be deduced. Loretta Del Francia Barocas (Rome) reviewed some of the archaeology of Antinoopolis and the textiles that could be linked to it. By contrast, Hero Granger-Taylor (London) was on firmer ground in her comparison of the textiles from the more recently excavated and well-dated sites of Masada (Israel) and Kirbet Qazone (Jordan), analysing the material from both burials and rubbish heaps. Finally, Gillian Vogelsang-Eastwood (Leiden) presented a summary of our current knowledge of archaeological textiles from Iran, sadly limited and, as she commented, far behind the other areas covered by the Colloquium in their study.

The Friday morning session, 'Textiles from Work-place and Domestic Contexts', opened with three papers summarising the archaeology and textile finds from three Roman-period sites of different types and dates in the Eastern Desert of Egypt, offering fascinating opportunities for comparison in date, function and use. The sites discussed were the early Roman quarry site at Mons Claudianus (Ulla Mannering, Copenhagen), the late Roman fort at Abu Sha'ar (Lise Bender Jørgensen, Trondheim) and the port at Berenike (John Peter Wild, Manchester), where the textiles came from two midden deposits, one early Roman and one late Roman, and contained a high proportion of imports. Orit Shamir (Israel Antiquities Service) then analysed the textile assemblages from way stations along the road from Petra to Gaza and its branches, of similar date to those from the Egyptian sites of the previous papers.

To start the afternoon session, Thelma Thomas (Kelsey Museum, Ann Arbor) attempted reevaluation of the textiles from Karanis in the light of their archaeological contexts, though once again, the limitations of material from old excavations proved an obstacle. The Colloquium ended with discussion of three single issues: Petra Linscheid (Berlin) demonstrated that the findspots of sprang fabrics, on the heads of female burials, provided evidence of their function; Alisa Baginski (Jerusalem) analysed the significance of a deposit of early mediaeval textiles in the recesses of a cave east of Jericho and Nettie Adams (University of Kentucky, Lexington) discussed textiles sealed by the destruction of the Temple of Isis at Qasr Ibrim in the 6th century AD and their significance for our knowledge of Isiac ritual.

In all, the Colloquium provided new insights and provoked new lines of inquiry. By comparison with the magnificent pieces in the collection of the Abegg-Stiftung, the pieces discussed were old rags, patched, recycled, and - on settlement sites - thrown on the rubbish heap. Just how much these rags, in their context, can tell us about date and technique, their function and the people who used them, was clearly brought out in the various papers. The Abegg-Stiftung's collection shows us the treasures of the wealthy and may indicate the original appearance of the archaeologists' scraps, but it is the rags that shed most light on the daily life of the 'man in the street'.

Thanks are due to the Director and staff of the Abegg-Stiftung for their hospitality and for the smooth running of the Colloquium, and congratulations to Sabine Schrenk for arranging such a stimulating programme.

The full publication of the papers as a *Riggisberger Bericht* is eagerly awaited.

Felicity Wild

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Ellis, M., 'Embroideries from Islamic Medieval Egypt in the Newbury Collection, Ashmolean Museum, Oxford', *Textile History* 32 (1), 2001, 61-74

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ISBN 3-905014-17-3
The publication, in English, contains several articles about Central Asian textile finds excavated a few years ago at the south-western border of the Taklimakan Desert (Chinese province of Xinjiang). The publication was produced in close collaboration with Emma C. Bunker from the Denver Art Museum as well as with the Directors of the Xinjiang Museum and the Institute of Cultural and Historical Relics and Archaeology of Urumqi.

Walton Rogers, P., L. Bender Jørgensen, A. Rast-Eicher (edd.), *The Roman Textile Industry and its Influence. A Birthday Tribute to John Peter Wild,* Oxbow Books, Oxford, 2001. ISBN 1-84217-046-5.
The volume contains twenty-two essays, ranging across the Roman world from Egypt to the Atlantic coast, the northern frontier and beyond. They cover everyday clothing, tapestry-woven and gold-brocaded fabrics, the contemporary clothing and textiles of the peoples beyond the frontiers and the influence of Roman fashions and technology in later times.

M.L.Ryder has sent in the following list of his semi-popular articles, not listed before in ATN. They appear in *Textiles Magazine*, published by the Textile Institute, Manchester.

'Silk - the Epitome of Luxury', *Textiles Magazine* 26 (1), 1997, 17-21

''Fleece evolution and textile crafts', *Textiles Magazine* 26 (2), 1997, 15-21

'Palms, Pearls and Pinnacles', *Textiles Magazine* 26 (3), 1997, 23-24

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'Can Spider Silk be used in Textiles?', *Textiles Magazine* 28 (2), 1999, 20-23

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'Ancient Fibres from the Silk Route', *Textiles Magazine* 29 (1), 2000, 18-19

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http://www.pr.mq.edu.au/macnews/august01/mummy.htm

An article has been promised for a future number of ATN!

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Notes and Queries

Why peat preserves textiles

Some recent research carried out in Norway provides a new explanation for the preservation of organic material, including textiles, in peat bogs. Readers of this

journal will be familiar with bodies, such as those of the Danish Bronze Age, surviving in peat, but food, such as the Scottish 'bog butter', has also been preserved in the same way for hundreds of years. And it was the preservation of food, notably fish, that led to this research reported in *New Scientist* (2 June 2001, 19). The initial explanation for such preservation was that lack of oxygen and the acidity of peat inhibited bacterial growth. Then it was suggested that tannins in the peat acted as a preservative. The new research has demonstrated that a complex sugar, an unusual oxopolysaccharide, is responsible and this has been named 'sphagnan'.

Tests were carried out with peat, sphagnum moss (forerunner of peat) and wood shavings to act as control. Fish that had been kept in moss and peat stayed fresh for a month and bacterial growth after removal was delayed by up to 12 days, whereas fish that had not been kept in this way began to putrefy after two days. The researchers plan to utilise this amazing difference to provide a cheap moss alternative to expensive freezers for fishing boats.

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Loomweights from Mazor, Israel

In 1999 a salvage excavation was carried out at Mazor (license 3149) by Y. Zelinger on behalf of the Israel Antiquities Authority. The site is attributed by the excavators to the Hellenistic period. Eighteen loomweights belonging to two typological groups were discovered on a floor (L.92 B.1272).

Typology

A. Cone Loomweights (Fig.16). Eight weights of this type were found at Mazor. These loomweights have a domed base. The perforation is horizontal, located in the upper third of the weight. Its shape is conical. They weigh 173–230g, averaged 194.3±17.2g.

B. Pyramidal Loomweights. Ten pyramidal loomweights were recovered. The four panels of the near-pyramid are not always equal. The perforation is horizontal, located in the upper third of the loomweight; the hole is not necessarily centred. Its shape is conical. The 'pyramidal' loomweights from Mazor vary in size, weight and shape (rectangular or square base) indicating that they were not mass produced in moulds as in some of the Hellenistic or Roman Mediterranean assemblages. The pyramidal type is more difficult to produce than the doughnut shape. They weigh 125–307g, averaged 226.2±63.2g.

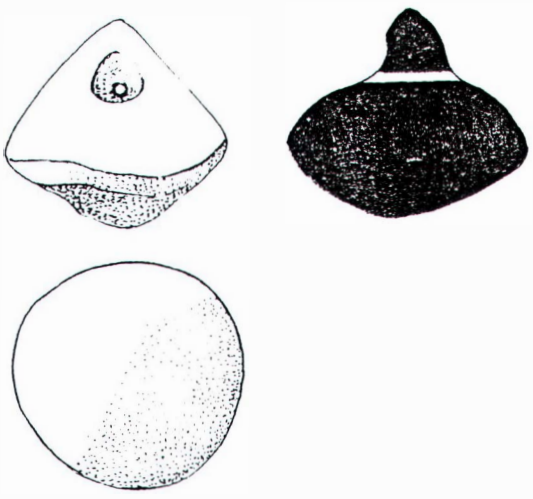

Fig.16 Cone Loomweights from Mazor

Material

All the loomweights are made of local, brownish *terra rossa* clay, fired at low temperature.

Question

The cone type with domed base is not known from any site as far as I know. I would like to know if someone has information about parallels.

The article will be published in *Atiqot*.

Orit Shamir
Israel Antiquities Authority
P.O. Box 586
Jerusalem 91004 Israel

Query: Skullcaps

Nancy Spies seeks information on the location of any extant ecclesiastical skullcaps/kronhauben/calottes. She knows of one at Speyer and one in the Abegg-Stiftung collection, but is sure that there must be others. If you know of any, please contact Nancy Spies, 1725 Trotting Court, Jarretsville, MD 21084, USA.

<snspies@aol.com>

News in Brief

Textile Tours to Peru

PUCHKA Textiles/Folk Art/Market Tours of Ontario, Canada, run textile tours to Peru in which readers may be interested. They are accompanied by textile experts, including a tapestry weaver, and visit folk-art villages and markets, artists' studios, textile museums, private collections and, of course, Machu Picchu. For further information, contact:
textiletours@puchkaperu.com
http://www.puchkaperu.com

'Strengthening the Bond: Science and Textiles'. North American Textile Conservation Conference, 5-6.4.2002

The North American Textile Conservation Conference 2002 will take place at the Philadelphia Museum of Art and the Winterthur Museum on 5 - 6 April 2002. It will focus on the role of scientific analysis as a means of expanding our knowledge of textile history and conservation practices. The papers accepted for the conference focus on cleaning, materials characterization, and case histories. The keynote speaker will be Judith Hofenk de Graaff, formerly of the Central Research Laboratory for Objects of Art and Science in Amsterdam. For more information, contact: Linda Easton, Winterthur Museum, Winterthur, DE 19735. <leaston@winterthur.org>

'Tapestry Weave Technique before AD 1500', Early Textiles Study Group, Manchester, 6-8.9.02. Call for Papers.

The 9th biennial weekend conference of the Early Textiles Study Group will be held at Ashburne Hall, Manchester, on the 6 - 8 September 2002. It will consider the origins, forms and uses of tapestry weave throughout the world before AD 1500. Guest speakers include Ann Rowe (The Textile Museum, Washington) on Peruvian Textiles. Papers should present unpublished or recently published research. Proposals should take the form of a title together with a 60-80 word synopsis of contents: please also state the time-slot you require (15/20/30 minutes). It is intended that a list of these synopses will be made available to conference delegates. A small number of poster presentations can also be accommodated. Please send two copies of proposals by 31 December 2001 to: Linda Woolley, Dept. of Textiles amd Dress, Victoria and Albert Museum, London SW7 2RL. <l.woolley@vam.ac.uk>

Subscription

ATN has a 2-year subscription term (4 issues). Subscription rate is £20 (private individual) and £30 (institution) per term.

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Guidelines for Authors

The *Archaeological Textiles Newsletter* aims to provide a source of information relating to all aspects of archaeological textiles. Archaeological textiles from both prehistoric and historic periods and from all parts of the world are covered in the *ATN*'s range of interests.

1. Contributions can be in English, German or French.

2. Contributions may include announcements and reviews of exhibitions, seminars, conferences, special courses and lectures, information relating to current projects and any queries concerning the study of archaeological textiles. Bibliographical information on new books and articles is particularly welcome.

3. Accounts of work in progress. This general category includes research/activities related to archaeological textiles from recent excavations or in museums/galleries. Projects may encompass technology and analysis, experimental archaeology, documentation, exhibition, conservation and storage. These contributions can be in the form of notes or longer feature articles.

4. Please send submissions in hard-copy, typed, form (lines not justified). (An accompanying disk in Word would be welcomed.) References should be in the Harvard system (eg Smith 1990), with bibliography at the end.

5. Line drawings and photographs are accepted, but must be originals of high reproduction quality. Artwork should not be mounted or incorporated into text. Captions, please !

6. The Editorial Board reserves the right to suggest alterations in the wording of manuscripts sent for publication.

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