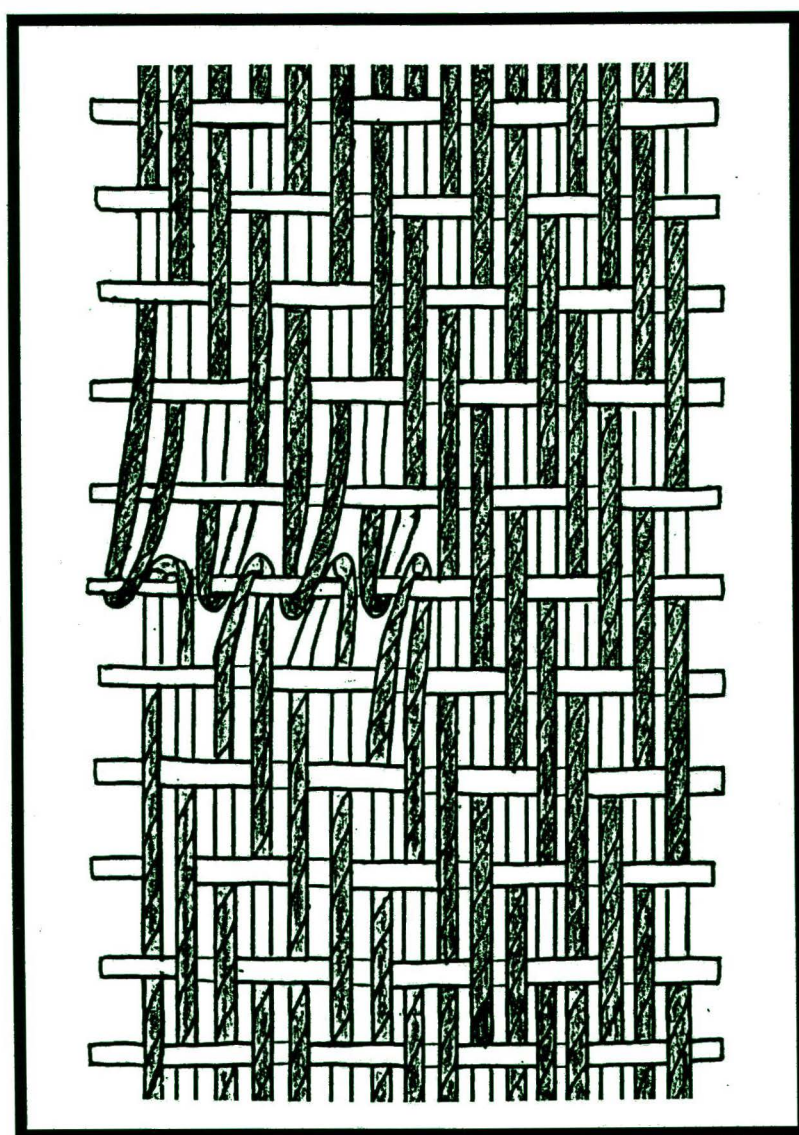


Archaeological Textiles

Newsletter



4th century Roman west-faced chevron 2/2 twill from Deurne, The Netherlands

Production and Layout - E.E. Peacock

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From the Editorial Board

Editorial

In this issue of *Archaeological Textiles Newsletter* a variety of topics is presented. On the scientific research side of textile analysis the project presently undertaken by Antoinette Rast-Eicher in the field of SEM analysis of fibres underlines afresh the increasing importance of this sort of work. It is timely that the Conference to be held in Manchester this coming September, organised by the Early Textiles Study Group on *New Approaches to Archaeological Textiles*, will focus on developments in textile science.

Without a doubt it is in this direction that much important work in archaeological textiles will take place in future. The only deterrent will be the realities of archaeological budgeting, and the financial restrictions placed on excavation directors on money available for post-excavation research. It seems likely that major new projects of scientific analysis will have to be funded by national research bodies or private foundations.

It is good to see Phillippa Henry taking up Lise Bender Jørgensen's editorial topic of *ATN 20* in setting out the parameters of her work on Late Anglo-Saxon textiles and textile production. Further contributions on this issue are welcome; such interchanges must stimulate evaluation of research objectives generally when setting out on a project and formulating questions to be researched.

The Poster Session section documents a portion of the up-to-date research and conservation projects presented at NESAT VI this May. The information contained in the posters was too important not to be recorded, so *ATN* will include those items not already published in this, and the next number.

We are glad to see contributions from North America about study groups and conferences; *ATN* would like to develop closer links with colleagues working in the States and Canada, and indeed South and Central America. On a personal note, if such a reminder were needed, a recent visit to the Ethnographic Museum in Göteborg, Sweden, to see the amazing collection of Paracas textiles emphasised anew the incredible richness of New World textiles and the wealth of artistic and technological achievement they represent.

Finally two short items, one a *Siberian noble lady* update, the second an account of mummies from the Tarim Basin, Western China demonstrate a most

stimulating aspect of textile studies at present. In the last few years we have seen the excavation and retrieval of clothed bodies in the most amazing circumstances.

Extraordinary and far-reaching information is being gathered from the Alpine *Iceman*, the Siberian Lady, and now the Tarim Basin finds, to name only a few examples. These are exciting times with a variety of research objectives to pursue which have direct relevance to wider archaeological perspectives on the development of human societies.

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Features

Oxidierter Textilien und Fasern

Ideal konservieren sich Textilien in feuchten Böden, wie in Mooren und Seeufersiedlungen, oder in ariden Gebieten, die hier in Europa normalerweise nicht zu finden sind. Aus gewissen Perioden, wie der La Tène Zeit und dem Frühmittelalter in der Schweiz, in denen viel Metallbeigaben ins Grab gegeben wurden, können organische Reste durch die Oxidation von Eisen oder Bronze am Metall erhalten bleiben. Fasern von oxidierten Textilien galten lange als nicht bestimmbar. Erst die Möglichkeiten der Rasterelektronenmikroskopie eröffnen eine andere Sicht. Neben Schafwolle und Flachs können Ziegenwolle, Kaninchenhaar, Hanf, Baumwolle, Seide, Nesseln und Federn unterschieden werden. Damit zeigt sich auch in unseren Regionen ein breites Spektrum an Textilfasern, die meistens nur durch die schriftliche Überlieferung bekannt waren (Abb. 1 und 2).

Laborarbeit für die Faserbestimmung ist dabei die eine Seite; sie soll hier nicht beschrieben werden. Die andere, ebenso wichtige, ist die Probenentnahme an den Funden. Im archäologischen Alltag, in dem allzu häufig Baetermine die Kürze der Untersuchung

bestimmen, fallen kleinste organische Reste oft *unter den Tisch*. Dass dies nicht so sein muss, haben Untersuchungen der letzten zwei Jahre in verschiedenen Schweizer Kantonen gezeigt, bei denen sich die jeweiligen Archäolog(inn)en und Restaurator(inn)en auch für Textilien und Faserreste interessiert haben. Grabfunde können eine Menge organische Reste beinhalten, die von Geweben stammen oder, wie Felle und Leder, eher mit der Grabausstattung oder mit Schwert- und Messerscheiden zu tun haben.

Besonders wichtig ist die Zusammenarbeit zwischen Archäologen, Restauratoren und Textilfachleuten von Anfang an, d.h. schon auf der Grabung. Denn je nach Boden und Oxidationsbedingungen ist die Erhaltung und Sichtbarkeit verschieden. Erfahrungen aus einer Grabung können deshalb nicht telquel auf andere übertragen werden. Im besten Fall sind die Textilien gut sichtbar auf dem Metall erhalten. Doch schon in einem nassen Boden oder wenn das Eisen sehr brüchig geworden ist, sind sie - besonders bei schlechtem Licht - häufig nicht oder schlecht zu



Abb.1 Kaninchen- oder Hasenhaar. Frühmittelalterliches Textil aus Kallnach (Kt. Bern). (REM-Foto: A. Rast-Eicher).



Abb.2 Federn. Frühmittelalterliches Grab aus Winterthur (Kt. Zürich). (140x. REM-Foto: A. Rast-Eicher.)

erkennen. In diesem Fall empfiehlt es sich, das Metall samt umgebender Erde eingegipst herauszunehmen. Das Ganze kann dann in Ruhe im Labor untersucht werden. Auch in der Nähe von Metall (nicht nur in unmittelbarer Berührung mit Metall), besonders Eisen, das leichter und schneller oxidiert, erhalten sich organische Reste besser. So müssen Verfärbungen besonders gut beachtet werden. Dazu braucht es ein Binokular auf der Grabung, damit solche *Erdproben* sofort untersucht und allenfalls Proben für eine Faserbestimmung genommen werden können.

Metallgegenstände, die scheinbar nichts haben, sollten auf keinen Fall auf der Grabung gereinigt werden. Denn häufig können in Fibelspiralen, an Nadelansätzen etc. immer noch kleine Faserreste erkannt werden, auch wenn das eigentliche Textil schon längst zersetzt ist (Abb. 3). Abb. 3 zeigt eine Probe von einer schwarzen Verfärbung auf und um einen Bronzering. Diese Verfärbung war nur während der Grabung erkennbar und trocknete dann sehr schnell ein. Unter Tonplättchen sind deutlich Fasern erkennbar. Der Durchmesser und die polygonale Struktur lassen wahrscheinlich auf Flachs schliessen. Während bei Textilresten bei guter Auswahl unter dem Binokular nur winzige 1-2mm grosse Proben zur Bestimmung genügen, muss bei anderen Faserresten mehr Material gesucht werden. Sichere Bestimmungen sind bei solchen Resten wegen der schlechteren

Erhaltung der einzelnen Fasern weniger häufig als bei noch erhaltenen Textilien.

Der nächste Schritt ist die Konservierung. Proben für die Faseranalyse sollten **vor** der Konservierung genommen werden, solange alles noch in ursprünglicher Lage ist. Ausserdem erschweren oxidationshemmende Mittel die Analyse im Rasterelektronenmikroskop, da wegen schlechterer Leitfähigkeit elektrische Aufladungen entstehen, die das Bild erheblich stören können. Die Gegenstände müssen vor der Konservierung unbedingt unter einem Binokular angesehen werden. Nur so sind feinste Textilien oder Faserreste zu erkennen. Bei eingegipsten Gegenständen ist es besser, zuerst (vor dem Wenden) auf der einen Seite die genaue Dokumentation zu machen und Proben zu nehmen. Erde, die von den Metallfunden weggenommen wird, birgt manchmal sogar den Negativabdruck des Textils - auch wenn das Textil nicht mehr vorhanden ist (Abb. 4). Auf Abb. 4, eines von Metalloxiden durchsetzten Tonerdestückes, das auf einem Schwert lag, ist sogar die Drehrichtung der Fäden erkennbar. Eine mikrofotografische Dokumentation empfiehlt sich, da solche Negative, einmal vom Metall gelöst, sehr schnell zerfallen.

Wenn immer möglich müssten die organischen Reste am Metall belassen werden. Leider kommt es immer wieder vor, dass dem Metallgegenstand Priorität



Abb.4 Negativabdruck eines Textils. La Tène-zeitliches Grab aus Sitten (Kt. Wallis). (7x, REM-Foto: A. Rast-Eicher.)

eingesäumt und er von Textilien, Leder etc. *gereinigt* wird. Häufig können aber Details an den Fibeln, Verzierungen an Gürtelbeschlägen u.a. mit Röntgenaufnahmen gut - und für eine Auswertung ausreichend - gesehen werden.

Dieses Vorgehen erscheint vielleicht kompliziert oder teuer. Eine funktionierende Zusammenarbeit mit den Restaurator(inn)en und den Archäolog(inn)en auf der Grabung und die Bereitschaft der Textilfachleute, einen ersten Augenschein schon auf der Grabung zu nehmen, bestimmen nach meiner Erfahrung ebenfalls das Interesse der Archäologen Textil- und Faserreste untersuchen zu lassen. Wichtig ist aber auch Information der Leute, die auf den Grabungen arbeiten und in Labors Metall konservieren und restaurieren. Je besser sie wissen, was technisch gemacht werden kann, wie solche Textilien oder Fasern aussehen und wie Proben genommen werden sollten, desto besser sind die Resultate.

Publikation der Fotos mit freundlicher Genehmigung von R. Windler (Zürich), D. Gutscher (Bern) und Ph. Curdy (Sitten).

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Abb.3 Flachs (?). La Tène-zeitliches Grab aus Sitten (Kt. Wallis). (REM-Foto: A. Rast-Eicher.)

Comment

A Culture-Historical Approach to Late Saxon Textile Studies

In *ATN* 20, Spring 1995, Lise Bender Jørgensen posed two questions, 'How are we doing the textiles?' and 'What are we doing with them?'. In this article I will give my answers to Lise's questions.

In my doctoral research I am examining changes in scale and mode of textile production in late Saxon England. My approach is a culture-historical one and very much like that of V. Gordon Childe. By that, I mean that I examine the textile evidence with a view to understanding the relationship between the developments in textile production technology and wider changes in society. I believe this approach will enable me to test my thesis, that the genesis of the wealth-creating medieval and early modern English wool trade and textile industry can be placed in the late Saxon Period.

To gather together the textile data for my research was not an onerous task, but what to do with the evidence and technical information gained? To make sense of the textiles it is necessary to examine also the textile production equipment. By including an investigation of production equipment it not only becomes possible to ascertain the probable reasons for changes in the technical details of the textiles but also to link these changes with developments in production technology. For instance, the apparent decline of the use of the warp-weighted loom (Fig. 1a) in urban contexts from the tenth century (evidenced by a decline in loom-weights and double-ended pin-beaters (Fig. 2) in the archaeological record (Brown, 1990, 226; Pritchard, 1984, 65-66; Walton, 1989, 386) and the probable introduction of two more loom-types at around this time coincides with an increase in excavated three-shed twills. By assessing the evidence relating to loom-types and combining it with an examination of the textile finds it becomes possible to suggest probable links between the two types of evidence.

The available evidence suggests that as well as the warp-weighted loom, in the latter part of the ninth century and early tenth century, the vertical two-beam loom (Fig. 1b) (evidenced by single-ended pin-beaters (Fig. 3) (Brown, 1990, 227-228)) was also being exploited in urban contexts. In earlier centuries this loom-type was known to the Roman world, whereas the warp-weighted loom remained the preferred tool in North European contexts (Crowfoot et al., 1992, 27). The two loom-types correspond with the distribution of three- and four-shed twills, the three-

shed twill being more common in the Roman world and the four-shed variety in northern Europe. By the early tenth century however, three-shed twills increased throughout this region. The vertical two-beam loom, normally associated with tapestry weaving and decorative fabrics, is easier and faster to warp for three-shed twills than is the warp-weighted loom. The appearance of this twill type at the same time as evidence for the vertical two-beam loom may thus be connected.

In addition, from the beginning of the eleventh century the horizontal treadle loom was introduced into northern Europe (Fig. 1c) (Hedges, 1979, 191; Walton, 1989, 386-387). It has been suggested that its introduction and the increase of three-shed twills are connected. Such a connection should be viewed with some care however: the binding of three-shed twills is no more suitable to the horizontal treadle loom than it is to the warp-weighted variety (Crowfoot et al., 1992, 27). It is nonetheless probable that complex patterned three-shed twills were produced on the horizontal treadle loom. Archaeological evidence shows that the warp-weighted loom could also be utilised for its manufacture (Walton, 1989, 388). To what extent the horizontal treadle loom was exploited for the production of three-shed twills, particularly the less complex plain ones, remains a matter of conjecture, however.

The main advantage of the horizontal treadle loom is speed. Nahlik has calculated that fabric can be produced up to six times more quickly on this loom-type than on the vertical varieties (Nahlik, 1965, 100). It is also possible to produce longer lengths of cloth than on warp-weighted and vertical two-beam looms. One disadvantage however, is the width of cloth that can be woven. Contemporary manuscripts (the ninth-century Utrecht Psalter), ethnographic examples (Hoffmann, 1964) and experimental evidence (Lejre Report, 1985) illustrate that on the warp-weighted and vertical two-beam looms wide cloth can be produced if two people work the weft threads standing side by side. In contrast an early illustration of a horizontal treadle loom dated to c. 1250 (Trinity College, Cambridge. MS.O.9.34,f.32 v) (Fig. 4) shows a narrow width. This appears to be dependent on the ability of the weaver to reach the outer warp threads through which to pass the shuttle (Walton, 1991, 328).

By examining such evidence it can be seen that changes in production technology were taking place

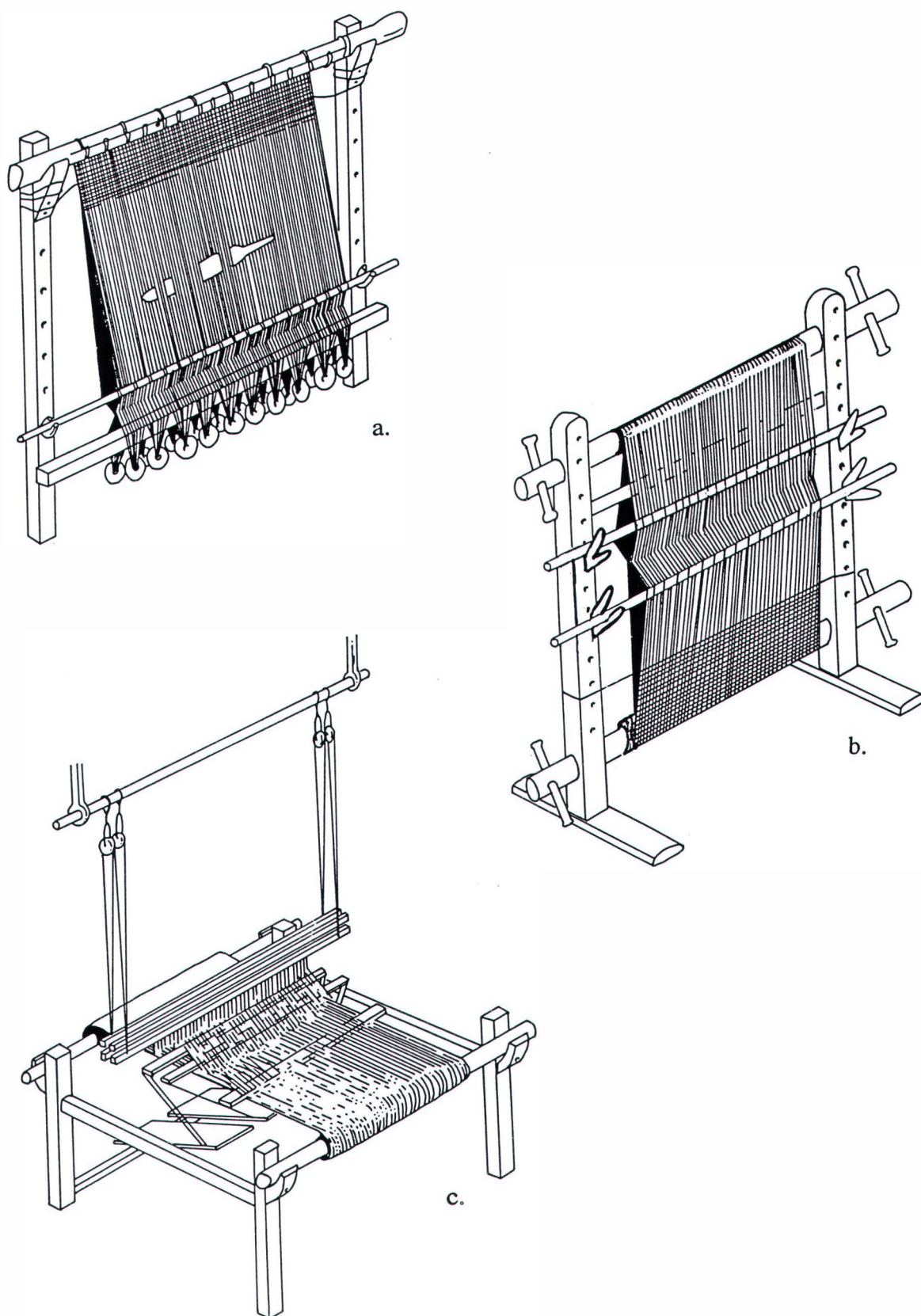


Fig.1 Loom types. a: warp-weighted; b. vertical two-beam; c. horizontal treadle (after Keene, 1990).

from the late ninth century, particularly in urban contexts. These possibly coincided with a change in emphasis of twill-type and the length of cloth required. But what do these changes mean in cultural terms and why were they happening? To answer such questions it is necessary to examine the social, political and economic climate of the late Saxon period.

From the late ninth-century the number of urban centres increased, some becoming major centres of production and trade during the tenth- and eleventh-centuries. These include for instance, London, York, Lincoln, Thetford and Winchester. Production appears to have become more organised with a greater degree of craft-specialisation. This is particularly pertinent to textile production. During the preceding centuries, the evidence for the production of *everyday* fabric tended more to domestic manufacture mainly for personal consumption, with the sale of surpluses if and when they occurred. Better quality and specialist fabrics were more likely to have been produced in specialist workshops on high status rural complexes. With the development of towns the evidence points to a change in this scenario. There appears to have been a move to organised workshop production in the new urban centres, although rural and urban domestic production almost certainly continued alongside this. A row of loom-weights excavated in Winchester and dated to the eleventh/twelfth century verifies this (Hedges, 1979, 29-39).

With greater organisation probably came a fragmentation of the production process. In the rural domestic sphere the whole community would have been involved in some way with the production of fabric,

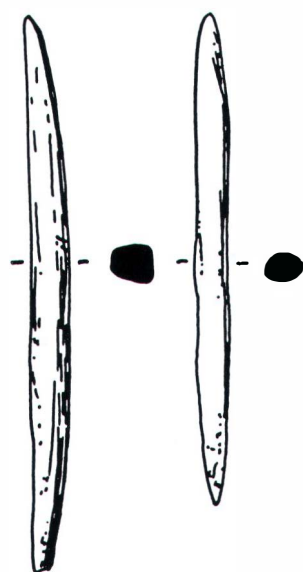


Fig.2 Double-ended pin beaters from the City of London (after Pritchard, 1984).

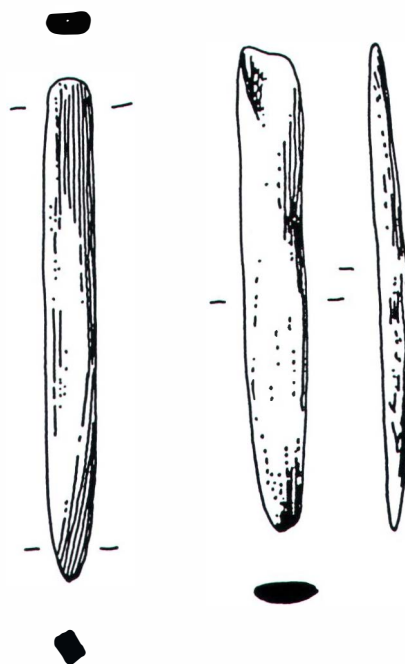


Fig.3 Single-ended pin beaters from Winchester (after Brown, 1990)

from raw material to finished article. With greater craft-specialisation, these components became separate processes. The distribution of spindle-whorls on urban excavations suggests that spinning was carried out in most households, possibly as part of a put-out system. In this the fibre was delivered to the spinners who were remunerated for the yarn they produced. Weaving on the other hand was more likely to have been confined to workshops (with the exception of limited domestic production). If this was the case it is highly probable that the weavers were employed by a financier or merchant who had control of the looms and the finished product.

Interestingly written evidence pertaining to professional weavers appears for the first time in northern Europe in the mid eleventh century and coincides with this move towards more specialisation. Rabbi Solomon Izhaqi writing in France refers to weavers (here generally interpreted as professional weavers) weaving with their feet (Carus-Wilson, 1969, 165; Walton, 1991, 346) i.e. on a horizontal treadle loom.

It is impossible to state with certainty that the horizontal treadle loom was introduced into northern Europe in response to greater craft-specialisation, or that the introduction of the loom was the impetus for this specialisation. There is little doubt, however, that the speed of producing cloth on the horizontal treadle loom had significant implications for the emerging commercialisation of late Saxon textile production.

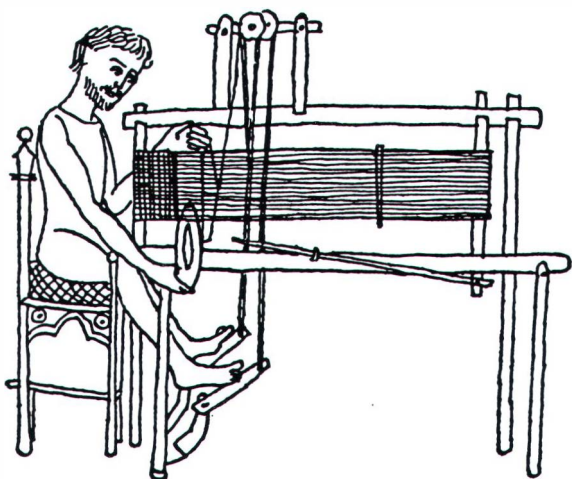


Fig.4 Horizontal treadle loom, c. 1250 (Trinity College, Cambridge. MS O.9.34 f.32v).

What though of the vertical two-beam loom? It is probable that this loom-type was used alongside the warp-weighted loom throughout the early medieval period although we lack the archaeological evidence for it. We do have however, manuscript evidence in the Utrecht Psalter dated to the ninth century and a copy of this in the mid twelfth century Eadwine Psalter (Trinity College, Cambridge, MS.R.17.1.f. 263) (Fig. 5). Although this loom-type is most suited to tapestry and specialist weaves, it is possible that in the late Saxon period the vertical two-beam loom became the preferred tool for the production of wide plain three-shed twill fabrics and superseded the warp-weighted loom, certainly in urban contexts. There is no proof of this but with the decline of loom-weights and double-ended pin beaters and the increase in single-ended pin beaters it seems a likely supposition.



Fig.5 Vertical two-beam loom, mid 12th century (Eadwine Psalter, Trinity College, Cambridge. MS R.17.1 f.263).

In conclusion, even from this brief discussion it can be seen that by studying the textile evidence in conjunction with the evidence for production technology, and by examining this in relation to the social, economic and political climate of late Saxon England valuable information pertaining to changes and developments in textile production can be obtained. A culture-historical approach to textile studies therefore goes some way to addressing the problems of 'Doing the Textiles' (Bender Jørgensen, 1995, 4).

Acknowledgements

Permission to reproduce Figures 4 and 5 was granted by the Master and Fellows of Trinity College, Cambridge, for which I am most grateful. Figures 1, 2 and 3 were drawn by Pauline Fenwick.

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NESAT Poster Session

Die Textilforschung in der Tschechischen Republik

Untersuchungen zu den Textilien

Unsere Erkenntnismöglichkeiten der Textilherstellung in historischer Zeit werden durch die geringe Anzahl bzw. völlige Absenz der Textilerzeugnisse und des dazugehörigen Werkzeugs deutlich eingeschränkt, was zur Folge hat, daß dieser Problematik bei uns relativ wenig Aufmerksamkeit zuteilgeworden ist.

Der erste, der bei uns die Textilherstellung und Bekleidung eingehender untersuchte, war L. Niederle. Er widmete sich der slawischen Zeit und faßte seine Erkenntnisse zu dieser Problematik im Werk *Život starých Slovanů* (*Das Leben der alten Slawen*) zusammen. Seine Arbeit auf diesem Feld wurde von den Forschern V. Hrubý und J. Staňková fortgesetzt.

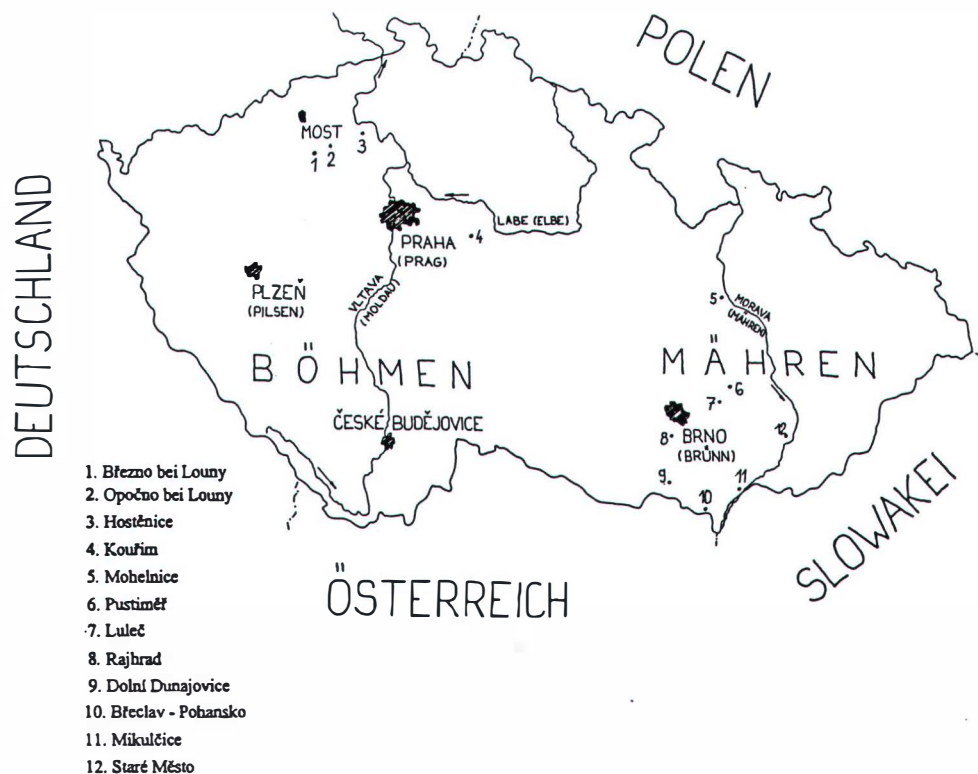


Abb.1 Karte der Tschechischen Republik mit eingezeichneten Fundstätten, die im Text erwähnt werden.

Am bedeutendsten für die vorgeschichtlichen und slawischen Textilien ist der Beitrag von M. Kostelníková, die im Archäologischen Institut in Brünn tätig war. M. Kostelníková bearbeitete und publizierte unter anderem die Textilfunde aus den wichtigsten mährischen Fundstätten - Mikulčice, Staré Město,

Rajhrad und Břeclav-Pohansko. In einigen Artikeln beschäftigte sie sich mit den Werkzeugen zur Textilherstellung als auch der eigentlichen Technik der Textilerzeugung und veröffentlichte einige vorgeschichtliche Gewebefunde. Am grundlegendsten ist ihre Arbeit *Velkomoravský textil v archeologických*

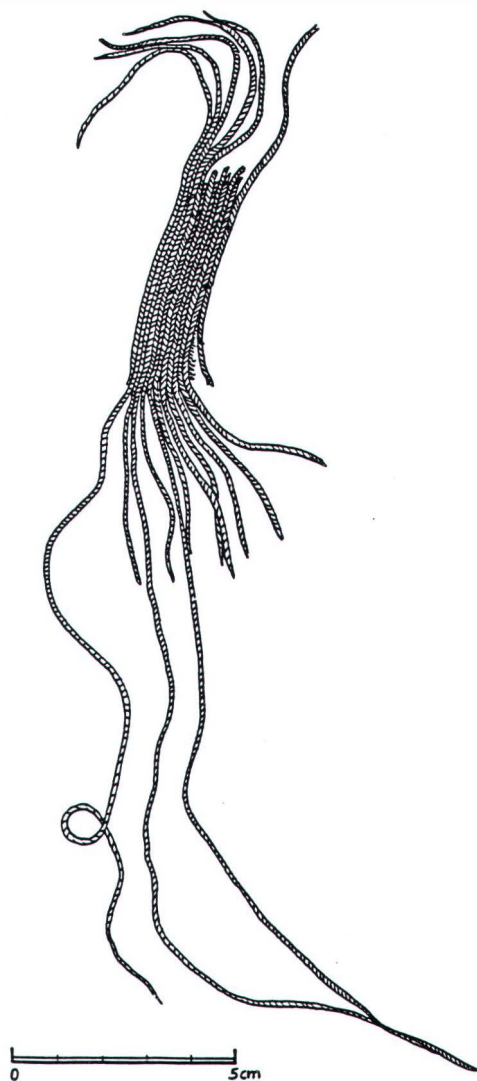


Abb.2 Wollband (1.5 x 21 cm) aus Pilsen, erzeugt auf dem Brettchenwebstuhl, datiert in das 15. Jahrhundert.

nálezech na Moravě (Die großmährischen Textilien in den archäologischen Funden aus Mähren) wo sie einen vollständigen und ausführlichen Überblick der aufgefundenen Gewebe aus dem 9. bis 10. Jahrhundert wiedergibt.

Gegenwärtig befassen sich N. Bažantová und M. Bravermanová mit den Textilfunden, und zwar mit den prunkvollen Textilien aus königlichen und adeligen Gräbern. Der Geschichte der Textilerstellung und den Textilfunden des Früh- und Hochmittelalters widmet sich H. Březinová.

Textilfunde auf dem Gebiet Böhmens und Mährens

Die ältesten Funde stammen aus dem Neolithikum. Es handelt sich um doppelgezwirnte Seile aus Flachs aus dem Brunnen von Mohelnice und den Abdruck von Geweben mit Tuchbindung auf einem Keramikgefäß aus Luleč (Abb.1). Für das Eneolithikum kennen wir aus Hostěnice einen Fund verkohlter Fäden aus Pflanzenfasern.

Aus der jüngeren Bronzezeit muß ein dicht gewebtes Stück (20 - 22 Fäden auf 1 cm) von Wollgewebe aus Staré Město genannt werden. Im Schuß wechseln regelmäßig einfach und dreifach gezwirnte Fäden.

Im reichen hallstattzeitlichen Grab aus der Höhle von Byčí Skála wurden Fragmente von Wollfilz gefunden. Weitere Gewebefunde aus der Eisenzeit stammen aus Pustiměř, wo es sich um Körperbindung handelt, aus Miroslav und Rvenice - beides Belege für Tuchbindung. Aus der Völkerwanderungszeit stammt ein einziger Abdruck von Weinem Gewebe auf der Unterseite einer Bronzescheibenfibel aus Opočno bei Louny.

Die größte Anzahl an Resten oder Abdrücken von Geweben erhielt sich aus dem Frühmittelalter (6.-12. Jahrhundert). Für diese Zeit sind die Textilfunde auch am besten bearbeitet: in Böhmen und Mähren haben wir es mit bisher fast 400 revidierten Funden zu tun. Am häufigsten handelt es sich um kleine Gewebereste, befestigt auf Metallgegenständen. Nur ausnahmsweise wird ein größeres Stück Stoff selbstständig gefunden. Von den Textilrohstoffen ist in unserem Befund Flachs, Hanf, Seide, Schafwolle, Mohair, Tier- und sogar Menschenhaar vertreten; das Übergewicht hält Flachs und Schafwolle. Seide gelangte zu uns immer nur als Import, wobei wir aber nicht wissen, ob als Rohstoff oder Fertigware. Reste von Seidengeweben wurden vor allem in reicher ausgestatteten Gräbern auf bedeutenderen Zentren der großmährischen Zeit gefunden, was dafür spricht, daß Seide ein kostbarer, nur den höchsten Gesellschafts-

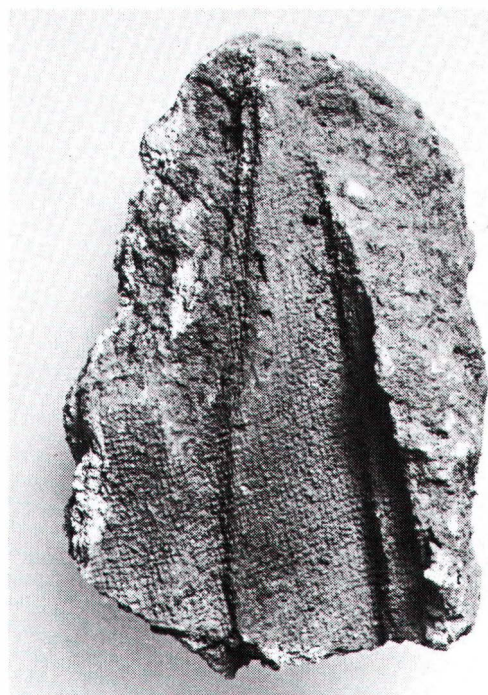


Abb.3 Abdruck von Geweben auf Mörtel aus der frühmittelalterlichen Kirch der Jungfrau Maria auf der Prager Burg.

schichten zugänglicher Artikel war. Im Fundmaterial treten folgende Gewebebindungen auf: Tuchbindung, Körperbindung, Atlasbindung, Rips, Zirkas; vereinzelt auch besondere Bindungen wie Drehergewebe, Brosché oder Lancé. Der Tuchbindung begegnen wir jedoch am weitaus am meisten. Bei den aufgefundenen Gewebe wurde am häufigsten eine Fadendicke von 0.4 - 0.5 mm festgestellt, die Dichte liegt meist bei 10 - 20 Fäden in der Kette und im Schuß. Die Lokalitäten mit der größten Anzahl von Textilfunden sind Staré Město, Břeclav-Pohansko, Mikulčice, Kourim.

Aus dem Zeitraum des Hochmittelalters (13.-15. Jahrhundert) erhielt sich eine beachtenswerte Menge von, en leider noch nicht ausgewerteten Textilfunden. Es handelt sich vor allem um große Fundkomplexe aus Brunnen und Abfallgruben aus Pilsen, Most, České Budějovice und Brünn (Abb.2).

Einen unikaten Komplex stellen Textilien aus den Gräbern der böhmischen Fürsten und Könige von der Prager Burg dar, der vorwiegend aus reich verziertem Seidengewebe besteht (Abb.3). Diese besonders kostbaren Stoffe aus dem 10. bis 16. Jahrhundert werden zur Zeit restauriert und verarbeitet.

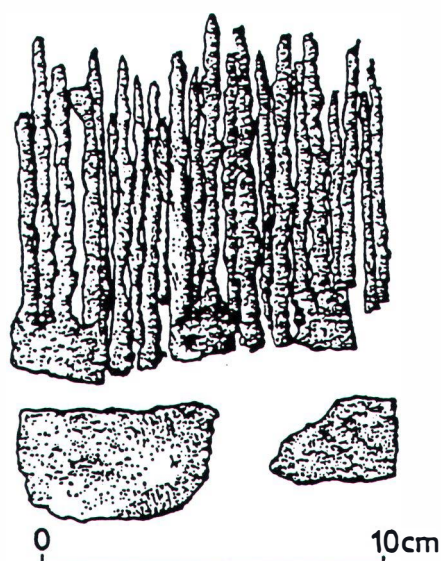


Abb.4 Eisenhechel aus Břeclav-Pohansko.

Geräte und Hilfsmittel zur Gewebeherstellung

Diese Gegenstände wurden fast immer aus Holz oder anderen organischen Materialien hergestellt. In Anbetracht der schlechten Bedingungen für die Erhaltung solcher Stoffe in unseren Breiten, sind nur wenige mit der Textilherstellung zusammenhängende Werkzeuge auf uns gekommen.

Wir kennen zwei Funde von Eisenhecheln aus Břeclav-Pohansko, die in das 9. Jahrhundert datiert werden (Abb.4). Bereits ab der La-Tene Zeit tauchen unter den Funden eiserne Schafsscheren auf, deren

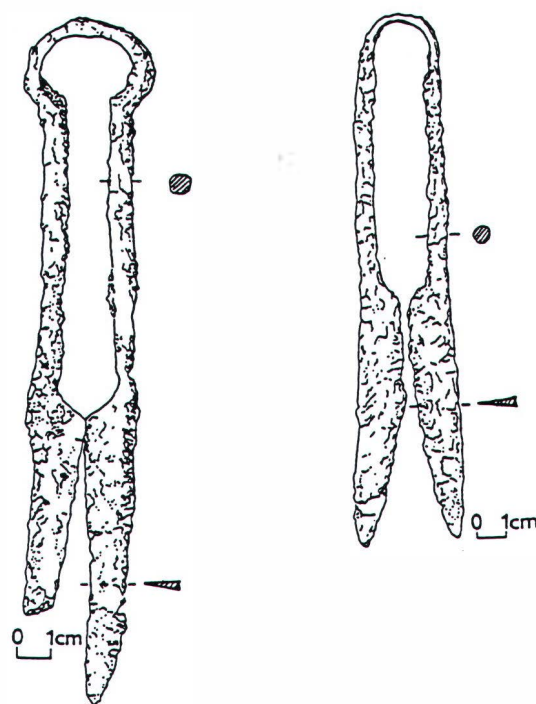


Abb.5 Zwei Typen von frühmittelalterlichen Schafsscheren gefunden in Böhmen.

Typen bis in das Frühmittelalter verwendet wurden (Abb.5).

Aus Brünn stammt der außergewöhnliche Fund eines beinernen Schafts, der höchstwahrscheinlich aus Wal-knochen besteht, 325 mm lang ist und an die Wende vom 11. bis 12. Jh. datiert wird. Es handelt sich wohl um einen Import. Sehr häufig werden bei uns wiederum Spinnwirtel gefunden (aus der Urzeit bis in das Frühmittelalter). Sie haben verschiedene Formen und bestehen aus den verschiedenen Materialien (Ton, weiches Sedimentgestein, Horn, Glas usw.).

Die Verwendung des Brettchenwebstuhl ist durch den Fund zweier ganz erhaltener Brettchen und eines Fragments des Mittelteils aus Staré Město nachgewiesen; diese aus Horn gefertigten Brettchen werden in das 9. Jh. datiert (Abb.6). Tönerne Webgewichte treten in relativ großer Zahl bereits ab der Urzeit auf. In Mikulčice aus einem Horizont des 9.-10. Jh. kennen wir eine beinerne und vier eiserne Netznadeln (Abb.7). Bereits ab der Urzeit treten unter den Funden beinerne Nadeln und Nadelbüchsen auf.

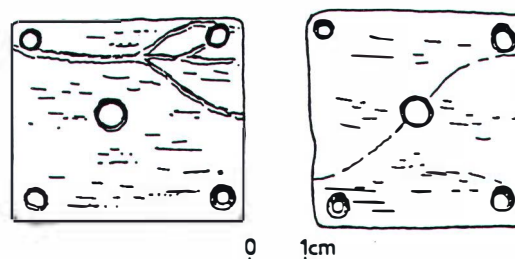


Abb.6 Webbrettchen aus Staré Město.

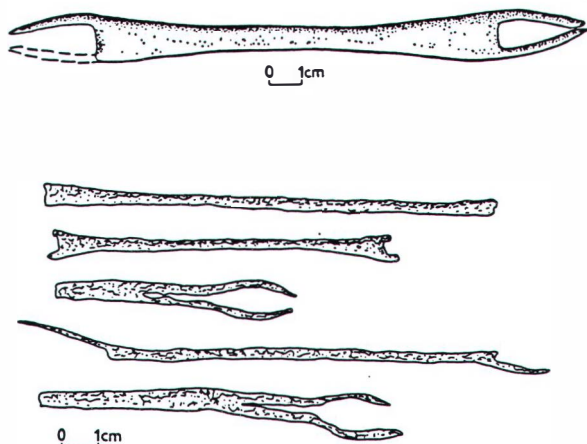


Abb.7 Netznadeln aus Mikulčice: 1. aus Knochen; 2. aus Eisen.

Experimentelle Archäologie

Der experimentellen Archäologie widmen sich in der Tschechischen Republik einerseits professionelle Archäologen (z.B. I.Pleinerová, J.Malina, R.Tichý,

H.Březinová), die Experimente auf wissenschaftlicher Ebene durchführen, und andererseits Amateure, die mittels Experimenten einzelne Technologien und Arbeitsvorgänge nachahmen.

In unserem Land besteht gegenwärtig ein Freilichtmuseum in Březno bei Louny, wo neben anderen Objekten auch eine Webwerkstatt mit vertikalem Webstuhl aus der Zeit der Völkerwanderung rekonstruiert wird. Zur Zeit entstehen weitere drei Freilichtmuseen (zwei in Prag), wo gleichfalls mit Experimenten zum Weben und zu anderen Techniken der Textilherstellung gerechnet wird.

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More Textiles at Lønne Hede in Denmark

An oak plank coffin grave, from the 1st century A.D., was excavated in western Jutland, Denmark, in 1969 (Fig.1). Of special interest are the preserved fragments of clothing, the interpretation of which has given us the costume called the *Lønne Hede pige* with its fine blue and red dyes (Fig.2). Denmark's National Museum lifted, treated and analysed the material (Nordqvist and Ørsnes, 1971; Munksgaard and Østergaard, 1988).



Fig.1 Map of Denmark showing Lønne Hede situated in western Jutland.



Fig.2 Reconstruction of the 1969 Lønne Hede costume, woven by Anna Nørgaard. On display at the Blaabyerg Egnsmuseum.

A combination of circumstances preserved the woollen fabric: acid soil, high water table and the development of iron pan. Our new excavation indicates that the oak coffin can have played a major role in the preservation of this material as well.

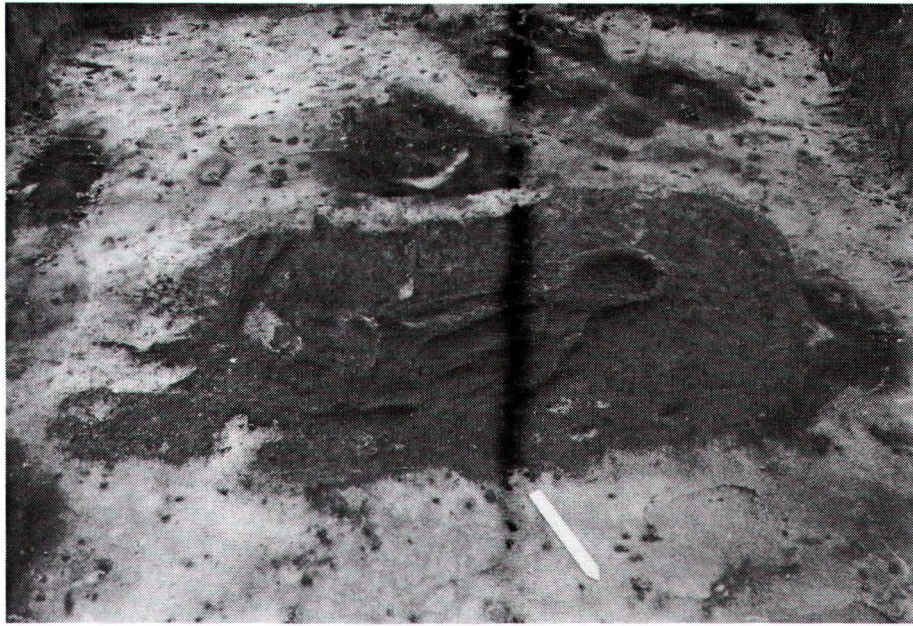


Fig.3 A humble grave. Rectangular hole in the ground, the corpse buried in the fetal position on a hide. During on site excavation the wet material gave no indication of textiles. Dry removal of the sand exposed several fragments.

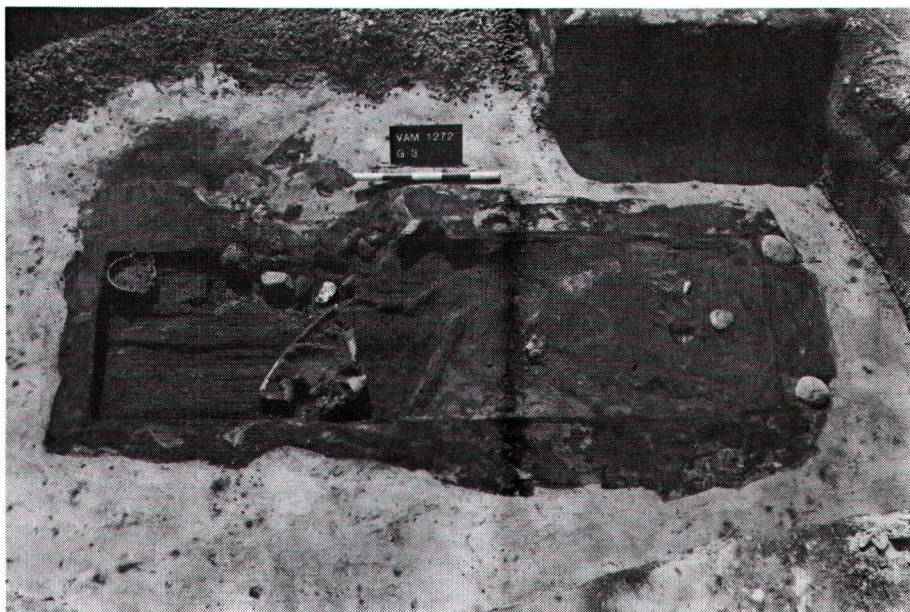


Fig.4 A rich grave. Massive plank coffin with ceramic shards at the foot end. The body and all its personal equipment and textiles were robbed soon after burial. A hole in the side of the coffin indicates how this happened.

Now, 26 years on, new owners wish to dig a fishing lake on the site, and Varde Museum was called in to excavate the whole of the area to be submerged.

The Lønne woman was not buried in isolation. To the north of her grave were 11 more inhumation graves; parallel to these, eastwards, were found 35 cremation pits (of these two were weapon burials, but otherwise

only very few grave goods appeared). The inhumation graves were also poor in terms of artifacts, no gold or silver! Only a few had any pottery, one grave had an iron knife, another a bone comb.

Burial traditions vary from the simple; the dead placed on a hide, through bath-shaped hollows with a skin lining and a plank lid, to one large and well



Fig.5 Two layers of textile, top may be floss, bottom layer with a pale stripe.

made oak plank coffin (identical to the one excavated in 1969). This coffin might be expected to contain rich goods of some prestige. Unfortunately for us, it had been plundered in antiquity, a pit being dug and a hole smashed into the coffin. The grave was totally emptied; not a rag was left behind - only three broken pots (Figs.3 and 4).

Despite the low occurrence of artifacts, the site gives rise to some excitement because of the appearance of textile fibres in most of the graves. We find no skeletal remains because of the acid, sandy soils (pH5) but a narrow band of organic remains, ca. 2cm in cross section, containing textile fibres and animal hair from the hides.

Because of the famous find from 1969, we approached the site with great care. When organic remains appeared the entire grave was lifted and removed to the conservation laboratory at Ølgod, freeze-dried and excavated. This process has preserved a great deal of information which would otherwise have been lost on site. Textile condition was graphically described by one of the students on the dig as "Wet tea leaves from a compost heap." Layers could not be separated from the soil.

The work of registering and preserving the finds is still in progress, but has already revealed different textile types, all of wool.

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Textile Fragments Found Together with a Late Roman Helmet

Archaeological Aspects

On June 17, 1910 in Deurne (N. Brabant, the Netherlands), the peat-cutter G. Smolenaars found a gilded silver helmet together with textile fragments and other objects. The helmet was cleaned and polished to be exhibited to the public in the living-room of G. Smolenaars' house. Unfortunately, during the cleaning process the iron inner cap, which was covered with leather, was removed.

In 1914, the Museum of Antiquity, Leiden (R.M.O.) bought the helmet together with the other objects. Restoration of the helmet was necessary, especially because the inner cap had been removed. The outer helmet is constructed of decorated gilded silver plates. At the right side this decoration is interrupted by the inscription "STABLESIA VI", which is the name of an equestrian unit of the Roman army (4-5th century A.D.). Helmet fragments of the same type were found at San Giorgio di Novara (N. Italy) and Burgh (Norfolk, England).

Objects excavated together with the helmet include:

- 38 bronze coins dated 315-319 AD.
- 1 bronze fibula
- 3 leather shoes
- 1 spur
- parts of a dagger sheath
- 2 horse bells
- leather and textile fragments.

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Technological Information

The textile fragments found at Deurne belong to two different textiles. Most fragments of textile no. 1 were found in 1910, those of textile no. 2 in 1914 (Leene 1973, p. 80-83).

Textile No.1

These coarse fragments apparently belong to a band or belt. The width between the selvages of the

fragments is 24 cm, 13-15 cm and 6 cm respectively. The association between the different fragments is lost, and this is unfortunate for reconstructing the textile.

The spaced warp has thin warp ends of strong Z-spun woollen threads (8/cm). The weft of Z-spun woollen threads (double threads per pick) covers the warp (16-18/cm). Two different weave structures are used: weft faced extended 2/2 tabby and weft faced 2/2 twill, which irregularly alternate (Fig. 1).

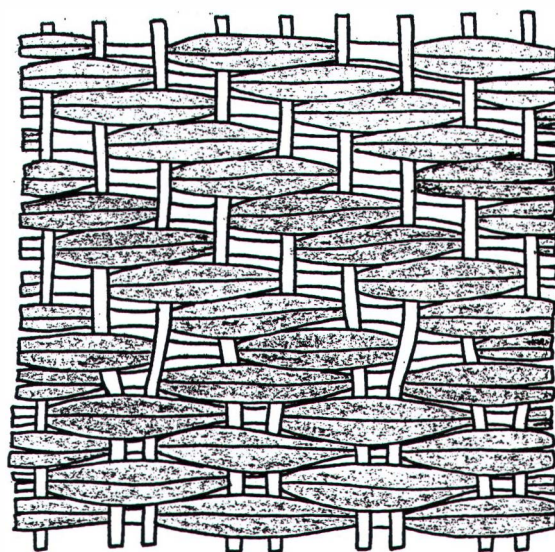


Fig.1 Textile number 1.

Textile No.2

These fragments are part of a textile which can be described as a mantle. In some of the fragments part of a decoration can be seen. The pattern itself was probably of a different colour, but burial in peat has altered the colour of the woollen threads. Although only small fragments have survived (all together 0.5 m²) we can see that a geometrical pattern was woven in.

This type of cloth described as *Palmyran twills and diamonds twills* is recorded from Palmyra (Pfister, 1934, 1937, 1940), Doura-Europos (Pfister & Bellinger, 1945), Mons Claudianus (Bender Jørgensen, 1991), Abu Sha'ar (Red Sea coast, Egypt. Bender Jørgensen, 1992) and from Berenike (Red Sea province, Egypt. Wild & Wild, 1995)

Textile no. 36 found at Doura-Europos may give the best idea of what the textile of Deurne looked like (Pfister & Bellinger, 1945 p. 15, Fig. 4). The textile has spaced warp ends (10/cm) of strong Z-spun woollen threads. These warp ends are totally covered by the Z-spun woollen weft (44-52 picks/cm).

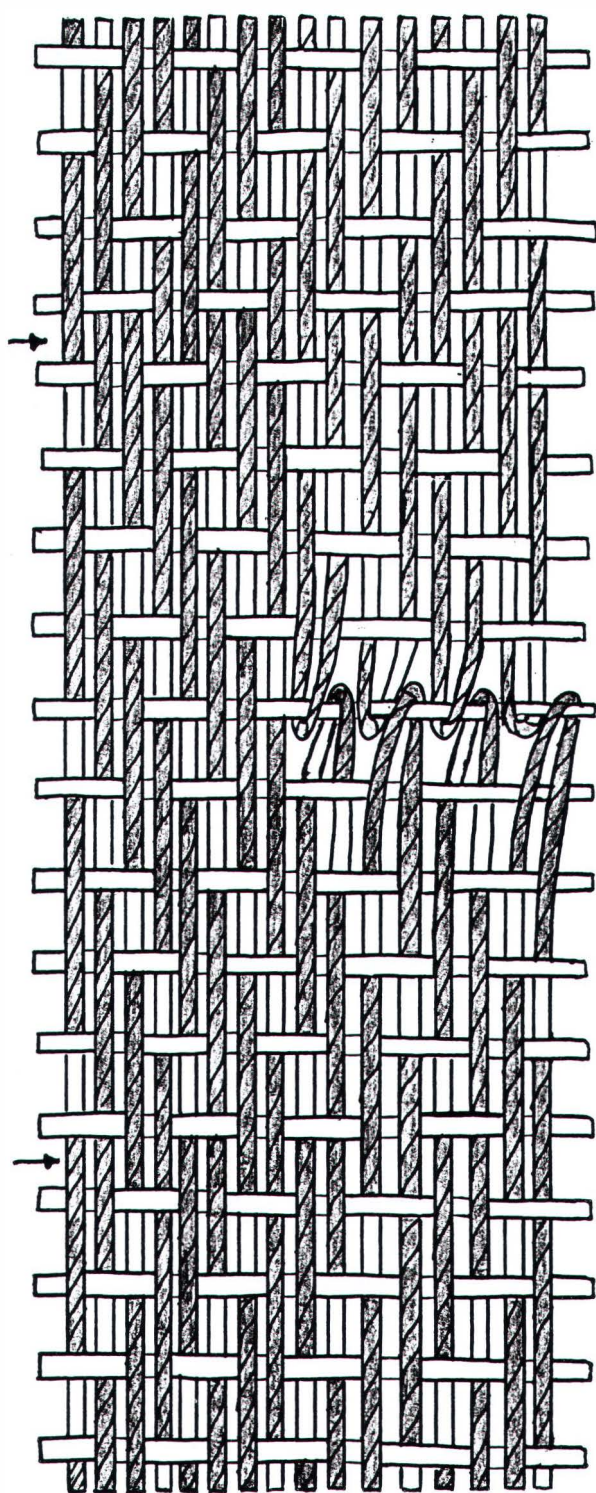


Fig.2 Textile number 2.

The structure of the main fabric is a weft faced chevron 2/2 twill; the direction of the twill changes every 10 warp ends. To incorporate the pattern a single dovetailed tapestry weave is used and the structure of the main fabric continues into the pattern (Fig. 2). It is only because of the dovetailed technique used that a pattern could be detected. The weft threads of the main fabric and the pattern, now of the same colour, have been sent to the Central Research Laboratory, Amsterdam, for analysis.

A reliable analysis of all reported textile fragments of this type is needed to be able to make a thorough study of the weaving equipment used. The textiles from Deurne are important because of the location of the finds (the Netherlands, N. Europe), the owner of the garments (a staff officer of a Roman equestrian unit) and the dating to the 4th century A.D. by means of the coins.

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News of the Norse in Greenland

One of the garments (D10594) from Herjolfsnes has been ¹⁴C dated to 1350 (Fig.1). The male garment is made of wadmál, 2/2 twill, Z/S, 8/9. When Poul Nørlund described the high-necked garment with front opening in *Buried Norsemen at Herjolfsnes* (Copenhagen, 1924) he wrote concerning the dating, "... in so remote a place (Greenland) it cannot be older than the beginning of the 15th century".

Threads from the garment have been analysed at Textile Research Associates by Penelope Walton Rogers. The fleece types are hairy/hairy medium. Both yarns (Z and S) are made from brown wool, overdyed with tannin (bark or galls). An edging in 2/1 twill at the left front just outside the buttonholes is made of white wool dyed with madder from *R. tinctorum* roots.

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Fig.1 The high-necked garment from Herjolfsnes, Greenland.

Worth Noting

Information Wanted

Textile Impressions from Kazakstan

Preliminary investigations at Botai, in north central Kazakstan, have revealed patterned fiber impressions on prehistoric ceramics. Could this indicate that the eneolithic culture was using and producing textiles and/or basketry?

Dr. Sandra Olsen of the Carnegie Museum (Pittsburgh, PA, USA), who is chief excavator, has made casts of some of the numerous pot sherds which exhibit impressions of fiber constructions, estimated to be 15% or more of the ceramic assemblage. A clear s-twist is visible in one example, but no definite weave pattern or fabric structure has been identified as yet. The repetition and regularity of the impressions suggest that they are the result of deliberate contact with textiles. The fibers used were most probably obtained from wild plants, as the site

precedes the introduction of sheep to the region and has produced very little evidence for agriculture.

Future work to determine the most likely fibers used, the structures of the fabrics, and possibly even their functions, will require research into the available resources and ethnographic and ethnohistorical studies of the use of fiber in this environment. I would like to hear from anyone with knowledge of and an interest in this topic, and welcome suggestions that may shed light on the poorly known fabrics of this area and period in central Asia.

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Notating Patterns

I am looking for information on how patterns were notated prior to weaving them. Specifically, I am trying to find out how medieval tablet weavers added surface patterns to their work using additional brocading wefts. The early simple geometric patterns could have simply been woven free-style, as it were, but it would not be possible to do the more ornate patterns which quickly developed without some visual aid, such as a chart or graph. There are very few mistakes made on these bands, so I am assuming that they did not simply work free-hand. Did they graph the patterns out prior to weaving as we do today? Did they work directly from patterns on silk fabric? I have seen no information about this aspect of pattern

transference in any of the literature which I know about, and would like to hear from anyone who has actual concrete archaeological, written or iconographical evidence about this. If no one knows of any concrete evidence, does anyone have an educated guess or know of something more historically modern from which we might extrapolate backwards? As Peter Collingwood says, we have no extant medieval tablets, so we have to assume that they used something like parchment.

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Update

Berenike 1996

Another 450 textile fragments were recorded from the 1996 season of excavation at the Roman port of Berenike on the Red Sea coast of Egypt (ATN 18/19 (15); 20 (8)). Founded to foster the India trade in 275 BC, occupation of the site continued until c.A.D. 500: there is no Islamic presence. Most of the textiles date to the fourth or fifth centuries A.D., and there is little prospect of large early groups since the water table in the tell is comparatively high. Invasion by salt, moreover, means that the surviving fragments in all layers are poorly preserved.

The corpus of finds from three seasons is now statistically significant. In 1996 a number of gaps in the record were plugged - and new problems thrown up. There were two more scraps of weft-faced compound tabby (one with paired pattern warp), a 2/1 herringbone twill, a piece of *Rippenköper*, some wool-tuft decorated linens and bits of red/green ribbed wool coverlet. Pieces of a brown wool cloak with H-motifs in blue tapestry, probably reflecting the strong Nubian influences evidenced in late Berenike, were the most photogenic finds. Some blue resist-dyed linens may be the first from scientifically conducted excavations in Egypt.

It was apparent both from the textiles themselves and from finds of well-preserved skins that a light- and dark-brown piebald sheep with a short stiff coat (almost a hair sheep) supplied the local wool - just as it does today. With the help of the Ababda Bedouin we think that we can now distinguish sheep from goat: the latter yielded a harsh very dark brown fibre for plied-yarn fabrics.

At Berenike there is a higher proportion of cotton among the textile finds than at any other Roman site so far excavated. Some is S/S, most Z/Z spun. The former is arguably a Nile valley or oasis product, but the source of the latter is still a mystery; it has Hellenising or Romanising traits, however. Another fragment of fine blue resist-dyed Z/Z cotton with a plant motif came to light this year (Fig.1).

The discovery by René Cappers of *indigofera articulata* growing freely in a wadi near the site has interesting implications for local dyeing. Anton Eryvynck and Wim van Neer crushed the common Red Sea *murex tribulus* and watched the content of its hypobranchial sac turn purple, something which will have to be investigated further in future seasons. On-site cooperation between specialists, as envisaged by the directors, Willeke Wendrich and Steve Sidebotham, is beginning to pay off!

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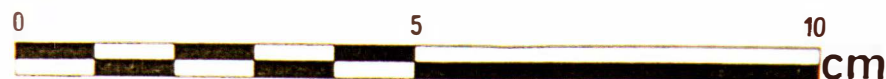


Fig.1 Fragment of a fine blue resist-dyed cotton from Berenike 1996 showing a plant motif, possibly a palmette or formalised papyrus flower. (The motif may be upside down here.)

Still More on the Scythian "Princess" Found in the Altai Mountains, Russia

As a footnote to the information given in *ATN 18/19* on the costume of the noble woman found at Al-Alakha 3 in the Altai Mountains, two points of interest have emerged. The first is on the question of the origin of the silk used in the blouse. This has been described as wild *tussah* silk (Schorta 1995:14) from moths of the Saturniidae family certainly at a later period found in India. Indian records of circa 1,000 BC write of local silk production (Ryder 1994:23). A report by V.A. Galibin on ancient Indian glass beads in *Archaeological News* (Institute of History of Material Sciences, Russian Academy of Sciences) includes the following information (Galibin 1993:66-69).

In burials in Siberia at the same time as the Al-Alakha kurgans glass beads were found. In particular they have been found in the tombs at Pazyryk. It has been established that these beads come from India and were produced only for a comparatively short time between the 5th century BC and the 5th century AD. This would of course show that it would be possible for silk to make its way to Al-Alakha.

The second observation stems from personal examination of some of the textiles from Pazyryk held in the Hermitage Museum, St. Petersburg, which were not on display, and a subsequent visit last autumn to the Abegg Stiftung to view the recently conserved Al-Alakha costume. It was impressive to see the same type of red 2/2 twill being produced at

both sites with the same trimming of garments with red wool braid. The sites at Pazyryk and Al-Alakha lie many kilometres apart, but there seems to be a continuity of culture over this large area.

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Embroidery Terminology

In *ATN 18/19* (November 1994), page 22, I asked for any thoughts on the categories of embroidery terminology that followed. I am trying to present a clear scheme available for reference.

Since then, thanks to some responses and further work, we have the following two papers.

EMBROIDERY TERMINOLOGY

1. SURFACE DECORATION OF EVENLY WOVEN OR NETTED FABRICS

1. Counted thread work
2. Net embroidery

2. SURFACE DECORATION OF OTHER FABRICS

- | | |
|--|--|
| a. By the addition of stitchery taken through the fabric | 1. Hand stitches
2. Tambour work
3. Machine stitches |
| b. By the addition of threads not taken through the fabric | 1. Laidwork
2. Couching |
| c. By the addition of fabric | 1. Applique
2. Inlay |
| d. By the addition of beads etc | 1. Bead work
2. Mirror work
3. Sequin work
4. Stones & Jewels |
| e. By the addition of padding | 1. Raised work |
| f. By the addition of | 1. Cords
2. Fringes
3. Tassels
4. Braids |

3. DECORATION ADDED FROM THE BACK OF THE FABRIC

1. Shadow work
2. Quilting: 1. False or flat
2. Corded
3. Wadded

4. NEGATIVE SPACE TECHNIQUES

1. Open work: 1. Pulled fabric
2. Drawn thread
2. Cut thread work: 1. Cut work

5. CONSTRUCTION TECHNIQUES

- | | |
|--|-------------------------------------|
| a. By pleats, tucks & folds manipulation of fabric | 1. Smocking
2. Shirring |
| b. By piecing | 1. Insertion
2. Patchwork |
| c. By using thread alone | 1. Needle lace
2. Teneriffe lace |

6. MISCELLANEOUS

- a. Edgings
- b. Hems & seams
- c. Buttons
- d. Decorative seams
- e. Fastenings
- f. Piping
- g. Patching, mending & darning

Paper 1.

EMBROIDERY TERMINOLOGY.

1. SURFACE DECORATION OF EVENLY WOVEN OR NETTED FABRICS.
2. SURFACE DECORATION OF OTHER FABRICS.
 - a. By the addition of stitchery taken through the fabric
 - b. By the addition of threads not taken through the fabric
 - c. By the addition of fabric, etc
 - d. By the addition of beads, etc
 - e. By the addition of padding
 - f. By the addition of
3. DECORATION ADDED FROM THE BACK OF THE FABRIC
4. NEGATIVE SPACE TECHNIQUES
5. CONSTRUCTION TECHNIQUES
 - a. By pleats, tucks & folds manipulation of fabric
 - b. By piecing
 - c. By using thread alone
6. MISCELLANEOUS
 - a. Edgings
 - b. Hems & seams
 - c. Buttons
 - d. Decorative seams
 - e. Fastenings
 - f. Piping
 - g. Patching, mending & darning

Paper 2.

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More on ¹⁴C Dating from Denmark

The *Vejen Blanket* at the Koldinghus Museum, South Jutland, which was thought to be from the Migration Period, has now been ¹⁴C dated to 160 BC to A.D. 50 (calibrated).

Literature

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Mummies Found in Western China

The information given here is taken from the article entitled *Mummies of the Tarim Basin* (*Archaeology* 1995:) by Victor H. Mair, Professor of Chinese, Department of Asian and Middle Eastern Studies, University of Pennsylvania. Professor Mair describes the excavation of numerous desiccated corpses from the Tarim Basin, Taklaman Desert, Xinjiang Province, since the late 1970s. These bodies were naturally mummified after burial either "dried out in the desert heat, freeze-dried during the region's bitter winters, or even cured in sandy soils where a high degree of salinity inhibited bacterial growth". Radiocarbon dating places these mummies from circa 2000BC through to 400BC. Older finds had already produced remains dating from 200BC to 200AD. The exceptional preservation shows very clearly that virtually all the corpses were people of caucosoid type and not mongoloid.

Han Kangxin, Institute of Archaeology of the Chinese Academy of Social Sciences, Beijing, has concluded that the earliest people in Northwestern Xinjiang were almost all of caucosoid type; before 1000BC coming probably from the northwest, and after 800BC perhaps from the west.

A coloured photograph illustrates clearly the dress of a male dating to 1000BC probably wearing a kaftan type coat in red-purple wool (?), the edges trimmed with narrow red braid, and dropped shoulders edged also with red braid. There are two thicker coloured braids around his wrists and red and yellow striped leg wrappings seemingly of soft felt. Another photograph shows a female corpse of circa 2000BC wrapped in a coarser sacking-like cloth with a head cap with a feather stuck into it. A later female body of at least 200BC wears a striped skirt still showing bright colours, a fur-lined leather cloak and a tall black cloth hat. There is also a red and green/blue twisted cord belt.

Dr. Irene Good, University of Pennsylvania, has analysed a wool cloth fragment from Qizilehoqa, Ulupu Oasis dating to circa 1200BC. Dr. Good has identified this piece as a 2/2 diagonal wool twill made from Z spun thread, no selvages. The yarns used are coloured blue, white and brown and the cloth is woven in a plaid pattern. It is described as being very similar to 2/2 twills found in the European Hallstatt period (given as circa 100-500BC).

So far more than 100 Bronze Age caucosoid mummies have been found in the Tarim Basin (an area of 500 miles east-west and 400 miles north-south). It is not mentioned how many are clothed. There are also hundreds more skeletons and many

more discoveries are expected. Professor Mair has initiated a project for their proper preservation and exhibition since, understandably, facilities to look after the numerous new finds are not immediately available.

These recent finds lend credence to descriptions in Chinese literature of legendary or historical persons who were said to be very tall, with blue or green eyes, long noses, full beards and red or blond hair. Such descriptions were never taken very seriously but now it would seem they were based in fact. Professor Mair raises the possibility that these people may have played a part in the transport of silk from China to various foreign countries further south and west over hundreds of years.

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TWINE

TWINE (Tablet Weavers International News Exchange) is a new organization specifically for people interested in tablet/cord weaving. To date, its membership numbers around 75. Anyone interested in joining and receiving the newsletter, please write to:

Linda Hendrickson
140 SE 39th Avenue
Portland, OR 97214-2002
U.S.A.

Tel. (1) 503-239-5016

Complex Weavers/Medieval Textiles Study Group

Complex Weavers/Medieval Textiles Study Group is a study sub-group of Complex Weavers, a North American organization whose members are interested in the more complicated weave structures. MTSG (Medieval Textiles Study Group) is a fledgling group of people who focus their weaving interests on medieval weaving and other textiles. Anyone interested in this group can receive further information from:

Desiree Koslin
116 West 29th Street, 7A
New York, New York 10001
U.S.A.

Conferences

Archaeological and Historical Research into the Medieval Cloth Industry of Flanders

29-30 November 1996

Ypres, Belgium

The Institute for the Archaeological Heritage of the Flemish Community (IAP) has organised a two-day conference which will bring together specialists with different research interests around the theme of "Archaeological and historical research into the medieval cloth industry of Flanders".

Further information can be obtained from:

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Instituut voor het Archeologisch Patrimonium
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B-8900 Woumen-Diksmuide
Belgium

Tel: (32)-51545610

Fax: (32)-51545812

e-mail: Geert.Vangrootel@rug.ac.be

New Approaches to Archaeological Textiles

Early Textiles Study Group

6-8 September 1996

University of Manchester, UK

The computer-assisted techniques and state-of-the-art equipment of the modern scientist and dye analyst have brought about a minor revolution in the study of archaeological textiles. This is the first conference to be devoted to an overview of present progress and future possibilities in the field. Speakers from Europe and the UK will report on the latest research into fibres and weave structure, dyestuff identification and conservation-related problems.

For further information contact:

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Textile Symposium '97

Fabric of an Exhibition: An Interdisciplinary Approach

22-25 September 1997

Ottawa, Canada

Textile conservators in the United States and Canada will sponsor biennial conferences on topics related to textile conservation. These conferences will take the broadest possible approach to a topic to encourage the participation of scientists, museum professionals, conservators, art historians, archaeologists and other interested specialists.

A regional group of conservators will be responsible for local organisation, program development, and most important, publishing the proceedings so that the information at the meeting be made available to the widest possible audience.

The Canadian Conservation Institute, Department of Canadian Heritage, will host the first such biennial textile conservation symposium 22-25 September 1997 in Ottawa, Canada. Entitled *Fabric of an Exhibition: An Interdisciplinary Approach*, the aim of this four-day symposium is to bring together people from the diverse specialities that are required for the successful exhibition of textiles. Examples of some of the topics to be considered include travelling exhibitions, case histories of exhibition solutions, mannequin construction, exhibition materials, and the balance between preservation and accessibility/interpretation of a textile collection.

In addition to the formal presentations and poster sessions, demonstrations of techniques and materials will be offered. Participants will also be able to visit museum and conservation facilities in the Ottawa area.

The official languages of the symposium will be English and French. An international call for papers has been sent out. To receive further details, please contact:

Michaela Keyserlingk
Canadian Conservation Institute
Department of Canadian Heritage
1030 Innes Road
Ottawa K1A 0M5
Canada

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Reviews

Conferences

6th North European Symposium for Archaeological Textiles

The 6th North European Symposium for Archaeological Textiles (NESAT) was held in Borås, Sweden from 8-11th May, 1996. The symposium was arranged jointly by Christina Rinaldo, Väfskolen, Högskolan i Borås and Lise Bender Jørgensen, Department of Archaeology, Göteborg University, very ably assisted by Eva Englund also of the Department of Archaeology.

The programme consisted of two and a half days of papers presented by thirty-one textile scholars, nineteen poster presentations and visits to Borås Weaving School, the Textile Museum, and a modern cotton factory. Excursions were made to the Tanum Bohuslän rock carvings and to a medieval castle. Participants were honoured to be entertained to dinner in Borås Town Hall by the Mayor, Mr. Bengt Ryberg.

The main purpose of the Symposium is of course the presentation of current research to colleagues and the interchange of ideas which foster the growth of the discipline. The Symposium was opened by Professor Kristian Kristiansen, head of the Department of Archaeology, Göteborg University, who emphasized the bountiful nature of the 'feast' of knowledge to follow. Indeed the programme started with neolithic textiles from France and finished with the sails of the Swedish royal warship, the Vasa of the 17th century. There were sections on prehistoric textiles, Neolithic, Bronze and Iron Age; on Late Iron Age and Early Medieval; on Medieval both from the Scandinavian Viking Age, England, Germany and Poland; and on Later Medieval cloth used both for dress and for industrial purposes. It is invidious with so many able participants to pick out particular topics but it was a great pleasure to see so many colleagues from Eastern Europe. The countries represented were the Czech Republic, Latvia, Lithuania and Poland. In all textile scholars from fifteen Northern European countries attended. Old friendships were renewed and new ones established while a great deal of fascinating information was shared.

Nineteen poster presentations created an instant exhibition in the Textile Museum and added an impressive dimension to the proceedings. Topics included new finds of grave textiles from Denmark, Belgium and Germany, and reconstructions of costume from the Bronze, Iron and Viking Ages.

Christina Rinaldo, Lise Bender Jørgensen and Eva Englund are to be congratulated on their superb organisation of all the events in the Symposium. It was an exacting task but it was very evident that the participants were gaining a great many new insights into textile studies while enjoying themselves enormously. The planned publication of the proceedings will make available papers, and *ATN* is publishing the content of those posters which have not already been published.

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Seafaring Textiles Conference

A one-day conference on medieval seafaring textiles was held at the National Maritime Museum, Greenwich, London on Saturday 27th April 1996. The conference was jointly organised by the National Maritime Museum and the Medieval Dress and Textile Society. Seven papers were presented and the two aspects of interest, the maritime and the textile, made for interesting discussion.

Gillian Hutchinson, National Maritime Museum, spoke on the uses of textiles in Northern European medieval ships giving an interesting overview of early sails and the possible sequences of usage of wool and canvas, and of ropes and cordage. Dr. Anna Muthesius, Surrey Institute of Art and Design, took the discussion further afield with her analysis of Byzantine seafaring textiles both in terms of sails and the goods transported by sea. Her emphasis was on the role of silk sails and other silk goods in the culture of the time. Dr. Wendy Childs, University of Leeds spoke on the export of English cloth: ships and markets, 14-15th century. She presented an incisive picture of the textile cargoes carried by ships plying between such ports as Bristol, Kinsale and Lisbon, and the timetables adhered to by the ships' captains.

After lunch Dr. Catherine Reynolds, University of Reading, described the painted decoration of textiles for Burgundian ships, 14-15th century, illustrating her

lecture with colourful slides and contemporary records which showed the importance of these textiles and others such as tapestries and cloth-of-gold. Kay Lacey, London School of Economics, followed with a very thorough description from accounts of Henry VII of the royal vessels and their outgoings for maintenance and functions like the transport of royal barges of foreign ambassadors. Maria Hayward also from the London School of Economics spoke on flags for royal ships in the 14-15th century demonstrating the importance of banners in medieval culture. The English navy did not at the time use flags for communication but to promote the image and heritage of the monarch. The final paper was given by Maggie Richards of the Mary Rose Trust, Portsmouth, whose evidence of clothing from the Mary Rose was

immediate and intimate. There is great interest in the fact that many of the remains, like the 43 leather jerkins, are of working clothes so few of which have survived.

For the forty or so people who attended it was a most interesting day, and the excellent logistical arrangements by the National Maritime Museum added greatly to their enjoyment.

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Source Materials

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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, as well as from all parts of the world are of interest. Contributions to the *Newsletter* are welcome, and should be in accordance with this concept.

1. Contributions can be in English, German or French. Items in Russian will be accepted, but these will be translated into English.

2. Contributions may include references to recently published books, journals and articles, and to announcements and reviews of exhibitions, seminars, conferences, special courses and lectures, information related to current projects (see note 3), and any queries concerning the study of archaeological textiles.

3. Work in Progress. This is a general category which includes research/activities related to archaeological textiles from recent excavations or in museums. Projects can encompass technology and analysis, experimental archaeology (e.g. reproduction), documentation, exhibition, conservation and storage. These contributions can be in the form of notes or longer feature articles.

4. Send submissions in typed form preferably on computer diskette produced in IBM compatible WordPerfect or Word format. Bibliographic references must be supplied in full. Line drawings and photographs are accepted, but must be originals of high reproduction quality. Items for illustration should not be affixed to other backings.

5. The editors reserve the right to suggest alterations in the wording of items sent for publication.

6. The deadline for contributions is May 30th and November 30th, for the Spring and Autumn issues respectively.

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