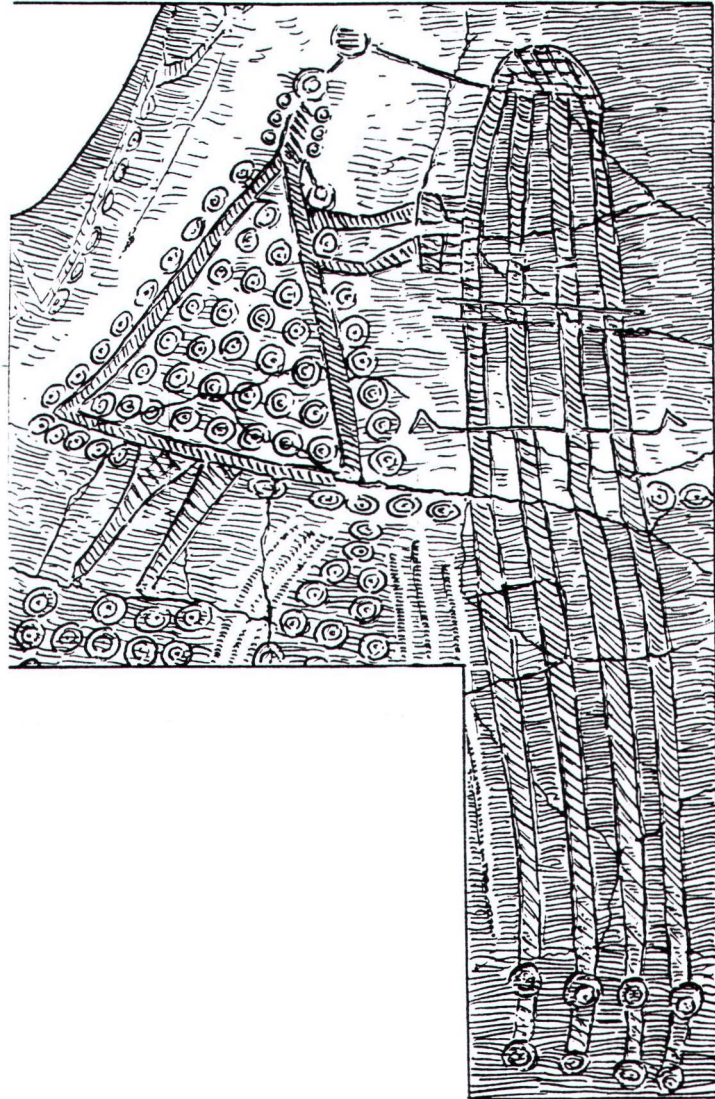


# ARCHAEOLOGICAL TEXTILES NEWSLETTER



## Editorial

*ATN* has now moved from Trondheim to Manchester. The Editorial Board take this opportunity to record their warmest thanks to Dr Elizabeth Peacock who has edited and produced the last nine issues with flair and conspicuous success. She is a hard act to follow !

Let the new Editor begin by restating the principles on which *ATN* operates. Our emphasis is on *news* - what has just happened on the textile scene, what is about to happen, and what is happening at this moment. Reports on conferences held, notices of events to be held, bibliographical information on the latest publications - all are grist to the mill. Longer articles, especially on work in progress, are at the heart of each number: but 'long' usually means 3-4 printed pages maximum, including illustration.

The Editor solicits articles - and he relies on the Editorial Board for their help in finding authors and contributions, too. But ultimately it is the readers and subscribers themselves who by offering notes and articles keep the *ATN* alive and healthy. Please do not be shy: if you think it might be interesting to readers of *ATN*, then it probably *is* interesting - so, submit it ! We print in English, German and French; but if you are writing in one of these as a non-native speaker, do not worry: your text can be polished by one of the Editorial Board, if you wish.

For the present, incoming manuscripts will either be retyped or scanned into a format compatible with the Editor's wordprocessor. The help of Jane Batcheller in scanning the texts for this number of *ATN* is gratefully acknowledged.

As the basis of illustrations we can accept line-drawings and black-and-white photographs (with good contrast). We can sometimes print in colour (from colour prints): but please check with the Editor first; for colour-printing is still very expensive.

Since Gillian Vogelsang-Eastwood conceived and founded the *ATN* in 1985, we have explored many methods of handling subscriptions. None is satisfactory. Banking

arrangements and charges are constantly fluctuating, rarely to our advantage. In particular the charges for sending relatively small amounts of money from one country to another are disproportionately high, and hence our 2-year subscription term, to minimise transfer costs. *ATN*'s main account is now in pounds sterling in the UK. If you have a means of getting sterling bank-notes into the Editor's hands, that is much the cheapest method; the Editor is happy to take a single lump sum on behalf of several subscribers. Once the dust has settled, he may even be able to open an account for Euros. It was all so much simpler before AD 450 ....

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**Cover:** The warp-weighted loom as represented on a pottery vessel from Sopron, Hungary (7th century BC).

## Features

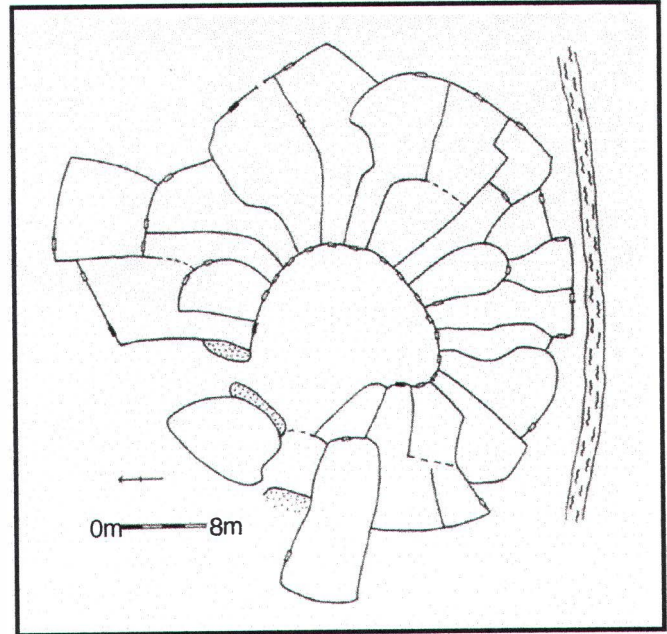
### The Sheepfolds of Snowdonia, North Wales

The production of the raw material for textile manufacture may have far-flung and long-lasting effects upon the culture and physical landscape of a region. Such is the case in the upland mountain and moorland area of Snowdonia. Here archaeological evidence for sheep domestication exists from the Neolithic, but it is during the medieval period and in the late 17th and 18th centuries in particular, that a reliance upon sheep farming became established.

During this period the importance of the Welsh weaving trade increased, and with the development of large-scale urban centres such as Manchester and Liverpool, and an expansion in the exploitation of local mineral and slate deposits, the demand for wool and meat products increased. In the 19th century some areas of Snowdonia saw almost a doubling of farm units because of population growth and the development of smallholdings held by quarrymen-farmers.

This agricultural exploitation of the area has left its mark in the form of a variety of stone-built structures such as sheepfolds, walls, washpools etc. Sheepfolds are enclosures for the penning of sheep and as such exist anywhere sheep husbandry has taken place. The upland Snowdonia landscape is littered with the remains of such enclosures. Many are single-celled simple structures which were formerly used for holding small-sized flocks for treatment or for shelter. During the medieval period in particular a system of transhumance existed in the area, known as 'hafod and hendref', and many of the smaller folds, often with attached ruined homesteads, may be associated with this practice. In addition whenever new sheep were introduced to the area they had to be gradually familiarised with it in order to prevent them straying. This process of learning the new area or 'cynefin' was carried out by the shepherd folding the sheep into a small pen at night and sleeping out with his dogs to guard them. Several pens contain hearth structures associated with this practice.

The milking of sheep was common in the past. Certain folds consisting of two linked pens are thought to have been possibly



*Fig.1 Sketch plan of a multicellular sheepfold in Snowdonia*

associated with milking. The ewes would be kept in one pen whilst being milked, with the lambs in the other.

Until the 1950s sheep were washed prior to shearing in order to assist the clippers by the removal of grease and dirt, and to gain a higher price for the fleece. A pool would be created in a fast-flowing mountain stream by damming, and the sheep driven through. Wherever a fold is sited beside a stream, it is usually possible to locate the former washpool, now often silted up. Once the sheep were washed, they then had to be dried before clipping. Exposed folds on windy sites are thought to have fulfilled this function.

A characteristic structure of this area is the large multicellular sheepfold. Multicellular folds consist of a central sorting pen with several (often over twenty) interlinked subsidiary cells leading from it. These folds developed during the 18th century for sorting individual flocks which were grazed communally on the open uplands. Some appear regular and planned in form, but others are much more irregular and complex, suggesting they are the result of a cumulative development (fig.1).

Since the beginning of the 20th century the number of individual farms has decreased dramatically, whilst actual flock sizes have increased, so that where a hillside may, for example, have been grazed in the past by twenty farms with around twenty sheep each, now only one or two farms graze the same area with flock sizes numbering in the hundreds. This has led to the dereliction of many of the folds, and changes in the form and structure of others.

Many of the folds, not only the large multicellular structures, appear to have been developed from earlier structures, such as medieval house-platforms or prehistoric enclosures and hut groups. In some cases a direct 'fossilisation' of the earlier structures has occurred. Elsewhere, elements of the site landscape such as aspect and altitude, suggest that earlier features may underlie the folds. Thus the folds may be used to identify otherwise unrecognised earlier structures.

Indeed, in some cases, the folds may represent a continuity of agricultural practice stretching back into prehistory, and reflect the impact and importance of wool production on both the cultural and physical landscape of the area.

## Reference

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## The Wools used in the 19th Century Carpets made in Barnard Castle

### Introduction

During the 19th century the small town of Barnard Castle in Teesdale, County Durham, northern England, had a little-known carpet industry, which at its peak in 1851 employed 9% of the population. The industry had died out by 1900, apparently without trace, and it was not until the 1980s that records were discovered, first, the carpet designs (they were flat-weaves) and second, cash-books indicating the source of the yarns used (Coggins 1996). The mounting of an exhibition of surviving carpets in Bowes Museum, Teesdale, during autumn 1996 provided an opportunity to analyse the wools in the carpets and it is gratifying to me that for the first time an exhibition catalogue (Coggins 1996) contained lists of fleece types (as well as dye analyses carried out by Dr G. W. Taylor) alongside the textile details. I here give a summary of my findings, which are to be published in full (Ryder 1998).

Although there are hundreds of sheep breeds throughout the world, there are only about six main types of fleece (Ryder 1983; 1987a). By measuring the diameter of fibres in a sample of yarn it is possible to define the type of fleece, but it is not usually possible to identify the breed of sheep from which the wool has come. The fleeces of hairy, British hill breeds with a black face are usually described as carpet wools, whereas in fact in modern carpet manufacture such fleeces provide only one of several types used in a "blend" (mixture) to produce the desired characteristics at an acceptable price. Other fleece types in the blend might be the less-hairy wools from white-faced hill breeds and more expensive, coarse, but non-hairy wools of medium fibre diameter. Medium wools wear better than hairy wools, and fibre measurement has shown that this type was often used in old oriental carpets (Ryder 1987b). Investigation of the Bowes carpets indicated that the wool they were made from included some very hairy examples of the Hairy fleece type, with some hairy examples of the Medium fleece type, and the suggestion that some of the yarns might have been a blend of Hairy and Medium wools.

## Gross and General Textile Observations

Several warp and several weft yarns from eight carpets were sampled and measured (total 45 yarns). The warp yarns were thinner and more tightly spun than the weft yarns, the warps being 1mm or less, while the wefts ranged from 1mm to 5mm, in thickness. Many of the warps were worsted-spun, and recorded supplies included worsted yarn. The warps usually had a Z spinning twist and were often S-plied, while the wefts were woollen spun with an S twist.

Under the microscope, rounded fibre ends were observed, which indicates the abrasion wear seen in carpets. This contrasts with the flexing wear seen in clothing in which repeated bending of fibres causes them to split. The dyes tended to be denser on the outside than the inside of the yarns, which suggests that they were yarn-dyed. This would mean that any blending of different fleece types was carried out before dyeing. However, some yarns had many fibres lacking dye, which could indicate mixing after dyeing.

## Microscopic Measurements of the Fibres

All the wools used were hairy; the percentage of medullated fibres ranged from 3% to over 40%. This is less than the amount of medullation in the hairiest Scottish Blackface sheep today (Ryder 1985). About half the wools had no natural pigment and amongst those with pigmented fibres the incidence was mostly small. Exceptions were a weft with 45% pigmented fibres, which had also been dyed brown, and a dark brown warp with 64%, which also contained colourless fibres and others dyed red. But the fibre diameter distribution showed no evidence of blending, being that of a Hairy fleece. Grey wool (i.e. a mixture of black and white fibres) is listed among the supplies. The black wool included could have been dyed, but may have been naturally pigmented since only natural colours are listed. A major fault of modern carpet wools is the presence of black fibres, which prevent the wool being dyed a pastel shade.

The overall fibre diameter range was from individual underwool fibres as fine as 10

microns to outer coat hairs as coarse as 180 microns. Hairy fibres so coarse are unusual in sheep, in which the upper limit is about 100 microns. Although most of these were quite clearly from sheep, a few of the coarsest hairs appeared to have characteristics of goat hair, which raises the possibility that some of the wools might have been blended with goat hair. Although 29% of the wools were of modern, true Hairy fleece type as found in the Scottish Blackface and Swaledale breeds, 15% with a less-coarse upper limit (60 to 80 microns) were of more primitive Hairy-medium fleece type as found in the white-faced, Cheviot and Welsh Mountain breeds. Only 2% were of the modern, true Medium fleece type. The coarser fibres of this type are the non-hairy fibres sought by modern carpet manufacturers. Such fleeces are found in certain Down breeds and in particular the Longwools, about 10 per cent of which might be included in a modern carpet wool blend. More recently among old wools and some primitive breeds a Medium fleece type has been discovered which also has hairy fibres. This has been designated hairy Medium (hyM), and 27% of the Bowes yarns were of this type.

Some wools (27%) were less easy to interpret since although basically hairy, they had a greater proportion of medium fibres than expected. They appear to be Hairy fleeces with which Medium (and most likely hairy Medium) fleeces had been blended. This possible evidence for the mixing of different types of wool prior to processing warrants further investigation.

Most of the suppliers of yarn listed in the account books were within a radius of 50 miles and it is tempting to suggest that the Hairy wools came from the local black-faced Swaledale breed, while the Medium and hairy Medium wools came from the longwooled Teeswater. But "Scotch wool" is listed and other suppliers were located in the West Riding and as far afield as London.

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## Obituary

### Elisabeth Munksgaard

Elisabeth Munksgaard died on 13th November 1997, aged 72. She was born in 1924, and took her MA degree in Prehistoric Archaeology at the University of Copenhagen in 1953. Her thesis earned her the University's Gold Medal. In 1953-54 she had a research fellowship in Cambridge and London. On her return from Britain she was employed as a research assistant at the National Museum of Denmark. In 1962 she became assistant Keeper at the National Museum's Department of the Prehistory of Denmark, a position she kept until her retirement in 1990. The Library and Archives were her responsibility, and she also welcomed guests and students to the Department and helped them find their way.

Late Iron-age and Viking Age art was one of Elisabeth Munksgaard's main academic interests, and for many years she was Denmark's acknowledged expert on this subject. Two papers on 5th century gold

rings and Late Antique silver in the *Acta Archaeologica* 1953 and 1955 present the main results of her Gold Medal thesis, and several studies on late Iron-Age treasure finds and gold bracteates followed in later years.

Europe's richest collection of ancient textiles and clothing is lodged in the National Museum of Denmark. When Margrethe Hald retired in 1967, Elisabeth Munksgaard started to develop an interest in this subject, soon to grow into the second main theme of her research. In 1974 she published *Oldtidsdragter*, a handsome book that today - 24 years later - is still the best introduction to ancient clothing in Scandinavia. The book was accompanied by a major exhibition that highlighted the Museum's unique collections and put the Danish finds in a European perspective.

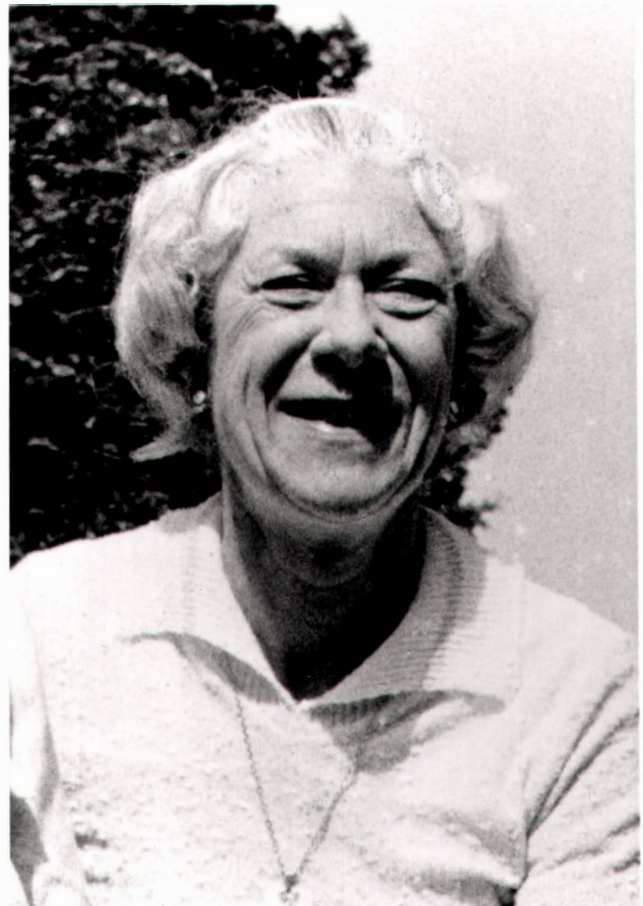


Fig.2 Elisabeth Munksgaard (1924-1997)

Elisabeth Munksgaard was one of the founding members of NESAT, participated eagerly and presented lectures at the first three Symposia. She co-organised the 4th NESAT Symposium in Copenhagen in 1990, and chose the very beautiful former manor of Rungstedgaard near her own home north of Copenhagen as the location of the Symposium. She also helped with the publication of the second NESAT meeting.

In *Oldtidsdragter*, Elisabeth Munksgaard noted that two triangular silks from the Viking-Age grave at Mammen could be part of cloak bands rather than 'hlad' fillets as suggested by Margrethe Hald. Later, she developed this idea further, and in *Aarbøger for Nordisk Oldkyndighed og Historie* 1989 she argued that several of the Mammen textile remains could be paralleled in details of the 1031 drawing of King Canute in the *Liber Vitae*. About the time of her writing this paper, the Draper's Guild of Copenhagen offered to fund the reconstruction of a costume based on the twin sources. It took two years and the united efforts of seven skilled craftspeople, a textile conservator and two textile archaeologists, but in May 1990, shortly before Elisabeth's retirement, the magnificent result was presented to the public: King Canute in all his splendour. It was a memorable event and a fine finale to Elisabeth Munksgaard's academic career.

Elisabeth was a personable lady who made her presence felt and added her own flavour to the Department of Prehistory. Her retirement coincided with a reorganisation of the Museum and the Department. She felt that things changed too much for her liking, and wanted to spend her time on other things. Her passing marks the end of an era.

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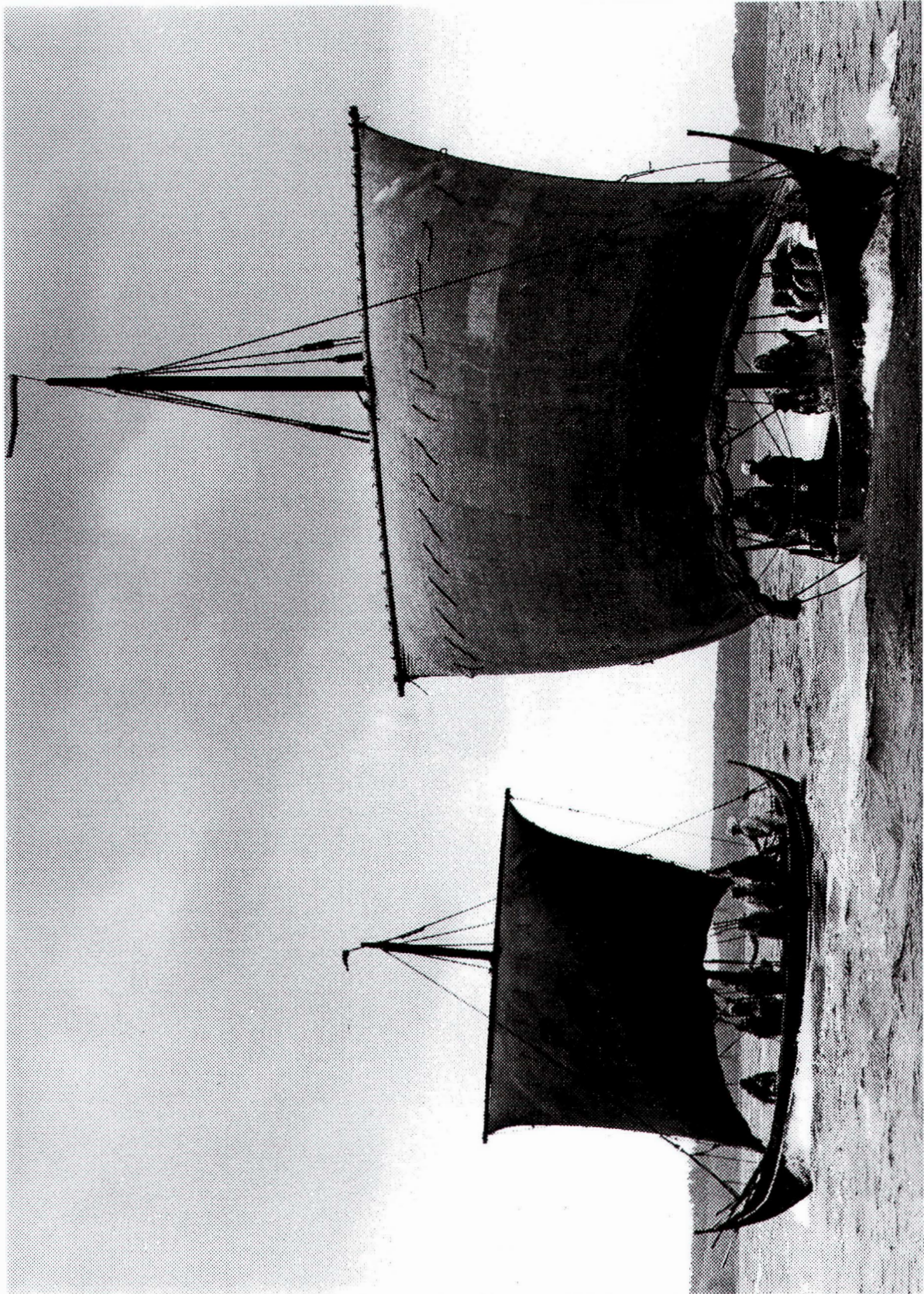
## Reports

### Textiles of Seafaring

*Textiles of Seafaring* is a research project partly financed by the European Union's Raphaël Programme. The project aims at increasing awareness of an almost forgotten part of Europe's cultural heritage: the craftsmanship behind woollen textiles used in seafaring. This requires a multidisciplinary approach, involving students and apprentices, and is undertaken cooperatively by four museums and a university: the Viking Ship Museum in Roskilde (Denmark), the Museum of Natural History and Archaeology in Trondheim (Norway), the National Museum of Scotland, Edinburgh, Lödöse Museum (Sweden) and the Manchester University Institute of Science and Technology (England). The Tømmervik Textile Trust (Norway) is also participating in the project.

Seemingly coarse wool textiles such as sails, sailors' clothing and bedding, tarpaulins and packing materials are hiding a sophisticated knowledge of raw materials and technology. Survival in the cold waters of the Atlantic necessitates water-resistant cloth with specific properties that differs for each type of item. Selecting the right kind of wool for a sail, for example, is a complicated matter, not restricted to a specific breed of sheep. The pasture where the sheep is grazing affects the quality of the wool, as does the time and way of harvesting, sorting and cleaning it. Spinning, weaving and finishing methods each have an important impact on the final result. This is mainly the craft of the *womenfolk* of the sailors, and the project is thus engendering the very male-biased image of this part of our cultural heritage.

By reconstructing Viking ships since 1983, the **Viking Ship Museum** in Roskilde, Denmark, has been investigating the craftsmanship of Viking shipwrights (Andersen *et al* 1997). During this work the Museum has established collaboration with the **Tømmervik Textile Trust** in Kvenvær, Norway. Amy Lightfoot of the Tømmervik Textile Trust and her apprentices have reconstructed the sails for a small trader, suited for sailing in the Baltic and in Danish waters. During this work substantial knowledge of the craftsmanship behind wool



*Fig. 3 Reconstructions of Viking ships being tested, Sif Ege and Roar Ege. The sail of Sif Ege has been made by the Tømmervik Textile Trust. Photo: The Viking Ship Museum, Roskilde.*



textiles used for seafaring along the Norwegian coast was recovered, providing an invaluable basis for future work (Lightfoot 1997).

Few remains of ancient or medieval sails have survived to our day. One such item was found in 1990 in the roof of Trondenes Church in northern Norway. It belongs to the collections of the **Museum of Natural History and Archaeology** in Trondheim (Godal 1994; Möller-Wiering 1998). Two reconstructions of wool sails have already been based on this fragment, but only through simple visual observation. In recent years scholars at the **Manchester Ancient Textile Unit** (MATU) have developed a range of advanced methods of analysis to perform in-depth analyses and characterisation of fleece-types, yarns and fabrics. The new methods are based on Scanning Electron Microscopy, coupled with Image Analysis, which makes it possible to measure fibre diameter and twist in a non-destructive way. High resolution photography permits the measurement of fabric parameters without moving the object. The measurement of fibre thickness allows the estimation of the textile's bending and stiffness properties. This opens totally new possibilities for extracting vital data from fragile ancient textiles. The identification of the 'spinner's fingerprint' is among the early results of the work at MATU directed by W.D.Cooke and J.P.Wild (Wild *et al* 1998). This now makes it possible to compare details and properties of reconstructions of Viking sails with those of the Trondenes sail fragment and other remains of ancient sails.

### **Analysis and Reconstruction**

Recently, financial resources have been secured to build a large sea-going vessel, a copy of the Viking ship *Skudelev I*. The *sail* for this ship is being produced within the framework of *Textiles in Seafaring*.

Samples of the Trondenes sail and other remains of ancient sails are at present being analysed at MATU by Carol Christiansen and W.D.Cooke. Along with this, work is being done at the Tømmervik Textile Trust by Amy Lightfoot and her associates, by the Swedish weaver Lena Hammarlund at the Museum for Natural History and Archaeology in Trondheim and at Lödöse Museum, and by Carol Christiansen on the

Shetlands and at the National Museum of Scotland.

A series of webs are now in process of being made, trying out combinations of raw materials, tools and working processes. Two fleece types, *spelsau* and *vilsau*, are being tried out. Spinning is performed in two different ways: by hand-spindle and by spinning wheel. Furthermore, two looms are in use: the warp-weighted loom, and the horizontal treadle-loom. Each test-web and its wools and yarns are to be examined at MATU in Manchester to see what differences may be observed. Later, wear and weathering are further aspects that are to be investigated and analysed. Each stage in the reconstruction process is being recorded, discussed and its results analysed at MATU for comparison with the originals.

### **Reconstructing Craftsmanship**

The finished wool sail (c.90 square metres) is to be tested on the North Atlantic and thus subjected to the same extreme conditions as the Vikings braved. This means that it will be tried out under realistic conditions, and not just treated as an indoor laboratory experiment.

In recent years reconstructions have become increasingly popular as a means of calling attention to artefacts and presenting the public with the possibility of seeing, touching and trying them out. This, however, in my opinion by no means exhausts the potential. The work done by the Tømmervik Textile Trust and Lena Hammarlund and documented by Carol Christiansen is highlighting a degree of sophistication of craftsmanship behind seemingly coarse wool textiles that leaves us marvelling. Craftsmanship is an Art of Movement, like performing arts such as Music or the Theatre. The skill behind a moving hand is difficult to capture except on film or video or by extensive photo-documentation. It is even more difficult to explain in words. Skill is tacit knowledge, created and recreated in action, and transferred by the same means. A vital part of the project *Textiles of Seafaring* is to recapture the skills and craftsmanship behind Viking ship sails and other textiles of seafaring. In this way we hope to convey a message on the important role textiles and

textile crafts hold in the European cultural heritage.

In 1999 exhibitions based on 'Textiles of Seafaring' will be shown at the Museum of Natural History and Archaeology in Trondheim, Norway, and at the Viking Ship Museum in Roskilde, Denmark.

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## Preliminary Report of the Textile Finds, 1998 Season, at Fag el-Gamus

In February, 1998, Brigham Young University, under the guidance of the Egyptian Supreme Council of Antiquities, completed its 7th season of excavation at the site of Fag el-Gamus on the northeastern edge of the Fayum oasis. The site is a cemetery mainly consisting of burial shafts dug directly into the sand to a depth of c.3m. Each shaft was used for multiple burials, supplying as many as six burials before reaching disturbed sand. This year, we excavated two adjacent five meter squares to a depth of 2.5m, yielding a total of 111 burials, a frequency of 2.2 burials per square (surface) meter.

The cemetery of Fag el-Gamus was in use during Roman and later Byzantine times. Earliest firm dates from the cemetery fall around 200 BC. (This calibrated Carbon-14 date comes from a sample of linen taken in another portion of the cemetery known to be earlier than the present site.) A survey of the potsherds in the area of this year's excavations produced early Roman to early Byzantine ware. A small terracotta votive figurine associated with a burial and found at a depth of 1.03m parallels figurines from other sites in the Fayum generally dated to the late second or early third century (Török 1995 dates similar pieces to this period; Breccia 1934 dates other parallels to the second century on the basis of hair styling details). On the basis of the pottery analysis and of the terracotta figurine, we estimate that the earliest burials of this year's excavation date to the first century AD, with the latest burials dating to the fifth century. Further analysis, including Carbon-14 dating and thermoluminescence, will help to refine those dates for future publications.

Of 111 burials excavated, 12 were completely skeletalized. Of the remaining 99, all of the burials included at least one layer of undyed linen in plain weave or 2x2 basket weave. The better preserved burials often included three to seven sheets of linen; one burial showed nine discrete layers of linen. These linen layers were used to wrap the body, covering the head and feet, and securing the arms to the torso. 39 burials included linen with some dyed wool

decoration, of which 13 burials included blankets (seven) or tunics (ten) entirely of wool. (The discrepancy in numbers is due to repetition within burials: six burials contained two blankets or tunics each, and one burial included a small scrap of yellow wool whose function could not be determined.) No other fibres (e.g. cotton, silk) were noted at the site.

Of those burials that included dyed textiles, the most common dye color was purple (occurring in 27 burials), produced with a combination of madder and indigo. Woolen blankets were most often yellow with purple ornament. Blue, red, brown, and green were also present in lesser quantities.

We distinguished three types of cordage used for securing the wraps around the mummy: ropes of twisted flax, torn strips of undyed linen cloth (exceptionally, one burial used true purple wool cloth instead of undyed linen), and woven ribbons usually of undyed and red linen. The following shows the rate of occurrence of each: torn strips: 47; ribbon: 42; rope: 11; cordage unknown (none surviving): 31. Several burials contained combinations of more than one type of cordage, to wit: ribbon and rope (4); ribbon and torn linen (16); ribbon and unwoven yarn (1). In each recorded instance of a mixed cordage, ribbon occurs as one of the two featured types. An additional two burials showed unusual usage in having an atypically large number of red and white ribbons or in having no less than four different weaves and five different colors of ribbon.

It should be noted that in this cemetery the upper levels of burials consistently have the head to the west, while the lowest (e.g. earliest) burials have the head to the east. Among the lowest, or westward-facing burials, it is torn strips of linen that are uniformly used for cordage. Because a large percentage of the westward-facing burials have no cordage remains (58%), one must be cautious about drawing conclusions from this observation; nevertheless, we consider it significant to find one uniform cordage in use amongst these burials. It is only in the eastward-facing burials that the great variety of cordage exists that was noted in the previous paragraph. If ribbons or ropes had existed in the westward-facing burials, it is highly unlikely that they would have

disintegrated in every instance, while the torn strips of linen were preserved, especially since the ropes and ribbons were thicker and more tightly woven. We thus conclude for lack of conflicting evidence that the use of ribbons and ropes reflects a later burial practice, seemingly correlated to other changes that took place in burial patterns at this time (Griggs 1990, 145-150).

A small number of textiles with sewn edges, sleeves or other fitted detail could be tentatively, or in a few cases, definitely, distinguished as tunics. As noted above, ten of these items identified as tunics were made completely of wool. In nine of ten instances, these woolen tunics were found in children's burials. The tenth piece was found associated with - but not directly touching - a cluster of three adult burials. A further five possible tunic fragments made of linen were found, three with children's burials, and two with adults. One of the adult fragments, not definitely identified as a tunic, contained a sewn dart and a second piece of linen stitched to the ground linen. Additionally, ten samples of linen into which one or more long stitches of yellow wool had been inserted came to light. Whether these stitches denote tunics, decoration on a blanket, or some other thing, could not be determined, due to the small size of the surviving samples.

While none of the pieces survived in a very complete fashion, photographs and field notes document the presence of hoods, gussets, side slits, oval neck holes, one dart, and sleeves. An occasional garment was lengthened by addition of a second piece of fabric or tucked and sewn horizontally at knee height. For headgear, this year's dig uncovered two sprang caps, each on women, consistent with earlier years' finds. Four of the burials had a hood sewn to the tunic or a blanket separately covering the hair.

The textile finds from this dig, associated with documented burials at discrete levels, provide new insight into the mass of unproveniented textiles from this period in Egypt. While very few museum-quality pieces have survived from this site, we hope nonetheless that further publication of the data from this dig will help to provide a context for other textiles from this period.

## Acknowledgements

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## Textiles from Mons Porphyrites 1998: A Brief Report

The textiles from the 1998 excavations comprised a reasonably large and varied assemblage. 579 pieces were recorded, of which 57% were found on the east side of the fort in Wadi Abu Ma'amel, 36% on the north side and 6% at the fort at Badia. A small number of textiles were found in the test pits at Lykabettos village, and nine examples came from the excavation of the cemetery at the fort in Wadi Abu Ma'amel. The majority of the textiles date to the second century AD, though those from Badia are around the fifth century AD. Most of the samples were less than 15cm square, and, although appearing superficially well-preserved, were in a very fragile state. Despite the diversity of the assemblage, the textiles can usefully be divided into categories of: 1. goat-hair tabbies, 2. coarse bast tabbies, 3. wool tabbies.

## The Fabrics

Goat-hair tabbies comprised 9% of the assemblage. All the pieces were dark brown, consisting of a simple Zs2 tabby weave, with a thread count of around 6 in each direction. Bast fabrics included 21% unidentifiable mixes of fibre and 3% linen fabrics. These were generally undecorated, even, tabbies with open weaves, though tabby variations such as half-basket were common. Wool was the most common fibre, making up 68% of the textiles found. The majority of the wool pieces were s-spun tabbies in natural shades, with thread counts in the range of 10-20/20-40. There were several identifiable styles of wool fabric typical of the period and region, including 28 examples of weft-faced striped weaves, such as TF739 which alternates eight brown and blue stripes and also has a texture stripe created by switching from plain tabby to half basket. There were also 15 examples of fine wool crepes, loosely woven with thread counts of around 14/20. There are also examples of complex tabbies with warp-floats, some of which appear to have pile remnants (TF199-200, TF665). One piece (TF713) had a coloured pattern created by the use of a complex tabby and coloured weft in yellow, brown and red. One of the most interesting fabrics found was an example of slit wool tapestry in turquoise and beige on a red warp (TF508-509) (see

Fig.4). In terms of non-woven fabrics there were 16 examples of felts, mostly in yellow, though some appeared dyed red, and two small samples of open net sprang (TF179-180).

The majority of the textiles were plain tabby weave, but there were 16 examples of twills, including 4 pieces of poorly preserved pattern twill repeats. What is remarkable about the twills is that only two (both 2/2 twills) have the s/s combination expected; the rest have either warp or weft, or both, z-spun. There are two examples that may fall into Bender Jørgensen's (1992) category of Verring type. Both are densely woven s/z twills, though the samples are too small to decipher the precise repeat patterns.

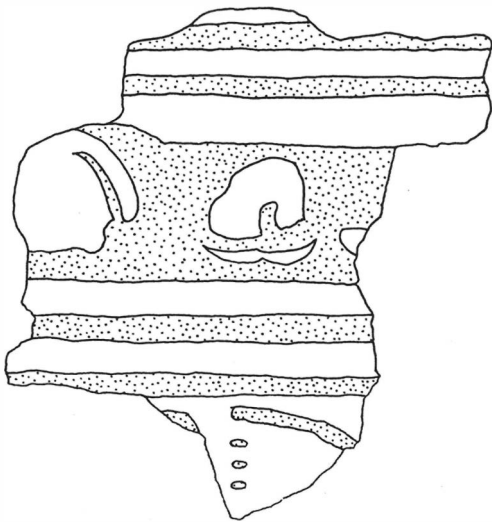


Fig.4 Tapestry from Mons Porphyrites: turquoise (dotted) and natural-colour wool on a red warp. Scale 3:2.

#### Sewn Items

As well as several sewn pieces from garments (eg TF552 appears to have an appliqué pocket), tents and bags, there are also several items which consist of several types of fabric attached to one another by sewing (TF211-214) or by a length of cordage (eg TF183-187, TF261, TF364-372) or a combination of these (TF189-193). One example is TF261, a small bundle of yellow wool fabric containing turquoise, pale green and pale yellow fabrics, tied with

a purplish piece of cordage. Many of these bundles are constructed from good quality textiles and are carefully stitched, indicating the relative abundance of high quality textile, and suggesting that the bundles may have had a function as more than just 'polishing rags'.

#### Textiles in Use

The textiles found during the Mons Porphyrites excavations reflect the activities and the uses of textiles that can be envisaged at an industrial and military base. Much of the sturdier material may have been used for tent material or light floor covering, the coarser wool fabrics for blankets and lighter wools for garments. The high quality and distant provenance of some of the pieces found is evidence of the lifestyle of *some* of the residents at Mons Porphyrites, whilst the goat-hair tabbies and felts were probably used as containers and to protect animals from their loads. The range of potential uses for the functional qualities of the textiles found suggests that the fabrics underwent many changes in use, an idea which is supported in the archaeological record.

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#### Cotton in a Merovingian Burial in Germany

##### Introduction

For those of us who work on textiles from excavations in northern Europe, the problems of fibre identification tend to centre around the distinction between flax and hemp or between flax and goat hair. Cotton rarely enters the picture and when it does occur it can often be dismissed as a modern contaminant. The identification of cotton in a secure context, in a burial reliably dated to the end of the 5th century (Dr I.Stork pers.comm.), is therefore of exceptional interest.

## The Thread

The fibres were found in a Z-spun thread used to quilt a garment or coverlet made from a wool diamond twill with a padded backing (J.Banck pers.comm.). The textile was found covering the full length of the body of a woman in a coffin-burial in the Merovingian cemetery at Lauchheim/Ostalbkreis in Baden-Württemberg. The sample was sent to our unit by Johanna Banck-Burgess, who is working on the material at the Institut für Ur- und Frühgeschichte, Freiburg-im-Breisgau. Johanna is the primary investigator of the textiles, the contribution of our company being in this instance limited to the identification of dyes and fibres.

The cotton was identified using a transmitted-light microscope fitted with a polarising analyser. The sample was mounted in water and viewed at x100 and x400 magnification (Fig. 5). There can be no mistaking the identity of the fibres. They

twist clockwise and anti-clockwise and contain elongated air-bubbles; when a polariser is inserted, fine spiral markings appear. The fibres are stained and have corrosion products adhering to the surface. Given the fibres' state of preservation, the position of the thread within the burial textile and the care taken in sampling and examination, the possibility that this is a modern contaminant may be dismissed.

## The Use of Cotton in Europe

Research into this material is still in progress, but some preliminary comments on the history of cotton may be presented here.

Cotton fibre derives from the seed bolls of plants of the genus *Gossypium*, which are native to India, Abyssinia, Senegal and Sudan (Forbes 1964, 43-49). By the Roman period cotton was being cultivated extensively in India, Bahrain, Egypt, Sudan, some parts of western Asia (*ibid.*; Wild 1997, 289) and perhaps also Greece (Wild 1970, 18). Cotton and cotton-union

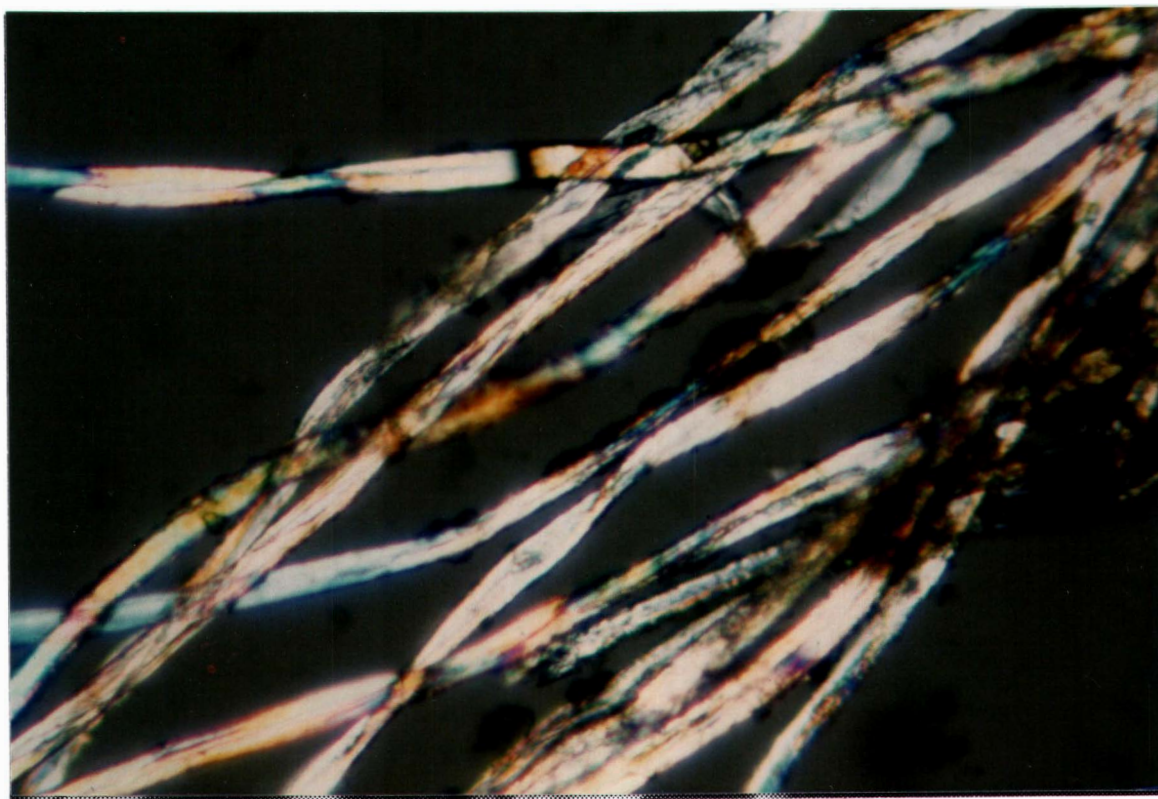


Fig.5 Cotton fibres from a Merovingian burial at Lauchheim/Ostalbkreis photographed at x400 magnification using a polarising analyser.

fabrics circulated within the Roman empire, although they seem to have been regarded as a luxury and are comparatively rare in the European archaeological record.

J.P.Wild (1970) cites the following findings of cotton in Roman Europe: a single S-spun thread from an early 4th-century well near Chew Stoke in Somerset, England (possibly a modern contaminant – Wild, pers.comm.); a cotton-wool union fabric used to wrap a 4th-century mummified woman's body buried near Aquincum-Budapest, Hungary; and a cotton winding sheet from another mummified body in a tomb on the Via Cassia near Rome.

With the fall of the Roman empire, cotton seems to have almost disappeared from the Mediterranean world. There is no evidence for its use in early Coptic Egypt (Pfister 1936, 8, 80–1) and it hardly has a mention in Byzantine papyri (Forbes 1964, 49). Rather curiously, however, a fibre-capsule from the cotton plant has been found in a reliquary buckle in an 6th/7th-century grave at Augsburg (Werner 1977, 196–7, pl. 65; Fuchs *et al* 1997, 452–4); and there is comparable material from France (*ibid.*). Such objects are thought to have been brought back by pilgrims returning from the Holy Land.

The presence of cotton in this grave in Germany suggests some far-reaching link, direct or indirect, with the East Mediterranean or Western Asia. Whether the textile arrived ready quilted with cotton thread, or whether the cotton yarn somehow reached Germany on its own, or was unpicked from another textile, will be the subject of further research at the Institute in Freiburg.

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## Flaach (CH/Kt. Zürich): Ein neues Gräberfeld aus dem 5.Jh – Ein Werkstattbericht

1997 wurde in Flaach (Kanton Zürich) zwischen Zürich und Schaffhausen ein Gräberfeld aus dem 5. Jh. entdeckt. Es war vorher schon durch Luftbilder bekannt, jedoch nicht gegraben worden. Erst als ein Bauer den Sand durch Humus ersetzten wollte und dabei auf die Gräber stiess, wurde eine Notgrabung unumgänglich. 23 Gräber aus dem 5. Jh. wurden gefunden – eine kleine Sensation, da die alamannische Bevölkerung links des Rheins bisher erst vom 6. und 7. Jh. an belegt war (Bader, Windler 1998).

Die Frauengräber waren zum Teil sehr reich ausgestattet, mit unter anderem Fibeln aus Edelmetall, Silberarmringen, Glas, Bronzebecken, Keramik, Gehänge mit Sieblöffel, Anhänger und Messer. Nach den guten Textil-Resultaten am Material von Flurlingen (7. Jh., Grabung 1996, noch unpubl.) wurde beschlossen, wiederum so viele organische Reste wie möglich zu erfassen. Die Metallfunde wurden deshalb nach Möglichkeit nicht vollständig ausgegraben, sondern als Blockbergung ins Labor des Schweizerischen Landesmuseums geliefert. Dort konnten sie vor und während der Freilegung nach Textilien und sonstigen organischen Resten untersucht werden. Die enge Zusammenarbeit von Textilarchäologin und RestauratorInnen hatte sich am Material von Flurlingen bewährt; sie wurde am Material von Flaach fortgesetzt und methodisch verfeinert. Das Team war inzwischen eingespielt und in der Lage grössere Materialmengen in bezug auf

organisches Material optimal zu untersuchen. Der Katalog wurde von mir direkt auf PC aufgenommen, was den Vorteil hatte, dass während der Freilegung durch die RestauratorInnen, Ergänzungen ohne grösseren Aufwand laufend hinzugefügt werden konnten. Am rationellsten erwies sich die Dokumentation mit Skizzen und Makrodias (Farbfilm!!). Die Skizzen waren für die RestauratorInnen eine wichtige Orientierungshilfe, die aber die Diskussion zu den einzelnen Objekten nicht ersetzten. Diskussionen gab es in der Frage, was belassen und was entfernt werden sollte, da allfälliges organisches Material die Schauseite der schönen Objekte "stört". Was eine erkennbare Struktur hatte wie Gewebe, Fell

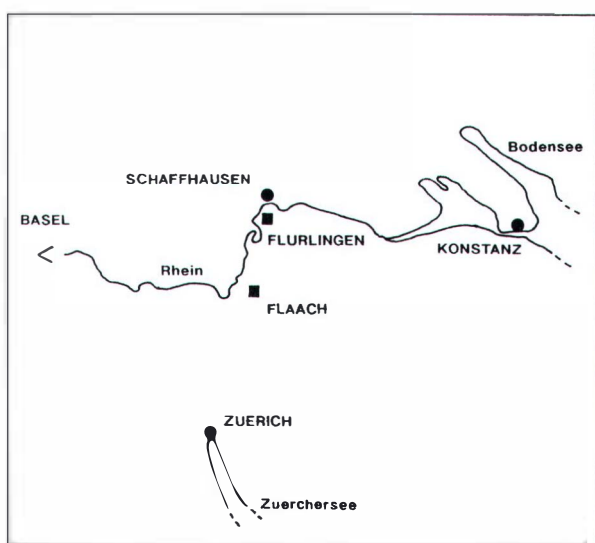


Abb.6 Flaach und Umgebung

oder Leder, wurde auf dem Metall belassen. Im Gegensatz zum Material aus Flurlingen mit vielen Waffen und tauschierten Gürtelbeschlägen aus Eisen, bestehen die Funde aus Flaach vor allem aus Gold, Silber und Bronze. Dies hat zur Folge, dass die oxidierten Schichten nicht so stark verkrustet sind wie beim Eisen. Der sandige Boden von Flaach war zumindest für die verbleibenden Textilien ideal und liess sich gut entfernen. Es muss jedoch vermutet werden, dass äussere Schichten wegen des luft- und wasserdurchlässigen Bodens nicht mehr vorhanden sind. So fehlen z.B. bisher die im Frühmittelalter häufig belegten Diamantkaro-Stoffe. Diese sind meist nicht unmittelbar auf dem Körper getragene Textilien, die offenbar im sandigen Boden von Flaach nicht erhalten wurden. Andere

Gewebe sind z.T. nur als kleine Fragmente erhalten, während aber das Metall durch eine undefinierbare Schicht verdeckt ist. So konnten wir z.B. auf dem Perlrandbecken aus Grab 19 einzelne kleine Stücke Leinwand beobachten, aber nur diese undefinierbare Schicht auf der restlichen Oberfläche legt die Interpretation einer Bedeckung (wenn nicht Umwicklung) des Bronzebeckens mit einem feinen Leinwandgewebe nahe.

Auf den Metallfunden konnten Leder der Gürtel, Textilien (bisher über 30) und Felle belegt werden. Wie beim Material von Flurlingen wurde von sämtlichem "textilen Material" eine Probe genommen, also auch aus dunklen Verfärbungen und von Fasern auf Metallgegenständen. Nur rund ein Drittel der Proben von einzelnen Fasern oder aus Verfärbungen gibt brauchbare Resultate - trotzdem (oder gerade deswegen) ist eine regelmässige Probeentnahme wichtig. Bei gut erkennbaren Textilien sind die Proben praktisch immer zu bestimmen. Alle Proben werden mit dem REM untersucht.

Ein spezielles Augenmerk wurde auf die Bügelfibeln gelegt (10 Paar), deren Funktion noch nicht ganz geklärt ist. Um die anhaftenden Textilien gut interpretieren zu können, wurde sorgfältig auf die Kanten der Fibeln geachtet, d.h., ob ein Gewebe von der Oberseite auf die Unterseite verlief und auf der Kante fassbar war, oder nur die Ober- oder Unterseite bedeckte. Blockbergungen waren in diesen Fällen sehr wichtig! An Kleinfibeln wie an Bügelfibeln sind z.T. die Ösen in verschiedenen Varianten erhalten: die Palette reicht von einfachen, schnell eingenähten Schnurösen bis zu den sorgfältig hergestellten umwickelten Ösen.

Bei den Textilien erwies sich das feine Mischgewebe aus einer pflanzlichen Faser (Lein/Hanf) und Wolle an den Almandinscheibenfibeln von Grab 19 als eigentliche Überraschung. An der einen Fibel sind zudem zwei sich überlagernde Brettchenkanten aus Wolle erhalten, die dieses feine, wahrscheinlich leinwandbindige Mischgewebe schmückten. Wie ein weiteres Mischgewebe, ein gemustertes Gewebe aus der Feddersen Wierde (FW 37, 1. Jh. AD, Tidow 1998), belegt, sind feine Mischgewebe im römischen und frühmittelalterlichen Europa als gesonderten Textiltyp zu betrachten.



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## Reviews

**ICOM Conservation Committee Textiles Working Group Interim Meeting, Palermo, October 1998**

### *Interdisciplinary Approach to the Study and Conservation of Medieval Textiles*

This conference brought together over one hundred art historians, curators, conservators and scientists. The conference theme was the need for interdisciplinarity in the development of appropriate strategies for the preservation and interpretation of medieval textiles. This is summed up effectively by Michele Cordaro (Director, Istituto Centrale del Restauro, Rome) in his published introduction: 'The best results are obtained when, from the beginning, the project and the following choices of conservation come from the presence of different experts and experiences, capable of exchanging the necessary information' (Varoli-Piazza 1998). This double stress on skills and communication is central to effective interdisciplinary work.

The mainspring of the conference and a vivid demonstration of an interdisciplinary project was a unique event: the in-depth study, preparatory to a minimal opening, of the tomb of Frederick II and its contents in Palermo Cathedral. This project provides a singular example of the issues and challenges involved in studying entombed textiles. Frederick of Swabia, King of Sicily and Jerusalem and Holy Roman Emperor, died in

1250 and was interred in a porphyry coffin in a funerary monument which presents a complex statement of his Norman-Swabian dynastic vision. In 1994 the Sicilian Cultural Councillorship, as part of the eighth centennial celebrations of Frederick's birth, asked the Istituto Centrale del Restauro in Rome to set up a project for the conservation of the 'material property' in the tomb. Rosalia Varoli-Piazza, the Co-ordinator of the ICOM Conservation Working Group and organiser of the Interim Meeting, is also a leading member of the interdisciplinary project team. Conference participants were therefore privileged not only to hear presentations from the project team, but also to visit the site as it was being prepared for the exploratory investigations. Following endopic analyses using fractures in the coffin, a minimal opening of the tomb is now planned to enable video-grammetry and sampling for further analysis, including DNA analysis as part of the Human Genome project, to be undertaken. A 'white chamber' has been built to control the environment of the tomb whilst this documentation and sampling is being undertaken. The team needed to consider the artistic, analytical and conservation issues involved as well as review information from the records of the 1781 opening of Frederick's coffin. This had documented three bodies, associated textiles and artefacts. A series of lectures outlined the key factors in planning the project, including: 1. risk analysis of the opening of the coffin, focusing on environmental issues; 2. the importance of documentation and appropriate databases; 3. the interdisciplinary nature of the project involving specialists in moving heavy art objects, engineers, microbiologists, DNA experts; 4. the application of techniques such as video-photogrammetric mapping; 5. the health and safety issues and legal requirements. The final decision on whether or not to open the coffin fully will be made on the basis of the evidence gathered from this survey.

Ursula Rothamel's particularly useful paper 'The conservation of textiles coming from medieval tombs: a hundred years of experience, today's knowledge and unsolved problems' reviewed historical approaches to opening graves. This underlined changes in attitudes to dealing with human remains and to the preservation of the textiles so closely

associated with them, an ethical debate which still needs to be engaged in today.

The Frederick project was contextualised by other lectures discussing other Sicilian textiles now in international collections. Other lecturers presented papers analysing the weave and dyes of a wide range of medieval textiles ranging from fragments recovered from Alan tombs in the Greater Caucasus to ecclesiastical textiles including embroideries and altar cloths used as body wrappings. Other papers focused on rare medieval and renaissance dress survivals. Christine Pollocik described a group of spectacular early doublets, dating from c.1570 to c.1670, in the Costume Institute, Metropolitan Museum of Art, New York. Equally dramatic garments which survived as the funerary garments of King Rudolph I of Bohemia were described by Mechthild Flury-Lemberg. These are made from two lampas-woven silks with gilt metal threads, one with a design of birds, and one with confronted dragons. The fascinating way in which these textiles were alternated when the mantle and jacket were worn was only revealed through meticulous study of the surviving fragments. Less glamorous textiles were presented in our own paper (Eastop, Brooks 1998) which discussed preservation and interpretation strategies for a number of early textiles including two doublets, probably working dress, found concealed in the walls of houses. These objects will be included in the database of concealed garments which the Textile Conservation Centre intends to develop.

Another group of papers focused on scientific and analytical studies. Judith Hofenk de Graaf and Wilma Roelofs presented a clear and concise paper reviewing the role of High Performance Liquid Chromatography (HPLC) in dating a group of red-dyed silk textiles as well as helping to establish the dye technology. Marta Jaro's paper 'Differences in manufacturing techniques usually neglected with the description of medieval metal thread made of metal-coated organic material' presented important data on the materials and structure of these complex threads. Her discussion of terminology should be borne in mind by all those documenting metal threads.

Those who were unable to attend the

conference will benefit from the extremely handsome publication which includes a generous allocation of high-quality colour plates. The range of sponsors for both the conference and publication are equally impressive and suggest that interdisciplinarity for successful conservation also extends to commercial and cultural organisations. The conference also provided the opportunity to learn much about approaches to early textiles with colleagues in different countries and disciplines. It was interesting to see how similar issues are handled in various contexts and how the commitment to interdisciplinarity as a means of improving care of the cultural heritage is being realised in different projects.

Thanks are due to Rosalia Varoli-Piazza and her team for organising this meeting which proved a valuable opportunity to hear about some spectacular textiles and discuss approaches to treatment and care with international colleagues. I would also like to acknowledge financial support from the Museums & Galleries Commission which helped me to attend the meeting.

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## Early Textiles Study Group

### *A Millennium of Mediterranean Textiles, 5th–15th Centuries*

Not a premature contribution to the millennial celebrations – but a celebration of a thousand years of textile art and production in the Mediterranean. Under this banner the eighth biennial conference of the ETSG took place once more in Ashburne Hall, University of Manchester (4–6.9.98).

The programme, designed by Professor Anna Muthesius, was a bold one, drawing in speakers from Israel, France, Germany and Sweden as well as enjoying contributions from UK scholars. Those who had travelled furthest, Alisa Baginski and Orit Shamir from Jerusalem, covered between them the latest textile finds and discoveries in Israel spanning the whole millennium, a tour-de-force. Papers tended to cluster otherwise in its latter half: Sophie Desrosiers (Paris) on the cloths of Areste and Purpura, Margareta Nockert (Stockholm) on 13th and 14th century Italian silks in Scandinavia, Jennifer Scarce (Edinburgh) on clothing in Middle Eastern domestic culture, and Marianne Ellis (Oxford) on the Newberry collection of Egyptian embroideries. Petra Linscheid (Berlin) reviewing the late antique and early Islamic textiles from Krokodilopolis (Egypt) reverted to the earlier medieval centuries. But these were just a handful of the stimulating papers that were on offer.

An excursion to the Whitworth Art Gallery at the kind invitation and with the practised guidance of Frances Pritchard introduced participants to some little known items from the former Bock collection.

The off-piste discussions, as always, were the cement that held the weekend together – the touchstone of a successful and rewarding conference. For the next conference in September 2000 the theme will be: *Migrating Textiles*. Watch ATN for further details.

*John Peter Wild*

## Notes on the 17th Meeting on Dyes in History and Archaeology

This meeting was held on 26th and 27th November 1998 at the Maritime Museum, Greenwich. Over twenty papers were presented, and those of relevance to the textile field are summarised here.

Jenny Balfour-Paul (Exeter University) summarised her studies of mud and indigo dyeing in Senegal and Mali. The craft is dying out, but Jenny was able to exhibit some of the beautiful textiles still being prepared. Rowena Hall (Bournemouth University) described the colouring of bark cloth and other artefacts in Papua-New Guinea. This is more painting than dyeing, but some of the colours, particularly annotto red, were astonishingly brilliant.

I.I.Ziderman (Israel) outlined some of the problems in defining the colours represented by ancient Hebrew terminology in the field of shellfish purple. Philip John (Reading University) described the scientific principles behind the operation of the medieval woad vat, stressing the importance of certain bacteria. Valery Golikov (Moscow) described experiments aimed at reconstructing early processes for dyeing crimson with cochineal.

Frances Pritchard (Whitworth Art Gallery, Manchester) demonstrated that some of the dyes used in the beautiful textiles produced early in this century by Mario Fortuny were indeed natural. George Taylor (ex-Textile Research Associates, York) described how Indian dyers occasionally used mixtures of dyes giving similar shades and speculated on the reasons for this. Patrick Brenac (CRITT Horticole-Antenne Couleur, France) outlined the work of his institution which is concerned with the growing and study of natural plant dyes: samples can be provided. Vincent Daniels (British Museum) described how iron-containing dyes, such as tannin blacks, cause degradation in old textiles.

Jan Wouters (Koninklijke Musea, Brussels) reviewed results of the analysis of wild madder samples from a range of geographical sources. The occasional occurrence of alizarin (not usually considered a colorant in *Rubia peregrina*) prompted the observation that careful

identification of the plant is vital. Ester Ferreira (Edinburgh) described new procedures aimed at identifying yellow mordant dyes not only in themselves, but also through their products of fading.

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#### **Notes on the Eastern Analytical Symposium, New Jersey, November 1998**

This is an annual meeting of analytical scientists, which this year included sessions on art conservation and analysis for the first time. Nancy Kerr (Alberta University) proposed an identification protocol for deteriorated bast fibres. Kay Obendorf (Cornell University) described chemical changes taking place in the ageing of oily-soiled textiles. Gregory Young (Canadian Conservation Institute, Ottawa) summarised methods of studying the processes taking place in the deterioration of silk. Charlotte Jirousek (Cornell University), concerned about the decline of sericulture in Turkey, described a possible method of distinguishing between Turkish silk and imported Chinese and Japanese silks by studying fibre diameter: the latter two had a more uniform fibre diameter. On the same theme, John Winter (Smithsonian Institute) indicated that it might be possible to distinguish between Japanese, Chinese and Korean paintings on silk by detailed study of weave structure.

Jan Wouters (Koninklijke Musea, Brussels) summarised how modern methods of dye analysis can add considerably to our understanding of old textiles, whilst George Taylor (ex-Textile Research Associates) described some of the problems in obtaining reference materials in dye analysis. Timothy Jull (Arizona University) outlined the achievements and limitations of radiocarbon dating of textiles: it is possible to date accurately articles made before 1700 AD. However, Mary Ballard (Smithsonian Institute) showed how it is necessary to be

critical in assessing published radiocarbon dates.

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#### **The Textile Society of America: Biennial Symposium 1998**

The eighth biennial symposium of the Textile Society of America was held in New York on 24-26 September 1998. The main venue was the Fashion Institute of Technology at 7th Avenue and 27th Street in the heart of New York's Garment District where participants were warmly welcomed to the various events. A reception at FIT on the evening of the 23rd set the tone for the proceedings and a goodly amount of ice-breaking and meeting old friends took place.

The full programme of papers ranged from the most recent creations of artists using tapestry-making as their art-form to ethnographic accounts of Ethiopian weavers and Bulgarian textile dowries to accomplished accounts of the making of late medieval tapestries. Another part of the symposium took the interesting form of site seminars. Every afternoon numerous seminars were held uptown, downtown and midtown, covering thirty-six venues in total. This afforded a comprehensive introduction to the textile facilities of New York and included sessions at the Metropolitan Museum of Art and other museums. Private firms, studios and galleries also offered seminars; on Friday evening (25th) there was a 'cocktail' trail to visit ethnographic textile and fibre arts galleries.

A high spot of the symposium was the reception at the Metropolitan Museum of Art where participants were also shown the facilities of the Antonio Ratti Textile Center. The Center holds the image database for the

Museum's textile collection which consists of around 36,000 pieces (excluding the holdings of the Costume Institute) distributed throughout the different departments of the Museum. Any member of the public may go to the Center and browse through the database on designated mornings. When a particular textile is identified as being of interest, one may request examination of the piece and an appointment will be made to view it (unless it is too large or fragile). This will be after a few days. Two study rooms are available so that the textile can be viewed on a video microscope at the magnification desired. In conversation with staff members the advice was that scholars coming from outside New York should write in advance saying when and for how long they will be in the city to ensure that the textiles will be available at that time. The Center has a large number of school visits, for example, in the autumn, so that staff would be unable to help unexpected visitors. There is also an expanding library of some 1,500 volumes, and no appointment is needed to use the library. The Center is a wonderful facility for textile scholars: all we need are even cheaper air fares to get there ! For more information contact: The Antonio Ratti Textile Center, MMA, 1000 Fifth Avenue, New York, NY 10028-0198 (tel. 212-650 2310, fax 212-650 2676).

On Friday there was an informal lunch with special interest group tables for Asian textiles, archaeological textiles and so on. This gave people the opportunity to meet others with similar interests. Among the speakers discussing archaeological matters were Philippa Henry (on Late Saxon textile technology), Nancy Spies (on the production and patronage of medieval tablet-woven bands) and Carolyn Priest-Dorman ('*Scutulis dividere Gallia*: Weaving on Tablets in Western Europe'). The proceedings of the symposium will be published in due course.

TSA 98 concluded with a Chinatown Feast which was a ten-course banquet at the Golden Unicorn restaurant, a fitting end to a very full and varied banquet of textile treats. The joint chairs of the symposium were Desirée Koslin (Fashion Institute of Technology) and Madelyn Shaw (Textile Museum, Washington) whose hard work and excellent organisation produced a thoroughly enjoyable and wide-ranging conference for a

very broad church of around 350 participants.

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#### New Edition

Anne Morrell, *The ATN Guide to Structural Sewing: Terms and Techniques*, published by ATN in 1989 is to be reprinted in a revised edition by the Sarabhai Foundation (opp. Underbridge, Shahibag, Ahmedabad, 380 004 India) with the title: *Guide to Structural Sewing: Terms and Techniques*. (A few copies of the first edition are still available at a cost of £4.75, post included: orders to the Editor of ATN.)

#### The Textile Conservation Centre: Future Developments

For over two decades the TCC has been instrumental in establishing and developing the profession and techniques of textile conservation. Its key objectives for the future are:

1. to further development of textile conservation education to meet the needs of the profession in the next millennium;
2. to increase and develop research, including doctoral and post-doctoral studies;
3. to establish short courses to promote the continuing professional development of conservators and curators;
4. to develop the textile conservation services which the Centre offers to museums and private clients.

The Centre merged with the University of Southampton on 1st August 1998 and in September 1999 will be leaving its former home in Hampton Court Palace in order to relocate to a purpose-designed building on the Winchester School of Art campus. New masters course and short courses will be on offer; research activity will increase and the Centre will develop a core of PhD students. In addition a two-year MA programme in Textile Conservation will be established.

More information is available from Mary Brooks at the Textile Conservation Centre, Apartment 22, Hampton Court Palace, East Molesey, Surrey KT8 9AU (tel. 0181 977 4943).

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## Subscription

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

Subscription payment should be sent to:

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Payment is accepted in **pounds sterling** (£) only. Payment must be made in the form of a bank/cashier's cheque and should be made payable to: **J.P.Wild - ATN**.

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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 are 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). 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.

7. The deadline for contributions for the Spring issue is April 30th, for the Autumn issue October 31st.

Submissions should be addressed to:

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