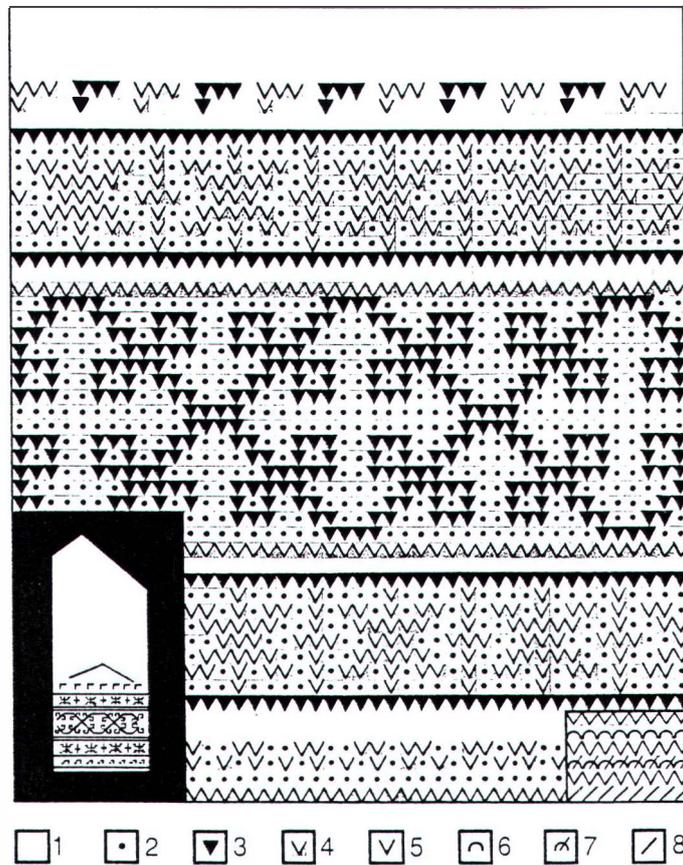


ARCHAEOLOGICAL TEXTILES NEWSLETTER



Editorial

We are pleased to print as a Feature article in this number of *ATN* Anna Zarina's paper on 'Gloves and Stockings of the sixteenth to seventeenth Century in Riga'. It was written originally as a contribution to the seventh Symposium of NESAT in Edinburgh (May 1999) (see *ATN* 28, 24), but Dr Zarina was unfortunately unable to attend and offered her work instead to *ATN*.

Increasingly contributors are offering their manuscripts to the Editor in electronic form, and this is most welcome. Text should ideally be in Word6 or WordPerfect6, and sent either on disk or as an attachment to an e-mail message (to: j.wild@man.ac.uk). A print-out, however, and any artwork, should be sent by post in the traditional way. *ATN* is generated on a Canon Starwriter, and all electronically stored text has to be translated into the Starwriter's language via MS-DOS text. Original formatting is lost in this process; but it greatly helps if the original text is not justified – the Editor does not then have to re-set alternate lines manually !

The response to the Editor's plea in the last number for the addresses of any interesting textile-related Web sites known to readers was indirect. But keep quoting addresses in whatever you write !

ATN is always keen to print conference and meeting reviews, and announcements of conferences, research projects and books about to appear.

Production of *ATN* takes more time and effort than its modest appearance may suggest (as previous Editors know well !). The Editor once more records his gratitude to Felicity Wild for sharing the multifarious tasks. He is grateful, too, for the active support of the Editorial Board, on whose services and advice he relies.

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Cover: Draft of decorative structure of a sock from 16th/17th century Riga.

Handschuhe und Strümpfe aus dem 16.-17. Jh in Riga

In den Jahren 1938, 1987 und 1989 wurden in Schichten des 16.-17. Jh. der Stadt Riga Strickerei- und Nadelbindungswerke oder Fragmente dieser aus 7 Handschuhen und 9 Strümpfen gefunden (Zarina 1998, 289). Bei der Wollfaseranalyse (37 Proben aus diesen Werken, von jeder Probe 100 Faser), wurde festgestellt, dass die Wolle einen Faserdurchmesser von 7-105 Mikron besitzt, mittlerer Durchschnitt - R - 37-45 Mikron, Ungleichheitsgrad - V - 30-58 %. Am meisten enthalten sie bis 5% Grannenfaser, auch einzelne tote Faser (Zarina 1998, 290-292). Nach diesen Angaben ist die Wolle solcher Qualität, die mit der von der Wolle in Nordeuropa verbreiteter primitiven Schafen, wie es in Russland, Estland und Polen an Proben des 10.-15. Jh. festgestellt worden ist (Nahlik 1963, 236; Peet 1987, 114-115; Maik 1988, 199). Die Angaben sind nah auch der lokalen Wolle des 10.-13. Jh. (Zarina 1970, 15,16), woraus zu schliessen ist, dass sich die örtlichen Schafe in diesem Zeitraum nicht wesentlich verändert haben. Die Farbe ist im Zeitlauf graubraun geworden und ausser Verzierungsfasern war die Wolle vermutlich meistens ungefärbt. Vorwiegend kommt bei heller Wolle auch beigemischte dunkle Wolle vor. Im allgemeinen wurde für Flechten und Grundstricken unsortierte Wolle gebraucht, doch für einzelne Erzeugnisse wurde die Wolle auch sortiert und gefärbt - es kommt vor - visuell bemerkbar - gelb, rot, blau gefärbte natürlich helle Wolle. Die Wolle wurde locker in Z Richtung gesponnen, zweifach in S gezwirnt; manchmal haben die Fäden ungleiche Dicke. Die gefärbten Fasern an einigen Handschuhen sind eingestrickt auch ungezwirnt, ebenso wie auch beim Flicker.

Zwei gefundene Handschuhe sind aus schwarzbraunem besonders lockerem ungleich dickem Zwirn geflochten, der Grösse und Form nach passen sie für die rechte Frauenhand (Abb.1). Die Flechtart an beiden Handschuhen ist gleich - in einer Richtung zwei, in der anderen eine gekreuzte Fadengruppe mit langen freien Fadenabsätzen (Abb.2). Flechtbreite etwa 2cm, mit 3 Schlingen in je 1cm Länge. Beim Flechten wurde das geflochtene Band spiralartig verbunden. Der Handschuh V I 296:775 hat eine zerrissene Handfläche, ihm

fehlt der Daumen, in dem Wall kommen helle Fadenreste vor. Dem Handschuh V I 296:629 sind einige Flechtbandspirallen entrissen. Nach bisherigen Funden sind sie die späteren Nadelbindungswerke in Lettland - aus dem 17. Jh. Im Vergleich zu ähnlichen, früheren aus dem 11.-13. Jh. stammenden, ist zu sehen, dass sich die Bereitungssitten ein wenig verändert haben - ebenso wurde minderwertige Wolle gebraucht, lockeres Spinnen, nahe Flechtvariante. Dauerhaft war der Übergang von Nadelbindung auf Stricken, was in Lettland seit dem 15. Jh. festzustellen ist (Caune, Zarina 1980, 290).

Von Strickwaren des 17.Jh. erfuhrte man näheres: Fünf Fäustlinge - von denen 3 mit Löchern und Flechten, eins nur fragmentarisch und von einem nur ein Endstück erhalten ist - wurden analysiert (Zarina 1998, 308,309). An diesen Handschuhen sind die Anfangswälle eng - bis 4cm breit, aus abwechselnd links-rechts gestrickten Reihen, weiter kommt glattes Rechtstricken (Abb.4:A B 5-9; Abb.6:4,5). Die Abschlüsse der Handschuhe (ausser V I 296:726) sind rund mit Verengungen an 4 Stellen.

Fäustling V I 296:452 ist aus heller ungefärbter Wolle, an der inneren Seite des Faust- und Daumentails sind 1cm lange Schlingen aus lockeren Fäden mit beigefügten Wollbüscheln an jede fünfte/sechste Masche angestrickt (Abb.3:3). Nach je einer Schlingenreihe kommen 5-6 freie Reihen - ohne Schlingen. In 10cm Handschuhlänge sind 8 Reihen mit Schlingen. Dieser warmhaltige Handschuh ist der Grösse nach für eine Frauenhand geeignet. Auch Fäustlingsfragment V I 296:727, wo beim ungleichen Spinnen stellenweise in die dunkle Wolle helle Wollbüschel eingesponnen sind, ist ein Handschuh für den Alltag gewesen.

Der Handschuh V I 296:776 hat eine helle Grundfarbe gehabt (Abb.3:2). Hinter dem Anfangswall ist eine 12cm breite Verzierungszone hergestellt, wo in der Mitte auf gelbem Grund über 18 Reihen rote Ornamente eingestrickt sind, die an 3 Stellen mit einer Reihe blauer Maschen zerteilt sind (Abb.4:1). In ähnlicher Weise, mit einer anderen Farbe verteilte Verzierungsornamente, gibt es auch bei in Riga gefundenen Handschuhen aus dem 15.



Abb.1 Handschuhe in Nadelbindung: 1 V I 296:629; 2 V I 296:775.

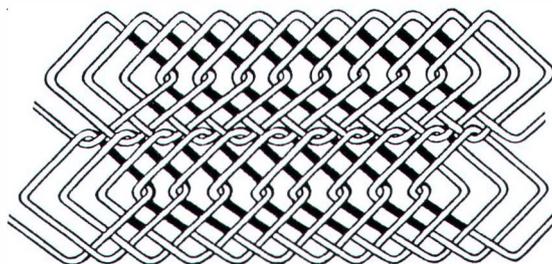
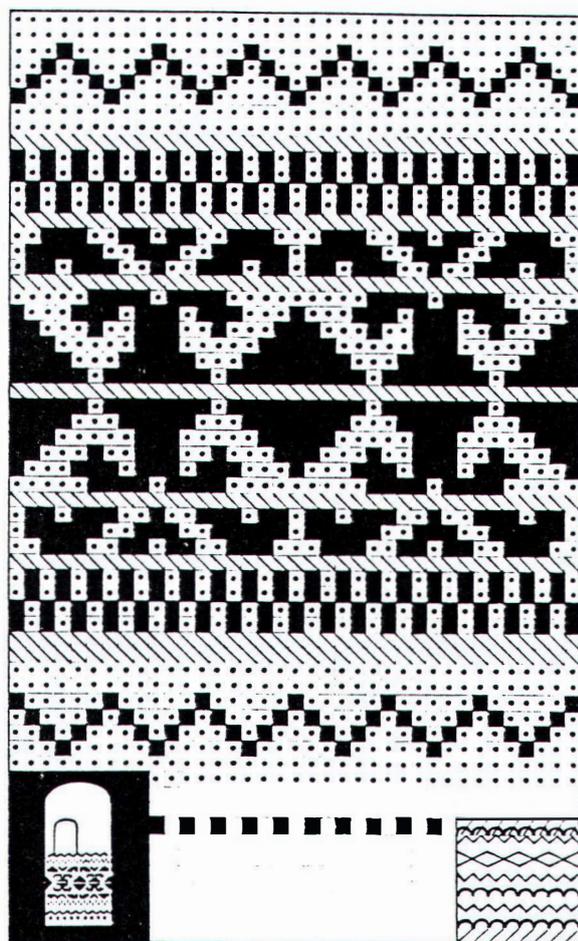


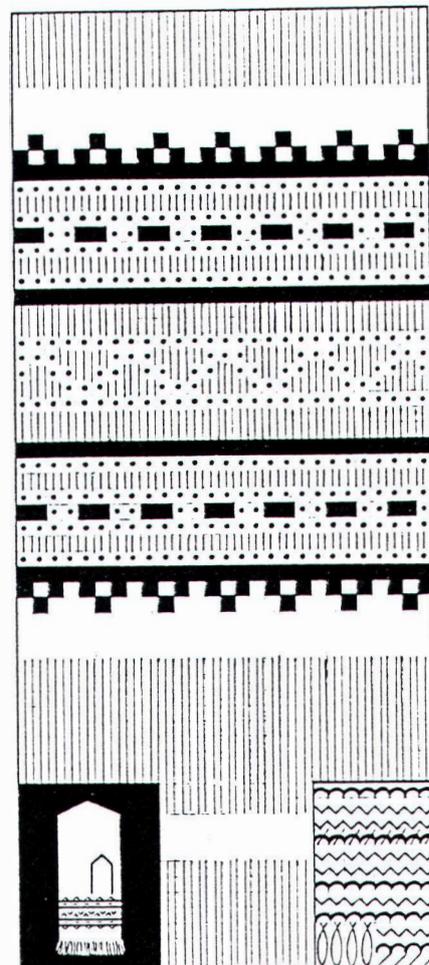
Abb.2 Technische Lösung der Nadelbindung.



Abb.3 Gestrickte Handschuhe: 1 V I 296:726; 2 V I 296:776; 3 V I 296:452.



A



B

Abb. 4 Technische Lösung der Verzierung der Handschuhe: A V I 296:452: 1 weiss, 2 gelb, 3 rot, 4 blau, 5 Flechte, 6 rechts, 7 Kerbchen, 8 links, 9 Anfangsreihe; B V I 296:726: 1 weiss, 2 gelb, 3 rot, 4 grau, 5 links, 6 rechts, 7 Flechte, 8 Anfangsreihe, 9 Fransen.

Jh. (Caune, Zarina 1980, 67, 68). Sie sind auch in Europa im 15.-16. Jh. bei Strickwaren bekannt (Turnau 1979, 160), in Lettland wurden sie noch bis ins 19. Jh. gebraucht (Slava 1990, 7,8). Der Handschuh V I 296:726 hat eine gräuliche Grundfarbe, aus einer Mischung heller und dunkler Wolle, gehabt. Der mit Fransen versehene Handschuh hat einen 2,5cm breite Anfangswall, gefolgt von 4 Maschen. an die sich eine 7cm breite Verzierungzone anschliesst (Abb.4:B). Die Abkettung, wie am Handschuh, so am Daumen ist zweiseitig – an Seiten, wo sich die Abkettungen von beiden Seiten zusammenfliessen, wird

dazwischen eine Masche weitergestrickt. In solcher Weise wird eine breitere Abkettungszone gebildet. Der Grösse nach eignet sich dieser Handschuh für die rechte Männerhand. Der breite, mit Fransen verzierte Anfangswall erinnert an Zeremoniehandschuhe aus dem 16.-17. Jh. in Europa (Turnau 1991, fig.41). Die beide letzten, verzierten, waren vermutlich Festhandschuhe. Die zonenartige Verzierung gehört nach der Auswertung der Ethnologin M.Slava zu den ältesten Handschuhverzierungsarten (*Istoriko-Etnographicheskii Atlas Pribaltiki* 1986, 157).



Abb.5 Lange Strümpfe: 1 V I 296:152; 2 V I 296:453; 3 V I 296:779.

Von 9 analysierten Strümpfen gehören 3 lange Strümpfe (Abb.5), 2 abgeschnittene Fussteile von solchen und 2 Socken ins 17. Jh.; ins 16. Jh. gehören 2 Strumpffragmente. Die langen Strümpfe sind sich linksseitig umgekehrt – mit Innenseite nach aussen – gefunden worden. Sie haben bis 2cm breite, abwechselnd links–rechts gestrickte Anfangswälle, weiter glattes rechtes Stricken mit 2 Maschen breiten, auch abwechselnd links–rechts gestrickten Rücknähten (Abb.6:2,6–8). Der Strumpf V I 296:152 ist hellgrau (mit 25% dunklen

Fasern), 47cm lang (bis Fersenunterteil), das Stricken ist mit 92 Maschen angefangen worden, so wurden die ersten 30cm bis zur breitesten Stelle des Unterschenkels gestrickt – dann der Beinform nach, verengt. Die Rücknaht fängt nach 18 Reihen – unter dem Knie – an und setzt sich bis zur Ferse fort. An den Seiten, von der breiteren Stelle nach unten, bis zum Anfang der Ferse, sind dekorative Zonen eingestrickt worden (Abb.6:2; Abb.7:1). Ähnliche Rücknähte sind auch im 17. Jh. für lange Strümpfe bekannt, die in Spitzbergen

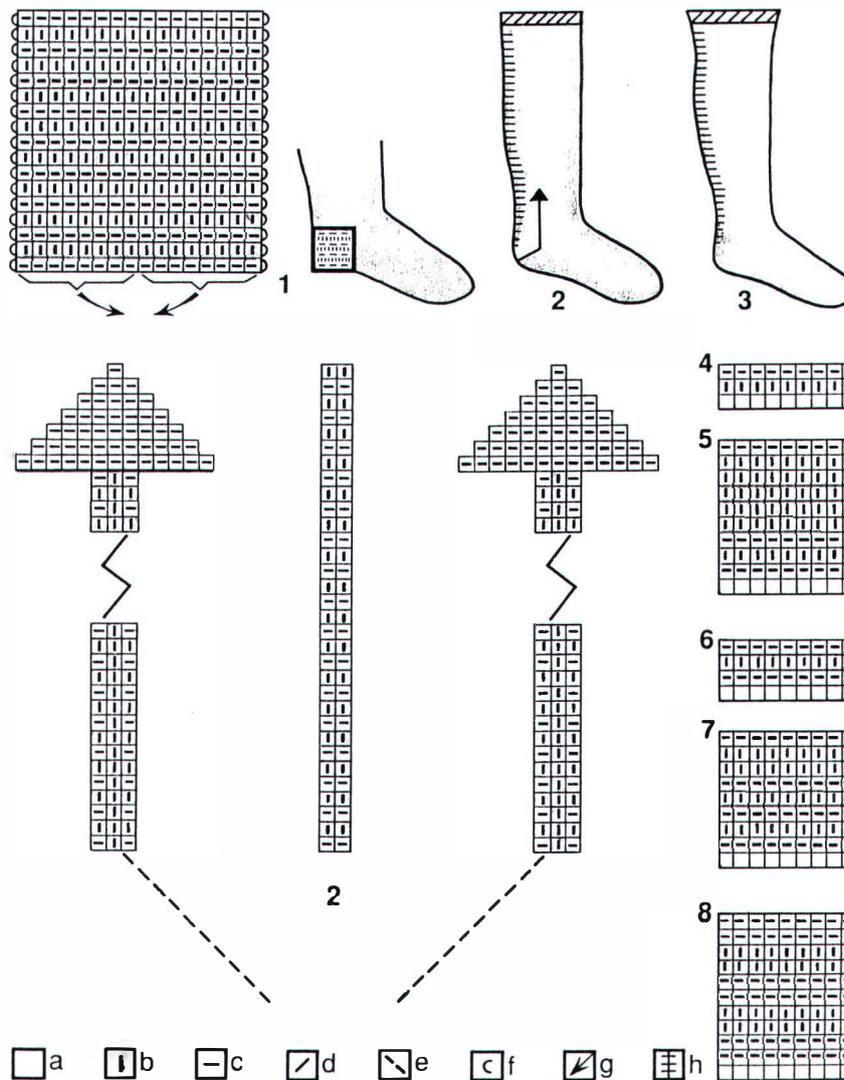


Abb.6 Technische Lösungen und Schemas: 1 V I 296:179 (Ferse); 2 V I 296:152 (Schema, Rücknaht, Seitenverzierung und Fersenverlängerung) ; 3 V I 296:453 (Schema); 4 V I 296:727; 5 V I 296:452; 6 V I 296:152; 7 V I 296:453; 8 V I 296:779 (4-8 Anfangswälle der Handschuhe und Strümpfe). Sigla: a Anfangsreihe, b rechts, c und f. links, d und e Verengung, g vereint, h Rücknaht.

gestrickt wurden (Vons-Comis 1990, 181). Auch die Seitenverzierung erinnert an damalige in Europa vorkommenden Strumpfverzierungssitten (Østergård 1990, fig.21,9). Die Fersenverlängerung ist dreieckartig, rechtsgestrickt (Abb.6:2). Wegen der Ausrisse am Fersenende ist nicht festzustellen, ob alle Verlängerungsmaschen abgenommen wurden - es scheint, dass ein Drittel der Maschen nicht abgenommen wurden. In Fortsetzung wurden die Seitenschlingen der Fersenverlängerung aufgenommen, das Stricken wird im Fussteil fortgesetzt. Der Abschluss an allen Strümpfen ist ähnlich - vierseitig, rund. Der lange Strumpf V I 296:453 ist hell gewesen,

4cm lang, gestrickt entsprechend der Beinform - sofern notwendig Maschen ab- oder aufgenommen, mit engerem Teil unter dem Knie (Abb.5:2; Abb.6:3). Die Rücknaht fängt sofort nach dem Anfangswall an und setzt sich bis zur Fersenverlängerung fort. Die Form ist nicht feststellbar - sie ist verschlissen und mit Flickern überdeckt. Der lange Strumpf V I 295:779 ist 40cm lang, der Beinform entsprechend (Abb. 5:3). Sein Oberteil, 22cm lang, ist hell gewesen. Der untere Bereich und das Fussteil sind aus rötlichem Garn gestrickt. Die Rücknaht reicht bis zum Unterteil der Fersenverlängerung, die 6cm lang und viereckig gestrickt ist und scheint unten

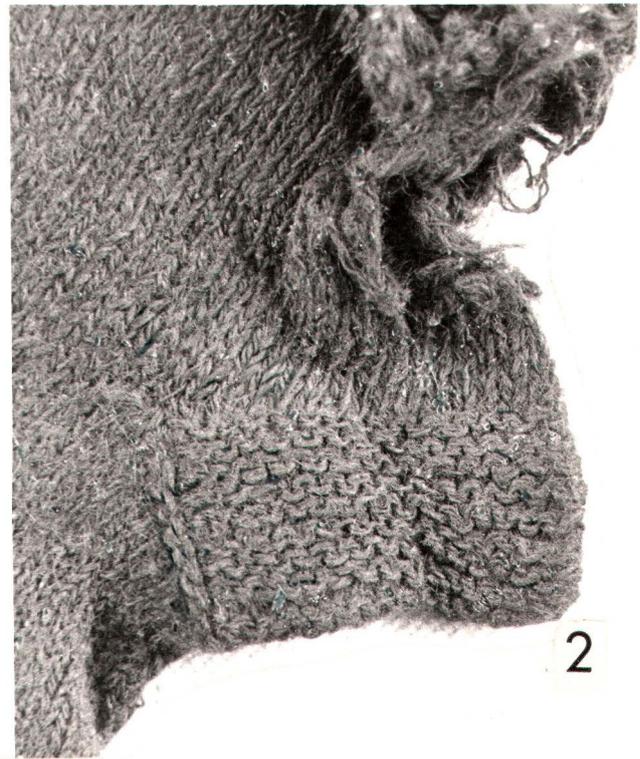


Abb. 7 Strümpfendetails: 1 Seitenverzierung V I 296:152; 2 Fersen V I 296:778.

vereint zu sein, wie am Strumpf V I 296:176 (Abb.6:1). Bei dem Fussteil von Strumpf V I 296:778 ist die 3cm lange Fersenverlängerung viereckig, aus 9 abwechselnd rechts-links gestrickten Reihen geformt und unten zusammengestrickt. Beim Stricken des Fussteils wurde die erste, an die Fersenverlängerung anschließende Reihe, links gestrickt, in Folge wurde glatt rechts gestrickt (Abb.7:2). Ähnliche rechts-links gestrickte Fersenverlängerungsreste sind auch an geflicktem Fussteil V I 296:777 feststellbar. Die Fussteillänge von allen diesen Strümpfen ist 22-23cm, was sich für einen Frauenfuss eignet.

Die zwei, bis zum Fersenunterteil 15-17cm langen Socken, mit 27-29cm langem Fussteil wurden nach lokaler Sitte über dem Hosenenden getragen. Der Socken V I 296:179 ist aus ungleich dickem Strickgarn ohne Anfangswall gestrickt helle und dunkle Fäden zusammengezwirnt. Die Socken waren für das alltägliche Tragen vorgesehen.

Abwechselnd rechts-links gestrickte, 5cm lange, viereckige Fersenverlängerung ist unten zusammengestrickt (Abb.6:1). Der verzierte, weise Socken RV M 411 49-5253 war Festsocke. Nach einem engen Anfangswall ist eine 10cm breite, farbige Verzierungzone eingestrickt, auf deren Grund kreuzförmige Figuren mit quer verkreuzten Enden zu sehen sind (Abb.8). Möglicherweise wird hier der Einfluss des europäischen Kunststils des 16/17 Jh. erkennbar. Das Fersenteil ist in ähnlicher Weise wie an dem Handschuhdaumen angestrickt. Es ist dreieckig, 5cm lang, 11cm breit. Die unsymmetrische Abnahme des Fussvorderteils ergab, dass der Socken speziell für den rechten oder linken Fuss geeignet war, in diesem Fall für den linken. Die Abnahmestellen sind dick, ähnlich wie beim Handschuh V I 296:726, 1cm breit geformt. Unsymmetrische Fussteilabnahmen gibt es auch an beiden Fussteilfragmenten aus dem 16. Jh. (LVM A 12751:5,17) (Zarina 1998, Abb.9:2). In manchen

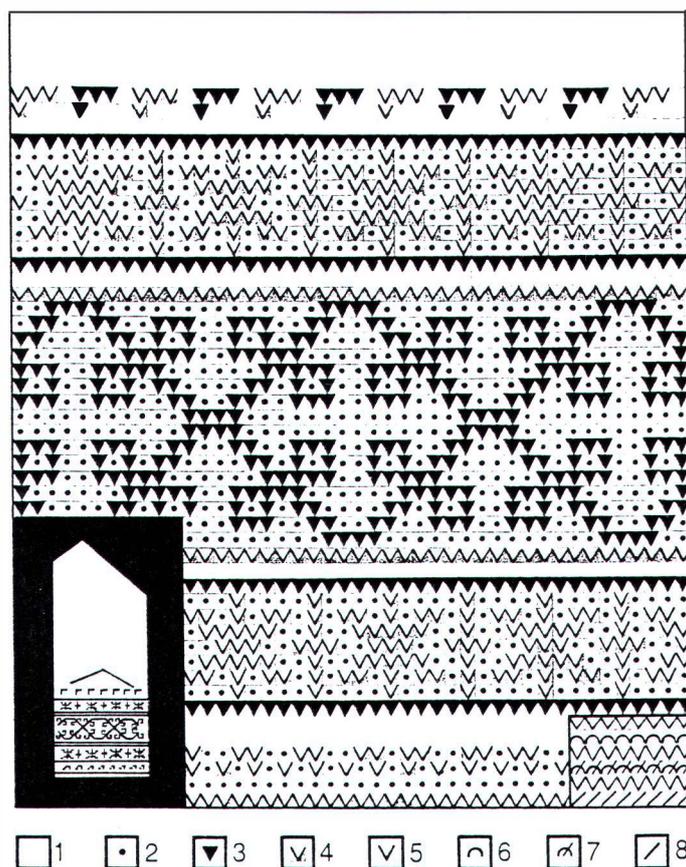


Abb.8 Technische Verzierungszeichnung des Sockens RVM 41149/5253: 1 weiss, 2 gelb, 3 rot, 4 blau, 5 rechts, 6 links, 7 Flechte, 8 Anfangsreihe.

Gegenden Lettlands wurden noch im 19. Jh. solche unsymmetrischen Abengerungen unmittelbar für den linken oder rechten Fuss geformt.

Die analysierten Handschuhe und Strümpfe sind als individuelle Flecht- und Strickwerke der Rigaer Einwohner zu betrachten. Im Vergleich mit früheren Strickwerken des 15. Jh. kann man feststellen, dass bei Fortsetzung der lokalen Sitten die zonenartige Verzierung reicher geworden ist, mit Fransen, Flechten und Kerbchen ergänzt sind die technischen Handgriffe. Nebst den lokalen Herstellungs- und Verzierungssitten von Handschuhen und Strümpfen, ist auch der Einfluss der europäischen Mode zu erkennen.

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The Roman Tradition of Weaving and Sewing: A Guide to Function?

Introduction

Research into Roman clothing has for a long time been dominated by information extracted from literary records and works of art. These sources have shown that Roman clothing was characterised by a tradition of weaving cloth into shape so that the outline, size and decoration of each garment was determined during the process of weaving (Granger-Taylor 1982). In recent years numerous Roman textiles have been excavated from sites around the Mediterranean and in Europe. These rich finds have added substantially to our knowledge of such details as fabric qualities, colour ranges and technical aspects (for further references see Sheffer & Granger-Taylor 1994). This means that a more elaborate picture of the Roman clothing and textile industry is developing. These new finds mean an increased demand from researchers for a framework for the archaeological evidence of Roman clothing, equivalent to the pioneer work on Pharaonic dress done by G.M. Vogelsang-Eastwood

(Vogelsang-Eastwood 1992, 1993). This article is a first attempt to meet this need and to systematise some of the constructional information related to clothing, primarily based on the textile finds from the Imperial Roman quarry of Mons Claudianus in Egypt's Eastern desert (for more details, see Bender Jørgensen 1999). At this unique location one of the richest archaeological textile assemblages of the twentieth century has been unearthed; most of the finds date to the period AD 104-155 in the reigns of the emperors Trajan, Hadrian and Antoninus Pius (Bülow-Jacobsen 1996, 73-4).

The textiles from Mons Claudianus are found in rubbish heaps representing different periods of occupation. The majority are both quite fragmentary and heavily worn, but due to the excellent conditions for the preservation of organic materials in the arid desert climate the present state must be very close to that at the time of deposition. By North European standards they are both well preserved and quite large. The textiles from Mons Claudianus represent the range of textile types that was available to a hardworking population and this point makes them very suitable for elaborating our present knowledge about Roman clothing. The finds of several more or less complete tunics and several other garments, together with hundreds of smaller fragments, offer an unique opportunity to compare information about weaving, sewing, cutting and decoration (Mannering in press).

Weaving, borders and selvages

The execution of starting and closing borders and selvages is a characteristic that seems to reflect a communal Roman tradition of weaving. Starting borders are extremely rare at Mons Claudianus: of the identifiable examples, one is corded and the other is plain (Fig.9). Closing borders are quite common and almost exclusively of the twisted cord type (CBC) (Fig.11). Selvages can be divided into two different types: simple selvedge (SS) (Fig.12) and reinforced selvedge with one, two, three, four and six groups of warp threads (RS1, RS2, RS3, RS4 and RS6) (Fig.13). RS3 is the most common while RS1, RS4 and RS6 must be considered as rare. In practice, where a combination of a closing border and a



Fig.9 Plain starting border (SB) on MC 653. Photo: Lise Bender Jørgensen.



Fig.10 Green tunic fragment with pink clavus and preserved reinforced selvedge with three groups of warp-threads (RS3) on MC 475. Photo: Lise Bender Jørgensen.

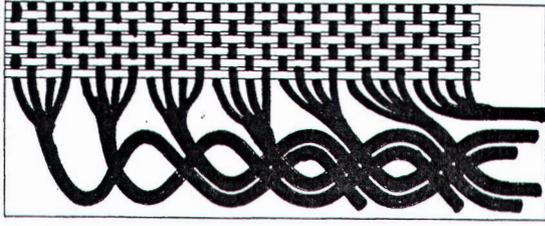


Fig.11 Corded closing border (CBC). Redrawn after Sheffer & Granger-Taylor 1994, 168.

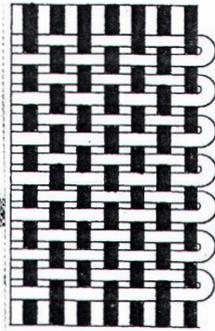


Fig.12 Simple selvedge (SS). Redrawn after Sheffer & Granger-Taylor 1994, 168.

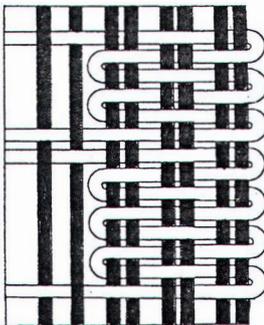


Fig.13 Reinforced selvedge with three groups of warp-threads (RS3). Reinforced selvedges have a varying number of warp-threads.

selvedge occurs, the closing border is always corded and the selvedge always reinforced with three groups of warp threads (RS3). Handweaver Lena Hammarlund of the Mons Claudianus Textile Project has demonstrated that these reinforced selvedges are necessary to keep the warp threads straight and to secure an even fabric width (Hammarlund 1998, 23-4). None of the complete garments from Mons Claudianus has preserved selvedges, as they are all heavily remade. From other sources, however, it is known that reinforced selvedges formed an important part of the sleeveless tunic in constituting the neck-opening, shoulder seam and lower edge of the tunic (Granger-Taylor 1982, 8-9; Yadin 1963, 212-19). This tallies with the fact that when a tunic fragment with a tapestry band (*clavus*) has a preserved selvedge, it is most often a RS3, and seldom a simple selvedge (Fig.10). Likewise, joined selvedges are always of the reinforced kind (RS3) and these probably represent the shoulder seam. From this it may be deduced that reinforced selvedges, especially reinforced selvedge with three groups of warp threads (RS3), are characteristic of tunics. On the other hand it cannot be excluded that some belong to mantles, as fragments of mantles from the Cave of Letters are also provided with RS3-selvedges (Yadin 1963, 232). Strips with reinforced selvedges of varying width have been used secondarily as strings or sashes (Fig.14). In woven sashes (primary use), simple selvedges seem to be dominant. On a few occasions these are further combined with fringed borders.

Hemming, patching and darning

A third of the recorded textiles from Mons Claudianus show characteristics like hemming, patching, darning and the like. Cut/torn edges are most often hemmed (H3) (Fig.16), alternatively they are whipped (H4) (Fig.17). In rare cases a selvedge may also be hemmed (H2) (Fig.18). Up to three layers of fabric may be joined in a hem. In joins of two selvedges or cut/torn edges a run-and-fell seam is most often used (S10) (Fig.19), but open seams with turned in edges also occur (S9) (Fig.20). The latter is most often used to repair tears. Roughly five per cent of all fragments are put together from more than one piece of textile. Apart from seams repairing is most



Fig.14 Strip of fabric with reinforced selvedge (RS3) used as a sash. MC 984. Photo: Lise Bender Jørgensen.



Fig.15 Darning where evenly spaced rows of sewing thread secure both loose or floating threads and the patching fabric. MC 676. Photo: Lise Bender Jørgensen.

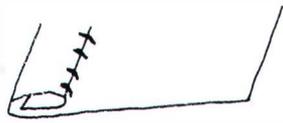


Fig.16 Hem (H3). Drawing: Ulla Mannering.



Fig.20 Open seam with turned-in edges (S9). Drawing: Ulla Mannering.



Fig.17 Whipped hem (H4). Drawing: Ulla Mannering.



Fig.18 Hemmed reinforced selvedge (H2). Drawing: Ulla Mannering.



Fig.19 Run-and-fell seam (S10). Drawing: Ulla Mannering.

often done by some kind of patching. A patch may either be nicely squared with turned in edges, or, more frequently, irregular in shape with several layers of fabric placed on top of or next to each other. On a particularly well executed patch the edges of the hole are turned in and stitched on to the patch so that the hole was closed on both sides (Fig.21). This indicates refined craftsmanship. Darning is yet another way of repairing a fabric and is often executed with great skill. It may either be executed as zigzag lines within the fabric or in combination with another layer of fabric where evenly spaced long rows of sewing thread are made to secure both loose/floating threads and the patch (Fig.15). Sewing thread is most often Z-plied of two S-spun threads and in general is relatively loosely spun. In many cases the colour of the sewing thread is different from the ground weave and this substantiates the assumption that most sewing was done at a later stage. Considering how many pieces show evidence of sewing it is striking how little variation there is in the types of hems and seams used. It has not been possible to see a connection between a specific type of hem or seam and a specific garment. On the contrary, different sewing techniques are more likely linked to function.

Conclusion

The finds from Mons Claudianus confirm that the Romans were familiar with scissors, needles and thread. Cutting and sewing is usually associated with Medieval textiles; the finds from Mons Claudianus show that these techniques also were mastered by the Romans. This adds to the general assumption that all Roman clothing was woven to shape, and further emphasises that textiles were too costly just to throw away. When a garment had passed the state where

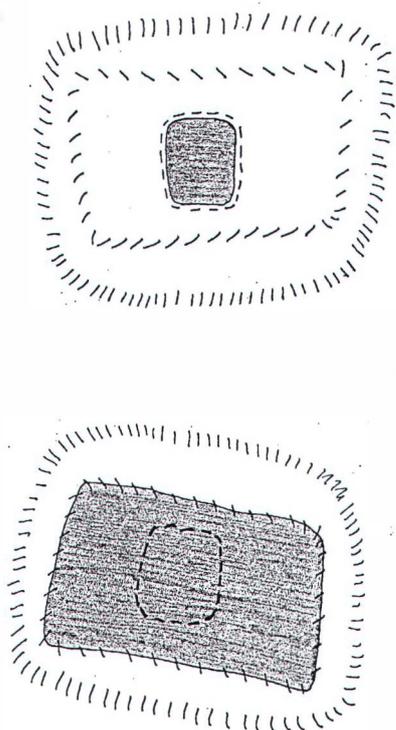


Fig.21 Patch on tunic MC 1101. The patch is made so that the hole was closed on both sides. Drawing: Ulla Mannering.

patching was no longer possible, it was cut into pieces and either remade into another garment or used for patches. Judging by the craftsmanlike execution it is likely that some of the tailored garments from Mons Claudianus are products of the Roman second-hand textile craftsmen, the *centonarii*, who made clothing and blankets from rags and patches (Forbes 1964, 238–9). The target group were workmen and slaves, a population which is well represented at Mons Claudianus. The borders, selvages and sewing techniques presented here are a selection of the types used in Roman clothing. They contribute a valuable insight into a very uniform textile technology, comparable to the textiles from a wide range of further Roman textile sites in the Near East such as Palmyra, Dura-Europos, Cave of Letters, Ballana and Qustul, Masada etc. (Pfister 1934, 1937, 1940; Schmidt-Colinet *et al.* 1999; Pfister & Bellinger 1945; Yadin 1963; Thurman & Williams 1979; Sheffer & Granger-Taylor 1994). Hopefully these comments may

contribute to a fresh discussion of Roman clothing and textile technology – a discussion which in the light of the present research is absolutely necessary.

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Fibre Analyses for the 21st Century 2: Could a Method of Isotope Analysis be Applied to Wool in Textile Remains?

Having worked alongside geneticists for 25 years I am reluctant to believe the aphorism: 'You are what you eat!' - our genes are simply so important in determining everything about us that diet is unlikely to contribute very much. Now a new and sophisticated technique applied to archaeological remains of human hair indicates that there might be some truth in the statement after all (Pain 1998).

The method is akin to C-14 dating in that it relies on the relative proportions of the heavy and light isotopes of carbon, nitrogen and sulphur in the keratin of hair. For instance, meat eaters have a high level of the isotope nitrogen-15 in the hair and fish eaters have a high level of sulphur-34. A low level of carbon-13 indicates a diet of plants from the group to which most plants belong and Ötzi, the Neolithic frozen man from the Alps, gave such a result suggesting a diet predominantly of grains.

The hair would still have the same genetically-determined composition, but the isotopes of the elements would vary.

My immediate reaction to this publication was the realisation that if it worked for human hair it would work for wool, which is a kind of hair and so is composed of keratin. If one could tell whether people had been fishermen, agriculturalists or pastoralists from their diet as indicated by their hair, one might be able to tell where sheep had been grazed and what they had been fed on in winter from their wool in textile remains. There might also be differences in the wool from sheep raised in different parts of the world, so that there would be the potential for determining the source of textiles made from animal fibres.

Before I had had an opportunity to write this note I came across a reference to the actual application of the method I was proposing. This concerned the Coast Salish tribe of British Columbia and the fibre in question was dog hair (Schulting 1994). A unique feature of the Coast Salish culture is the use of the hair of a small domestic dog to make blankets. Despite numerous historical and ethnographic references to this 'wool' dog some authors have questioned their importance in the native textile industry because of the apparent lack of dog hair in remains of Salish blankets. The author was led to use stable carbon isotope analysis on the fibres in a blanket from an archaeological context because of the deterioration of the surface scale pattern, which is an important criterion in fibre identification.

Schulting burnt eight samples of hair from a blanket and measured the values of carbon-13 using a Micromass stable isotope mass spectrometer and obtained values around 15%, whereas mountain goat-hair, coyote hair and deer hair analysed for comparison had values of C-13 ranging from 20% to 23%. This data showed that the animal from which the hair had come had gained much of its protein from fish and led him to the conclusion that it was a wool dog belonging to the Coast Salish tribe.

I came across this reference while revising a paper on dog hair I presented at the First International Council for Archaeozoology Symposium on the Domestic Dog (Ryder

1999). I reported breed differences in dog-hair dimensions and suggested that such coat variation in archaeological remains could throw light on dog-breed origins as it has done in sheep. I presented coat length and hair diameter data for ten breeds of dog. Larger breeds had greater hair diameters than smaller breeds. There have been few reports of remains of dog hair, but as more are found, and hair shaft diameter measurements made, similar light is likely to be thrown on breed origins in domestic dogs (*Canis lupus familiaris*), which could have had hair differences even before, like sheep, they were bred for coat type.

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More Textiles Preserved by Salt

During October 1999 I discovered what is described as a 'Saltman' in the Archaeological Museum in Tehran, Iran, that I have not seen reported in the West. This preserved, but disintegrated, body was found by salt miners during 1993 in the Zanzan area of Iran and has been dated by C-14 to the third or fourth centuries AD. The man has long white hair and a beard and the high quality of the fragmentary clothing, and in particular of the finely-made leather boots, has led to the suggestions that he was a Sassanid nobleman or prince (the Sassanid dynasty lasted from AD 224 to 637). It is suggested that the

man was hunting and his injuries are such that it is thought that he may have been killed by a rock-fall. The man wore cream trousers only 36cm long. The remains of the wool cloth had a plain weave with 11 warp and 8 weft threads per cm. and the yarns had been Z-spun (the direction expected in this area). The cloth had a pattern along the border in red, blue, green and brown yarns on which the dyes madder and indigo have been detected.

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The Fourteenth-Century Bands on an Eleventh-Century Relic Purse

There is a lovely little relic purse (B16) in the Cathedral Treasury in Sens, France, which was discovered in an anonymous relic chest. Woven in purple and green silk, the eleventh-century purse has been trimmed with two different brocaded tabletwoven bands, dating to the fourteenth century, that run across the top of the purse and down both sides. There are ties at the top made from the same fabric as the purse.

The broad band (1.5cm wide) at the top of the purse has been woven with twenty-nine tablets - six in each border and nineteen in the center pattern area - with red silk warp and weft (Fig.22). The tablets are threaded in all four holes and oriented alternating S-and-Z in the borders and all Z in the center nineteen tablets. The band is brocaded with 'spun-gold' which is S-spun around a core of pale yellow silk, used singly, and is tied down randomly on the surface by one or two warp threads. (There are c.16 brocade wefts per cm.) The borders are patterned with a 'stave' (straight line) on each side, while the center pattern has large 'X's and possibly other, now missing, geometric motifs.

The bands (each 1.0cm wide) along the sides of the purse (Fig.23) have been woven in a slightly different technique. Thirty-one tablets have been used - seven in each border and seventeen in the center pattern area. The border tablets have been threaded with red silk in all four holes while the



Fig.22 (left) Detail of broad tablet-woven band at top of relic purse in Sens. Photo: Musées de Sens, E.Berry.



Fig.23 (above) Tablet-woven bands edging relic purse in Sens. Photo: Musées de Sens, E.Berry.

center pattern tablets have been threaded with red silk in two holes and dark purple silk in two holes of each tablet. The orientation of the tablets across the band is ZSSZSSZ, 17 S-and-Z, SZSZSSZ. The weft is red silk; the brocade wefts (14-15 per cm) consist of 'spun-gold', S-spun around a core of pale yellow silk, used singly, as well as dark pink and dark turquoise silk. The brocade wefts have all been tied down under two red warp threads. The borders have been patterned with a 'stave' on each side; the center of the band is patterned with various plant forms within fields formed by diagonal lines - gold forms on purple fields with pink and turquoise forms on gold twill fields.

The side bands are in remarkably good condition. However, the wide top band is missing quite a lot of its brocade weft which appears to have worn away at the same places along the band, suggesting the use of a thread at these points that is more prone to decay than are silk and metallic threads.

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Reports

A Cotton-like Fibre from Hallstatt - CORRECTION

The cotton-like fibres of the mid-first millennium BC from the salt mines at Hallstatt in Austria I reported in *ATN* 28, 1999, p.2 could have been a recent intrusion. During the completion of the writing-up of my investigation I looked again at the vast amount of correspondence and came across a letter from the excavator, Dr F.E. Barth, hinting that the object in question (some cord, No 90.138) might be modern. All discussion of the fibres must therefore be withdrawn. This episode, however, provides a timely reminder how careful excavators must be to avoid contamination of finds, and how specialists must check on unusual samples before drawing conclusions from them.

It reminds me of a similar red herring

concerning some fibres I received from a Belgic excavation in Britain during the 1970s. From a photograph, the sample appeared to be wool with two cut ends suggesting a 'double-cut' made while the fleece was being shorn. I at once thought that this might throw light on the Belgic introduction of white, fine-wooled sheep into Britain. But closer inspection showed that the fibre length was too regular for a 'double-cut' from a fleece and its white colour was what one associates with flax rather than animal fibres, which even when lacking natural pigment have a yellow discoloration.

Under the microscope, the fibre diameter distribution was too uniform for wool, and another specialist I enlisted thought that the fibres might be silk, but they were twisted like cotton. However, any thoughts that this might be Belgic cotton evaporated when the fibres were observed to contain the pigment that is added to de-lustre modern synthetic fibres. At this stage the sample was sent to the cotton research institute in Manchester and I withdrew from the investigation through lack of time. Here my suspicion that the material was a modern synthetic was confirmed and the mass (which I had not seen in its entirety) was identified as a *cigarette filter*.

Amusing as this may be, it wasted an appreciable amount of several specialists' time and struck at the very roots of archaeology. I therefore wrote a note for *Antiquity* entitled: 'Belgic cotton, or don't dig and smoke - a cautionary tale', pointing out that if such a large object as a cigarette end can creep into an excavation unnoticed, what hope have we that really small finds such as insect parts are not modern intrusions?

I suggested that archaeological excavation needed a form of hygiene akin to that in food preparation if not that of the surgical operation. I wondered, partly tongue-in-cheek whether archaeologists would one day, like surgeons, work through a 'drape' so that only that part actually being excavated is exposed? The late Professor Glyn Daniel, then editor of *Antiquity*, used my note in the editorial of the March 1974 issue (Vol. 48, p.6).

Returning to the Hallstatt 'cotton', being

wise after the event, once one knows that the fibre might not be ancient, the cotton-like twist, as with the Belgic 'cotton', may well be that found in some synthetic fibres.

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Reviews

Exhibition Review: Tutankhamun's Wardrobe

The exhibition *Tutankhamun's Wardrobe* aroused great interest and received wide publicity when it was shown at the Textilmuseum in Borås, Sweden.

The intention was to show the original appearance and the composition of the clothing of the famous Pharaoh 3200 years ago. While the gold and the furniture from the grave are depicted in publications over and over again, the textiles were neglected in storerooms and showcases in the Egyptian Museum in Cairo. They were never published nor conserved. In 1991 Gillian Vogelsang-Eastwood started to make a catalogue and it became clear that the textiles contained much more information than had been realised before. In 1994 she met Christina Rinaldo at the Institute of Hand Weaving in Borås. This led to a student project, an analytical project involving the photographer Nino Monastra, and finally, in co-operation with students and craftsmen in Borås and Leiden an exhibition project, financed by local organisations in Borås.

The original textiles are too fragile to be moved from Cairo; so the exhibition shows the replicas together with black and white photographs from the excavation and newly taken pictures of the textiles in colour.

All the replica textiles are in linen of high quality. They are hand sewn; most are hand woven, but some are made from machine woven fabric. All details such as bands braids and fringes are hand made. The blue linen is dyed with indigo. The process of dyeing flax fibres with madder is too time-consuming and the red colours were

achieved with synthetic dye. Some of the garments were tapestry woven. They could not be reconstructed as such because of the limited time for production; instead they are screen-printed. This is very successful on the smaller textiles such as gloves and belts: at first glance even the original looks printed because of the fineness of the material and high quality of the craftsmanship. Beadwork and sequins are all replicas, made from glass faience and gold. Two ceremonial bag-tunics with beaded decoration on the front are displayed. Embroidery and appliqué work is another type of decoration executed in astonishing fineness; most striking is the linen leopard skin in a child's size. Of special technical interest are the tabby bands patterned with extra warps, making warp reps on the face and floating on the reverse. Circular collars are woven to shape using this technique. The hand woven textiles are exquisite. The linen thread used is the thinnest possible in modern production, and demands great skill in handling by the weaver. A tabby tunic with ducks in inlaid design gives an impression of the often-depicted see-through Egyptian garments. One must bear in mind that the thinnest thread used by the Egyptians was even thinner: it was not spun in the strict sense but spliced, ie. bundles of flax fibre were joined end to end one after another, then doubled and given a low twist.

The Egyptian looms were of the simplest construction, but the replicas are made on modern Swedish handlooms. All this fills the viewer with admiration for the craftsmanship of ancient civilisations, as much as for the great skill of the modern craftsmen headed by Christina Rinaldo.

The exhibition gives a vivid image of the wardrobe of Tutankhamun. The splendid quality of the textiles and the colourful decoration impresses even a person without textile-historical knowledge. For the textile historian it helps the visualisation of the latest developments in the study of ancient Egyptian textile technique and costume history.

The exhibition closes in Borås on 27th February 2000. In March-April it will be in Łódź, Poland. In June 2000 it will open in Amsterdam and then travel on to England. More information is available on the

Internet: www.tutankhamuns-wardrobe.com

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Séminaire de Recherche, Lattes (Hérault),
Octobre 1999

*Archéologie des Textiles (des Origines au Ve
s. de notre Ère)*

The purpose of this two-day seminar hosted jointly by Professor Michel Feugère, editor of the journal *Instrumentum*, and Dominique Cardon of the Lyon division of the CNRS, was to demonstrate to archaeologists in France the potential and achievements of archaeological textile studies. The meeting was held in the premises of the CNRS at Lattes, on the site of one of the earliest Greek colonies in southern Gaul. The gathering had a markedly international atmosphere. Thanks to a message posted on the Romarch Web pages, a number of scholars from the USA came over to make a very welcome contribution.

The programme fell naturally into two parts: the archaeology of textiles *without* textiles (Day 1), and archaeological textiles (Day 2).

Day 1 was devoted to visual and written sources, ranging from the papyrological evidence for a weaving factory at Memphis in Hellenistic Egypt to a review of the information on textile topics revealed by Roman tomb monuments in the Latin-speaking West. Local archaeologists made a very useful contribution through surveys of textile implements and allied material in context.

On the second day surviving textiles came to the fore. Tamar Schick spoke on the outstanding finds from the Cave of the Warrior near Jericho, of which she has given an account in *ATN* 29. The importance of Palmyra (Syria) as a handling centre for international textile trade in the Roman period was illustrated by Annemarie Stauffer. Hero Granger-Taylor presented the textiles from the Nabataean cemetery at Kirbet Qazone (Jordan), and Sophie Desrosiers discussed preliminary findings on the gold, purple and silk from two richly-

furnished burials at Naintré near Poitiers. For Spain Carmen Alfaró Giner examined new finds from high-status burials of both the early and late Roman periods. There was also a fascinating team presentation on the research currently in progress on the textiles from Mons Claudianus in Egypt.

That is just a selection of what was on offer. The gastronomic tour of Palavas was a memorable extra. The papers as a whole will be published in due course in *Instrumentum's* lively monograph series.

John Peter Wild

Conference in Copenhagen, 5th May 2000

Textiles from Roman Egypt

Until about 10 years ago or so, the major source of information about textiles in Egypt from Roman times came from cemeteries at sites like Antinoë (Antinoöpolis), where a large number of textiles had been found. Since then, much evidence has come from nine new sites in the Eastern Desert region which has complemented and to a certain extent changed our understanding of the design, technology, context and chronology of Roman textiles in Egypt. This conference, organized by Ulla Mannering, Institute for Archaeology and Ethnology, Copenhagen University, and Lise Bender Jørgensen from the NTNU Vitenskapsmuseum in Trondheim, Norway, aimed at discussing and disseminating new information on this fascinating area.

In her opening talk 'Textiles from Roman Egypt - Patches of an Empire' Lise Bender Jørgensen, who is also director of the textile part of the Mons Claudianus excavations (<http://adam.igl.ku.dk/~bulow/welcome.html>) likened our understanding of Roman textiles in Egypt to a patchwork quilt. Until recently textile knowledge was rather fragmentary, but in the past decade we have been able to add many new pieces to this quilt thanks to the finds from nine new sites in the Eastern Desert region (Fig.24, map of the region). These sites can be divided into three types, each with its own character and, not unexpectedly, textile types: ports, with sites such as Abu Sha'ar, Myos Hormos and Berenike), quarry sites

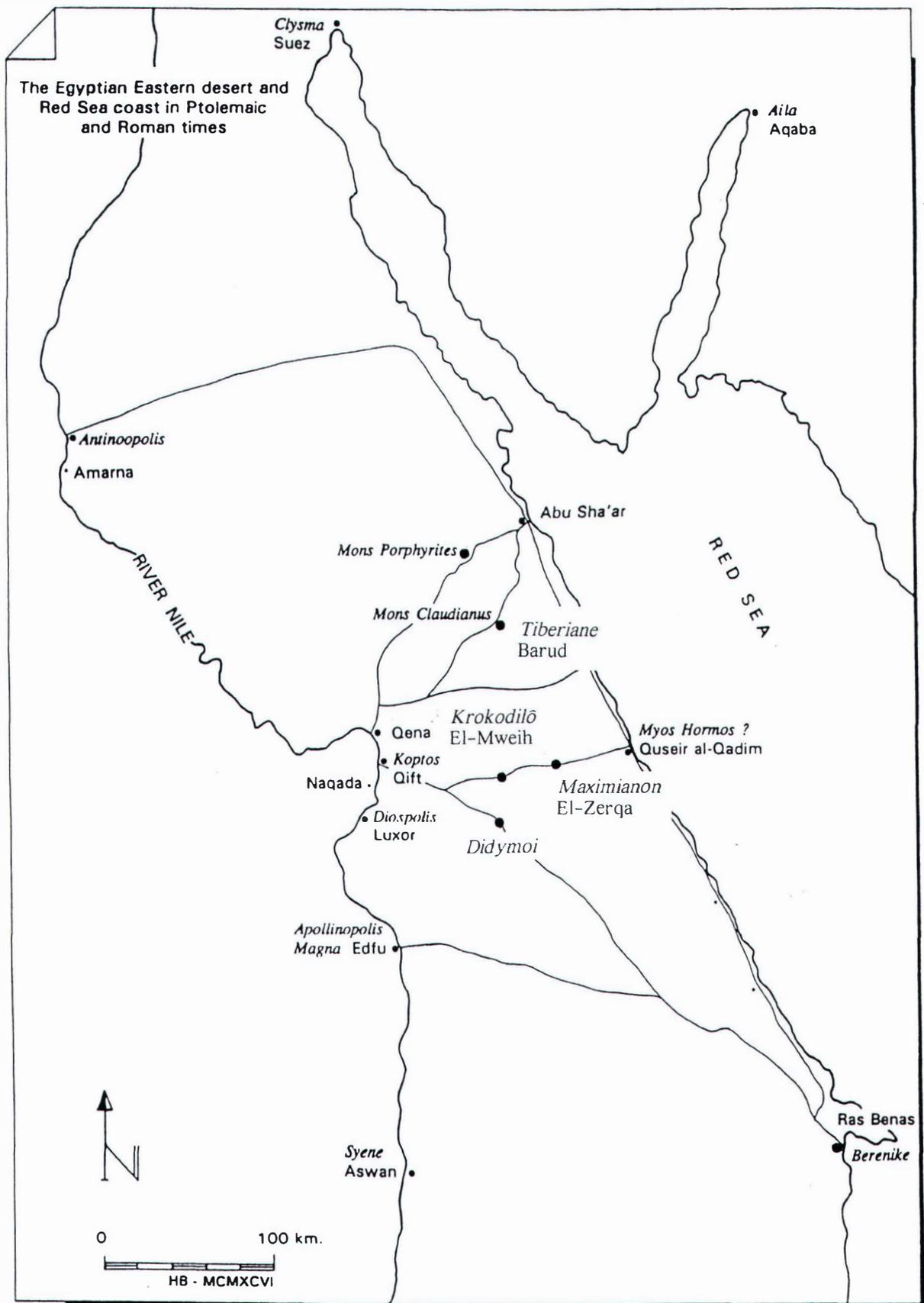


Fig.24 Map of Roman Egypt showing sites in the Eastern Desert with recently excavated textiles. Drawing after H.Barnard.

such as Mons Claudianus, Mons Porphyrites and Tiberiane, and forts along caravan routes, each with a water supply (Didymoi, Krokodilō and Maximianon). LBJ gave a brief history of each site and of the excavations. Much more is now understood about the diversity of textiles: for example, a great amount of native and foreign cotton cloth for clothing and sails was found in the port site of Berenike which had extensive trade contacts with India and imported Indian cottons, dyes and carpets. Inland, however, cotton was rare. Silk was not found in the textile repertoire of the Eastern Desert of Roman Egypt. Linen as expected was used mainly for luxury and status clothing and was rare. Wool was the most common material for most clothing and there are many different ways to study this vast amount of textiles. One of the aims of Lise's paper was to draft a structure that may lead to correlations between the people inhabiting these sites (for example, in their professions as soldiers, quarrymen, and so on) and their clothing and other textiles. It may be possible ultimately to identify professions, professionals and social status through the type and fabric of the textile, the weave and the type of garment as well as through colors, patterns and quality of the textiles. As an example LBJ mentioned the imperial quarry of Mons Claudianus, where although there were some linen, goat hair, and a minuscule amount of miscellaneous other fabrics like cotton, wool made up c.90% of all the textiles catalogued.

Adam Bülow-Jacobsen, Dept. of Greek and Latin, Copenhagen University, in 'Texts and Textiles from the Eastern Desert' discussed the difficulties in using the written sources to gain information about textiles. Only private letters give any insights about clothing, mentioning *himatia*, *chitones* and *pallia*, a Roman term for *himatia*. However, information about their weave, their size, their color and their material must be sought elsewhere. As textile weaving was not under state control, nothing can be found in the texts concerning the identity of the weavers, either – they might have been skilled slaves, women, or children.

New forts along the caravan roads from the center at Koptos to the port cities of Myos Hormos and Berenike have been systematically excavated since 1994.

Dominique Cardon, CNRS, Lyon, France, in her talk on 'Textiles from Roman Sites on the Caravan Roads in the Egyptian Eastern Desert' concentrated on the vast information gleaned from the study of textiles found in the rubbish heaps at three small forts on these routes. All three – Maximianon, Krokodilō and Didymoi – were erected in the 1st century AD and flourished in the 2nd. Of the vast quantities of textiles from Maximianon and Krokodilō, very few were made of vegetable fibers, less than 1%. Goat hair, producing a coarse textile, was relatively common (11-16.3%), and probably used for matting and tents in these forts. The quality of the wool fabric was very high, with extremely thinly-spun yarn and tightly woven material. The majority of the textiles were in plain weave, but the colors transformed them. A huge range of colors was found – reds, greens, blues, purples, pinks, mauves, blacks, yellows, although their original values might have degraded through time (dye analyses are being planned). Tapestry bands, checks, and designs were fanciful, colorful and not at all unusual. Twills, almost lacking in Palmyra and other Asia Minor caravan cities, were found in relative abundance – 4-7%. The use of twills and the patterns both suggest the influence of European settlers and European weaving traditions. She also emphasized one very important find, that 68% of the wool textiles at Maximianon had damask patterns, dating to at least 50 years before they were found in silk in Palmyra.

Mons Claudianus was one of the three Imperial quarry sites excavated recently. Ulla Mannering presented the material from this site in 'From Rags to Riches. Recognizing Garments from Mons Claudianus'. Through her work with c.1000 textile fragments and objects, she has identified tunics, mantles, hats, sashes, socks, shoes, and purses. It is clear that the Romans were familiar with scissors, sewing needles and thread. Many of the garments were decorated with colored bands or stripes (*clavi*). There was great differentiation in the types of garments, the weaving, the colors and the placement of stripes or other decorative motives or symbols. Even in a quarry site, the general level of craftsmanship was quite high.

Hero Granger-Taylor, London, discussed status and clothing in classical antiquity. The

display of status and wealth through clothing in antiquity (as today) differed in time and space but gave clear messages. For Roman times the message was in the color (and thus the quality) of the wool (the whiter, the better), the size of the garment (the larger, the more important the bearer – a Roman toga could be up to 5m in diameter!), and the type, quality and color of any decoration (purple and gold the most important). The element of status can even be applied to statues, where the fold wrinkles are carefully carved into the marble, conveying the message that the subject could afford to have one or more tunics folded away in reserve.

Going from Roman Egypt to sites in Nubia, Israel, Jordan, Syria and Iraq, Chris Verheeken-Lammens, Museum of Art and History, Brussels, spoke on 'Roman Patterns and Techniques'. Of particular interest was the similarity in fabrics and especially those with an "L" or an "H" woven into the fabric. Parallels can be found in wall paintings from Dura-Europos and mosaics from Ravenna.

The actual production of textiles from a craftsman's point of view rather than the knowledge that a study of the finished products and their social or economic contexts can provide was the basis of the final two papers presented at the conference. Lena Hammarlund, Institute of Handicrafts and Household Science, Gothenburg, spoke on 'Twills at Mons Claudianus'. Her aim is to investigate the twills, including *Rippenköper* and damasks, by studying the yarns, the weave, the thread count, the weaving and the finishing. In the contribution to the conference, she took up how the yarns were spun, the yarn diameter and the twist of the warps and wefts of s/s and z/z-spun textiles. Of particular interest is that one of the types in the z group has its closest parallels to northern European textiles.

In 'Wool Damasks from Mons Claudianus', Martin Ciszuk, Weaving Institute, Borås, Sweden, discussed his analyses and technical studies for the twill-damasks and the *Rippenköper* fragments. They demonstrate a common origin and show a highly developed level of craftsmanship. They have close parallels with Maximianon and Krokodilö, and are among the earliest known examples

of this technique. He also showed (and had with him!) a Roman type of loom – a vertical two-beam one – which he constructed and uses in experimental textile production of *inter alia* two-block damask, diamond twill and two-block patterned taqueté.

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Source Materials

Recent Publications

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News in Brief

ETSG 2000: 8-10.9.00

Migrating Textiles

The theme of this year's weekend conference of the Early Textiles Study Group in Ashburne Hall, Manchester, was chosen, not just for its resonance, but to avoid the problems of confronting the theoretical concepts of trade and exchange when a very wide chronological and geographical spread of material is under consideration. Textiles migrating from Far and Near East to the West - and vice versa - occupy much of the programme at its stands at present. The lecture programme will be interrupted on the afternoon of Saturday 9th September by a visit to the Whitworth Art Gallery. Moreover, several speakers promise video presentations, so there will be as much for the eye as the ear. Booking forms and details can be obtained from Dr J.P.Wild, Ancient Textile Unit, Dept of Archaeology, Architecture Building, University of Manchester, Manchester M13 9PL.

Focus on Textile Conservation: 13-17.11.00

On 13th and 14th November 2000 the ICOM CC Working Group Textiles and the Instituut Collectie Nederland will organise an interim meeting for the working group under the title: *Archaeological Textiles: Conservation and Research*. The focus will be on the conservation of archaeological textiles. One day will be devoted to textiles from a wet archaeological environment, the other day to textiles from a dry context. The preservation of the integrity of the textile object and its role as a carrier of information will be the central theme for the two days. The fee for the meeting will be 100 Euros.

Those who wish to present a paper to the meeting are asked to submit the title and a summary to the organisers. Only the summaries will be published.

All meetings will be held in the Instituut Collectie Nederland in Amsterdam. Requests for more information may be directed to: Instituut Collectie Nederland, Symposium 'Archaeological Textiles', Postbus 76709,

1070 KA Amsterdam (e-mail: tex.symp@icn.nl).

Fiber Perishables Interest Group

Textiles and the Negotiation of Power

The Fiber Perishables Interest Group is sponsoring a symposium entitled 'Textiles and the Negotiation of Power' for the 2001 Society for American Archaeology meetings to be held 18th-22nd April 2001 in New Orleans. Using data from the world over, participants are invited to explore critically the interplay of textiles, power and ideology. Several suggestions have been put forward on how to give some common structure and focus for the papers; but speakers are urged to present alternative theories and address their own concerns regarding relationships between and explanations of the production and reproduction of power through prehistoric textiles.

Proposals for presentations at this symposium are invited. The deadline for working title and abstract of 100 words or less is 4th August 2000. Further information may be obtained from Linda Neff, 6590 Snowflake Drive, Flagstaff, AZ 86004 (e-mail: Linda.Neff@nau.edu) or from Penny Drooker (pdrooker@mail.nysed.gov).

Brocaded Tabletweoven Bands

Ecclesiastical Pomp: Aristocratic Circumstance

Shortly to appear from the printer is a new book by Nancy Spies (foreword by Peter Collingwood) with the above title, subtitled *A Thousand Years of Brocaded Tabletweoven Bands*. It surveys the craft of brocaded tabletweaving from the sixth to the sixteenth century and analyses data from the surviving bands, including their metal and fibre content. The book concludes with a catalogue of bands and an annotated bibliography. For a sample of the contents visit

www.weavershand.com/ArelateStudio.html.

The volume will be available at \$40 plus packing and postage from Arelate Studio, 1725 Trotting Court, Jarrettsville, MD 21084.

Query: Palermo Bands

Nancy Spies (snspies@aol.com) seeks information on the looms that would have been used in the Palermo workshops to weave the so-called 'Palermo bands'. Weibel (*Two Thousand Years of Textiles*, New York 1952, 58) comments: 'Another speciality of the Palermitan ateliers were *aurifrisia*, borders of gold with details in brightly coloured silk. They were woven on small looms in a special form of tapestry technique.'

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:

John Peter Wild
Ancient Textile Unit
Dept of Art History & Archaeology
University of Manchester
Manchester M13 9PL GB

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**.

Guidelines for Authors

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

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

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

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

4. Please send submissions in hard-copy, typed, form (lines not justified). (An accompanying disk in Word6 or WordPerfect6 would be welcomed.)

References should be in the Harvard system (eg Smith 1990), with bibliography at the end.

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

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

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

Submissions should be addressed to:

John Peter Wild
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Disclaimer

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