

ARCHAEOLOGICAL TEXTILES NEWSLETTER

ATN, no. 5, Nov. 1987

EDITORIAL

This edition of the *ATN* contains a very wide variety of notes, items and bibliographies and for the first time we have included an item on textiles found in the New World. The pieces in question are a number of fragments of 16th century Basque clothing found in a grave in Newfoundland, Canada. Following this item there is an account of the textiles from the Israeli site of Masada which are currently being conserved and catalogued.

A number of notes have been based on the conservation of textiles in museums, notably, several items which have come from the tomb of Tutankhamun, Egypt and which are now in the Victoria and Albert Museum. There is also a reference to a joint Victoria and Albert Museum and UMIST project about the washing of degraded flax. If anyone has any comments or observations about "first aid" treatment for textiles on site, these would be greatly appreciated, bearing in mind that the textiles survive in both wet and dry conditions as well as in carbonised or pseudomorphic forms. Many sites, moreover, are miles away from the nearest town and may not have an adequate water or power supply.

In addition to the notes mentioned above about various items which are being conserved, there is a note on an American conservation group which runs a newsletter called *A Guide to Textile Conservation*. The group wishes to get in contact with anyone who may be interested in this subject.

We carry a report about the very successful NESAT meeting, 1987, which was held in York, as well as further details about "The Textiles for the Archaeological Conservator" conference to be held in York, 1988, which was mentioned in the previous issue of the *ATN*. P. Walton has been involved with the staging of both meetings and it would seem likely that the York meeting in 1988 will be equally worth while attending.

Some interesting points have also been raised by A. Morrell, a noted English embroideress, about the range of information which should be included in a textile report. She has stressed the need for more information about stitches and embroidery, etc. Again, if anyone has any further comments about the note, could they please address them to the *ATN* and they will be included in a future issue.

The Quotable Quote has been provided by R. Hall, London. Once again the textiles in question were excavated by Sir Flinders Petrie.

The Bibliography includes a wide range of items. In addition to the normal list which includes items post 1980 in date, there are the references from two books which contain many articles about archaeological textiles. We include the extended bibliographies of K. Tidow and M. L. Ryder. It should be noted that Dr. Ryder's bibliography only includes items published since 1983.

Our apologies for not translating the bibliography of Marie Kostelníková which was written in Czechoslovak. If anyone can provide a translation this will be included in a future issue of the *ATN*.

Alas, there is no cartoon in this issue as the editors have run out of examples. If anyone has suitable cartoons, etc., could they please send them in!

Please note, the deadline for the next issue of the *ATN* (no. 6) is April 1st, 1988.

Finally, a number of members have still not paid their subscriptions. Could they please pay them in the near future, otherwise the next issue of the *ATN* will not be sent out to them. If you are not sure whether you have paid or not, please get in contact with G. M. Vogelsang-Eastwood, at the address given in the colophon.

Colophon

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J. P. Wild.

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Eastwood, 2567328, again using the contact
address given above.

NOTES TO CONTRIBUTORS

The *Archaeological Textiles Newsletter*
aims to provide a source of information for
those who are studying textiles primarily as
archaeological objects. Contributions to
the *Newsletter* are welcome, and should be in
accordance with this concept.

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

2. Contributions may include short (!)
references to recently published books,
journals, articles and to forthcoming
exhibitions, seminars, conferences, special
courses, lectures etc., information
concerning work in progress (see note 3),
and any queries concerning the study of
archaeological textiles.

3. Work in Progress: this is a general
category which includes, for example, work
on archaeological textiles from recent
excavations or in museums. Items in this
section should contain information (if
available) about the following: where the
textiles were found; the relevant dates; who
excavated the site and when; the range of
textiles found; who is responsible for the
cataloguing of the textiles and where they

are to be published. These notes should not
exceed a maximum of five hundred words per
item. Maps showing the position of the
relevant sites would be greatly appreciated.

4. Line drawings will be considered, but
photographs cannot be accepted at present.

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

6. The deadline for contributions is the
1st April and the 1st October, for the May
and November editions respectively.

LOGO

The logo is taken from the famous
depiction on a Hallstatt urn, found at
Odenburg/Soporn, Hungary. The original
illustration shows three women who are
spinning and weaving.

QUOTABLE QUOTES

The following 'quote' comes from an
unpublished letter sent by the eminent
Egyptologist Margaret Murray to P. M. Evans
of the Clothworkers' Hall, Mincing Lane,
London. It was dated 1st September 1908.

"I send herewith the pieces of mummy
cloth which I wrote about last year. They
have all been soaked for at least 24 hours
in a weak solution of Jeyes Fluid* and then
ironed. I don't think you will be troubled
with salt in them, but if they should get
moist, soak them in plain water for a few
hours"

* Jeyes Fluid is a mild disinfectant
normally used for cleaning floors, etc.

sent by R. Hall.

RECENT THESIS

G. Tata, *The Development of the Egyptian
Textile Industry*, Ph.D. thesis, University
of Utah, 1986.

EXHIBITIONS

*GEKLEED VOOR DE DOOD, Kleding en weefsels
uit het Oude Egypte*: Allard Pierson Museum,
Amsterdam, The Netherlands; 31st October
1987 to 14th February 1988. A small
exhibition about Coptic textiles.

PRACHT UND GEHEIMNIS, Kleidung und Schmuck aus Palästina und Jordanien: Rautenstrauch-Joest-Museum, Cologne, W. Germany; 13th October 1987 to 27th March 1988. An exhibition about Palestinian and Jordanian women's costume. A well illustrated catalogue is available, ISBN 3-923158-15-7.

In February, March 1988 an exhibition will be held at the National Museum, Stockholm, Sweden, which includes textiles from the Syrian sites of Palmyra and Halabiyeh. No further details are available at the moment.

CANADA

A 16th-CENTURY BASQUE SEAMAN BURIED IN 'RUSSETS' (Map 1)

Since 1978 a team of archaeologists from the Memorial University of Newfoundland, led by J. A. Tuck, has been working at Red Bay in Labrador, on the site of a 16th-century Basque whaling station. Several burials have been found over the years and in 1986 one of particular interest was discovered in an area of peat bog. The bones of the body had dissolved, but the costume was remarkably well preserved and proved to consist of a cap, a shirt, a jacket or outer shirt, knee breeches, leggings and leather shoes.

Although the woollen clothing was heavily stained by peat, a faint plaid pattern could be seen in the shirt and jacket. Samples of threads from all the garments were therefore selected by the conservator at the Canadian Conservation Institute and sent to England for dye analysis. In fact, no trace of dye could be detected in any of the 15 samples. However, much of the peat stain was removed by the dye-testing solvents, so that the original colours of the threads were clearer. Fibres were therefore examined under a high-magnification microscope, where many of them showed the dark pigment granules which indicate a naturally coloured wool.

The degree of pigmentation varied. The breeches proved to have been a uniform dark brown, much like the wool of a modern Soay. The jacket was originally white, with mid-brown checks made up of a blend of light and dark brown fibres. The shirt was much the same, but the checks paler. The leggings, however, were a mottled ginger-red colour, perhaps from a reddish fleece such as that of the Spanish Guirra. The wool of the knitted hat was not examined, but the lining was a natural white.

In England such garments were called 'russets' and, according to sumptuary laws, were considered the correct clothing for the

poorer classes. No doubt it was equally true in the Basque region, that the lowest ranks of society were not expected to wear the more expensive dyed cloth. Although some dyed cloth was evidently in use among the Red Bay whalers (madder and woad/indigo have been identified in garments found in other burials), it is likely that the man in this particular burial was a seaman of fairly low status.

P. Walton.

Notes: The Red Bay excavations are described in J. A. Tuck and R. Grenier, "A 16th-century Basque Whaling Station in Labrador", *Scientific American*, (Nov. 1981), 180-190 and in annual reports by J. A. Tuck in *Archaeology in Newfoundland and Labrador*. For further information on natural pigment see M. L. Ryder, "The natural pigmentation of animal textile fibres", *Dyes on Historical and Archaeological Textiles* (report of the 1986 meeting, forthcoming).

ISRAEL

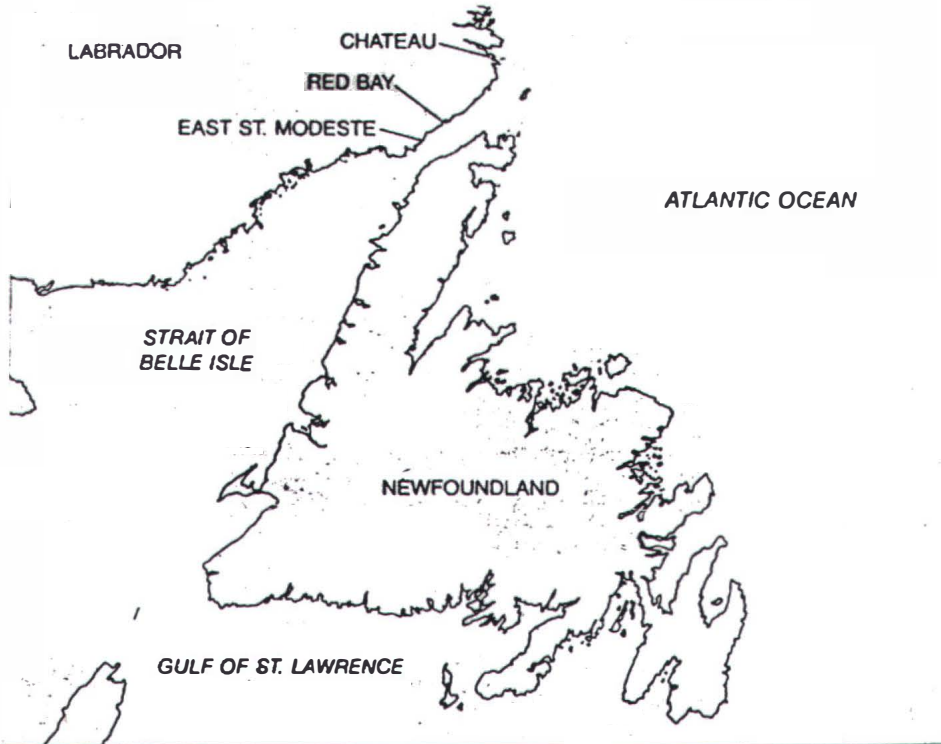
TEXTILES FROM MASADA (Map 2)

Hundreds of textile remains were found during the Masada excavations carried out by Prof. Y. Yadin between 1963-65 (Yadin, 1966). All of the textiles have been attributed to the period when Jewish Zealots held Masada as their last stronghold in their fight against the Romans (A.D. 66-70). The Zealots, according to Josephus Flavius, burnt Masada and died by their own hands as "they chose death rather than slavery" and preferred to "die noble as free men", when they realised that there was no hope of escaping massacre at the hands of the victorious Roman army (see Josephus, *Jewish War* and *Jewish Antiquities*).

Most of the textile remains were found in the chambers of the casement wall which surrounds the fortress and was used by the Zealots as their dwelling place. Heaps of spent embers containing the remains of clothing and other possessions were found in the corner of several chambers. They were left there after each family set fire to its belongings, just as Josephus described "they quickly made one heap of all they possessed and set it on fire".

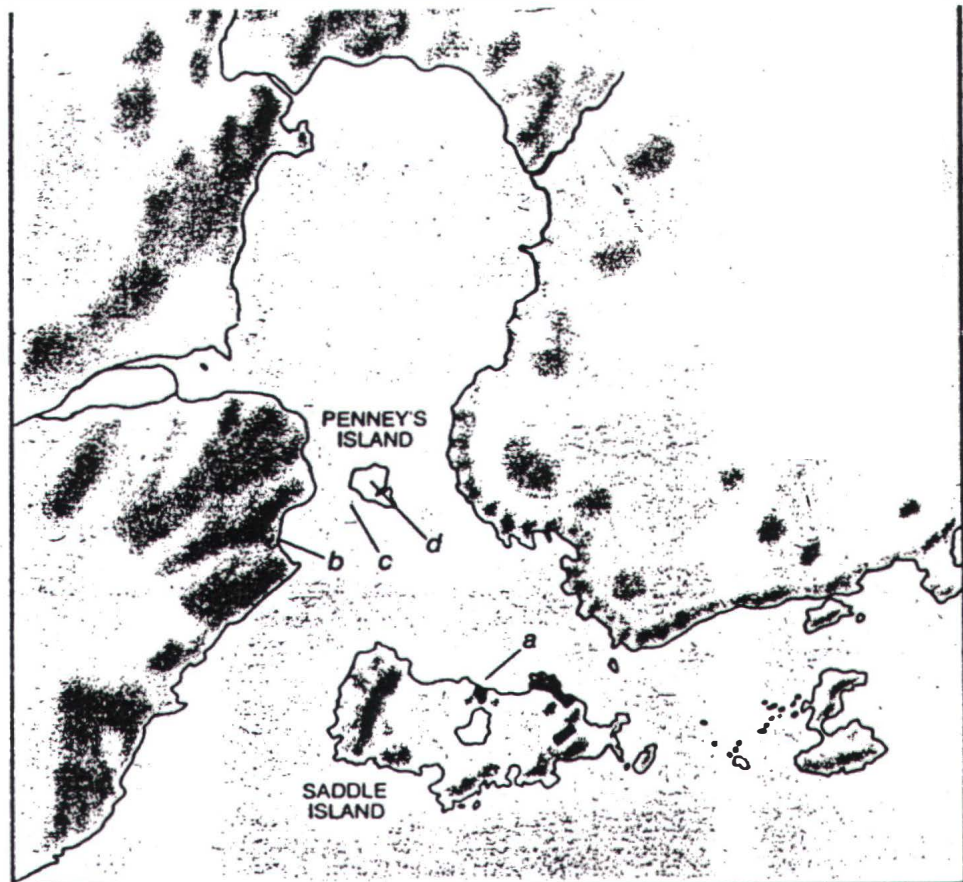
Due to the great aridity of the area, the textile fragments which survived the flames were in a good state of preservation. These pieces, however, were dirty and brittle. During the excavation of the site the textiles were stored in boxes and then transferred to the University in Jerusalem.

Later, only about 50 large and colourful pieces were selected and cleaned for exhibition purposes; the rest of the

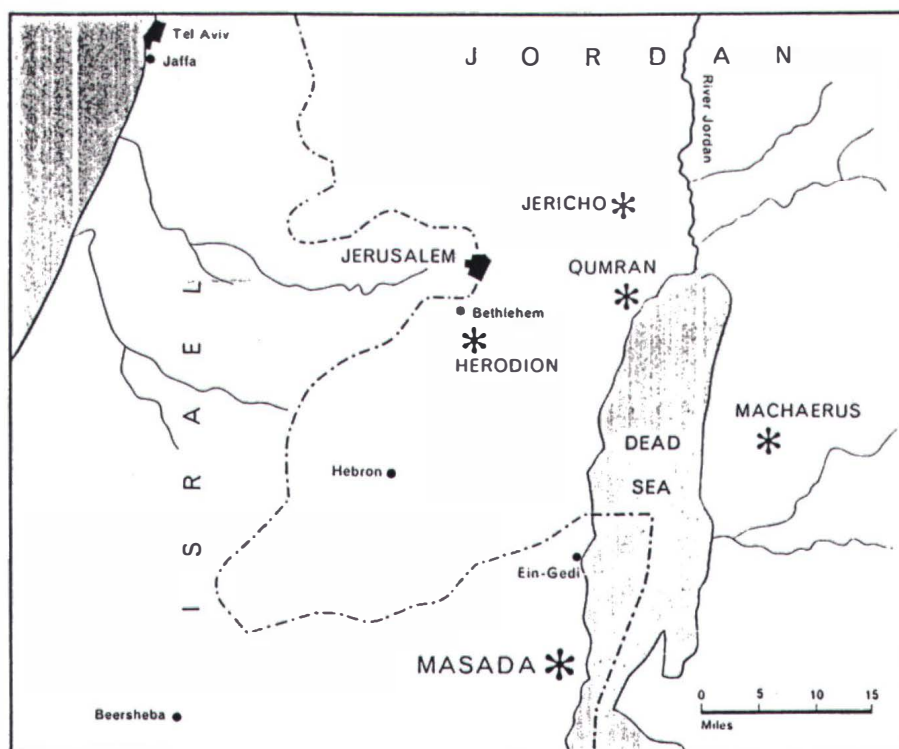


MAP 1

STRAIT OF BELLE ISLE, the entrance to the Gulf of St. Lawrence separating Newfoundland from the Quebec-Labrador coast, was known to the Basque whalers of the 16th century as Grand Bay. East St. Modeste may have been a shore station the Basques called Semadet and Chateau a station they called Xateau. The Red Bay station they may have called Butos.



RED BAY AREA is shown in greater detail. Most of the excavating has been done in the parts of Saddle Island marked in color; the sunken vessel lies at *a*. The bone deposit shown on page 182 is at *b*, northwest of Saddle Island. Other whale bones lie off Penney's Island, as does the wreck of a smaller vessel (*c*). Ovens for trying (rendering) the blubber were found ashore at *d*.



MAP 2a

Position of Masada

Map of the Dead Sea area showing Masada.

fragments remained in the boxes. Most of the 50 textiles were woven from wool threads, a few from goat hair and only one from flax. A quick glance at the contents of some of the boxes, however, showed that many of the uncleaned textiles were actually of flax. As they were not coloured or impressive they had not been considered sufficiently attractive to be placed on exhibition and had been left untreated.

Most of the textiles woven from goat hair are coarse and were probably used for sacking. But some are ornamented with stripes of brightly coloured threads and look quite delicate and therefore may have been used for some other purpose, perhaps even for outer clothing.

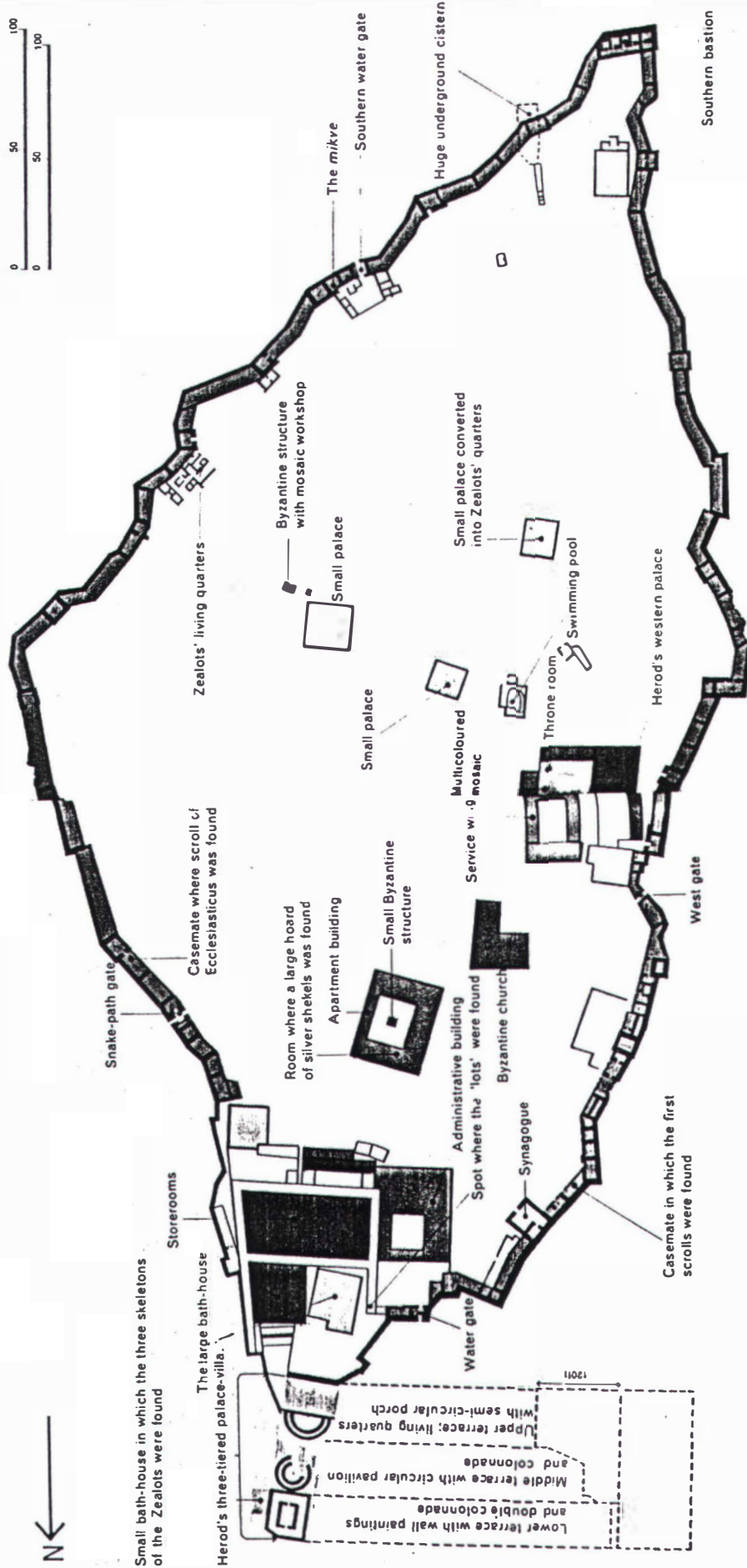
Among the woollen remains there are fabrics which have already been encountered in the Cave of Letters (A.D. 135; Yadin, 1963, 204-251), such as tunic fragments with *clavi* bands, mantles with coloured notched bands or *Gamma* shaped patterns. The woollen textiles, with shaded and coloured bands, show an abundance of bright colours which are comparable only with the pieces from Dura Europos (3rd century A.D; Pfister and Bellingier, 1945).

On the other hand, some of the fragments reveal weaving techniques and colour designs not found hitherto as early as the 1st century A.D. There are different types of twills, such as chevron twill, 2/2 twill, 1/2 twill, and broken diamond twill. Every fabric has a different thickness of thread

and varied colours. A geometric pattern (drawloom ?) woven with delicate blue threads on a whitish background was also found.

Furthermore, there are two more items made of wool threads, but these are not woven. One of the pieces is a hair net done in the sprang technique, which still retains its typical red strings. The second item is the remains of a stocking, probably the part that covered the toes. At first sight it seemed knitted, but after careful examination and experiments, we concluded that it was done with a single eyed needle, with a limited length of yarn in a technique sometimes called "Coptic knitting".

In his book *Masada*, Prof. Yadin tells how deeply stirred all of them were when the remains of three skeletons were uncovered in the northern palace/villa of Herod. The skeletons were of a young man, a young woman and a child. The man may have been the commander of Masada. The woman's dark plaited hair and delicate sandals were still preserved. After the textiles scattered near the bodies had been collected and cleaned, they turned out to be the remains of their beautiful red mantles, as well as a woollen "bag" or envelope for documents, still tied with a string. The bag has a delicate woollen lining and is embroidered around the edges with a zigzag pattern; the upper part of the embroidery is in chain stitch.



MAP 2b Masada Site Plan

The average thread counts of the twill weaves are much higher than in similar fabrics woven in the Roman provinces, the warp and weft threads are very fine, and mostly single rather than plied. The spinning and weaving of the fabrics was done by highly experienced workers. Furthermore, it seems that during the four years of the siege, spinning and weaving was also carried out on the site. Many spindle whorls of different sizes have been found, which were made out of a variety of materials, such as stone, glass, bone, etc. The remains of a wooden loom with its loom weights was found in one of the casemate dwelling rooms. In other rooms many more unbaked loom weights were uncovered. We cannot tell as yet what kind of fabrics were woven on these looms.

The textile remains found at Masada contain samples of a Roman textile art and of elaborate weaving techniques not encountered till now in this early period in Israel. There is no doubt that when all the textiles uncovered on Masada are cleaned and analysed we may find an astonishing and perhaps also unexpected "wardrobe" of the Jewish families who fled their wealthy homes to find heroic deaths at Masada.

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R. Pfister and L. Bellinger, *The Excavations at Dura-Europos, Final Report IV, Part II: The Textiles*, New Haven (1945).

Y. Yadin, *The Finds from the Bar-Kokhba Period in the Cave of Letters*, Jerusalem (1963).

Y. Yadin, *Masada, Herod's Fortress and the Zealots' Last Stand*, London (1966).

RESEARCH WORK BEING CARRIED OUT AT UMIST INTO THE WASHING OF VERY DEGRADED LINEN (UMIST = The University of Manchester Institute of Science and Technology)

The cleaning of archaeological textiles is an irreversible process which must be approached with great caution. Washing not only removes valuable evidence from the object, but can also cause partial or total collapse of the cell walls resulting in greater fragility and fragmentation. The major part of the archaeological textile collection in the Victoria and Albert Museum, London (V. and A.) comes from three great desert areas: Egypt, Peru and the Takla Makan desert of China (the Stein Loan collection). The survival of large numbers of textiles from these areas is due to dry stable conditions which exclude light, oxidation and sudden changes in humidity. The washing of any textile, ancient or modern, involves rapid expansion of the cell walls of the fibre on wetting and equally vigorous contraction on drying. The dangers of subjecting fragmented fibres to this treatment are obvious.

At the Victoria and Albert Museum the general approach to the conservation of archaeological textiles is to do as little as possible. There are many instances, however, when a more active approach is unavoidable and indeed necessary for the wellbeing of the object. One of the major advantages of cleaning by water is that it removes accumulated acidity, the presence of which endangers the life of the object. It will also remove deep creases or folds which may have been acquired in poor storage. This kind of damage causes cracks in the fibres and will result in splits. The relaxation brought about by water is the best way of re-aligning a weave and establishing the nature of a fragment. Evidence of selvages, seams and the cut of early clothing may become apparent when a bundle of rags is gently unravelled in the washing tank. I know of three tunics which have emerged in this way.

Methods have been evolved at the V. and A. to minimise the dangers and the impact of water on the desiccated and degraded cell and it is these methods which are being investigated, in a joint V. and A./UMIST MSc research project. UMIST is well known for its work on fibre fatigue and stress for the modern textile industry and for its excellent Microscopy Department. The aim of the project is to assess what happens at cell level during the washing process and whether delayed wetting by pre-soaking in a viscous solution of Glycerol (propane 1-2-3 triol) and deionised water and/or IMS (Industrial Methylated Spirits) results in less damage to the structure of the cells. Rinsing in mixtures of IMS/deionised water is used to minimise cell contraction on

drying. Empirical results, to date, have been consistent and good. It is hoped that a more objective scientific investigation will support our methods and explain the process more fully.

L. Hillyer,
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England.

The organisers wish to record their gratitude for considerable material and financial help from the York Archaeological Trust, from the Robert Kiln Charitable Trust and from the Pasold Research Fund. Generous contributions have also been made by other bodies to help meet the eventual costs of publication.

J. P. Wild.

A PLEA FOR A BETTER DESCRIPTION OF SEWING AND EMBROIDERY DETAILS

In archaeological reports woven textiles are often reasonably well described with details of s and z-twist in the yarns, together with the particulars of the weave structures. But such descriptions often give no details about any sewing or embroidery on a textile. The textile is simply described as 'embroidered', or that 'embroidery stitches' or 'simple stitches' were present, or sometimes just that it was 'sewn'. Such descriptions are too vague and are of very little use. They would not be regarded as acceptable descriptions for a piece of woven textile. Nor can such descriptions be regarded as good enough when there are approximately 500 named embroidery stitches and their variations.

Perhaps there are too few researchers with an interest in embroidery, but I think they owe it to the future to document the textiles well, especially as each small find helps to form a fuller picture about how they were made, why they were made, etc. In many cases the textiles are fragile and will not last long; evidence can vanish with time!

I realise it is difficult for archaeologists to be familiar with all areas of textiles: to be a true textile archaeologist one would have to cover all textile aspects which are involved in the study of fibres, dyes, print, weave/knit (constructed), embroidery, and extended into fashion and interior use. However, most reports only give satisfactory details and information about weaves and loom weights!

Could I suggest the following as a check list so that as much information as possible is given about the sewing and embroidery details:

-Cloth: Indicate what the construction is: woven, felt, knitted, etc. Also indicate the colour, the dye and the yarn types that have been used.

-Thread: Refer to the type of thread which was used to sew or embroider; its colour and dye.

-Stitches: Please identify the sewing or embroidery stitches; most of them have individual names. Indicate the name; the quality of the stitching; the direction or

NESAT AT JORVIK, 1987

NESAT - The North European Symposium for Archaeological Textiles - is despite its high-flown title a down-to-earth working party of archaeologists and conservators concerned with the recovery, treatment and study of textiles from archaeological contexts throughout northern Europe. Its home and archive are in the Textilmuseum at Neumünster, Schleswig-Holstein, where it held its first Symposium in 1981 on the initiative of Klaus Tidow, Director of the Museum, and Lise Bender Jørgensen. In 1984 the Symposium took place in Bergen, Norway, and in May 1987 symposiasts ventured further into the Viking realms, to Jorvik - York, England.

The formal meeting in York lasted 2½ days; but it was preceded by a gathering in the Museum of London where Frances Pritchard was able to display and discuss some of her striking medieval textile finds from the city. Nearly 40 members and guests from 14 European countries took part in the symposium; such was the eagerness to present papers (albeit short ones) that the organisers, Penelope Walton and John Peter Wild, were contemplating at one point a 12-hour lecturing day! In the event, there proved to be time for the members to visit the Jorvik Centre, to be entertained at a Reception given by the York Archaeological Trust and to view the City of York's silver in the Mansion House.

The working programme was *anstrengend*. Papers ranged over the whole spectrum of European textile production from the Mesolithic to the brink of modern times. It would be invidious to single out individual contributions (they will all appear in print when the *acta* are published); but all led to lively discussion inside and outside the meeting room. A triennium is an awful long time in present-day textile studies; but NESAT members must wait patiently for the next revelations, in Copenhagen in 1990.

directions in which the stitches have been worked; the changes in direction; the number of stitches per centimetre; some measurements to indicate the scale; a description of the manner in which the stitches have been worked within the design or context as a whole.

-Drawing: Present a good drawing which shows the stitch together with the material on which it has been worked. This may prove difficult as it is impossible to describe some stitches as simply as woven structures. However, there are many people who can draw and who could do this work (this point would be helped if there was a good PHOTOGRAPH).

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Stockport,
Cheshire, SK4 3AT,
England.

(See for example, A. Butler, *The Batsford Encyclopaedia of Embroidery Stitches*, London, (1982), ISBN 07134 3849 5).

TUTENKHAMUN IN THE VICTORIA AND ALBERT MUSEUM

It is not commonly known, nor has it been widely advertised, that the Victoria and Albert Museum, London (V. and A.), houses a group of textiles taken from the tomb of Tutankhamun, dated c. 1325 B.C., deposited there in the early thirties by Howard Carter. They have been stored as they arrived, in a series of brown cardboard boxes of varying sizes. The smallest is only a few centimetres long. One length of linen which had been wrapped around some faience beads was conserved many years ago at the time of the major exhibition at the British Museum and was quoted as a case history in *The Textile Conservator's Manual* (1).

Recently an attempt has been made at re-housing these fragments of decaying linen, to give them a new lease of life and to make them more accessible for study, for they are of exceptional fineness in the spin of the yarn and the evenness of weave.

The most important of these textiles must undoubtedly be the tunic, shawl and scarf that were wrapped around the neck of the jackal, Anubis, which was found in the entrance to what was called the "Treasury" (2). Conservation in an active sense of cleaning and support was neither possible nor desirable, each piece bearing signs of usage which had to be retained as evidence of the past and the fibres being in such a state of degradation that normal methods would be more destructive than helpful.

Preventive conservation was therefore considered the appropriate course to follow.

The two smaller pieces, the shawl and scarf, have been housed in a drawer, padded with polyester wadding covered with white polyester crepe. This material was chosen because other fabrics tend to cling to it slightly and it is hoped to keep the linen from moving in the drawer when it is opened.

The shawl, of incredibly fine linen, was only about 75 cm square and was still in the folds formed when two corners were tied around the neck of the figure of the animal. One corner only was relaxed and unfolded just enough to make it possible to measure it, but even this small interference seemed an impertinence. As there was not enough room in the drawer for both the shawl and the scarf to lie fully extended, one end of the shawl was softly rolled in polyester crepe with a core of a small tube.

The scarf also showed creases where it had been tied, but the disposition of the creases was slightly puzzling as there were three places which had been tightly crushed, rather than an expected two or four. In a colour photograph of the jackal published in *Tutenkhamen* by C. Desroches-Noblecourt it is possible to see a scarf in gold on the carving, with the ends disposed down the haunches, each side of the centre. Taking a length of cloth I tied it around the neck of a costume dummy to see if I could find the way to repeat this effect. The link visible was just a simple twist of one round another to the right of centre, leaving one end trailing down the shoulder. It was then possible to work out how the other side must have been twisted to achieve the same effect with the other end, which I find quite impossible to describe in words. When untied there were three creased places.

The linen was now so brittle and carbonised that to retie it was out of the question. It was laid, therefore, in the drawer in such a way as to explain the formation to anyone with intelligent eyes.

The tunic was made from a single length of linen, fringed at each end, doubled over and stitched together along the sides with a fine over-stitch joining the two selvages edge to edge. Unusually, the hole for the neck was cut about 5 cm down from the fold at the shoulder, as a small circle with a further slash about 10 cm long, finished with a rolled hem most exquisitely stitched.

The tunic must have been flattened out at the time of excavation, for, although crease marks were discernible in changes of colour, a V-shaped area of lighter tone clearing indicated where it had been wrapped around the neck of the jackal; the only real creases were those formed through having been folded into the box. Although flattening must have made it easier to fold the tunic, it had also lost much of its character in comparison with the two other pieces. The fibres are extremely degraded, discolouration appearing as strange

blotches, almost like paw marks from a large animal, but there are also hundreds of small holes where the fabric seems to have been eaten. Finally, although photographs exist of an inscription in one corner, this has been cut out and probably lost. According to Desroches-Noblecourt it said, "In the seventh year of the reign of Aknhaten", which was the year of Tutankhamun's birth. It has been assumed that this indicates that the tunic was used at some kind of naming ceremony.

The inevitable problem of lack of space in the Museum made it impossible either to store or display the tunic completely flat. A shallow tray was prepared, covered in linen crash, which would take the full length, but narrower than the width of the tunic. The crease marks from the cardboard box were removed with the use of humidity and a soft roll of padding introduced, over which one side was turned to decrease the width to a manageable measurement to fit into the tray. Later the tray could be placed inside a case for exhibition.

It is hoped to be able to re-house the rest of the collection whenever space becomes available.

S. Landi,
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London, SW7 2RL,
England.

[1] S. Landi, "Case history no 10", *The Textile Conservator's Manual*, Butterworth's Scientific Ltd., London (1985), 137.

[2] All historical references have been taken from: C. Desroches-Noblecourt, *Tutankhamen*, London (1965). Most of the photographs referred to are now in the Ashmolean Museum, Oxford.

THE TEXTILE CONSERVATION GROUP

The Textile Conservation Group was founded in New York City in July, 1978, as an unincorporated membership organisation. Open to all interested persons, membership includes artists and museum personnel as well as professional conservators.

The activities of The Textile Conservation Group are directed by a four member Executive Committee, elected every two years. Meetings are held every six to eight weeks between September and June. Past formats have included lectures, seminar presentations, informal discussions, and laboratory and exhibit tours. Members are encouraged to present material themselves, and to suggest programme topics. A report of each meeting is published in the Newsletter which is mailed to all members between meetings.

Membership in The Textile Conservation Group is required for inclusion in *A Guide to Textile Conservation* and every individual and organisation interested in textile conservation is encouraged to join. A copy of *A Guide to Textile Conservation* will be distributed to all current members of The Textile Conservation Group in late winter 1988. A limited number will be available for purchase.

The membership year is September 1st to August 31st, and annual dues are currently \$12.00. All members who join after the beginning of the season receive back issues of the Newsletter for that year. Newsletters from previous years may be purchased.

As membership in The Textile Conservation Group is not based on formal election or presentation of qualifications, it cannot be construed to be a certification of professional fitness.

For further information please contact:

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Membership Secretary,
The Textile Conservation Group,
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New York, NY 10128,
U.S.A.

FURTHER DETAILS ABOUT THE "TEXTILES FOR THE ARCHAEOLOGICAL CONSERVATOR" CONFERENCE, YORK

A one day conference on textiles for the archaeological conservator is to be held in York on Thursday 28th April, 1988. The conference will be preceded by a one day workshop designed to provide practical experience in a range of related techniques.

Workshop: Wednesday 27th April, 1988, at the Conservation Laboratories of the York Archaeological Trust.

This will be for a limited number of participants and will cover aspects of the following four areas:

- 1 Textile production and natural dyeing techniques
- 2 Fibre sources and identification of fibres from both archaeological textiles and 'rogue' fibres from modern contamination
- 3 The recording of woven and non-woven textile remains and the identification of dyes
- 4 Basic washing and handling techniques for archaeological textiles.

Conference: Thursday 28th April 1988 in the Huntingdon Room, Kings Manor, University of York.

Papers have been invited from archaeological conservators, textile conservators and other textile specialists. The papers are:

- J. P. Wild, "An introduction to textile studies"
 H. Granger-Taylor, "The significance of creases in archaeological textiles"
 F. Pritchard, "Missing threads and their meaning"
 B. Cooke, "Fibres and fibre damage in archaeological textiles"
 L. Hillyer, "The cleaning of archaeological textiles"
 E. Peacock, "Freeze-drying of the Svalbard textiles"
 L. Morrison, "A mounting and storage system for archaeological textiles"
 M. Hann, "The examination of Egyptian mummy fabrics from the XIIth and XXVth dynasties"
 V. Lochhead, "The conservation of four Egyptian tunics"
 L. Morrison, "The re-conservation of the Baynards Castle textiles"
 R. Janaway, "The conservation and analysis of the textiles from the excavation of the crypt at Christchurch Spitalfields"
 J. Glover, "The conservation of medieval and later shrouds from burials in North West England"

One of the aims of the conference is to give the archaeological conservator with a basic knowledge of textiles a deeper understanding of the studies carried out on archaeological textiles and how conservation treatments may affect these studies. Other topics will include differential preservation of textiles, their cleaning, mounting, packaging and storage and case studies of diverse items with particular problems.

It is anticipated that the fee for the WORKSHOP (inc. tea/coffee, lunch, materials) will be in the region of:

Unwaged/students	£6
Arch Section members	£10
UKIC/Early Textile Study Group	£12
Others	£18

It is anticipated that the fee for the CONFERENCE (inc. tea/coffee) will be much the same as for the WORKSHOP

For further information about the WORKSHOP and CONFERENCE, please write to Sonia O'Connor at the address given below.

Sonia O'Connor,
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 England.

Gösta Sandberg, *Indigo, en bok om blå textilerna*, Leipzig (1986; in Swedish).

G. Sandberg was given the name of *San ge shi* by a Chinese calligrapher. The title means "the man who systematically spreads knowledge". The worthiness of this title is attested to in G. Sandberg's new book *Indigo* (subtitle, *A book about blue textiles*).

Following an exciting historiography Sandberg describes some textile techniques which are dependent on the particular character of indigo, and which until recently have not been known in the Old and Western worlds. Exceptionally valuable is Sandberg's own experience from his meetings with the last active indigo dyers and blue printers of Europe. Finally exhaustive recipes and instructions of procedures are given about dyeing with indigo.

The book is partially embellished by unique photographs of items from Sandberg's privately owned collection, which is open to the public. The museum is situated in the mid-Swedish town of Nora. The collection also houses many manuscripts and books on dyeing and printing which date from A.D. 1500 onwards.

In order to meet the needs of a thorough, but summarised account of the dye 'Indigo' and its applications, Sandberg has written this book with the purpose of giving the reader as much information as possible but without being addicted to a hard academic/literary style and trivia about dye workshop technology.

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 Denmark.

In Issue 3 of the *Newsletter* (ATN, 3, 1986, 13) reference was made to a work by Y. Ragib called *Marchands d'étoffes du Fayyoun au III^e-IX^e siècle d'après leurs archives (actes et lettres)*. It was originally thought that the work covered the period from the third to the ninth century A.D. and that there was only one item. In fact it only covers the ninth century A.D. and is being published in six parts, the first two of which are now available. The series is intended to cover the following:

- I The work of Banu 'Abd al-Mu'min (published 1982)
- II Official and private correspondence of Banu 'Abd al-Mu'min (published 1985)
- III Letters of the Banu Thawr to Abu Huraya and his brother Hasan
- IV Correspondence of Abu Huraya with several of his colleagues
- V Letters of various textile merchants of the Fayyoun, the capital and elsewhere
- VI Synthesis and Index.

Taken from G. Frantz-Murphey, a review of Y. Ragib, *Marchands d'étoffes du Fayyoun au III^e-IX^e siècle d'après leurs archives (actes et lettres)*, in: *Journal of the Economic and Social History of the Orient*, XXVII, pt. II (1984), 219-223.

BIBLIOGRAPHY

- C. Alfaro Giner, "Restos de textiles entorchados y cueros procedentes de la necropolis medieval de San Juan de Agreda (Soria)", *Noticiario Arqueológico Hispanico*, 26 (1985), 282-287.
- Le Problème des Fibres dans les Textiles Anciens*, AEDTA Symposium 1984, Paris (1985).
- O. Bar-Josef, *A Cave in the Desert: Nahal Hemar*, Israel Museum Jerusalem, Catalogue 258 (1985; includes several textile finds).
- L. Bender Jørgensen, "Oldtidens Metervarer", *Lollands-Falsters Stiftsmuseums Årsskrift*, (1986), 5-29.
- L. Bender Jørgensen, "The string from Sigersdal Mose", *Journal of Danish Archaeology*, 5 (1986), 105-106.
- L. Bender Jørgensen, review of: I. Hägg, "Die Textilfunde aus dem Hafen von Haithabu", *Journal of Danish Archaeology*, 5 (1986), 253-4.
- L. Bender Jørgensen and P. Walton, "Dyes and fleece types in prehistoric textiles from Scandinavia and Germany", *Journal of Danish Archaeology*, 5 (1986), 177-188.
- L. Bender Jørgensen, "A survey of North European textiles", *Studien zur Sachsenforschung*, 6 (1987), 99-121.
- P. Bennike, T. K. Ebbelsen, L. Bender Jørgensen, "Menneskefundet i Bolkilde", *Nordslesvigske Museer*, 13 (1986), 86-115.
- idem.*, "Early Neolithic skeletons from Bolkilde Bog, Denmark", *Antiquity*, LX (1986), 199-209.
- E. Crowfoot, "The textiles", in: V. I. Evison, *Dover: The Buckland Anglo-Saxon Cemetery*, Historical Buildings and Monuments Commission for England, Archaeological Report, 3 (1987), 190-195.
- Z. Castro Curel, "Avances de estudios cuantitativos y localización de pondera en asentamientos peninsulares", *Arqueología Espacial: Coloquio sobre el Microespacio. 15-17 de Septiembre*, Teruel (1986), 169-186.
- V. Furmáněk, K. Pieta, *Pociatky odievania na Slovensku*, (Beginnings of Clothing in Slovakia), Bratislava (1985).
- H. Granger-Taylor, "Textile fragments", in: J. Curtis, "Late Assyrian Bronze coffins", *Anatolian Studies* 33 (1983), 94-95.
- H. Granger-Taylor, "The Emperor's Clothes: the Fold Lines", *The Bulletin of the Cleveland Museum of Art*, 74, no. 3 (1987), 114-123.
- D. De Jonghe, "Koptische Weefsels, Een technologische Kunstgreep", *Bulletin van de Koninklijke Musea van Kunst en Geschiedenis*, 56, 2 (1985), 5-23.
- D. King, "Appendix B. Report on the woollen pile rug from tomb 193.105 at Qasr Ibrim", in: A. J. Mills, *The Cemeteries of Qasr Ibrim*, London (1982), 87.
- G. van der Kooij, "Tell Deir 'Alla (East Jordan Valley) during the Achaemenid period. Some aspects of the culture" in: ed. H. Sancisis-Weerdenburg, *Achaemenid History I, Sources, Structures and Synthesis* Leiden (1987), 97-102 (reference to loom weights on p. 100, see also pl. III).
- H. Masurel, "Étude comparative des vestiges textiles de la Motte d'Apremont (Haute-Saône) et de ceux provenant du site éponyme de Hallstatt", in: *Les Âges du Fer dans la Vallée de la Saône, Actes du 7^e Colloque de l'AFEAF 1983, Revue Archéologique de l'Est et du Centre-Est*, 6^e suppl., CNRS, Paris (1985), 35-43.

- J. Maik, "Das Vorkommen des sogenannten römischen Schafes in Pommern", *Fasciculi Archaeologiae Historicae*, I (1986), 55-64.
- P. E. Mottahedek, "The Princeton bronze portrait of a woman with *reticulum*", *Festschr. f. Leo Mildenberg*, ed. A. Houghton et al, Wetteren (1984), 193-210 (Roman sprang hairnet).
- I. Pollet, D. De Jonghe, "Herondtdekking van de techniek der koptische weefsels", *Handwerken zonder Grenzen*, 3 (1986), 21-26.
- D. Renner, *Die spätantiken und koptischen Textilien im Hessischen Landesmuseum in Darmstadt*, Wiesbaden, (1985).
- R. H. S. Robertson, *Fuller's Earth: A History*, The Mineralogical Society Occasional Publication, Volturna Press, Hythe, (1986).
- G. Sandberg, *Indigo*, Stockholm (1986; highly recommended by K-H. Stærmoose Nielsen).
- J. Scarce, *Women's Costume of the Near and Middle East*, London (1987; price £40, and worth every penny, G. M. V-E.)
- P. Steinkeller, "Mattresses and felt in Early Mesopotamia", *Oriens Antiquus*, XIX (1980), 85-95.
- G. Vial, "Le Lampas", *AEDTA Proceedings*, 5 (1986), 5-23.
- A. E. Wardwall, "Flight of the Phoenix: Crosscurrents in late thirteenth to fourteenth century silk patterns and motifs", *Bulletin of the Cleveland Museum of Art*, 74, no. 1 (1987) (the complete issue is dedicated to this subject).
- G. White, "Purpurschnecken aus dem römischen Grenzach", *Archäologische Nachrichten aus Baden*, 37 (1986), 35-37.
- J. P. Wild, "The Roman horizontal loom", *American Journal of Archaeology*, 91 (1987), 459-471.
- Documenta Textilia*, Festschrift für Sigrid Müller-Christensen, ed. by M. Flury-Lemberg and K. Stolleis, Munich (1981)
(please note that not all the articles in this book have been included in the following list)
- G. Taubert, "Erwähnung von Textilien in mittelhochdeutschen Epen", 13-18.
- M. Hald, "Spinning goat's hair", 19-22.
- J. H. Hofenk de Graaff, "Zur Geschichte der Textilfärberei", 23-36.
- M. Hoffmann, "Der ungenähte Rock in textilhistorischem Zusammenhang", 37-51.
- E. E. Gudjónsson, "A sprang embroidered altar frontal from Iceland".
- D. Renner, "Spätantike figürliche Purpurwirkereien", 82-94.
- D. King, "Early textiles with hunting subjects in the Keir Collection", 95-104.
- D. G. Shepherd, "Zandaniji revisted", 105-122.
- A. Jeroussalimskaia, "Une soierie récemment trouvée dans le tombeau de Mochtchevaja Balka", 123-128.
- K. Riboud and G. Vial, "Quelques considerations techniques concernant quatre soieries connues", 129-155.
- A. Geijer, "Bishops Gunther's shroud in Bamberg Cathedral", 156-162.
- M. Flury-Lemberg, "Das Ulrichsgewand aus dem Kloster St. Urban", 163-176.
- M. Nockert, "Zwei mittelalterliche Seidenstoffe aus dem Bremer Dom", 177-184.
- B. Schmedding, "Beobachtungen bei der Restaurierung der Kasel des heiligen Bernward von Hildesheim", 185-195.
- E. Heinemeyer, "Gedanken zu einem Seidenstoff des 15. Jahrhunderts", 196-199.
- R. Ettinghausen, "An unknown nizami motif on a sixteenth century Persian textile", 200-206.
- F. Lindahl, "Ein persischer Wirkteppich aus einer dänischen Dorfkirche", 207-212.
- S. Durian-Ress, "Die Bordüre der Münchner Paulusserie", 213-233.
- B. Volk-Knüttel, "Jan de la Groze ein Brüsseler Tapissier am Hof Wilhelms V. von Bayern", 234-250.
- C. A. Burgers, "Dutch damasks for Denmark", 251-260.
- L. von Wilckens, "Eine Stickerei des frühen 14. Jahrhunderts als Bucheinband", 275-282.
- B. Klesse, "Italienische und böhmische Trecento-Stickereien in Köln", 283-292.
- J. Schneider, "Die Rheinauer Kasel", 293-298.
- I. Estham, "Dänische Kaseln in norwegischen und schwedischen Kirchen", 299-209.

E. Zimmermann, "Das Prunkbett des Markgrafen Ludwig Georg von Baden-Baden in Schloß Favorite bei Rastatt", 310-327.

D. Heinz, "Wilhelm Jakob Seberth in Wien", 328-341.

S. M. Newton, "Queen Philippa's Squirrel Suit", 342-248.

M. Gräfin Preysing, "über Kleidung und Schmuck von Brabanter Christkindfiguren", 349-356.

K. Stolleis, "Die Kleider der Maria Jakobäa Fugger (1562-1588)", 357-370

J. L. Nevinson, "A sixteenth century doublet", 371-375.

R. Pylkkänen, "Die sogenannte Albe im Dommuseum zu Turku", 376-383.

G. Ekstrand, "Zwei Hemden aus dem Jahre 1627", 384-393.

Textile Grabfunde aus der Sepultur des Bamberger Domkapitels, Internationales Kolloquium, Schloss Seehof 22/23 April 1985, Munich (1987)

K. L. Dasser, "Aufgaben des Referates Textilrestaurierung im Bereich des Bayerischen Landesamtes für Denkmalpflege", 7-8

B. Neundorfer, "Zur Geschichte des Bamberger Domkapitels", 9-11

R. Baumgärtel-Fleischmann, "Trauerfeierlichkeiten für Bamberger Domherren im 16. und 17. Jahrhundert", 12-35.

H. Herrmann, "Die Bergung, Konservierung und Dokumentation der textilen Grabfunde aus der Sepultur des Bamberger Domkapitels", 36-43.

K. Kniefelkamp-Müllerschön, "Gewandteile und Schnittformen - die Grabfunde im Zusammenhang mit der Gewandung der Domherren", 44-61

L. von Wilckens, "Kunstgeschichtliche Einordnung der Bamberger Textilfunde", 62-79.

R. Schorta, "Anmerkungen zur Technik einzelner Gewebe der Bamberger Grabfunde", 80-90.

K. Tidow, "Gewebefunde aus Ausgrabungen in mittelalterlichen Siedlungen und Kirchen. Ein Vergleich der Webtechniken", 91-98.

U. Kniefelkamp, "Die Handelswege kostbarer Textilien nach Mitteleuropa vom 10. bis. 15. Jahrhundert", 99-106.

Programm des Kolloquiums, 107.

Katalog der Gewebefragmente aus der Sepultur des Bamberger Domkapitels, 109-239.

EXTENDED BIBLIOGRAPHY

K. TIDOW

"Frühgeschichtliche Gewebefunde", *Spinner Weber Textilveredlung*, 7 (1970), 35-38.

with R. Ullemeyer, "Textil- und Lederfunde der Grabung Feddersen Wierde", *Probleme der Küstenforschung im südlichen Nordseegebiet*, 10 (1973), 69-93.

"Die Gewebefunde aus dem Gräberfeld von Thumby-Bienebek", in: M. Müller-Wille: "Das wikingerzeitliche Gräberfeld von Thumby-Bienebek (Kreis Rendsburg-Eckernförde)", *Offa Bücher*, 36 (1976), 60-63.

"Die Gewebefunde aus dem Gräberfeld von Thumby-Bienebek", in: H. Haiduck, "Archäologische Untersuchungen in den Kirchen von Wiegboldsbur und Timmel im Kreis Aurich", *Emdener Jahrbuch* (1977), 22-23.

"Spätmittelalterliche Gewebefunde aus Göttingen, Markt 4", *Neue Ausgrabungen und Forschungen in Niedersachsen*, 12 (1978), 233-242.

"Gewebefunde aus der Zitadelle in Berlin-Spandau", *Ausgrabungen in Berlin*, 5 (1978), 137-139.

with R. Ullemeyer, "Textil- und Lederfunde aus der Lübecker Innenstadt", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 1 (1978), 133-138.

"Textilfunde aus einem Brunnen auf dem Schranken in Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 1 (1978), 139-157.

"Gewebefunde von der Wurt Hessens (7-9 Jh)", *Archäologie des Mittelalters und der Neuzeit in Niedersachsen*, (1978), 44.

with P. Schmid, "Frühmittelalterliche Textilfunde aus der Wurt Hessens (Stadt Wilhelmshaven), und dem Gräberfeld von Dunum (Kreis Friesland) und ihre archäologische Bedeutung", *Probleme der Küstenforschung im südlichen Nordseegebiet*, 13 (1979), 123-153.

"Textilfunde aus einem Brunnen von Grundstück Schlüsselbuden 16/ Fischstr. 1-3 in Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 3 (1980), 183-192.

"Spätmittelalterliche und frühneuzeitliche Gewebefunde aus der Lübecker Innenstadt", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 4 (1980), 163-168.

"Textilfunde aus der Lübecker Innenstadt", *Archäologie in Lübeck*, 3 (1980), 117-1290.

"Spätmittelalterliche und frühneuzeitliche Gewebefunde aus Lübeck", *Textiele bodemvondsten. Publicatie van de Textielcommissie Musea, Commissie tot het behoud van museaal textielbezit*, (1981), 25-37.

with R. Ullemeyer, "Textil- und Lederfunde der Grabung Feddersen Wierde", *Einzeluntersuchungen zur Feddersen Wierde*, III (1981), 77-152.

"Gewebereste an einer Bronzesitula aus Döhren, Stadt Petershagen, Krs. Minden-Lübbecke", in: K. Günther, *Beiträge zur vorrömischen Eisenzeit in Ostwestfalen*, 18 (1981), 72-75.

"Untersuchungen an Wollgeweben aus einem Brunnen auf dem Schragen in Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 6 (1982), 251-285.

"Textilfunde aus dem Burgkloster und dem Heiligen-Geist-Hospital zu Lübeck", *Textilsymposium Neumünster, Archäologische Textilfunde* (1982), 163-177.

with H. Hayen, "Die Wolljacke des Jan Spieker", *Archäologische Mitteilungen aus Nordwestdeutschland* 5 (1982), 29-31.

with H. Hayen, "Ein Wollgewebe vom Bohlenweg VI (Pr)", *Archäologische Mitteilungen aus Nordwestdeutschland*, 5 (1982), 29-31.

book review: H. J. Hundt, Die Textil- und Schnurreste aus der frühgeschichtlichen Wurt Elisenhof, in: *Praehistorische Zeitschrift*, 58, 2 (1983), 289-291.

book review: M. Hald, *Ancient Textiles from Bogs and Burials*, in: *Bonner Jahrbücher* 183 (1983), 752-755.

"Gewebereste aus Grab 107 von Garlstorf, Krs. Harburg", *Hammaburg*, NF 6 (1984), 171-173.

"Spätmittelalterliche und frühneuzeitliche Textilfunde aus der Hundestraße in Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 8 (1984), 33-40.

"Mittelalterliche Gewebefunde aus der Göttinger Altstadt", in: S. Schütte, *Das neue Bild vom alten Göttingen*, Göttingen (1984), 43.

"Reste eines Wandbehanges oder einer Decke aus der Stadt Emden, 10./11. Jh.", *Stadt im Wandel* (1985), 46-47 (catalogue).

"Spätmittelalterliche Textilfunde aus Hameln, Bäckerstraße 16", *Die Kunde*, NF 36 (1985), 271-293.

"Textilfunde aus der Grablage von Individuum II in St. Emmeran, Regensburg", in: O. Röhrer-Ertl, *Der St. Emmeran-Fall. Beiträge zur Geschichte des Bistums Regensburg* 19 (1985), 121-123.

"Gewebefunde", in: H. E. Saggau, "Bordesholm. Der Urnenfriedhof am Brautberg bei Bordesholm", *Offabücher*, 60 (1986), 123-124.

"Mittelalterliche und frühneuzeitliche Textilfunde aus Hann.-Münden und Höxter", *Neue Ausgrabungen und Forschungen in Niedersachsen*, 17 (1986), 309-310.

"Neue Textilfunde des hohen Mittelalters aus Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 12 (1986), 123-129.

"Untersuchungen an Leinen- und Seidengeweben aus der Kloake des Fronen auf dem Schragen zu Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 12 (1986), 173-182.

"Textiltechnische Untersuchungen an Gestriicken und Filzen aus der Kloake des Fronen auf dem Schragen zu Lübeck", *Lübecker Schriften zur Archäologie und Kulturgeschichte*, 12 (1986), 183-189.

"Gewebefunde aus Ausgrabungen in mittelalterlichen Siedlungen und Kirchen - ein Vergleich der Webtechniken einfacher Gewebe", *Textile Grabfunde aus der Sepultur des Bamberger Domkapitels. Internationales Kolloquium, Schloß Seehof, 22./23. April 1985. Arbeitsheft 33. Bayerisches Landesamt für Denkmalpflege*, (1987), 91-98.

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For pre-1982 publications by M. L. Ryder, see the bibliography in M. L. Ryder, *Sheep and Man*, Duckworth Press, London (1983).

"A re-assessment of Bronze Age wool", *Journal of Archaeological Science*, 10 (1983), 327-331.

"Sheep representations, written records and wool measurements", in: J. Clutton-Brock and C. Grigson (eds), *Proceedings of the 4th International Conference on Archaeozoology, London (1982)*, vol. 3, *British Archaeology Reports International Series*, no. 202, Oxford, (1984), 69-82.

"Skin, hair and cloth remains from the ancient Kerma civilisation of Northern Sudan", *Journal of Archaeological Science*, 11 (1984), 477-482.

"Early technology and the development of different fleece types in sheep", *World Archaeology Conference*, Southampton (1986).

with S. Adalsteinsson, "A note on differences in coat structure between the black and white areas of piebald lambs", *Journal of Agricultural Science*, 108 (1987), 379-382.

with T. Gabra-Sanders, "The application of microscopy to textile history", *Textile History*, 16 (1985), 123-140.

with T. Gabra-Sanders, "A microscopic study of remains of textiles made from plant fibres", *Oxford Journal of Archaeology*, 6 (1987), 91-108.

with M. J. Hutchings, "The automation of the projection microscope method of fibre-diameter measurements", *Journal of the Textile Institute*, 76 (1985), 295-299.

Cashmere, Mohair, and Other Luxury Animal Fibres, (available from the author, price £2 plus postage in Britain; £3 plus postage for overseas orders).

"Wool", in: I. Fayex, M. Marai and J. B. Owen, *New Techniques in Sheep Production*, Butterworth, London (1987), 3-10.

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- The Library, The Royal Ontario Museum, 100 Queen's Park, Toronto, Canada, M5S 2C6.
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