

# ARCHAEOLOGICAL TEXTILES NEWSLETTER

## EDITORIAL

It is with regret that we have to announce that Penny Walton Rogers has left the Editorial Board of the *Archaeological Textiles Newsletter*. Due to pressures of work, Penny felt she was unable to carry on her editorial role. Nevertheless she will be as busy as ever in her support of our activities. Her place on the Board has been filled by Libby Heckett, Cork, Ireland who is a specialist in Viking Age and medieval textiles. We would like to extend a warm welcome to her.

This edition of the *Newsletter* contains a wide variety of notes and articles, ranging from items on textiles in Scotland to two museums in China.

We start off with a review by T. Gabra-Sanders and T. Cowie of the textiles found in Scotland at a site in St. Andrews, dated to the Late Bronze Age. This article is followed by a note by M. L. Ryder on evidence for palaeolithic stitching. The theme of stitching is continued in a note by A. Sheffer on sewing in Biblical times. The ancient feel of the *Newsletter* is extended by an account by G. M. Vogelsang-Eastwood on a recent find from the Anatolian site of Çayönü which may well be one of the earliest known textile to date. A. Baginski and O. Shamir have provided an interesting article on the textiles from Nahal Omer and an update on the Timna excavations. The Nahal Omer textiles include what appear to be the earliest examples of cotton *ikat* to be recorded. A

second note by M. L. Ryder concerns the recent observations of an Austrian team who appear to have found silk (type unknown) in the hair of a tenth century BC mummy from Egypt. This find begs many questions and we hope to have more information about it in the next issue of the *Newsletter*. Finally, we conclude with a description by Lucy Fang Lu of the textiles now in the Famen Temple Museum in China.

The range of articles and notes gives a good indication of the many changes occurring within the world of ancient textiles. Frontiers are being rapidly shifted and as usual nothing is quite as simple as it seems at first.

**SUBSCRIPTIONS ARE DUE AGAIN!** As will be noted, we have been forced to put up the price of the *Newsletter* to fl. 25 per year. The current European financial situation plus increases of 25% in bank charges have meant that we can no longer afford to charge subscribers fl. 20 per year. Our main fear at the moment is that banks will continue to increase their charges and we may be forced to close the *ATN* down. Hopefully, however, it will not come to this, but the possibility exists unless other sources of funding for the *Newsletter* can be found in the near future.

## 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 750 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.

The views expressed by the various authors are not necessarily those held by the editors.

## COLOPHON

The Archaeological Textiles Newsletter, No. 16, 1993. Published in Leiden, The Netherlands. ISSN: 0169-7331.

Editorial board: L. Bender-Jørgensen, G. M. Vogelsang-Eastwood, L. Heckett and J. P. Wild.

Publication dates: Twice-yearly: May and November. Deadlines for contributions: April 1st and October 1st for the May and November issues respectively

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Subscription charges: Dfl. 25.00 (or equivalent in pounds sterling) per annum (two issues). Please note that payments are only accepted in pounds sterling or Dutch guilders, and that money should be transferred as indicated below! If all else fails, and it is necessary to use another currency, please add the equivalent of Dfl. 12 to the subscription to cover the bank charges.

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**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.**

## THE LATE BRONZE AGE HOARD FROM ST. ANDREWS, FIFE, SCOTLAND

### The significance of the hoard

In July 1990, a large hoard of metalwork was discovered during building work at a house in Priestden Place, St Andrews, Fife on the east coast of Scotland (NGR: NO 5136 1578) (fig 1). It is the largest surviving Late Bronze Age hoard to have been discovered in Scotland, with perhaps as many as 200 pieces of metalwork represented, and dates from the so-called Ewart Park phase (9th-8th centuries BC). The metalwork includes tools, weapons and a large number of ornaments, especially pins and bracelets. There is also a small number of amber beads and three armlets made from the jet-related substance known as cannel coal. Most of the component pieces in the hoard are types already known from other Scottish Late Bronze Age hoards (or as stray finds) but the sheer size of the hoard, the presence of unusual quantities of certain items especially ornaments (eg pins) and the presence of a small number of exotic pieces of metalwork elevates it to a position of unusual importance in Scottish terms.

However, what really raises this discovery out of the ordinary run of such finds and gives it an international significance is the presence of a rich organic component, surviving either as actual fragments (eg portions of wooden hafts, fragments of adhering or detached textiles, fibres and haired skin) or as microscopic traces within the corrosion products of virtually every item of metalwork. Remarkably, both animal and vegetable fibres have been preserved. The organic remains appear to owe their survival to the compact, densely packed nature of the deposit of metalwork, for the soil in which it lay was sandy and freely drained.

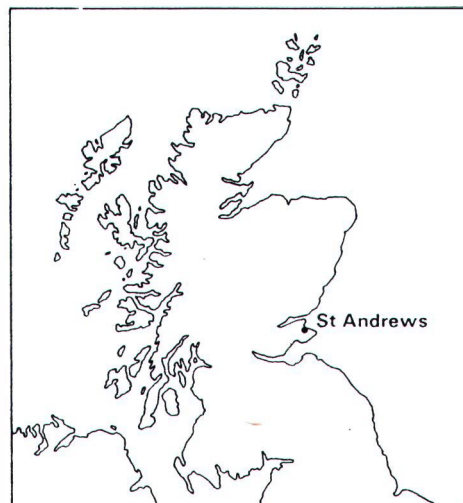
A preliminary account of the discovery has been published (Cowie *et al* 1991). A fuller

interim account will be published once the first fruits of specialist research are available, while the final report will be published as a monograph.

### The textiles

The textile remains can be divided into textile and yarn fragments from both wool and vegetable fibres. The majority, about 74%, of the total number of textile fragments are made from wool. The fragments can be divided into those still adhering to artifacts, such as an axe, a socketed knife, two of the spearheads, the end of a socket and one of the amber beads, and those that have become detached. Within this assemblage, such fragments are characteristically dark brown in colour and are woven from wool in tabby weave. They are worked from z-spun single yarn in both warp and weft, with an average thread count of 6-8 x 5-8 per cm. Dr Michael Ryder is currently carrying out a study of the types of wool present to establish the fleece type.

Fragments of textile made from vegetable fibres also occur in association with specific artifacts, adhering to items such as rings. Within the assemblage these fragments are characteristically off-white in colour and are woven from flax in a tabby weave from S<sub>2</sub>z-plied yarn in both systems, with an average thread count of 10-16 x 6-12 per cm, slightly warp- or weft-faced.



Vegetable fibres have also been used to produce string used for binding items together. Small fragments of S-plyed yarn have been found adhering to artifacts such as rings, spearheads, knives and a fragmentary sword blade. Such fibres were also used to bind many of the bronze rings and in some cases clearly linked several rings together to form a chain. Scanning electron microscopy of some of the bindings has revealed the presence of some epidermis cells with stomata, probably from grass stems. Such stems were used as binding round certain items - such as a pair of bronze tweezers and some of the rings.

This is the largest such assemblage of textile remains of this date found in Britain so far. The St Andrews hoard thus provides many insights into the nature and use of the organic fittings associated with metalwork of the period, aspects which of course normally remain archaeologically invisible to us.

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#### References

Cowie, T. G., O'Connor, B. and Proudfoot, E. V. W. P., 1991, 'A Late Bronze Age hoard from St Andrews, Fife, Scotland: a preliminary report', in Chevillot, C. and Coffyn, A. (eds), 1991, *Le Bronze Atlantique. Premier Colloque de Beynac 10-14 Sept 1990*, Beynac, France, 49-58.

#### **THE FIRST FIND OF PALAEOLOGIC STITCHING**

Frozen remains, including some from a Norse site in Greenland, were reported in the last *ATN*. I now report another frozen find from Greenland, but of a much earlier date. This comprises thread in skin clothing and was

described in a seminar at Southampton University given by Ass. Prof. Bjarne Grønøw of Copenhagen University, Denmark. The site he is excavating is named Qeqertasussuk and was probably colonised from Siberia as late as 2500 BC. It is unique in containing much organic material preserved in permafrost which is culturally Palaeolithic despite the mid third millennium dating.

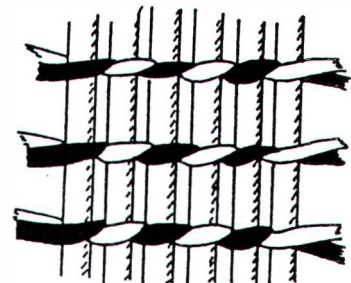
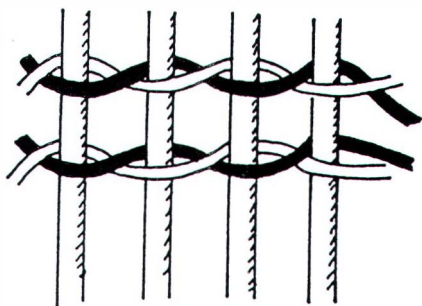
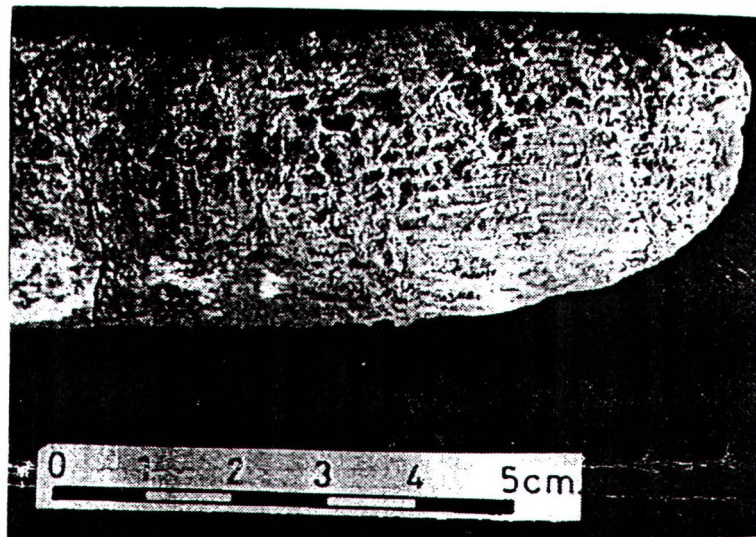
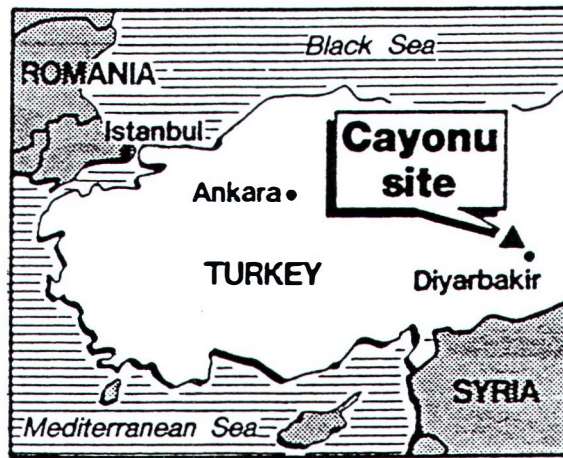
Of particular interest to readers of this newsletter was the discovery of remains of stitched skin clothing, although no fragment had an area larger than one square metre and their position in garments was not clear. The site had many fine bone needles, which are usually the only evidence of stitched skin clothing, but here the skin remains had stitches *in situ*, which were finer than those in recent stitching. The thread was made of sinew, which had first been shredded, then spun and finally plyed before use. This is claimed to be the oldest stitching found - it would certainly appear to be the only example of Palaeolithic stitching. The skin of different species of seal was used in clothing and thick skin was used for the soles of boots, which unlike the clothing was an item that could be identified.

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#### **ONE OF THE OLDEST TEXTILE IN THE WORLD?**

The Çayönü textile

A bone object [CT 88A.200] described as a handle was found during the 1988 season at Çayönü in south eastern Turkey. At one end of the handle there are the remains of a textile. The sickle has been given an



weft-twining

uncalibrated carbon date of the mid-sixth millennium BC, but the excavators believe that an eighth millennium date can be expected.

Traces of cloth can be seen on the upper side of the handle. It covers an area of about 8.0 x 4.0 cm. The textile appears to have been preserved by being semi-calcified, possibly due to calcium leaching out of the bone. Further tests, however, need to be carried out on this point before the hypothesis can be confirmed. Some areas of cloth are in a poor condition and only the lower half of the structure remains. Near and around one side, however, the complete form of the threads and weave has been preserved.

The condition of the textile is such that it is impossible at present to identify the fibre type. A sample of thread has been sent to Dr. W. C. Cooke, UMIST, Manchester, for further analysis using a Scanning Electron Microscope. It is likely that the fibre is a bast, possibly flax, but this has not yet been confirmed. In this respect, however, it is worth noting that flax seeds have been found at the site. Both the warp and the weft threads have been made from S-plyed yarn, twisted from two z-spun threads. The textile has been woven using a spaced or open twining technique with paired threads in system 2. There are about seven threads per centimetre in system 1 and five threads per centimetre in system 2. Although no selvages are present on this textile, it is likely that a weft-twining technique was used. Weft-twining is a simple form of weaving carried out manually without the aid of any shedding device. It is possible therefore to make it either in the hand or more likely using an elementary form of frame.

It is extremely rare for textiles to survive from a pre-neolithic or early neolithic horizon. It is even more unusual to find textiles surviving as a result of being in contact with bone. The Çayönü textile is, therefore, of great interest.

Currently, the earliest known textiles of the twined type come from Nahal Hemar in Israel which have been dated to about 6500 BC (Bar-Yosef and Alon 1988:5; Schick 1988). These are closely followed by a group of textiles found at the Anatolian site of Çatal Hüyük, dated to about 6000 BC. It is worth noting that the twined textiles from Çatal Hüyük appear to have been made from S-plyed (S,2z) yarn. On the other hand the majority of the Nahal Hemar textiles were made from Z,2s, with the occasional S,2z example (Schick 1988:34). It would seem therefore, that S-plying may have been an Anatolian form for this type of cloth, while Z-plying was more common in the Levant region.

The method in which the Çayönü textiles were made can also be paralleled by finds from Çatal Hüyük and Nahal Hemar. Several of the finds from these sites were described as examples of weft-twining with paired wefts; the direction of the twining was confirmed by the presence of selvages on a number of the textiles (Burnham 1965, figs. 1-2; see also Schick 1988:37). As noted above, it is likely that the Çayönü textile was also made using a weft-twining technique.

In addition to the twined textiles, 'normal' tabby woven textiles were also found at Çatal Hüyük. To date, however, no such examples have been found at Çayönü. Weft-twining, as encountered at sites such as Çayönü, Nahal Hemar and Çatal Hüyük, indicates that twined cloth should be regarded as the direct ancestor of loom woven textiles and that for many millennia the two techniques went side by side within the textile repertoire of the Anatolian and Levantine regions.

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Burnham, H., 1965. "Çatal Hüyük - the textiles and twined fabrics", *Anatolian Studies*, 1965:169-174, pls. XXXI-XXXIII.

ed. O. Bar-Yosef and D. Alon, 1988. "Nahal Hemar Cave", *'Atiqot*, XVIII 1988

Schick, T., 1988, "Cordage, basketry and fabrics", in ed. O. Bar-Yosef and D. Alon, 1988. "Nahal Hemar Cave", *'Atiqot*, XVIII 1988:31-43

## SEWING AND WEAVING IN BIBLICAL TIMES

The land of Cana'an, which was captured by the Israelites, extended between the Gaza River and the mountains of Lebanon. The Cana'anites were famous for their knowledge of weaving and dyeing. However, as Cana'an was bordered by Egypt and Mesopotamia, the influence of these large empires can also be observed in the garments of the Cana'anite inhabitants.

Only a few textiles were found in archaeological excavations. Those which survived are quite small and stitches can hardly be noticed. To find out about ancient textiles, how they were woven and stitched, we are helped by works of art such as sculptures, paintings, cylinder-seals, etc., depicting dressed people.

The art of stitching has preceded the art of weaving and wrapped garments, tailored dresses. The earliest draped garment was the *Azor* - a loincloth sometimes held in place with a girdle *hagor*. This was followed by the draped garment, the Biblical *Simlah* in its varied forms and embellishments. During the Monarchical period the tailored Biblical *Kutoneth* made its appearance; sometimes it was also embroidered.

The cultic site of Kuntilet Ajrud in Sinai excavated in 1970 by Dr. Zeev Meshel has yielded the only fragments of textiles and the remains of the warp-weighted loom belonging to the Monarchical period.

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## TEXTILES FROM NAHAL OMER, ISRAEL

The earliest cotton warp *ikats*

In 1981 and 1991 excavations were carried out at Nahal Omer in the 'Araba (in south-east Israel, see *ATN* 14) on behalf of the Israel Antiquities Authority directed by D. Nahlieli and Y. Israel.

The site, occupied during the Early Islamic period (650-810 CE [1]), was probably a way station on the Spice Route (see *ATN* 14). The dry climate of the region enabled the preservation of textile, basketry and rope fragments. Most textiles were discovered in a waste dump and a few were recorded from the ruins of a building. All the fragments found at the waste dump were cut pieces.

There are no indications that textiles were produced at the site [2]. As Nahal Omer was a way station, it is feasible that the textiles found there were produced elsewhere along the route and brought to the site by the travellers.

A wide variety of materials, techniques, dye and origin were observed in the textile fragments. Seventy-three were studied; the remainder were either too fragmentary or too fragile to be handled. The materials are cotton, wool (26), linen (10) hair (4) and silk (2).

The largest group 31 out of the 73 textile fragments are made of cotton. All of them are tabbies. The spin direction of 16 is z, of six s and nine are z/s.

A variety of techniques and dyes decorated the cotton fragments. Eleven fragments are dyed, but only one is all over plain monochrome blue (probably indigo). The

other ten are decorated in various techniques using dyes; one has alternating green and red bands on a reddish-brown warp; one is a blue-green plaid with a reddish-brown grid; two are brocaded; one is blue-green with beige brocading; the other one is decorated with brocaded diamond shaped motifs in red and cream on a checked fabric (brown, red and cream).

Eight fragments are warp *ikats* in blue, brown, reddish-brown, red, cream, and tan. The reserved parts of the warp always remained undyed. The patterns are feathers or/and lozenges; in two the wefts are dyed in shades of red, while the other six the weft remained undyed. In all but one the *ikat* dyed warp is z-spun cotton (18-28 thread per cm).

Of the other fragments found at the site and examined 26 fragments are made of wool. Most of them are s-spun, fibre are s-spun and five are s/z-spun. One is a weft-faced compound twill; one is a weft-faced compound tabby and all the others are tabby. Two fragments are completely dyed brown; four have dyed stripes, four are lattice patterned, plaids or checks, three are brocaded, two have geometric patterns, one is decorated with loops and one with embroidery. The decorations are in green, red, pink, blue and brown.

All ten linen garments are s-spun. Most of them are undyed and three are bleached. Two are blue and white plaids; one has a blue warp threads with some brocaded wefts. Three have rudiments of dyed wool decoration.

Four fragments are made of hair, one of them is very fine and shiny, and is probably made of mountain goat hair.

One of the silk fragment is a small, very fine red tabby (33/38 threads per cm), while the other one is of a shining coral colour brocaded with cream wefts in a geometric pattern. They are z-spun.

The great variety of materials, patterns and techniques indicate that many the textiles

discovered at Nahal Omer originated from areas outside the region along the route. The silk fragments were probably manufactured from raw material produced in East Asia (China) and woven along the route in Central Asia or nearby in Syria or even in Egypt. As mountain goats are not found in the nearby area, the fragment made of their hair originates from far away, either Anatolia or Central Asia, while the simple goat hair and woollen textiles could have been made in the nearby area which is suitable for sheep and goats. Although flax was not grown locally, it was cultivated in the north of the country in Galilee (which was famous in the Byzantine period for its fine high quality products) and in Egypt. Linen, wool, hair fragments were found in great numbers in nearby excavations of the Roman to the Early Islamic periods.

Very few cotton garments were discovered at archaeological sites in Israel. Moreover, the majority were imported [3]. The earliest cotton was discovered in India, from where it spread to other regions [4].

*Ikat* decorated textiles resembling those discovered at Nahal Omer are depicted in cave paintings of the Vakataka period (late 5th-6th c. CE) in Ajanta (Caves 1 and 17, India) [5]. Although there are several silk fragments in Japan of the Asuka period (552-644 CE) with warp *ikat* they differ from the textile fragments of Nahal Omer [6]. The hitherto earliest known cotton warp *ikats* come from Egypt [7]. The inscriptions they bear indicate their date (862-863 CE) and that they originate from the "Tiraz of Zan'a", Yemen [8]. The *ikat* decorated fragments from Nahal Omer are comparable to them in patterns, material and thread counts.

In summary the Early Islamic (650-810) textiles unearthed in the excavations of Nahal Omer are the earliest cotton warp *ikat* decorated textiles discovered to date.

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- 1 The site and the textiles were dated by coins and by C14 tests of several samples, carried out by I. Carmi and D. Segal at the Weizmann Institute of Science, Rehovot, Israel.
- 2 Indications for textile production, needles and whorls, were discovered at other sites in the region such as Mo'a (ATN 14) and En-Rahel (ATN 12).
- 3 Sheffer, A., "En Boqeq", *Textile History*, 22, 1991.
- 4 Watson, A.M., "The rise and spread of Old World cotton", in V. Gervers (ed), *Studies in Textile History*, Toronto, 1977:357; Barber, E. *Prehistoric Textiles*, Princeton, 1991:32-33; Vogelsang-Eastwood, G., *Resist-dyed Textiles from Quseir al-Qadim, Egypt*, Paris, 1990.
- 5 Sivaram Muri, C., *L'Art en Inde*, Paris, 1974, fig. 115, 471, 480; Buhler, A. *Ikat, Batik, Plangi*, vol. III, Basel, ill. 147, 148.
- 6 Buhler, ill. 158-161.
- 7 Buhler, vol. I, p. 23.
- 8 *idem*; Golombeck, L. and Gervers, V., "Tiraz fabrics in the Royal Ontario Museum", in V. Gervers (ed) *Studies in Textile History*, Toronto, 1977:92, 98 and 99.

#### TEXTILES FROM THE MINING CAMPS AT TIMNA

We were asked by Prof. B. Rothenberg to examine the textiles uncovered during the excavations of the mining camps at Timna for inclusion in the final excavation report [1].

Timna is situated in the 'Araba, in the south-east of Israel. The site is dated from the end of the 14th century BC to the beginning of the 12th century BC (the duration of the Nineteenth Egyptian Dynasty) when this

region was under Egyptian rule.

Seventy-six textiles were discovered at the mining camps at Timna; 63 were of wool, nine of goat hair and four of linen [2]. About 30 textile impressions on pottery were discovered as well as 89 threads and cords, and two garments of basketry.

The textile fragments are very small, the largest measuring 6.5 x 8.7 cm; all are woven in various tabby techniques.

The woollen textiles are s-spun, weft-faced tabby, except for one balanced tabby. Their density varies from coarse [?] to fine. The thread counts also vary; in the warp 2-12 per cm; in the weft 11-40 per cm. Weaving faults were distinguished in some of the woollen textiles.

Only five fragments are dyed or decorated; four with red dye and one with blue. Three textiles have reinforced selvages. One fragment has a closing cord, identical to that found in many textiles from the Roman Period [3]. Remains of sewing threads were found in six woollen fragments, made of three s-spun threads Z-plied (s3,Z). At the Workmen's Village at Amarna in Egypt (ca. 1375 BC), the sewing threads are either s2,Z or s3,Z. The sewing threads discovered at sites in the southern region dating to the later Iron Age (1200-586 BC) such as at Kuntillet 'Ajrud [5] and Kadesh Barnea [6], as well as those from the Roman Period, are mostly s2Z.

One woollen loop-braided band, diameter 0.5 cm, length 11 cm., was found. It is made of five loops, with wool fibres mixed with goat hair fibres [7].

All the linen textiles are s-spun, in two textiles some of the threads are s-spun and Z-plied. The weave is balanced tabby, 9-12 threads per cm. in both directions. Only one is a warp-faced tabby, 9-18 threads per cm. None of them are bleached.

The goat hair textiles are weft-faced tabby. The warp threads are s-spun, Z-plied; the weft threads are z-spun. The thread counts vary: in the warp 3-5 per cm.; in the weft 8-20 per

cm. Two are decorated with woollen wefts.

*Summary:* Only four of the 76 fragments found at the mining camps are made of linen, probably not woven at the site. They resemble the linen fragments found at the Workmen's Village at Amarna and perhaps represent Egyptian imports.

Sixty-three textile fragments are made of wool and four are made of goat hair. These might have been made at the site or in its vicinity, which is suitable for raising sheep and goat. Many pieces of fleece were also found in the camps.

Eighty-three out of 89 threads and ropes found at the site are wool and/or goat hair; none of them are of linen.

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1. A. Sheffer and A. Tidhar published the textiles from the Egyptian mining temple at Timna: Sheffer, A., and Tidhar, A., "Textiles and Textile Impressions on Pottery", in: B. Rothenberg, *The Egyptian Mining Temple*, 1988: 224-232.

2. Some of those textiles are exhibited at the Eretz-Israel Museum (Tel Aviv).

3. Bergman, I., *Late Nubian Textiles. The Scandinavian Joint Expedition to Sudanese Nubia*. Sweden 1975; Fujii, H. et al., "Textiles from At-Tar Caves, Part 1: Cave 12, Hill C", *Al-Rafidan* 10, 1989:115; Yadin, Y., *The Cave of the Letters*. Jerusalem 1963.

4. Vogelsang-Eastwood, G., "Preliminary Report on the Textiles", in: B. Kemp, *Amarna Reports* 11, 1985:196.

5. Sheffer, A. and Tidhar, A., "Textiles and

Basketry at Kuntillat 'Ajrut", *Atikot* 20, 1991:1-26.

6. Shamir, O, in preparation.

7. Speiser, N., *The Manual of Braiding*. Basel, 1983. It was reconstructed by the late Amalia Tidhar. The same as in: Gudjonsson, E. E., "Icelandic Loop-Braided Bands: Krilud Bond", *CIETA* 49, 1979:65-68, fig. 3a.

Acknowledgements: Many thanks are due to Prof. Beno Rothenberg for his support and encouragement, as well as his helpful comments in reading the material.

## SILK IN ANCIENT EGYPT

Scientists at Vienna University have reported a find of silk from Egypt dating about 1000 BC. The silk was discovered during scanning electron microscope (SEM) studies of the hair of a female mummy and was identified by non-destructive infra-red spectra. The identification as silk was confirmed by an amino acid analysis. A SEM micrograph published by Lubec *et al.* (1993) shows what appears to be a Z-ply yarn among the hair, but which may in fact be two strands of silk filaments thrown together with a s-twist. Each strand has numerous fibres.

To exclude the possibility that the silk was a recent contaminant of the hair, amino acid racemisation studies were carried out on the hydrolysed hair and silk using proline as the marker amino acid. The similarity of the racemisation ratios for the hair and silk indicates that they are of contemporary date. The mummy was from the Deir el-Medina workmen's cemetery at Thebes, was aged 30-50, and is attributed to the 21st Dynasty.

The authors do not discuss the textile implications in detail, but point out that the familiar silk route through Persia may have started earlier than recognised. The z-twist suggests that the silk reached Egypt as yarn

since the local spinning twist was S. This Egyptian silk dates much earlier than that of about 500 BC found in central Europe which Barber (1991) considers had travelled from Central Asia by a northern route. The link through Baghdad and Palmyra, and then by sea to Alexandria, had become established by the second century AD, but it was not until the fourth century that silk began to be common in Egypt. This intriguing discovery gives considerable food for thought.

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Barber, E.J.W., (1991), *Prehistoric Textiles*,  
Princeton University Press, pp 189, 203-204.

Lubec, G, *et al.* (1993), "Use of silk in  
ancient Egypt", *Nature*, 362 (1993), 25.

## TEXTILES IN THE FAMEN TEMPLE MUSEUM, CHINA

The Famen Temple Museum, Shaanxi, China

According to the records over 700 silk garments were excavated in 1987 from the crypt of Famen Temple. These garments date from the Tang Dynasty and have a *terminus ante quem* of c. 618-906 AD. The textiles were either in a plain weave, using the basic structures of tabby, twill or a combinations, or woven into patterns with the basic structures as backgrounds. For the highly sophisticated patterns, some form of drawloom was used to control the warp movements. Some fabrics were embroidered with either coloured silk threads or gold thread to give flowery patterns. The gold and silver threads were also used as warp or weft yarns in weaving.

There were forty photographs of the textile

fragments on display. These photographs are mainly of the following types of fabrics:

- plain woven, red coloured, coarse silk fabric with gold thread embroideries
- the embroidered robe worn by Empress Wu Setian with gold threads as warp and silk yarns as weft
- plain woven, thick silk fabrics dyed a light orange or purple, with large flowery silk embroideries,
- patterned silk dyed in sky blue
- patterned silk in a shade of brownish yellow, with rhombus patterns in a yellow colour

The fabrics themselves were not displayed due to the problems relating to deterioration.

## The Zhouyuan Museum

In addition to the textiles in the Famen Temple Museum, objects related to the production of textiles can also be found in the Zhouyuan Museum. The museum is located at the historical site of Zhouyuan, Fufeng County, Shaanxi. It was the capital of the region during the early Zhou period (c. 1200-1100 BC). The city was famous for the manufacturing of bronze articles. Displays in the museum include pottery, stone-made building tiles, water-draining pipes, micro-carved writings, bone needles, bronze articles and ornaments made from precious natural stones. Also on display are stone-made spindle whorls, approximately twenty of them. These were used for spinning wool, silk and plant fibres, since cotton was not introduced until the Tang period (c. 618-907 AD).

Although there existed different manufacturing sites in the early Zhou period in the region, only a few textile fragments were excavated. These were silk and plant fibre (flax?) fragments and were dyed with red, yellow and blue colours. Unfortunately, they did not survive deterioration after excavation.

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## SYMPOSIA

### THE EMBROIDERED MESSAGE

A one-day seminar on embroidery was held at the National Museum of Ethnology, Leiden on 2nd March 1993. The symposium was organised jointly by the Textile Research Centre, the National Museum of Ethnology and the Centre of Non-Western Studies, Leiden University. Speakers included R. Heringa, B. Menzil, G. M. Vogelsang-Eastwood, B. Gardi and P. Meredith. Various aspects of embroidery were discussed including what is embroidery? (Morrell), West African embroidery for garments (Menzil and Gardi); Indonesian embroidery (R. Heringa), Egyptian *tiraz* (Vogelsang-Eastwood) and the use of Japanese embroidery for hangings (Meredith).

Although the emphasis was on modern techniques and uses, it was clear that many of the comments could be applied to ancient finds. In general, much more needs to be done to incorporate information about embroidery, and indeed sewing techniques as a whole, into current research into archaeological textiles.

### WRAP-AROUND SOCIETIES

A two-day symposium will be held at the National Museum of Ethnology on the 16 and 17th September 1993. The symposium is organised jointly by the Textile Research Centre, the National Museum of Ethnology

and the Centre of Non-Western Studies, Leiden University. The theme of the symposium is societies where the wrapping of cloth around the body formed or forms the basic clothing type. Both past and present societies will be discussed. In addition, there will be practical sessions whereby participants of the symposium can try on replicas or actual garments. Speakers include H. Granger-Taylor (togas); R. Heringa (Leiden; Indonesian clothing); B. Menzel (Krefeld, African clothing); M. Oort (Leiden; Indian clothing) and G. M. Vogelsang-Eastwood (Leiden; Ancient Egyptian clothing).

Cost: Dutch Guilders fl. 50 (inc. tea, coffee, lunches and materials), students fl. 25.

For further information about the symposium please contact G.M. Vogelsang-Eastwood, Stichting Textile Research Centre, National Museum of Ethnology, Postbox 212, 2300 AE Leiden, The Netherlands.

### THE FIFTH NESAT MEETING

The fifth NESAT meeting took place for the second time in Neumünster from the 4th to 7th May 1993. Neumünster was where NESAT began in 1981, and Klaus Tidow and his competent staff did their utmost to make the three days more than memorable.

Members came from Norway, Sweden, Denmark, Iceland, England, Scotland, Ireland, Germany, Poland, Latvia, Switzerland, Belgium and Spain!

The lectures were as usual chronologically arranged, opening with Neolithic textiles from Switzerland; Hallstatt textiles from Hochdorf and late Bronze Age finds from Scotland.

Many lectures dealt with weave [?] structures (Lise Bender Jørgensen, Anne Hedeager Krag) and copies especially of complicated tablet weaves (Lise Raeder Knudsen, Anna Nørgaard and Heidi Stoltze)

which were demonstrated to a most impressed audience.

Fragmented medieval and later looms were presented by Else Østergaard (a Norse settlement in Greenland), and Elsa Gudjonsson (Iceland).

Conservation and analyses were presented by Elizabeth Peacock (finds from Trondheim), and Frieda Sorber (finds from the Notre Dame Cathedral, Antwerp).

We enjoyed warm hearted hospitality from the town of Neumünster, the Lord Mayor of which invited us to lovely drinks in the old "Kaiser-Wilhelm Railway-Station 'Gothic' Town Hall. Another evening the Textile Museum and Förderverein Textil Museum und Industriemuseum Neumünster invited us to a very charming evening with various sorts of beer and lovely snacks. The same evening Anna Nørgaard and Else Østergaard showed the perfectly beautiful copy of a white cloak or blanket from Jutland (dated to about 400 AD), the spinning and weaving process of which was also shown in a poster exhibition in the front hall of the museum.

All in all, three very busy, but most impressive days which will not easily be forgotten.

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## THE HISTORY OF TEXTILES IN ISRAEL

The growth and development of the textile industry in Israel has given rise to great interest in the history of local textiles, from prehistoric times onwards.

A symposium on the subject of *The History of Textiles in Israel* was organized by four institutes. Two from the Academic world: Tel-Aviv University and Shenkar College of Textile Technology and Fashion.

The other two organizations are from the industrial world. The lectures were on ancient textiles as well as on the latest development of the textile industry. Speakers included T. Schick, A. Sheffer, Z. Koren, N. Larmon, C. Shimony and R. Yucha, H. Granger-Taylor, R. Mirkin, H. Taragan, A. Baginski, Y. Shavit and D. Levy. Talks ranged from the cloth and dress worn in Eretz-Israel in Neolithic and Chalcolithic periods (Shick), the dyes on ancient textiles from the Middle East (Z. Koren), Roman textiles from Israel (Granger-Taylor) to lace making in the 19th and 20th century (Baginski) and the textile industry of the 1950's and 60's (Levy). All in all a thought provoking event.

A. Sheffer

## EXHIBITIONS

### COLOR FROM NATURE - NATURAL COLORS IN ANCIENT TIMES

Tel Aviv, Israel

On February 25th an exhibition was opened in Tel-Aviv on the subject of *Colors from nature - Natural Colors in Ancient Times* [see bibliography]. A colourful catalogue was published in connection with this exhibition. It included various articles written in Hebrew with an English summary (see bibliography).

### HAKEN EN OGEN

Museum Boymans-van Beuningen,  
Rotterdam, The Netherlands  
August 1993-July 1994

An exhibition has just opened at the Museum Boymans-van Beuningen, Rotterdam which explores the use of clothing accessories during the Dutch middle ages. Items include hooks and eyes, buttons, belts and belt clasps

and rings. Most of these objects come from various excavations in the Netherland. In addition, a leather (goat) workman's jacket worn by Hugo the Great (c. 1621) is on display.

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