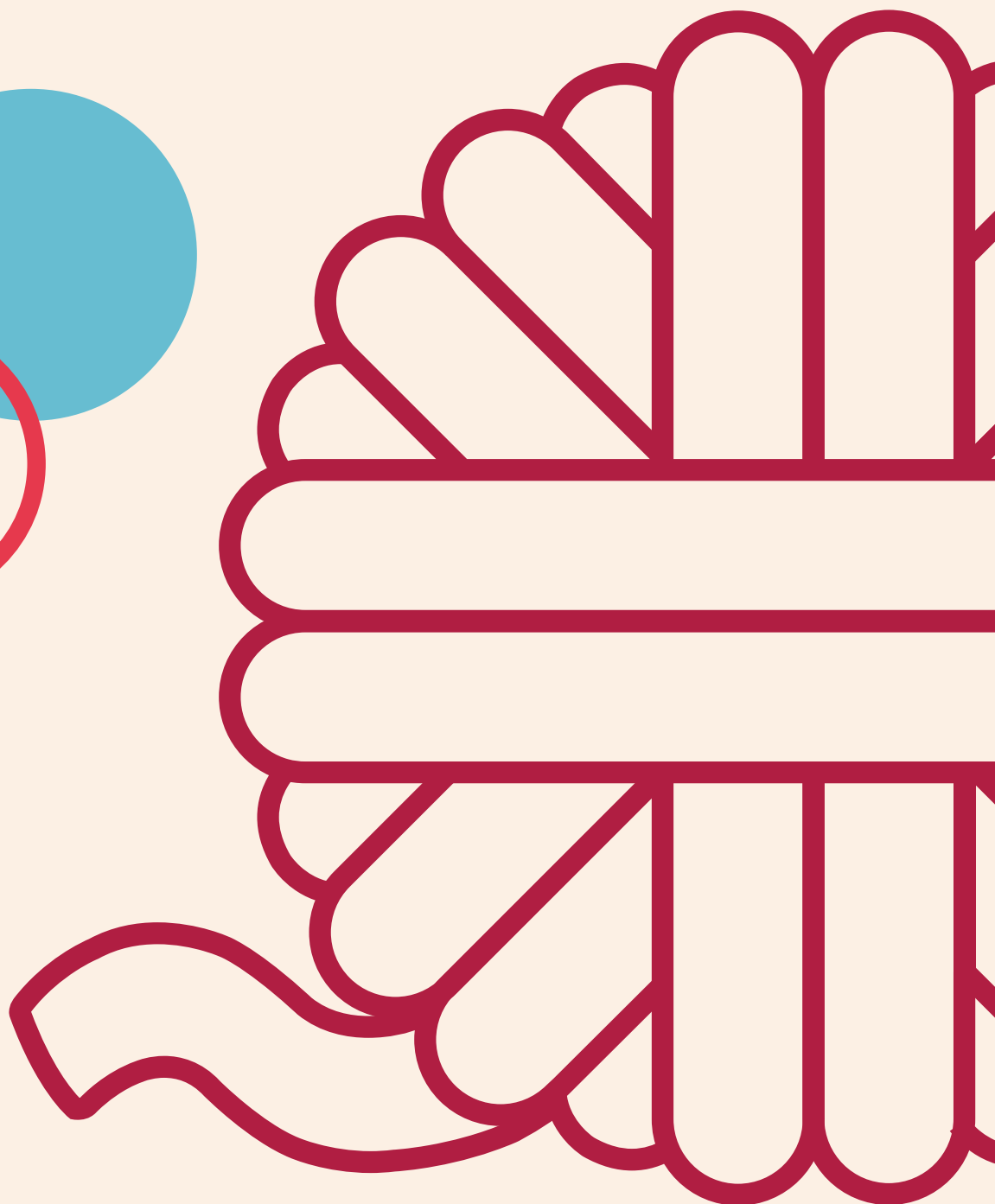
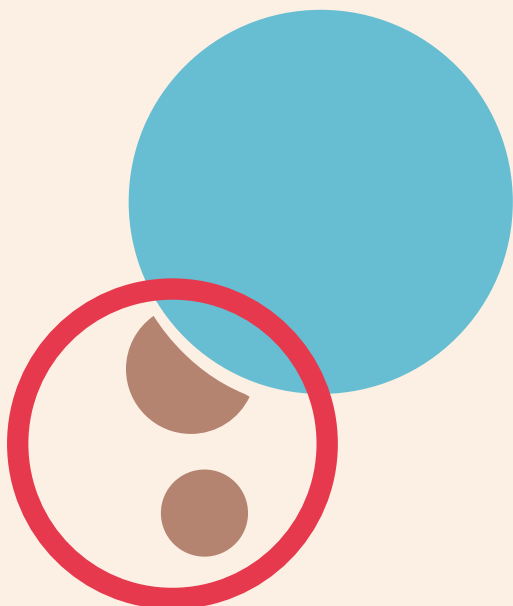


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ARCHAEOLOGICAL TEXTILES NEWSLETTER



Spring 2008 issue

Archaeological Textiles Newsletter

ATN is a twice yearly journal published by the Society Friends of ATN, hosted by DNRF CTR.

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ATN has moved once again – this time, from Manchester to Copenhagen. We kindly thank John Peter and Felicity Wild for making the transfer easy. We hope to continue the great work of the previous editors, Gillian Vogelsang-Eastwood, Elizabeth Peacock and John Peter Wild. The format of the ATN will remain the same but the layout has been digitalised and updated.

Archaeological Textiles Newsletter is a twice-yearly publication for textiles, which have been found in archaeological contexts, dating from the prehistoric to the modern age. Geographically, ATN concerns itself mainly with the Old World textiles (from Western Europe to Japan) but New World textiles may be included if deemed relevant.

The study of archaeological textiles involves many disciplines, which seldom overlap in traditional scientific journals. The publication of the ATN started in 1985 to provide a medium for discussion, interaction and exchange of information between archaeologists, conservators, historians, art historians, biologists, chemists, geologists and craftspeople, who have archaeological textiles at the core of their interests. It still remains unsurpassed.

Originally, the ATN was intended to be an information service and not a journal. Over the years, however, it has become an important venue for publication of important scientific articles. Currently it publishes a unique combination of featured scientific articles and reports, notes, queries, reviews, resources as well as conference and event announcements, thus truly serving as an active tool of communication. This is largely due to the fact that subscribers to the ATN have been both readers and contributors.

In order to secure the scientific and legal continuation of the ATN in the future, on 17 August 2007 the society “Friends of Archaeological Textiles Newsletter” was established. All old and new individual subscribers to the ATN will automatically become members of the society and thereby receive the newsletter. Institutions may subscribe to the ATN without membership in the society at a special price. The most current information about the society, the subscription fees and submissions can be found on www.atnfriends.com. This is also where the renewal of all subscription should be made via a secure web-shop. We hope that by the end of the year we will fix all the glitches and this new platform will ease the dissemination of ATN. The society will hold annual meetings, where all issues regarding the running of ATN will be decided. The 2008 meeting was held on the 14th of May and the minutes follow this editorial.

We encourage the readers to send articles, notices about new books or forthcoming conferences, as well as reviews of events and sources – the continuation of ATN can only be ensured if it is ‘for the readers and by the readers’. We also would like to emphasise that the ATN website can be used as a further venue for communication, particularly for announcements of events, short queries etc. For the moment, ATN will be continued in a printed format and distributed by mail but it is planned that, in the near future, ATN will also be accessible in an electronic format.

We look forward to your comments, suggestions and all kind of input following the release of No. 46, which covers Nubian textiles, Avar costumes and Bronze Age spindle whorls. The number of yearly events on archaeological textiles has increased so much that we have decided to begin a Textile calendar, which will provide links for the forthcoming events.

We would like to begin this issue by introducing ourselves.

Eva Andersson Strand is an archaeologist specialised in North European archaeology. She received her Ph.D. in Prehistoric Archaeology from the Lund University (Sweden). She has worked in museums and as a lecturer at the Lund University. Her research focuses on textile production in the Iron and Viking Age Scandinavia and in the Bronze Age Mediterranean as well as experimental archaeology.

Margarita Gleba is an archaeologist specialised in pre-Roman Italian archaeology. She received her Ph.D. in Classical and Near Eastern Archaeology from Bryn Mawr College (USA). She has worked on excavations in Italy, Turkey and Ukraine. Her special area of study is the archaeology of textile production, including investigation of textiles, textile tools, as well as written and iconographic sources.

Ulla Mannering is an archaeologist specialised in North European textiles and costumes. She received her Ph.D. in Prehistoric Archaeology from the University of Copenhagen (Denmark). She has been analysing textiles for numerous museums in Denmark and abroad. Her areas of research include Scandinavian and Roman costume traditions, the use and production of prehistoric plant fibre materials, especially nettle and flax, and study of costume from iconographic sources.

All three editors are research programme managers at the Danish National Research Foundation’s Centre for Textile Research at the University of Copenhagen, Denmark

The 2008 annual general meeting of the society Friends of ATN was held on 14 May, 17.30-18.30, at the Centre for Textile Research, in Copenhagen. In order to maximise the number of members present, the meeting was held in conjunction with the NESAT.

Present:

Margarita Gleba, Eva B. Andersson, Ulla Mannering, Marianne Bloch Nansen, Sascha Mauel, Susan Möller-Wiering, Ida Demant, Frances Pritchard, Carol Christiansen, Sandra Comis, Jerzy Maik, Eva Jordan-Fahrbach, Dietlind Hachmeister, Johanna Banck-Burgess, Nicole Reifarh, Britt Nowack-Böck, Kordula Gostencnik, Elisabeth Völling, Annelies Goldmann, Eva-Maria Pfarr, Saskia Thijssse, Ruth Gilbert, Sue Harrington, André Verchecken, Chris Lammens, Felicity Wild, John Peter Wild, Elizabeth Wincott Heckett, Hanna Zimmermann, Ellinor Sydberg, Marie-Louise Nosch, Lauritz H. Gregersen

As no additional proposals have been sent in by the members, the agenda was as follows:

1. Election of a chairperson, if somebody so wishes: Eva B. Andersson elected as chairperson of the board.
2. The report of the board for the period since the previous annual general meeting: Eva B. Andersson, Margarita Gleba and Ulla Mannering reported on the establishment of the society 'Friends of ATN', statutes, new editors, scientific board, establishment of website,

new layout, advertisement of ATN in TSA, CIETA, DISTAFF and fliers to be sent to various institutions around the world; issue 46 in progress.

3. Presentation and approval of the revised account of 31 of December: no account for 2007; transfer of 29.578,50 DKK from Manchester by John Peter Wild on 18 January 2008; 14 individual and 7 institutional memberships paid via website as of 17 April 2008.
4. Decisions concerning individual and institutional subscription fee for the current financial year: yearly membership fee for 2008 established at 20€ individual, 30€ institutional; for 2009: 30€ individual, 40€ institutional.
5. Election of 3 members of the board and 1 deputy member for the current financial year: Eva B. Andersson, Margarita Gleba, Ulla Mannering remain as board members, Carol Christiansen elected as deputy.
6. Election of an auditor and a deputy auditor the current financial year: Marie-Louise Nosch and Lauritz H. Gregersen stay as auditor and deputy.
7. Miscellaneous: presentation of website and new layout; discussion of challenges and possibilities: digital version of ATN to be sent as PDF file for a lesser fee; issues 46- available on-line a year later (copyright clearance required from all authors); reprinting of issues 1-45; website as a platform for announcements and distribution of other items.



ATN Friends 2008 annual general meeting in Copenhagen, 14 May 2008

John Peter Wild and Felicity Wild

Cotton: the New Wool

Qasr Ibrim Study Season 2008

The site of Qasr Ibrim, now an island on the eastern flank of Lake Nasser in Lower Nubia, Egypt, was occupied from at least the 8th century BC to the early 18th century AD. Its stratigraphy is correspondingly deep and complex. Many thousands of textiles of all periods from the earlier excavations have been recorded by Nettie Adams and Elisabeth Crowfoot (*ATN* 41, 25-29), but study seasons since 2005 (*ATN* 43, 16-19) have offered the first opportunity to examine material from well-dated, sealed contexts in the lower levels on the site excavated since 1999.

The objective for the 2008 season was to extend and complete the analyses and recording of two large and significant groups of textiles, one Napatan in date (broadly 8th to 3rd century BC), the other a Meroitic midden deposit (1st century BC to mid 4th century AD). The study, it was hoped, would lead to fuller characterisation of the very distinctive Napatan and Meroitic textile cultures and to clearer definition of their relationships with the contemporary textile industries of late Dynastic Lower Egypt and Roman-occupied Egypt respectively. Some 350 fragments were recorded in 2008.

Napatan textiles

Napatan textiles were uniformly woven of flax which often still retained a glossy off-white sheen. Yarns were all S-spliced from two slightly Z-twisted strands – there was no trace of continuous spindle-spinning. Some fabrics of sacking quality had a harsh handle, and on close examination it became clear that their yarns had been spliced from ribbons of bast (up to 0.5 mm wide), arguably peeled direct from the flax stem. The traditional fibre processing steps – retting, breaking, scutching, hackling – had apparently been short-circuited or curtailed.

Tabby was the commonest weave, supplemented by some basket weaves and half-basket weaves. Cloth was almost invariably warp-faced, in a proportion of about 2:1. One fragment recorded in 2008 showed a register of blue warp stripes next to the (plain) selvedge [1205]; a second carried blue weft stripes close to a terminal fringe [1204]. An instance of a basket-

weave fabric decorated with rows of knots was noted [1217], and one with simple pile [1173].

The typical Napatan web began with a transverse border in which warp-to-be passed around a bundle of weft threads followed by a succession of shots of paired weft [1254, 1235]. Selvedges were plain. Once weaving was complete, the warp ends were formed into a short fringe which was usually (but not invariably) secured at the point of exit from the fell of the cloth with one of a range of knotting, wrapping and plaiting techniques. One simple expedient was to knot a pair of warp threads round an adjacent pair and twist the two units into a single fringe strand [0956]. In other cases the warp groups which were to become the fringe were formed into a simple three-strand plait before being released and neatly knotted off at their ends [1240, 0744, 0748]. In the most complex examples the fringe strands which ultimately emerged were seen to incorporate two distinct elements. The weaver (or weaver's assistant) had first taken a series of groups of four adjacent warp yarns and plaited them in one direction along the cloth edge. Then he/she worked back again in the other direction, picking up groups projecting loose from the first pass which then joined those from the second pass to create the fringe strands [1272, 0705, 0978, 1232]. The exact path followed by the yarn groups was almost impossible to draft satisfactorily.

The only complete or nearly complete textile item was a small neat tassel, *c.* 28 mm long, possibly detached from a parent garment [0972]. The strands were of red-dyed flax yarn and the neck bound with blue and undyed yarn.

Meroitic textiles

The Meroitic textile assemblages are dominated by a new fibre, cotton, represented by finds of complete balls, seeds, unworked fibres (lint), spun yarn and woven fabrics. Flax has disappeared, except for a few examples which might be explained as recycled material. Wool is found occasionally as weft on cotton warp; although it is not hard beaten up or apparently dyed, it might have had a decorative function.

Cotton yarn for warp was strong S-spun, even over-spun, while that for weft was marginally less hard twisted. In contrast with the earlier warp-faced linen fabrics, cotton tabbies, basket weaves and half-basket weaves show a balanced thread-count, with only slightly denser warp than weft cover.

A typical Meroitic cotton web begins with a flat-woven starting border similar to those of northern Europe. Its selvages are reinforced as in wool textiles: weft yarns pass over/under three outer bundles of warp threads and sometimes pass round them again before returning into the web. Occasionally there is an extra pair of wrapping yarns following the passage of the weft over/under the warp bundles. There is one

pyramids' in blue weft. The blue yarn was often faded; but it is evident that the core of the yarn had not been penetrated by the blue dyestuff, a feature which suggests hank-dyeing of the spun cotton yarn. The most striking mode of decoration at Qasr Ibrim was embroidery – a technique comparatively rare in the Roman world to the north. Rows of blue flower heads on stalks were worked across a textile (ATN 43, 17 fig.13). They are understandably more degraded on the face of the cloth than on the back. At the centre of each flower is a raised boss, built as a tight spiral worked in chain stitch. Radiating from the boss are single stitches representing petals, framed in one case by an outer circle in running stitch [1016]. In some of



Fig. 1. Worn blue tassels on a Meroitic cotton textile [0999] (Photo: P.J. Rose).

find to date of a cordeline finish in which groups of warp ends were twisted into a three-strand cord against the fell of the cloth. The commonest Meroitic finish, however, is a fringe of greater or lesser complexity (see below).

As to decoration: a number of fragments show pairs of narrow blue weft bands repeated at regular intervals down the length of the cloth, and there is one example with warp stripes close to a selvage [1151]. A more elaborate version of the weft-banded scheme was recorded on two fragments [1015, 1111]: single, wider, tapestry-woven blue bands, repeated down the cloth, incorporated narrow blue and white undulating bands and widened at intervals into opposed 'step-

the examples examined in 2008 the bosses were worked in stem stitch rather than chain stitch, but the visual effect was the same. Where the role of the textiles carrying the embroidery could be ascertained, they seem to have been loin cloths and the aprons worn over them [1000, 1073] – male attire. Decoration based on rows of close-set short loops was recorded on one frustratingly incomplete fragment of cotton tabby [1110, with 0689 from the 2007 season]. A single geometric motif picked out in rows of loops ended on a line oblique to the weave, but was otherwise truncated. Amid the mainly blue loops were small patches of red loops, virtually completely worn away and impossible to interpret.

The technique of weaving, plaiting and wrapping a terminal fringe was brought to a fine art in the Meroitic cotton industry. The striking Meroitic openwork fringes have long been known: Elisabeth Crowfoot published a type series (Crowfoot 1984, 16 fig.1), to which we have added a number of variants. The same basic principles, however, underlie them all. Pairs of warp ends are formed into a three-strand plait along the fell of the cloth. The warp pairs emerging sideways from the plait hang loose and parallel for a short

Where cloth was cut either straight or on the bias, in the making of tailored garments, the hems were emphasised by the addition of two lines of blue piping. Each piping cord consisted of 4 pairs of yarns twisted together. One cord was sewn to the outer edge of the hem (and was soon the worse for wear), the other into the step between the hem and the main fabric. The hem-bearing face of the cloth thus became the 'show side', the opposite of normal practice.

Among the multitude of fragments were three readily



Fig. 2. Meroitic cotton cod-piece with blue-piped hems [1032], viewed from the front (Photo: P.J. Rose).

distance before being plaited again. To the (short) ends which emerge from this second plait are attached a close-packed row of heavy tassels. In a separate operation the parallel warp pairs left free between the two lines of plaiting are bound with an extra yarn (sometimes blue) into rows of open diamonds, a scheme with many variants.

Rather less flamboyant fringes finish other cotton fabrics. After the warp pairs have been plaited, first in one direction, then the other, the pairs emerge to be converted into a row of 'bobbles'. Some are (or were) diminutive blue tassels [0999] (fig. 1) or undyed tassels [1017]; other tassels were denser and bushy [1033].

recognisable cotton garments. The first was a one-piece shoulder cape with hood of a size that would fit a baby [1030]. It had tucks to mark the shoulders, blue piping along the hems and a tiny blue bobble at the front of the seam on the hood. The second garment was a cod-piece [1032] (fig. 2), constructed from a T-shaped piece of cloth by sewing two adjacent corners together and providing ties from the corners of the T-arms to fasten round the waist. Again there is blue piping, along the hems. A third item was an enigmatic hemmed object resembling an eye-patch, with ties [0990].

Conclusion

The season's work has brought into sharper focus the revolution in textile culture that marks the end of the Napatan and the beginning of the Meroitic period. Archaeological evidence sheds at present frustratingly little light on the duration and character of the interface between the two – if indeed there *was* an interface at Qasr Ibrim and not a gap in occupation. An industry based on spliced flax woven on a two-beam loom gave way – apparently rapidly – to one based on spun cotton and the warp-weighted loom. The only obvious thread of continuity is the penchant in both cultures for elaborate fringes. Indeed, among the Meroites the character of a fringe was a significant marker of the status and identity of its wearer, as contemporary iconography reveals.

Cotton was introduced from the south into Nubia by the Meroites as the first of a suite of new African crop plants such as sorghum which contrasted with the old-established repertoire of Lower Egypt (Wild, Wild, Clapham 2007; 2008). Yet some key features of the Meroitic cotton textiles – especially the reinforced selvages and transverse borders – reflect the contemporary wool weaving techniques of the Hellenistic and Roman world to the North: cotton was manifestly the 'new wool'. The brief presence of a Roman garri-

son at Qasr Ibrim in 25/24 and 22 BC is unlikely to have had much influence at a textile-cultural level. How this apparent contradiction between influences from south and north is to be explained requires further thought and discussion.

Acknowledgements

We are indebted to Dr. Pamela Rose, Director of the Qasr Ibrim excavations for the Egypt Exploration Society, to Dr. Alan Clapham, the expedition's palaeobotanist, and to the Pasold Research Fund which has twice generously provided travel grants.

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Hero Granger-Taylor

A fragmentary Roman cloak probably of the 1st c. CE and off-cuts from other semicircular cloaks

UNAVAILABLE



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Karina Grömer and Silvia Müller

Textiles from the Avar graveyard Zwölfaxing II, Austria

The Avars were a nomadic people who invaded Europe in the 6th century AD and disappeared at the beginning of the 9th century AD, after their territory had been annexed to the empire of Charlemagne. The western border of the Avar region was situated in a territory that forms part of Austria nowadays (Lower Austria and Burgenland). There are many Avar graveyards with inhumation burials in this region, most of them containing textiles preserved in connection with metal objects. The first Austrian Avar textiles excavated in Sommerein and Leobersdorf were analysed and published by Hans-Jürgen Hundt (Hundt 1984 and 1987). More than 50 textiles from a graveyard near Frohsdorf were inspected by Natascha Müllauer in 2004. The results have not yet been published yet and hundreds of textile findings are still lying quietly in the archives, awaiting scientific analysis. This overview of the Avarian textiles from Zwölfaxing (site Zwölfaxing II, Burstynkaserne) hopefully will stimulate the interest and research about this group of early Medieval textiles.

In 1938-39 and 1998-99, the finds from 69 single graves, one double grave and a disturbed grave were excavated within the area of the Burstyn barracks in Zwölfaxing, Lower Austria, near Vienna (Grömer in print). The necropolis is dated to a period between the transition from the Early Avar to the First Middle Avar period and the transition between the Second Middle Avar and the First Late Avar period, i.e. from AD 625 to AD 710 according to absolute chronology. The finds of the disturbed grave further testify to the use of this necropolis up to AD 800.

The textiles from Zwölfaxing

In 22 inhumation graves of the Zwölfaxing II graveyard (71 in total), 43 different fabrics could be identified as mineralised fragments on metal objects. Most

of them are preserved on belt buckles, a few on strap-ends (*Riemenzungen*). In six graves, textiles were also recognised on other grave goods, like a hook, iron knives (both in male and female graves) and triple-winged arrow-heads, which are regarded as a typically male Avar attribute.

The textile remains on these artefacts are in most cases very small; sometimes just a few millimetres of the fabric survive. Furthermore, conservation treatment used to stabilise the objects has complicated the analysis of the textiles, and in only in 22 of the fabrics could the raw material be determined. The identified fibres are usually of vegetal origin, presumably flax. A few items showed the characteristics of animal hair (sheep wool). It should be noted that the woollen fabrics are usually coarser than the linen ones.

The Avar fabrics from Zwölfaxing are generally characterised as fine linen tabbies, woven in single yarn, 0.2-0.3 mm thick and z-spun (Fig. 1). A few tabbies are woven with combined spin-directions, i.e. z-spun yarn in one and s-spun yarn in the other system. Plied yarn (S-plied) was found only in one case in the warp of a rep band, which was wrapped around an unidentified iron object found next to a reflex arch in the male grave 51. Basket weave and half basket weave were also identified. No twill fabric was found at Zwölfaxing.

It is also worth noting that there are only very few coarse or ribbed tabbies. The coarsest textile is a woollen tabby in 0.7-1 mm thick z-spun yarn with 6-7 threads per cm. Interestingly, it was located on the front side of a belt buckle in male grave 70; on the same object a fine basket weave was found as well. The Avar fabrics usually have a flat, smooth surface. Very seldom any kind of patterning of fabrics could be registered. Thus, two textiles/pieces from grave 15 and 71 have been woven with alternating single and

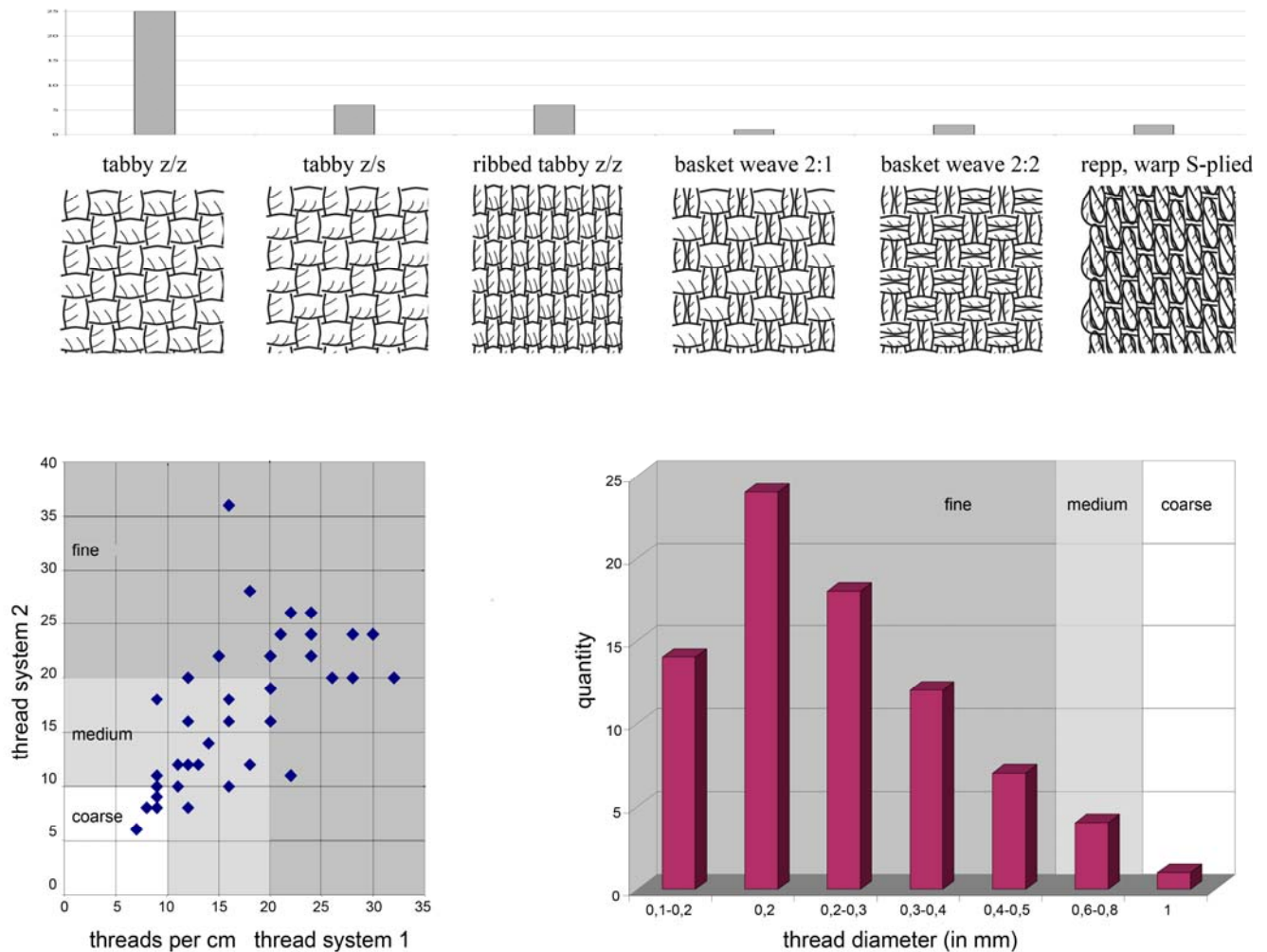


Fig. 1. Zwölfaxing II: weave types, thread count and yarn diameter (© K. Grömer).

plied or paired yarns in one-thread system. The fragments however, are too small to detect a regular pattern.

The most interesting find is a small, fine, multi-layered, linen tabby (in 0.3 mm thick z-spun yarn, thread count 12/16 per cm) preserved on a ring-shaped iron belt-buckle from male grave 46. The upper layer has floating threads forming a rhomboid pattern (Fig. 2). Due to heavy mineralisation, it is difficult to determine the patterning technique: the rhomb-pattern may have been created by floating threads in the weave or, alternatively, by embroidery. In grave 14, a layer of fur could be detected over a fine linen tabby. Unfortunately the grave was looted, and as the artefact was not found *in situ* no further conclusions can be made.

Interpretation

The Avar fabrics from Zwölfaxing were found in graves of males, females and juvenile males. At first glimpse the fabrics - usually uniform, fine tabbies -

were assumed to be shrouds, but the micro-stratigraphical analysis has demonstrated that most of them were actually parts of clothes (Fig. 3). For both sexes a fine undertunic made of fine tabby seems to be common. In most cases the weaves were found corroded on belt-buckles (front and back side) and sometimes strap-ends, *in situ* on the waistline of the deceased; sometimes folded and multi-layered parts could be identified (Fig. 4). This implies that the garments were wide, and gathered and held in place by a girdle. Furthermore, it is likely that the small buckles were part of a belt for the undertunic.

Avar iconographic representations of human figures are not very common and usually it is warriors that are depicted. Examples include the golden vessels of the Sínnicolaul Mare (=Nagyszentmiklós) treasure (*Ausstellungskatalog* 1996, 441; 2002, 25) and the agrafes from Mödling-Goldene Stiege (*Ausstellungskatalog* 1996, 300), as well as various strap-ends from Hungarian sites (Fettich 1937; Erdélyi 1966, Tab. 9). The male figures in these representations usually wear trousers,

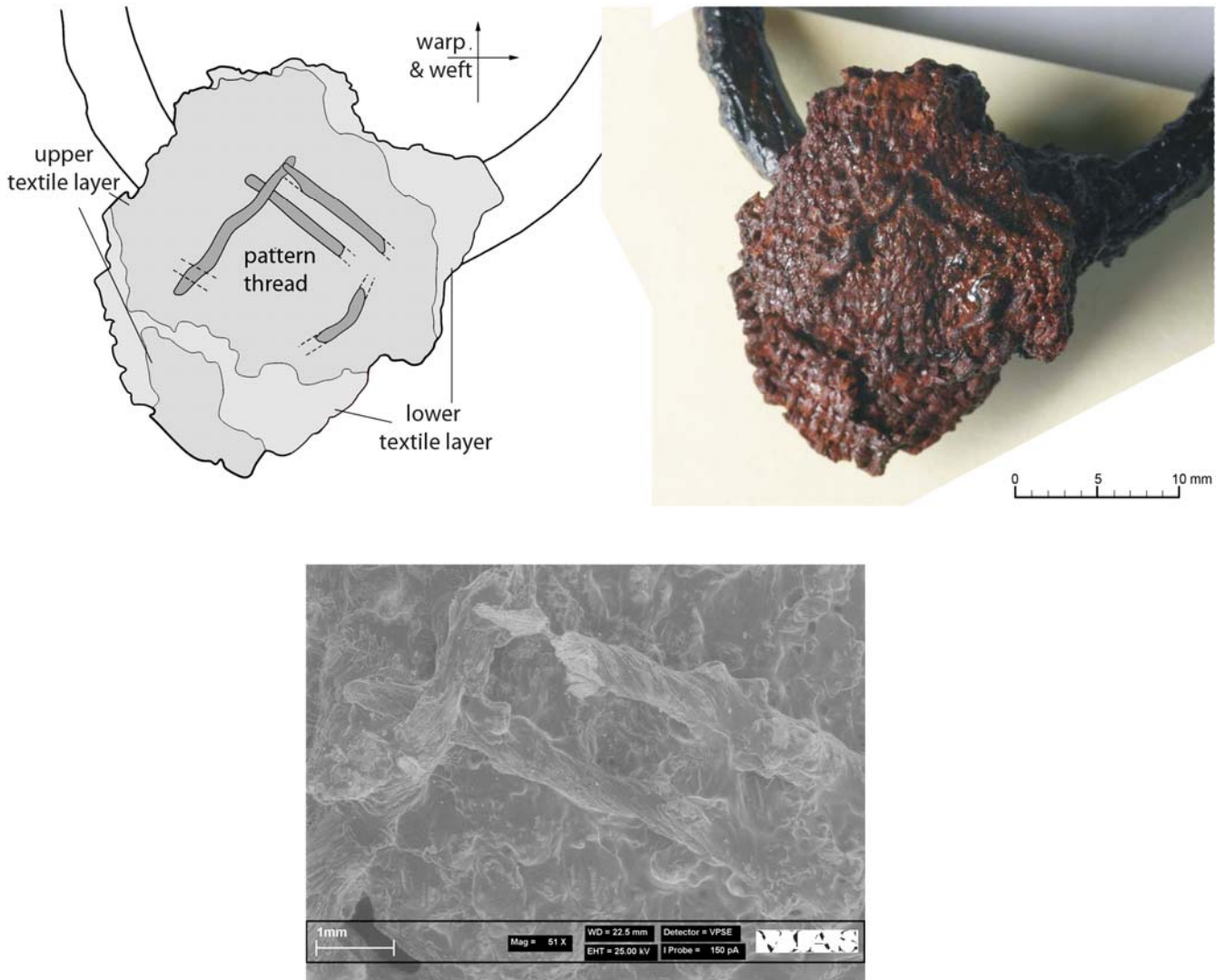


Fig. 2. Zwölfaxing II: patterned textile from grave 46 (© K. Grömer and M. Kucera, VIAS).

types textile	costume component				grave goods		
	belt buckles over	under	both sides	strap ends	knife	arrow head	others
fine tabby > 20 threads		1	8	1	1	1	1
medium tabby 10-20 threads	3	3	1	1	3		1
coarse tabby 1-10 threads	3				1	2	1
ribbed tabby, repp	1		1			2	1
basket weave fine	1		2				

Fig. 3. Zwölfaxing II: costume components and grave goods with different textile types (© K. Grömer).

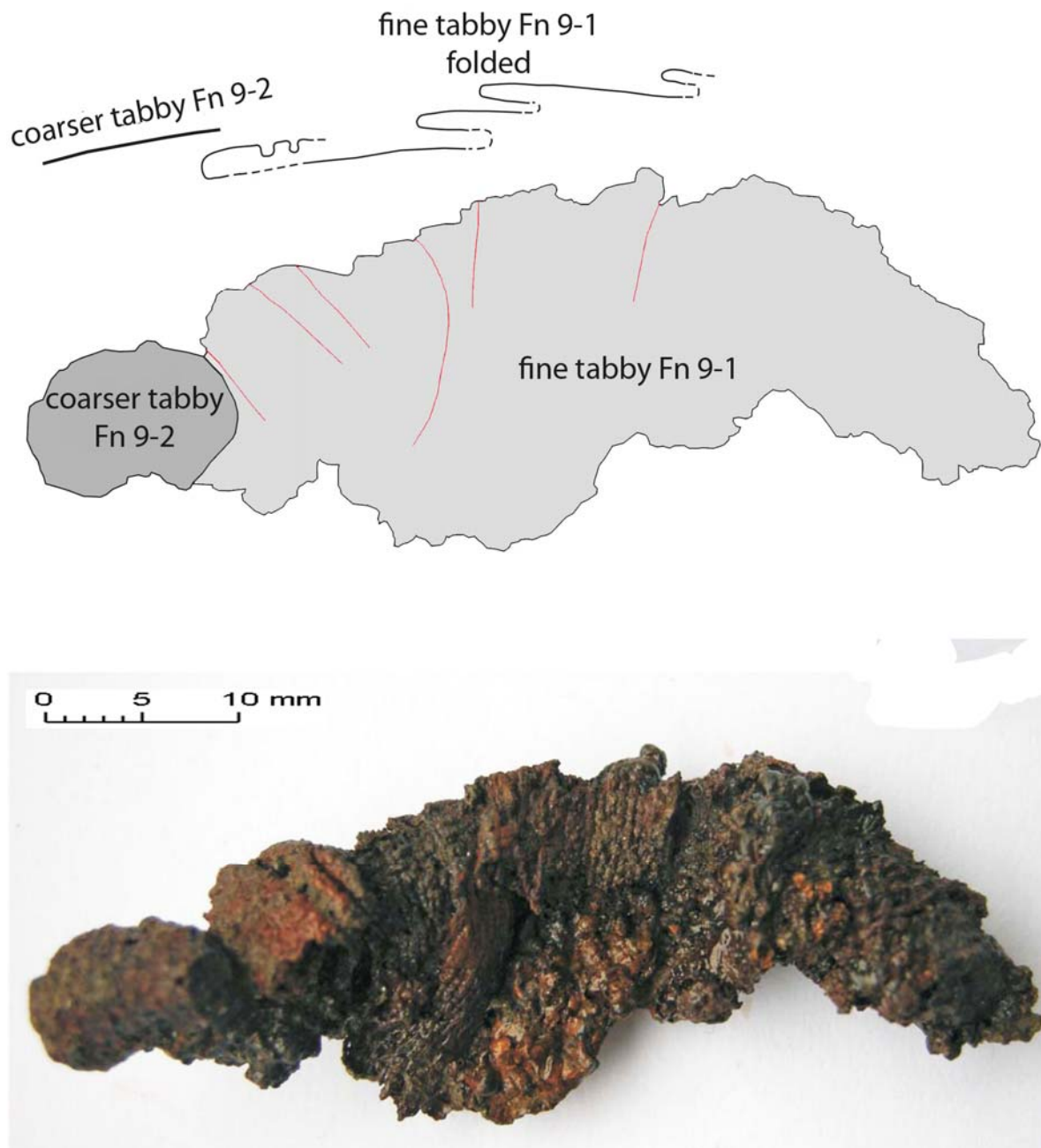


Fig. 4. Zwölfaxing II: belt fragment from grave 12 with different folded textiles (© K. Grömer).

sometimes leg-wrappers and waist- to knee-long caftan-like overclothes (Sinnicolaul Mare, vessel no. 7; Hungarian strap-ends e.g. Egyházaskér). In some cases (Sinnicolaul Mare, vessel no. 2 and agrafes from Mödling), the depictions of the garment covering the upper part of the body are patterned in a specific way, suggesting that this pattern represents amour.

In general, the iconography indicates that Avar male clothing was multi-layered, with an undertunic and a caftan-like overcoat. It is likely that this combination is also present in the graves from Zwölfaxing, as indicated by the micro-stratigraphical analysis of three different graves (15, 46 and 70). When several layers are preserved, a fine linen cloth is usually found clos-

est to the body, while a second, different, and sometimes, coarser cloth is placed over this, like in the above-mentioned male grave 70. The fine basketwoven textile is interpreted as an undertunic, while the coarse fabric is interpreted as part of an over-tunic or a caftan. A similar interpretation seems to be applicable in the case on male grave 15.

As the fabrics are also found on other objects besides costume accessories, they are sometimes identified as wrappings. However, in graves 46 and 70, the textiles found on the arrow heads, placed close to the arms of the bodies, were similar to those found on the belt-buckles and it is most likely that all the textiles were parts of the costume.



Fig. 5. Image of Avar male costume by Helga Mautendorfer.

Avar textiles in context

The fabrics found in Avar graves in Austria and Hungary show a very simple repertoire: plain tabby dominates (pers. com. Lise Bender Jørgensen), while basket weave and rep are rarely found. Only two of the more than 120 analysed Avar textiles from Austria (Sommerein, Leobersdorf, Frohsdorf and Zwölfaxing) are made in twill. As demonstrated by the analyses of the materials from Zwölfaxing, the textiles are quite fine. A similar picture is known from textiles found in graves of the Austrian Roman Period. However, these Avar textiles differ markedly from the contemporary Alamannic and Bajuvarian textiles, among which twill fabrics of different variants, such as *Rippenköper* or *Kreuzköper*, are more common (Bender Jørgensen 1992, 68ff, 110ff).

Two different interpretations can be offered to explain the differences between the textiles of the Avars and those from other contemporary tribes in Upper Austria and South Germany. The first lies in the fact that, not only do the tabby textiles differ from those of the contemporary (7th century AD) tribes in the west and north, but also we find almost no loom weights in these Avar settlements. It is possible that the Avars – who were equestrian people, originating in the Cen-

tral Asian steppe – had different production techniques, possibly based on a two-beam loom. This loom, which can easily be used for weaving simple weaves with one heddle rod, is more transportable and therefore would have been convenient for the nomadic lifestyle of the Avars. Another possible explanation for the Avar preference of tabbies could be the local influence. Eastern Austria forms the western border of the huge Avar Empire, where Avars mixed with local populations. The predominance of tabby and its variants may reflect the surviving traditions of the inhabitants of the Roman Province Noricum, which were inherited by the Avar people.

Acknowledgments

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Sascha Mauel

Zur Mehrdeutigkeit der gelochten Femur- und Humeruscapiti des bronzezeitlichen Monkodonja – einige technische Überlegungen bezüglich der Erwägung ihrer Funktion als Spinnwirtel

Seit Anfang der 1950'er Jahre werden in dem bergigen Terrain der kroatischen Halbinsel Istrien eine Vielzahl befestigter protourbaner Siedlungen der *Kastellierkultur* entdeckt und untersucht. Eines dieser bisher über 350 entdeckten Kastelliere liegt in etwa 2 km Entfernung zur Adria bei Monkodonja nahe der Stadt Rovinj (Abb. 1). Das Kastelliere Monkodonja wurde 1953 entdeckt und in den Jahren 1997 bis 2002 archäologisch untersucht (Hänsel *et al.* 1997; 1999; Teržan *et al.* 2001). Die Siedlung wurde zwischen dem 18. und dem 12. vorchristlichen Jahrhundert etwa ein halbes Jahrtausend lang genutzt – eine Zeitspanne, welche die frühe und mittlere Bronzezeit Mitteleuropas umfasst. Während der Kulminationsphase der Siedlung, zu Beginn der mittleren Bronzezeit, gewährte das Kastelliere schätzungsweise 1000 Personen Schutz (Becker 2005, 157).

Genauere Untersuchungen des bei den Ausgrabungen der Akropolis zutage gekommenen Materials ergaben, dass die Einwohner des Kastellieres es scheinbar vorzogen, Waren zu konsumieren, statt zu produzieren (Becker 2005, 158) – ein Faktum, das sich auch hinsichtlich der Frage nach der Textilproduktion der Siedlung geltend machen (Becker, persönliche Auskunft). Mykenische Scherben mit einer Provenienz aus weiten

Teilen der östlichen Mittelmeerregion, darunter insbesondere aus Kreta und Zypern, belegen einen ausgeprägten Kontakt zu seefahrenden Händlern des zu dieser Zeit unter mykenischen Einfluss stehenden Kulturraumes. Weitere Keramikfunde zeigen, dass Monkodonja auch in den kontinentalen Tausch- und Wirtschaftsverkehr mit Kulturgruppen der östlichen



Fig. 1. Die Lage des bronzezeitlichen Kastellieres bei Monkodonja auf der kroatischen Halbinsel Istrien an der Adria (Zeichnung: S. Mauel).

Spinnwirtel, Perlen oder Knöpfe?

Weniger als ein Prozent einer ungewöhnlich großen Menge von insgesamt etwa 75.000 Knochenfunden konnten als Artefakte identifiziert werden. Darunter befinden sich auch 12 halbsphärische Gelenkköpfe von Oberschenkel- und Oberarmknochen (lat. *femur*-, bzw. *humeruscapiti*), die ausschließlich von Rindern stammen (Abb. 2 und 3) und die hier diskutiert werden sollen. Form und Größe sowie die zentrale Durchbohrung von 11 dieser Objekte vermitteln unmittelbar den Eindruck, dass es sich um Spinnwirtel handelt. Die Archäozoologin Cornelia Becker ist dieser Vermutung nachgegangen und kommt zu dem Schluss, dass es sich eher um Teile eines Schmucksets oder um Knöpfe handelt, ohne jedoch eine Funktion dieser Gelenkköpfe als Spinnwirtel ausschließen zu können. Ihre Interpretation basiert auf einer multilateral angelegten Indizienkette, die sich aus verschiedenen Befunden aus Monkodonja selbst, kombiniert mit Daten aus chronologisch vergleichbaren Grab- und Siedlungsbefunden Süd- und Mitteleuropas, zusammensetzt (Becker 2005). Die vielen Beispiele und Vergleiche, die Becker aufführt, sind weitgehend plausibel und logisch. Dennoch klingen in ihrer Argumentation mehrfach technische Aspekte durch, die meiner Meinung nach zu stark gewichtet wurden, wenn es darum ging, die durchbohrten Femur- und Humeruscapiti für eine technisch denkbare Funktion als Spinnwirtel zu disqualifizieren. Mit Bezug auf Beckers Untersuchung sowie anhand einiger neuer Gedanken und Erkenntnisse aus der Spinnwirtelforschung setzte ich

daher zur Wiederaufnahme der Ansprache dieser mehrdeutigen Knochenartefakte an.

Die Durchbohrung

Ein Argument, das Becker hervorbringt, betrifft die Durchbohrung eines der 11 Gegenstände. Der betreffende femorale Gelenkkopf (Abb. 2, Nr. 2) wurde mit einem verhältnismäßig schiefen Winkel durchbohrt, was eine nicht rotationssymmetrisch verteilte Masse zur Folge hat. Das Trägheitsmoment bei der Rotation des Objektes würde daher während des Spinnens eine starke Unwucht bewirken (Becker 2005, 166). Becker geht Recht in der Annahme, dass ein so unharmonisch schlingernder Spinnwirtel einen zu ungleichmäßigen und somit unbrauchbaren Faden produzieren würde. Die Durchbohrung der übrigen zehn Artefakte ist dahingegen jedoch ersichtlich gerade durch den Gelenkkopf getrieben worden, und die Objekte könnten daher ohne große Mühe als Spinnwirtel zur Herstellung eines feinen, dünnen Fadens verwendet worden sein. Die eine schiefe Durchbohrung kann folglich kein haltbares Argumentationsglied jener Indizienkette darstellen, anhand derer Becker die Tauglichkeit sämtlicher Gelenkköpfe als Spinnwirtel in Frage stellt (vgl. Becker 2005). Ich vermute vielmehr, dass es sich bei der schiefen Durchbohrung des einen Objektes um einen misslungenen und daher ausrangierten Versuch handelt. Unter dem Fundmaterial befand sich auch ein zwölfter, nicht gelochter Gelenkkopf (vgl. Abb. 3), der womöglich als unvollendetes Objekt zu verstehen ist (Becker 2005, 158, 165-166).

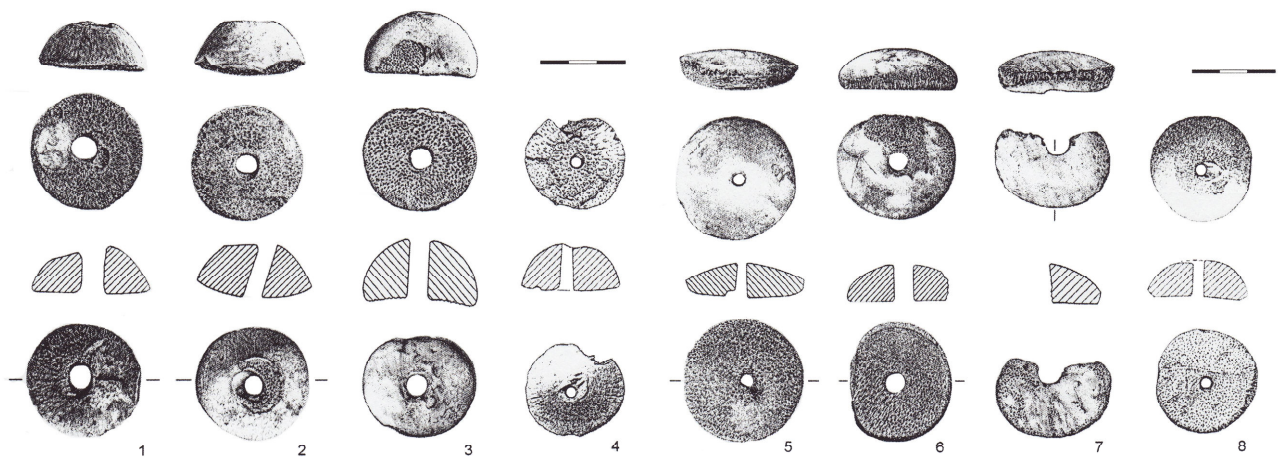


Fig. 2. Acht der 11 durchbohrten knöchernen Gelenkköpfe des Kastellieres Monkodonja (Zeichnung: H. Hähnl nach Becker 2005, 159).

Die spezifischen Maße

Ein weiterer Aspekt, dem sich Becker in ihrem Artikel (Becker 2005) bezüglich der Untauglichkeit der Knochenobjekte als Spinnwirtel anschließt, der aber meiner Meinung nach fragwürdig ist, bezieht sich auf die Maße der betreffenden Objekte: Loch- und äußerer Durchmesser sowie Gewicht und Höhe. Es geht dabei um den Vergleich dieser Werte mit denen einer Reihe anderer, meist tönerner Spinnwirtel aus anderen Befunden. In der Tat ist hier die Rede von Werten, welche die Objekte als sehr kleine und ausgesprochen leichte Spinnwirtel auszeichnen würden. Dieses Faktum schließt aber, wie im Folgenden klargestellt wird, eine Funktion als Spinnwirtel nicht aus. Es ist die Haltbarkeit dieser technischen Vergleichsgrundlage Beckers, die ich hier vornehmlich



Fig. 3. Einige der insgesamt 12 Gelenkköpfe des Kastellieres Monkodonja. Oben und Mitte: halbsphärische *femurcapiti* (Oberschenkel-Gelenkköpfe), darunter das ungelochte, womöglich unvollendete Exemplar. Unten: abgeflachte *humeruscapiti* (Oberarm-Gelenkköpfe). Vergleiche mit Abb. 2. (Foto: Arheološki Muzej Istre, Pula).

diskutieren möchte.

Der Lochdurchmesser

Der Lochdurchmesser der Funde aus Monkodonja beträgt zwischen 4,1 mm und 12,1 mm, mit einem Durchschnittswert von 7,6 mm. Becker schließt sich der Meinung von Blegen *et al.* (1950, 129) an, die da lautet, dass Spinnwirtel mit einem Lochdurchmesser von weniger als 5 mm als solche zweifelhaft seien (Becker 2005, 162). Die Ergebnisse einer globalen, sehr breit angelegten ethnoarchäologischen Untersuchung von Spinnwirteln zeigen unterdessen, dass Spinnwirtel mit einem Lochdurchmesser von 3 mm bis 10 mm durchaus gebräuchlich sind (Liu 1978, 97, nach Barber 1991, 52). Die Möglichkeit, dass es sich bei den Funden aus Monkodonja vielleicht doch um Spinnwirtel handeln könnte, wird überdies von einer großen Anzahl knöcherner Spinnwirtel gestützt, die von dem ostanatolischen Tell Arslantepe herkommen. Mit einer Datierung in das späte Chalkolithikum wurden hier etwa 30 sowie aus der nachfolgenden Bronzezeit 50 knöcherne Spinnwirtel gefunden. Deren Lochdurchmesser von etwa 7 mm bis 11 mm (*Centre for Textile Research*, Forschungsprojekt 'Tools and Textiles – Texts and Contexts') decken sich weitgehend mit denen der durchbohrten Gelenkköpfe aus Monkodonja.

Der äußere Durchmesser und die Höhe

Der äußere, maximale Durchmesser der Knochenobjekte aus Monkodonja beträgt 3,5 cm bis 4,4 cm. Eine weltweit durchgeführte ethnoarchäologische Untersuchung von Perlen (Liu 1978, 90-91; nach Barber 1991, 51-52) ergab, dass die meisten solcher runden Perlen, die häufig mit Spinnwirteln verwechselt werden, einen Durchmesser von unter 2 cm haben. Runde, zentral durchlochte Objekte, deren Funktion unklar ist und die einen Durchmesser aufweisen, der größer als 2 cm ist, sind folglich eher als Spinnwirtel, denn als Perlen anzusprechen. Die Schwierigkeit der Funktionsdeutung der hier diskutierten Objekte aus Monkodonja, deren Durchmesser mit 3,5 cm bis 4,4 cm etwa doppelt so groß sind, obliegt somit demjenigen, der sie als Perle und nicht als Spinnwirtel anzusprechen versucht (vgl. Barber 1991, 51). Vergleiche der Durchmesser der Spinnwirtel aus Troja

überwiegend 2 cm bis 3 cm; Monkodonja 1,2 cm bis 2,6 cm) erlauben ebenfalls den Schluss, dass Form und Größe der Gelenkköpfe aus Monkodonja nicht definitiv eine Funktion als Spinnwirtel ausschließen.

Das Gewicht

Das Gewicht der Gelenkköpfe beträgt 6,7 g bis 18,8 g. Es ist mehrmals dafür argumentiert worden, dass Spinnwirtel mit einem Gewicht von weniger als 10 g praktisch gesehen untauglich seien (Carington Smith 1992). Dies läge angeblich daran, dass es nahezu unmöglich sei, einen so leichten Spinnwirtel in die für das Spinnen notwendige Rotation zu versetzen, so dass es sich folglich eher um Perlen oder Knöpfe handeln muss (Obladen-Kauder 1996, 235; nach Becker 2005, 164). Vergleiche mit zweifellosen Spinnwirtelfunden mediterraner und anatolischer Lokalitäten, die innerhalb der Handelskontaktzone Monkodonjas gelegen und in etwa in denselben chronologischen Horizont datierbar sind, zeigen jedoch, dass die bronzezeitliche Textilproduktion auch Wirtel (ungeachtet des Materials, aus dem sie gefertigt sind) äußerst kleiner Größenordnung hervorgebracht hat – insbesondere zur Herstellung feinen Fadens.

Für einen Maßvergleich mit den Knochenartefakten des Kastellieres Monkodonja, eignet sich beispielsweise eine Vielzahl der in Troja gefundenen tönernen Spinnwirtel. Das Gewichtsspektrum dieser anatolischen Wirtel verteilt sich auf 4 g bis 136 g, wobei der überwiegende Teil zwischen 10 g und 40 g liegt (Barber 1991; vgl. hierzu auch Balfanz 1995b, nach Becker 2005, 162). Die 12 Knochenobjekte aus Monkodonja liegen im Vergleich hierzu mit durchschnittlich 12,8 g zwar deutlich im unteren Bereich dieser Gewichtsskala, mit einer Differenz von 2,7 g ist der leichteste Gegenstand aus Monkodonja (6,7 g) aber dennoch 67,5 % schwerer als die leichtesten in Troja gefundenen Spinnwirtel. Zu den letztgenannten gehört unter anderem auch ein bloß 4,8 g leichter Spinnwirtel, der in einem bronzezeitlichen Siedlungshorizont des vermutlich homerischen Troja VIIa (um 1200 v. Chr.) eingelagert und *in situ* an einer Elfenbeinspindel befestigt war (Barber 1991; Balfanz 1995a). Aus dem prähistorischen Demirci Höyük in Anatolien sind sogar Spinnwirtel mit einem Minimalgewicht von 2,5 g bekannt (Becker 2005, 163).

Experimente mit Spinnwirteln der griechischen bronzezeitlichen Siedlung Nichoria, die im Rahmen des Forschungsprojektes *'Tools and Textiles – Texts and Contexts'* am Centre for Textile Research (CTR) der Danish National Research Foundation durchgeführt wurden, haben zudem erwiesen, dass Fasern auf einem 3,62 g leichten Spinnwirtel problemlos zu einem brauchbaren Faden gesponnen werden können, der anschließend erfolgreich an einem mit Nachbildungen der im archäologischen Kontext gefundenen Webgewichte bestückten Webrahmen verwebt werden kann (Mårtensson *et al.* 2006).

Exkurs

An dieser Stelle sei darauf hingewiesen, dass knöcherne Spinnwirtel in der Regel kleiner und leichter sind als solche Wirtel, die beispielsweise aus Ton, Stein oder Metall hergestellt sind. Der simple Grund hierfür liegt wohl in der Tatsache, dass die Femur- und Humeruscapiti vom Rind einer durch Naturgegebenheiten definierten Gewichts- und Größenordnung entsprechen, die 20 g im Gewicht, 5 cm im Durchmesser und etwa 3 cm in der Höhe in der Regel nicht übersteigt. Im Unterschied hierzu lassen sich alternative Spinnwirtelmaterialien, wie beispielsweise Ton oder Wachs, in Bezug auf Form und Gewicht nach Belieben gestalten.

Bezüglich des Gewichtes sei hier ebenfalls auf die Tatsache aufmerksam gemacht, dass organisches Material bei längerfristiger Lagerung im Erdboden einen für gewöhnlich nicht unerheblichen Gewichtsverlust erfährt. Die Knochenartefakte des Kastellieres könnten demnach ursprünglich ein durchaus schwereres Gewicht als das heute messbare gehabt haben. Da es hierfür jedoch keine konkrete Berechnungsgrundlage gibt, wird diese Annahme – so positiv sie sich auch auf eine Funktionsdeutung der Gelenkköpfe als Spinnwirtel auswirken würde – vergeblich Spekulation bleiben.

Parallelen

Becker präsentiert in ihrem Artikel (Becker 2005, 161-168) eine Vielzahl von Parallelen wirtelähnlicher Objekte, sowie meist tönerner Wirtel anderer Lokalitäten, die sie in Bezug auf die hier diskutierte Funktionsdeutung der Monkodonja-Funde zum Vergleich

heranzieht. Die von Becker vorgestellten durchlochten Femur- und Humeruscapiti anderer Lokalitäten machen insgesamt jedoch nur weniger als die Hälfte der von ihr genannten Vergleichsbeispiele aus. Darüber hinaus handelt es sich bei diesen in Hinblick auf Form und Größe nur teilweise um solche Objekte, die zu den Gelenkköpfen aus Monkodonja eine wirkliche Gleichheit aufweisen.

Zu diesen gehören unter anderem zwei Funde vertikal durchbohrter Femurcapiti des anatolischen Fundortes Gözlükule (Abb. 4, Nr. 1 und 2), die in die Frühbronzezeit (2. Jahrtausend v. Chr.) datiert werden, und die der Ausgräber als Spinnwirtel anspricht (Goldman 1956, 307; nach Becker 2005, 164). Goldmann erwähnt ferner auch „similar finds from Byblos, Megiddo, Tepe Gawra I and Alishar Hüyük“ (Becker 2005, 310), wobei jedoch unklar ist, ob hiermit tatsächlich gleiche oder bloß ähnliche Funde gemeint sind. Vier von insgesamt neun Objekten des spätbronzezeitlichen Alishar Höyük (1400-1200 v. Chr.) ähneln den Gelenkköpfen aus Monkodonja hingegen sehr (Abb. 4, Nr. 3 bis 5). Die auffallend schmale Durchbohrung dieser, sowie der übrigen, vorangehend erwähnten Funde veranlasst Becker aber dazu, sie durchweg eher als Perlen zu deuten (Becker 2005, 164) – eine Deutung, die anhand des Lochdurchmessers von 3 mm bis 5 mm (wie auf der Zeichnung zu sehen, vgl. Abb. 4) an sich nicht stichhaltig ist (vgl. Liu 1978, 97; nach Barber 1991, 52).

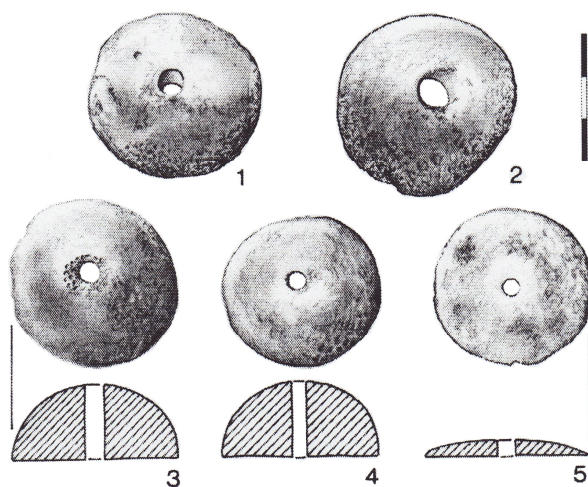


Fig. 4. Gelochte Gelenkköpfe anderer Lokalitäten, ähnlich denen des Kastellieres Monkodonja: Gözlükule (Nr. 1 und 2) und Alishar Höyük (Nr. 3 bis 5) (Zeichnung: H. Hähnl nach Becker 2005, 165).

Becker erwähnt ferner einige Grabfunde, die unter anderem in den alpinen Nekropolen des österreichischen Gemeinlebens sowie der des bayerischen Straubing gefunden wurden. Diese durchbohrten Gelenkköpfe lagen jeweils im Schulterbereich des Bestatteten und scheinen, zumindest ihrem Fundkontext nach zu urteilen, tatsächlich nicht als Spinnwirtel, sondern eher als Knöpfe verwendet worden zu sein (Becker 2005, 167). Bei vielen dieser „Schulterknöpfe“ ist allerdings eher von knöchernen Ringen die Rede, die im Vergleich zu den Objekten aus Monkodonja einen kleineren Durchmesser sowie ein deutlich größeres Loch aufweisen. Weitere Exemplare dieser etwas kleineren und breiter gelochten Knochenartefakte (darunter auch einige aus Geweih gefertigte „Ringe“) stellt Becker aus diversen norditalienischen Siedlungen der *Terramarekultur* vor, welche in die mittlere Bronzezeit, etwa um 1400 v. Chr., datiert wird (Becker 2005, 167-169). Einige in Montale geborgene, mit abstrakten Ornamenten dekorierten Femurcapiti sehen einer Vielzahl tönerner Spinnwirtel aus Troja zum verwechseln ähnlich, und werden in Hinblick auf eine mögliche Funktion als Spinnwirtel nicht ausgeschlossen (Becker 2005, 168). Obwohl Begriffe wie „Knöpfe“, „Perlen“ und „Ringe“ stets vorgezogen werden, liegen für die meisten dieser Objekte – so auch in Monkodonja der Fall – nur vereinzelt eindeutige Funktionsdeutungen vor.

Schlussfolgerung

Ich habe mich auf den technischen Aspekt der Gelenkköpfe konzentriert, um der Frage näher zu kommen, in wie weit es sich bei den Femur- und Humeruscapiti aus Monkodonja um das handelt, wonach es unmittelbar den Anschein hat: Spinnwirtel. Allein Form und Größe sprechen eindeutig für eine Anwendung als Spinnwirtel, und entgegen der üblichen Auffassung konnte gezeigt werden, dass auch das geringe Gewicht sowie der schmale Lochdurchmesser dieser Knochenartefakte eine Funktion als Spinnwirtel (vgl. Abb. 5) keineswegs ausschließen. Die einzige Ausnahme bildet ein wahrscheinlich ausrangiertes Stück, dessen Durchbohrung zu schief geraten ist. Gerade diese spezifischen Minimalwerte sind es, die bei Becker wiederholt als disqualifizierender Aspekt erwähnt werden – wenn auch nicht als alleinige Argumentationsgrundlage.

10 g deutlich auf unter 5 g zu senken ist. Solche kleinen, wirtelähnlichen Objekte werden bisher üblicherweise – und nicht selten ohne einen konkreten Beleg – als Perlen, Knöpfe oder dergleichen begriffen, weil davon ausgegangen wird, dass sie für eine Spinnwirtelfunktion viel zu leicht, bzw. zu klein seien. Wäre es nicht vorstellbar, dass es sich bei Funden knöcherner Gelenkköpfe, die entlang der Mittelachse durchbohrt sind womöglich ebenfalls um Spinnwirtel handeln könnte – ganz ähnlich der vertrauten „Perle-oder-Spinnwirtel“-Diskussion?

Beckers Interpretationsvorschlag, demzufolge die gelochten Femur- und Humeruscapiti des bronzezeitlichen Kastellieres Monkodonja als Teile eines Schmucksets, Knöpfe oder gar Perlen aufzufassen sind, ist vor dem Hintergrund ihrer multilateral angelegten Indizienkette stellenweise plausibel und keineswegs undenkbar. Es ist daher nicht meine Absicht, und es liegen mir hierfür auch keine konkreten Indizien vor, dies zu widerlegen. Andererseits gibt es ebenso wenig konkrete Belege, die eindeutig dafür sprächen, dass Beckers Deutung die richtige ist – sie selbst behauptet dies auch nicht. Der entscheidende Punkt ihrer Aussage ist, dass einige der gelochten Gelenkköpfe aus Monkodonja durchaus Spinnwirtel sein könnten, sie in der Summe der verschiedenen Befunde jedoch eine andere Interpretation für wahrscheinlicher hält. Solange aber im archäologischen Befund keine konkreten Anhaltspunkte vorliegen, und solange nicht eindeutig geklärt ist, wie klein und leicht Spinnwirtel eigentlich sein können, müssen Funktionsdeutungen solcher bislang kaum beachteten Gegenstände meiner Meinung nach weiterhin mehrdeutig bleiben. Es ist daher meine Auffassung, dass es sich bei den knöchernen Gelenkköpfen von Monkodonja – zumindest tech-

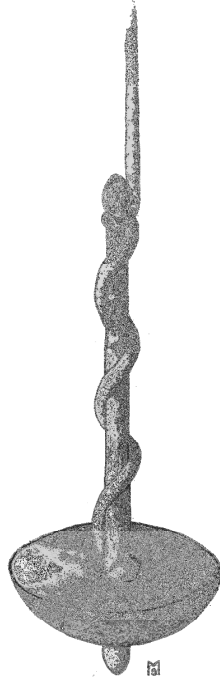


Fig. 5. Rekonstruktionsvorschlag für die mögliche Funktion der knöchernen Gelenkköpfe als Spinnwirtel (Zeichnung: S. Mauel).

nisch gesehen – sehr wohl um Gegenstände handeln könnte, deren Funktion in Zusammenhang mit der Textilproduktion zu sehen ist – eine Überlegung, die ich hiermit wieder zurück in die Diskussion führen möchte.

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Carol A. Christiansen

NESAT X

13-18 May 2008, Copenhagen, Denmark

The North European Symposium for Archaeological Textiles (NESAT) held its 10th meeting on 13-18 May 2008 in Copenhagen. The jubilee event was hosted by the Danish National Research Foundation's Centre for Textile Research (CTR). Held every three years, the symposium was larger than ever, with 120 registered participants from 23 countries. No less than 41 papers and 20 posters were presented during the 6-day event. The symposium began on the evening of the 13th with a wine and hors d'œuvres reception at CTR. This was followed by a presentation by CTR director, Marie-Louise Nosch and research programme managers Margarita Gleba, Ulla Mannerling, and Eva Anderson outlining the Centre's many projects and publications currently underway.

Lise Bender Jørgensen began the formal symposium the following day with an amusing trip down memory lane. She explained how the first NESAT was realised, after she and Klaus Tidow searched for like-minded researchers among archaeologists and textile historians. Lise reviewed how NESAT has slowly expanded over the years, welcoming more and younger scholars from a larger geographical base. Many delegates from the first NESAT meetings were in attendance or presented research at the jubilee meeting. The first sessions set the main theme which ran throughout the symposium: experimental archaeology

and new methods of research. It was clear from many of the presentations that textile archaeologists are increasingly using reconstruction processes to better understand early tools, fibres and fabrics. For example, Viktoria Holmqvist analysed the Eric of Pomerania's Belt and the Dune Belt, both exhibiting a more complex structure than noted in previous research, but one which was better understood after reconstructions using octagonal-shaped tablets.

The first full day concluded with a large number of papers on conservation. Again, these focused on new methods, in some cases using new technology. Nicole Reifarh showed how poorly preserved burials in unmovable sarcophagi could be analysed in greater detail using close-up video-microscopy. Maria Cybulska presented remarkable research on how archaeological textiles could be virtually reconstructed, using the results of traditional structural analysis combined with the latest methods in computer animation.

Thursday began with a session on medieval textiles focussing on how texts, whether descriptive passages or single words, ancient or modern, require careful consideration when applied to specific types of cloth or clothing. The day continued with research on viking age and medieval textiles, followed by the poster session, organised by Maj Ringgaard of the National Museum of Denmark and CTR. In all, 20 posters were

presented over several hours in lively discussion. A number of the presenters thoughtfully provided printed versions of their posters. Friday was devoted to prehistoric and early historic textiles. This was followed by lunch at the Town Hall. Delegates were invited to a special preview of the newly re-opened Danish Prehistory exhibit at the National Museum. The exhibition was formally opened by Queen Margrethe II, after which delegates viewed the displays, including many textiles recently analysed by the CTR project on Danish Bronze and Iron Age textiles. The last day of presentations was held at the National Museum and finished the conference with a lively session on textile tools and technology.

Following the final discussion, delegates were treated to a luncheon hosted by the National Museum. On Sunday, delegates were taken on an excursion to Lejre Experimental Centre. The weaving studio presented some of its recent work with tools and recon-

structed fabrics and clothing.

The 'new methods' theme was carried further at this NESAT by the broadcast of a web-cast of the first two day's proceedings. Twenty listeners across the globe tuned in to watch the symposium live.

For the full NESAT X programme and abstracts,



podcast of the first two days of the conference and PDF files of some of the posters, go to <http://ctr.hum.ku.dk>. The proceedings will be published by Oxbow Books in the Ancient Textiles Series in 2009. The 11th NESAT will be held in Esslingen, Germany

Anne Marie Carstens

Military and Textile Conference 20-22 May 2008, Copenhagen, Denmark

An international conference *Military and Textile* was held at the Danish National Research Foundation's Centre for Textile Research and the Royal Danish Defence College in Copenhagen May 20-22, 2008. The aim of the conference was to analyse the role of textile culture within the military organisation, with the broadest geographical and chronological scope. Thus the interaction between military and the civil society from Antiquity till the 21st century was covered by in all 28 papers, from *Purchase orders of military garments from papyri of Roman Egypt* (by Kerstin Dross, Marburg) to *The Political Fabric of NATO in Afghanistan*.

Uniforms, Symbols and a Multinational Mission (by James Thomas Snyder, NATO Science, Brussels), and from *Ancient linen corselets* (three papers by Eero Jarva, Oulu, by Margarita Gleba, Copenhagen, and by Carmen Alfaro Giner, Valencia) to *The use of the Sewing machine in the American Civil War* (by Amy Isaacs, Baltimore). For the full programme and abstracts as well as podcast of the first day of the conference (Early Historical Contexts), go to <http://ctr.hum.ku.dk>. The papers will be published by the Danish National Research Foundation's Centre for Textile Research, University of Copenhagen.

Recent Publications

Dressing the Past, edited by Margarita Gleba, Cherine Munkholt and Marie-Louise Nosch, Oxford: Oxbow Books, 2008 (in English) ISBN 978-1842172698

Minoan ladies, Scythian warriors, Roman and Sarmatian merchants, prehistoric weavers, gold sheet figures, Vikings, Medieval saints and sinners, Renaissance noblemen, Danish peasants, dressmakers and Hollywood stars appear in the pages of this anthology. This is not necessarily how they dressed in the past, but how the authors of this book think they dressed in the past, and why they think so. The seventeen contributors come from a variety of disciplines: archaeologists, historians, curators with ethnological and anthropological backgrounds, designers, a weaver, a conservator and a scholar of fashion in cinema, are all specialists interested in ancient or historical dress who wish to share their knowledge and expertise with students, hobby enthusiasts and the general reader. The anthology is also recommended for use in teaching students at design schools. Can be ordered from www.oxbowbooks.com Price GB £25.00

Textiel in Context. Een analyse van archeologische textielvondsten uit de 16e eeuw, by Hanna Zimmerman, Groningen: Stichting Monument en Materiaal, 2007 (in Dutch) ISBN: 9789077957080

In the town of Groningen ca. 2800 fragments of textiles were excavated from a 16th century moat. Hanna Zimmerman discusses these finds in her dissertation "Textiel in Context". Never in the Netherlands have so many textile finds from this period come to light. Containing many photographs, drawings, patterns, reconstructions and contemporary pictures, the book gives a clear insight into the production, the producers, the use and re-use of textiles, the tailors and seamstresses, as well as the procedures of excavating, cleaning, conservation, analysis and documentation of archeological textiles. The main part of the book contains the descriptions of the finds, which are divided in weaves, tablet-woven bands, sewing techniques used, decorations, clothes and fashion as far as could be reconstructed from the remaining scraps, knitting and felt. The more complete children's clothes are particularly informative. The knitting also contained new information about the construction of stockings. In the later chapters, the finds are put into a broader historical and social-economic context. The book can be ordered from www.stichtingmenm.nl Price € 29.95

Reissue of Michael Ryder's *Sheep and Man*, London, Duckworth, 2007 (in English) ISBN 13 978 071 563 6473

The seminal volume *Sheep and Man* by Michael Ryder has been reprinted after 25 years. When the 850-page book was published by Duckworth in 1983, it received 30 excellent reviews but has been out of print for some time. It covers the history of human association with sheep world wide over 12,000 years, exploring the development of different fleece types for varied textile use. All sources of evidence were used – archaeology, ethnography, history, geography, agriculture and textiles. Michael Ryder thinks that the book's reissue by popular demand is an appropriate way to mark his 80th birthday.

Osebergfunnet. Bind IV Tekstilene, edited by Arne Emil Christensen and Margareta Nockert Oslo: Kulturhistorisk Museum, 2006 (in Norwegian and Swedish) ISBN 978-8280840240

The volume contains the long-anticipated presentation of the fabulous textile remains found in the Oseberg boat burial, excavated in 1904. This Norwegian Viking Age grave, dated to AD 834, contained some of the most extraordinary organic material ever excavated. A series of five publications was planned, and volumes I, II, III, and V appeared from 1917 to 1928. Unfortunately, the fourth volume, in which the textiles were to be presented, was constantly delayed. Therefore the text is a patchwork of contributions from researchers who have worked with the Oseberg textiles over many decades. A large part of the book, written by Bjørn Hougen in the 1930s, is dedicated to the description of the famous tapestry weaves (Chapter 1). The same author also produced a very interesting chapter on the furnishing textiles (Chapter 3). The presentation of the utilitarian and costume textiles is by Anne Stine Ingstad (Chapter 5), with the technical analyses by Anna M. Rosenqvist (Chapter 4). Margareta Nockert contributed analyses of the tablet weaves and the various silk textiles (Chapters 2, 6, and 7). These chapters make a valuable contribution to Viking Age textile history. For non-Scandinavian readers, there is an English summary with catalog descriptions available at the end of the text.

Anne Marie Carstens, Judit Pásztkai-Szeöke
and Marie-Louise Nosch

Clothing and Identities in the Roman World

A grant from the European Union's Culture Programme (EACEA) has provided a unique opportunity to gather textile experts from all over Europe in a joint research program focusing on Dress and Identity. The project *Clothing and Identities — New Perspectives on Textiles in the Roman World (DressID)* encompasses seven European universities and research institutions, and is coordinated by the Curt-Engelhorn-Stiftung of the Reiss-Engelhorn-Museen in Mannheim, Germany. The project has a budget of € 4.9 million. From 2007 through 2012, research, publications, conferences and a touring exhibition will be the outcome of the collective focus on the interrelations between dress and identity within and beyond the Roman Empire. The main objectives of the DressID project are to provide a position in cultural history for clothing and textiles in antiquity, and to demonstrate how clothing is a key to identity studies. The interdisciplinary collaboration will strengthen the networks and exchange of knowledge and ideas of European scholars and combine various scientific traditions in Europe.

The Roman Empire

The Roman Empire forms the frame for the project. At the time of its maximum extent in the 2nd century AD, the Roman Empire incorporated the territory of most of the present-day members of the European Union, the Balkans, and the Mediterranean seaboard. It also had an outstretching web of diplomatic and economic relations with peoples living beyond its borders. With its richness in diverse sources — archaeological finds, images and texts — the Roman Empire provides a perfect opportunity for investigations of cultural uniformity and diversity. Its pervading political and administrative structures present an excellent platform for identity studies on all levels.

Clothing and Identity

Clothing serves as a major tool for communication on a non-verbal level. It expresses relational constructions

within groups, and it demonstrates affiliations or debarment as well as ethnicity, social rank, profession, gender and age. Clothing may reveal the regional origin of the bearer, present variations in local costumes, and it reflects the correlation between tradition and innovation in a highly visible way. Dress is used — consciously or unconsciously — to express identity, and it carries information about the ethnic, social or religious affiliation as well as the profession, gender and age of the wearer.

Multidisciplinary research

Numerous textile experts and institutions all over Europe carry out specific investigations concerning Roman clothing on an individual basis. The DressID project provides a platform where researchers with various exploratory foci can interweave their specialist knowledge into a large network of information on textile questions in order to get a broader view and a better understanding of the social significance of clothing in the Roman world. The research is organised as a network of study groups, each headed by two spokespersons. The spokespersons are in charge of communication and organization of the research within specific fields. DressID meets annually at a General Meeting, hosted by the co-operators in the programme. The 2nd General Meeting has just been held in Copenhagen in May 2008 and the next will be held in Chania, Crete in December 2008.

Publications and exhibitions

The research results will be published via scientific publications, articles and monographs, and via public meetings and the media. A major outcome addressing a larger international public is an itinerant exhibition based on the ongoing research, starting in Mannheim in 2011 and hereafter touring around various European cities.

More information can be obtained at www.DressID.eu

Dissertations

Sophie Bergerbrant has been awarded a doctorate at the Stockholm University, Sweden, for her work: *Bronze Age Identities: Costume, Conflict and Contact in Northern Europe 1600-1300 BC* (2007).

Karina Grömer has been awarded a doctorate at the Institute for Pre- and Protohistory, University of Vienna, Austria (Institut für Ur- und Frühgeschichte Universität Wien) for her work: *Bronzezeitliche Gewebefunde aus Hallstatt - Ihr Kontext in der Textilkunde Mitteleuropas und die Entwicklung der Textiltechnologie zur Eisenzeit* (2007).

Annika Larsson has been awarded a doctorate at the Uppsala University, Sweden, for her work: *Kläd Krigare* (2007).

Marianne Vedeler has been awarded a doctorate at the University in Oslo, Norway, for her work: *Klær og formspråk in norsk middelalder* (2007).

Marina Fischer has received a masters degree at the University of Calgary, Canada, with the work: *The Prostitute and Her Headdress: the Mitra, Sakkos and Keryphalos in Attic Red-figure Vase-painting ca. 550-450 BCE* (2008).

Astrid Geimer has received a masters degree at the Johann Wolfgang Goethe-Universität, Frankfurt, Germany, with the work: *Gefärbte Textilien in vorgeschichtlichen Europa. Funde und Befunde vom Neolithikum bis zur Mitte des 1. Jahrtausends v. Chr.* (2007).

Sunniva Wilberg Halvorsen has received a masters degree at the University of Bergen, Norway, for her work: *Myrfunn av tekstiler. - En ny undersøkelse av funnene fra Tegle og Helgeland* (2008).

Agnete Wisti Lassen has received a masters degree at University of Copenhagen, Denmark, with the work: *Textiles and Traders. A Study of the technology, organisation and socioeconomics of textile production in Anatolia in the Middle Bronze Age c. 2000-1700 B.C.* (2008).

Synnove Thingnæs has received a masters degree at the University in Oslo, Norway, with the work: *I enden av en tråd. - Om spesialisert tekstilhåndverk i folkevandringsstid* (2007).

Textile Calendar

June-December 2008

August 2-8: Experiments with archaeology: archaeologists rediscover how textiles and fibres were produced in the past, Lejre Experimental Centre, Denmark
<http://www.english.lejre-center.dk/ACTIVITIES-2008.196.0.html>

August 6-9: Summer workshop, Triste, Spain: dyes with natural plants, lichens and mushrooms
<http://ctr.hum.ku.dk/upload/application/pdf/f51d6748/Tristes%20Workshop.pdf>

August 21-22:
Ötzi, Schnidi and the Reindeer Hunters: Ice Patch Archaeology and Holocene Climate Change, Bern, Switzerland
<http://www.oeschger.unibe.ch/events/conferences/schnidejoch/>

September 24-27: Textiles as Cultural Expressions, 11th Symposium of Textile Society of America, Honolulu, Hawaii
http://textilesociety.org/symposia_2008.htm

October 1-3: Experimental Archaeology Research—new Approaches, Östersund, Sweden
<http://ctr.hum.ku.dk/conferences/oestersund/>

October 8-11: Dyes in History and Archaeology 27, Istanbul, Turkey
<http://www.dha27.com/>

November 6-9: Costume Colloquium: A Tribute to Janet Arnold, Florence, Italy
<http://www.costume-textiles.com/pages/page.asp>

November 13-15: 3rd Ancient Mediterranean Textiles and Dyes Symposium, Naples, Italy

December 5-6: Textiles in Art: from the Bronze Age to the Renaissance, Early Textiles Study Group 12th bi-annual conference, London, UK
<http://uk.groups.yahoo.com/group/Textilesinart/>

General Information

Guidelines to Authors

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

1. Contributions can be in English, German or French.
2. Contribution may include accounts of work in progress. This general category includes research/activities related to archaeological textiles from recent excavations or in museums/galleries. Projects may encompass technology and analysis, experimental archaeology, documentation, exhibition, conservation and storage. These contributions can be in the form of notes or longer feature articles.
3. Contributions may include announcements and reviews of exhibitions, seminars, conferences, special courses and lectures, information relating to current projects and any queries concerning the study of archaeological textiles. Bibliographical information on new books and articles is particularly welcome.
4. References should be in the Harvard System (e.g. Smith 2007, 56), with bibliography at the end (see previous issues). No footnotes or endnotes.
5. All submissions are to be made in electronic text file format (preferably Microsoft Word) and are to be sent electronically or by mail (a CD-ROM).
6. Illustrations should be electronic (digital images or scanned copies at 600dpi resolution or higher). Preferred format is TIFF. Illustrations should be sent as separate files and not imbedded in text.
Colour images are welcome.
7. All contributions are peer-reviewed by the members of scientific committee.

8. The Editors reserve the right to suggest alterations in the wording of manuscripts sent for publication.

Please submit contributions by post to:

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