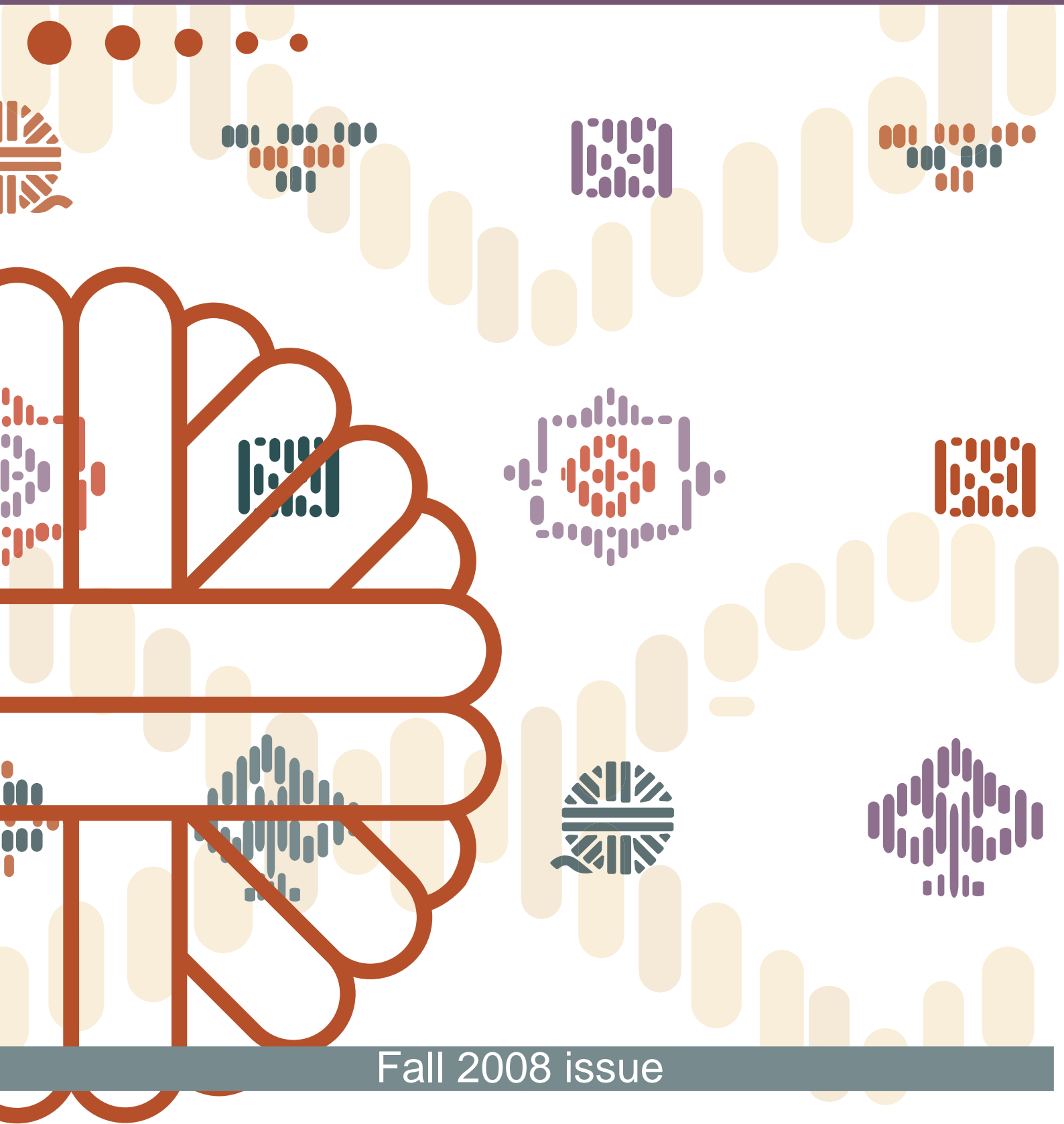


Nº

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ARCHAEOLOGICAL TEXTILES NEWSLETTER



Fall 2008 issue

Archaeological Textiles Newsletter

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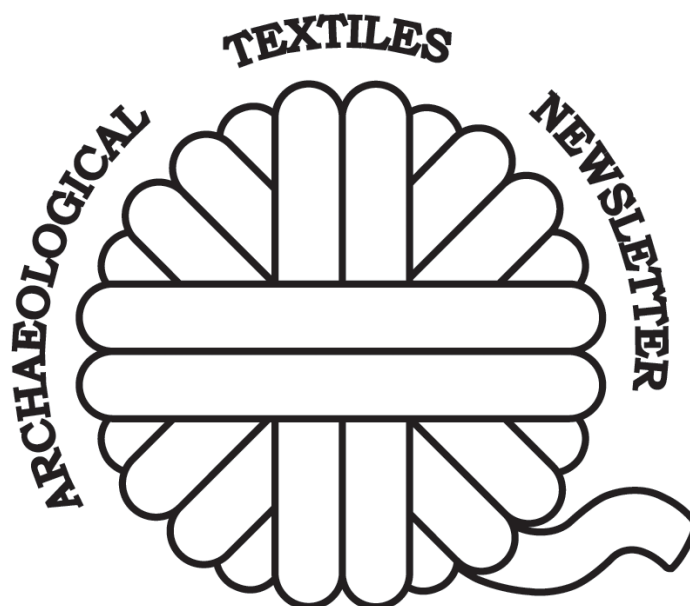
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This year has been a busy one for the world of archaeological textiles, with many big international conferences and smaller workshops, testifying to the increasing importance of and interest in textile studies around the world. Museums and Universities are becoming more and more aware of the potential of textile research, as exemplified by large interdisciplinary projects that started in the past few years, such as the study of the textiles from Hallstatt, DressID project, Mons Claudianus project, the research project on textiles by the Landesamt für Denkmalpflege in Baden-Württemberg (reported in this issue) and many more projects reported at the *Purpureae Vestes III* conference (see review in this issue). Many of these result in important publications and exhibitions. Furthermore, numerous important publications on textile topics appeared in 2008 and we have tried to provide their reviews or summaries for the ATN readers.

ATN, now based in Copenhagen, has found a new format and we hope the readers appreciate the new design. This year more than 55 people have renewed or started their subscription on the internet via our secure web-shop. It seems that easy access has given more readers the opportunity to subscribe and we hope the future will bring many more subscribers.

It has been decided to keep the subscription rate in 2009 at the same rate as in 2008. The most current information about the society, the subscription fees and submissions can be found on www.atnfriends.com.

Back issues for 2008 will soon be available on the website to buy at a rate of €10 each. For issue 45 and earlier newsletters, please contact the former editor Dr. John Peter Wild in Manchester.

The society will hold the next annual meeting in May 2009 in Copenhagen. The date will be announced on the society homepage www.atnfriends.com and we will also send out a call via e-mail. Suggestions for the agenda should be sent to one of the editors no later than the 1st of April 2009.

We still 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 would also like to emphasise that the ATN website can be used as a venue for further communication, particularly for announcements of events, short queries etc.

We look forward to your comments, suggestions and input following the release of No. 47, which covers information on new Viking Age textiles in Ukraine and Russia, C14 dating of nine so-called Coptic textiles from Musée du Louvre in France, two interesting loom weights from Hungary, spindle whorls from Finland and ongoing textile research in Germany. The articles truly represent all aspects of textile research, presented in all three ATN languages; English, French and German.

Roberta Cortopassi

Datation au ^{14}C de neuf toiles brochées du Louvre

Dans une étude publiée en 2002, treize toiles de lin brochées conservées au département des Antiquités égyptiennes du musée du Louvre (Paris, France) ont été analysées en détail du point de vue techniques et iconographique (Cortopassi 2002).

Ce type de tissu, dont la technique est relativement simple (De Jonghe and Tavernier 1978), sont présents dans toutes les collections de tissus byzantins, mais ils ne sont jamais très nombreux. Pour le groupe de tissus brochés traités dans l'étude de 2002, le décor est créé par une trame supplémentaire qui flotte sur un nombre fixe de fils de chaîne (3, 5, 7) et qui est liée toujours par le même fil.

Cette technique a été utilisée pour décorer des tuniques ou des pièces rectangulaires. Pour les tuniques, qui sont relativement rares, le décor s'organise, en général, selon le schéma classique de la tunique « copte » (*clavi*, bandes en équerre, carrés) ou alors il forme un semis de petits motifs sur toute la surface du

tissu. Les pièces rectangulaires sont de dimensions variables : de 36 x 34 cm (Städtischen Museum Simeonstift, Trèves, inv. VII.224) jusqu'à 130 x 103 cm (Benaki Museum, Athènes, inv. 7236). Ces variations de dimensions indiquent qu'elles ont été utilisées de différentes manières comme textiles d'ameublement. Les motifs géométriques l'emportent largement sur les motifs figurés (personnages et animaux), mais la manière de les disposer sur la surface du tissu et les dimensions de chaque motif sont extrêmement variables.

En 2007, à l'initiative de Mme Dominique Bénazeth, conservateur en chef à la section copte du département, neuf des treize pièces étudiées ont été datées au radiocarbone. Les analyses ont été effectuées par Marc Van Strydonck et son équipe à l'IRPA de Bruxelles, le calibrage à l'Université de Kiel.

Le but de ces analyses était de vérifier s'il existait une période de production relativement délimitée et s'il

n° inv.	fig.	type	liage	fils au cm	nombre couleurs	Datation 95.4% probabilité
AF 5805	1	Tunique	5.1	13 / 11	3	KIA-34908 : 1580±25BP 420 – 550 AD
AF 6032	2	Tunique	3.1	24 / 14	3	KIA-34915 : 1525±35BP 430 – 610 AD
AF 5582	3	Nappe	3.1	10 / 12	2	KIA-34914 : 1435±30BP 570 – 655 AD
AF 5823	4	Nappe	3.1	13 / 14	4	KIA-34906 : 1370±30BP 600 – 690 AD
E 31973	5	Tunique	3.1	21 / 14	3 – lin	KIA-34912 : 1375±30BP 605 – 685 AD
AF 5504	6	Nappe	5.1	17 / 17	4 – lin	KIA-34916 : 1325±25BP 650 – 720 AD (77.5%) 740 – 770 AD (17.9%)
AF 6089	7	Nappe	5.1	9 / 9	3 – lin	KIA-34913 : 1315±30BP 650 – 780 AD
AF 5824	8	Nappe	3.1	10 / 9	6 – lin	KIA-34902 : 1300±30BP 660 – 780 AD
AF 12753	9	Nappe	5.1, 3.1	18 / 15	? – lin	KIA-34905 : 1195±30BP 710 – 750 AD (4.3%) 760 – 900 AD (88.8%) 920 – 940 AD (2.2%)

Table 1. Datation au ^{14}C de neuf toiles brochées égyptiennes du musée du Louvre.



Fig. 1 - AF 5805

était possible de mettre en évidence une quelconque évolution.

Dans le tableau suivant sont indiquées les datations ainsi que les caractéristiques principales de chaque pièce. Pour simplifier nous avons appelé « nappe » les pièces rectangulaires. Nous avons indiqué sur combien de fils flotte la trame brochée, le nombre de fils au cm en chaîne et en trame, le nombre de couleurs employé et aussi la présence de trames brochées en lin écru. Les fils sont tous de torsion S ; pour les trames brochées les fils sont doubles ou triples, parfois retordus en Z.

Les datations s'échelonnent entre le début de la période byzantine (395 après J.-C.) et la dynastie tulinide (868-905 après J.-C.). Si pour d'autres types de tissu il a été possible d'identifier une période de production relativement réduite (voir, par exemple, De Moor 2002 ; De Moor, Van Strydonck and Verhecken-Lammens 2004 ; Cortopassi and Verhecken-Lammens 2007), pour les brochés cela ne semble pas envisageable. Non seulement les pièces du Louvre ont été tissées sur cinq siècles, mais il se peut que la période de production soit encore plus étendue. Rappelons, en effet, que les tissus décorés datant de la période romaine (donc avant 395 après J.-C.) sont rares dans les collections des musées. C'est seulement avec l'introduction du christianisme et l'abandon de la momification que l'on commence à ensevelir les morts vêtus de leurs tuniques. Ces vêtements, trouvés lors des fouilles, sont ceux que l'on appelle communément « tissus coptes », mais ces vêtements existaient bien avant l'introduction du christianisme. Ainsi, quand nous avons voulu étudier des exemples de vêtements correspondants par leur iconographie aux textiles d'époque romaine conservés au musée du Louvre, les datations au

radiocarbone ont systématiquement donné une fourchette entre la fin de la période romaine et les premières décennies de la période byzantine (Cortopassi 2008). Il serait toutefois absurde d'affirmer que ces vêtements n'existaient pas avant les dates indiquées par le radiocarbone et cela serait encore plus absurde pour les toiles brochées, dont la technique est simple. Nous pouvons simplement affirmer que les plus anciennes toiles brochées conservées au Louvre remontent au début de la période byzantine, mais que très probablement elles existaient bien avant.

La date la plus récente englobe la période tulinide, mais nous savons que la technique du broché était encore utilisée aux périodes ikhshidide (934-969 après J.-C.) et fatimide (969-1171 après J.-C.). Par exemple, elle est employée pour créer des bandes avec une inscription en arabe dont un exemple est conservé au Museum für Islamische Kunst de Berlin (Helmecke 2006, 185, 188). Une inscription pratiquement identique avec la formule *al-mulk li-llāh* en broché a été trouvée lors des fouilles du monastère de Baouit en septembre 2006 (Pantalacci and Denoix 2007, 282, 284 ; Cortopassi 2006). A l'extérieur du bâtiment D, dont le sondage a été effectué par l'équipe dirigée par Dominique Bénazeth, était enseveli un corps enveloppé dans un linceul, sur la tête était posé un grand coussin. La housse était constituée de plusieurs fragments d'un grand tissu broché présentant des nombreuses reprises. Des registres d'octogones et des bandes de bordure en constituaient le décor réalisé avec quatre couleurs de laine, sur une bordure était placée l'inscription brochée en lin bleu. La sépulture, qui sera publiée en détail avec le reste de la fouille, date de l'époque fatimide. Les fibres végétales qui en constituaient le rembourrage ont été analysées au radiocarbone et datent entre 1028 et 1214 après J.-C. (probabilité 95,4%). L'analyse a été effectuée en 2007 par le Laboratoire de Datation par le Radiocarbone de l'IFAO du Caire (Rapport d'analyse IFAO_50). Le textile est certainement un peu plus ancien que le rembourrage végétal. Le radiocarbone est un moyen extraordinaire pour dater les textiles dépourvus de contexte archéologique, qui sont majoritaires dans les collections des musées, toutefois il serait très imprudent de considérer que les datations obtenues sur une dizaine de pièces soient indicatives des limites chronologiques de la production de certains tissus. Les collections conservées dans les musées, ainsi que les pièces choisies par les collectionneurs, sont certainement un reflet de la réalité, mais un reflet très souvent incomplet. Pour conclure, encore deux remarques sur les données



Fig. 2. AF 6032



Fig. 3. AF 5582



Fig. 4. AF 5823



Fig. 5. E 31973



Fig. 6. AF 5504



Fig. 7. AF 6089

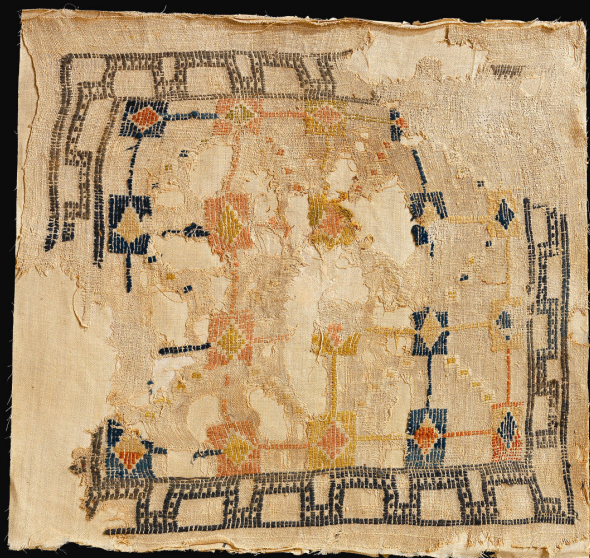


Fig. 8 AF 5824



Fig. 9 AF 12753

du tableau. Les trois fragments de tuniques sont placés entre les pièces les plus anciennes du groupe, encore pratiquement à la période byzantine. Pouvons-nous en déduire que les tuniques brochées ont été délaissées à la période arabe ? Cela serait très risqué si l'on considère le nombre de fragments à *clavi* multiples alternant décor en tapisserie et décor broché qui pourraient provenir de tuniques mais aussi des 'abā', vêtements inconnus avant la période arabe (Kendrick 1921, 77, pl. 24 ; Cornu 1992, 1, n° BAV 6890 ; Bellinger 1951, TM 72.106 ; et aussi Dumbarton Oaks Collection, inv. 53.69.4).

Et enfin, dans notre tableau les trames brochées en lin figurent seulement sur les cinq pièces les plus récentes. Il s'agit de lin écru qui crée un décor ton sur ton, une sorte de variation dans la structure du tissu. Il se pourrait, mais l'hypothèse reste à vérifier, que l'emploi du lin dans les trames brochées soit une évolution dans l'emploi des matériaux. On le trouve en effet sur les *clavi* multiples dont nous venons de parler et sur d'autres tissus ornés principalement de motifs en tapisserie, mais dont la toile de fond est agrémentée de losanges ou de carrés brochés en lin (Martiniani-Reber, Cornu, *et alii* 1993, n°s 34, 35, 36) et, enfin, c'est du lin bleu qui est utilisé pour les inscriptions brochées du coussin trouvé à Baouit et pour le fragment conservé à Berlin.

Bibliographie

Bellinger, L. (1951) Textile analysis: early techniques in Egypt and the Near East, Part 2. *The Textile Museum Workshop Notes* 3.

Cortopassi, R. (2002) Les toiles à décor broché dans la collection de tissus égyptiens du musée du Louvre. *Journal of Coptic Studies* 4: 1-24.

Cortopassi, R. (2006) Monastère de Baouit : premiers textiles. *ATN* 43: 12-16.

Cortopassi, R. (2008) Vêtements romains au Louvre. In C. Alfaro and L. Karali (eds.), *Purpureae Vestes II. Actas del II Symposium Internacional sobre Textiles y Tintes del Mediterráneo en el mundo antiguo*, 149-158. Valencia.

Cortopassi, R. and Verhecken-Lammens, C. (2007) Tunics with loops: ¹⁴C, spinning, weaving, dyes and iconography. In A. De Moor and C. Fluck (eds.), *Methods of dating ancient textiles of the 1st millennium AD from Egypt and neighbouring countries. Proceedings of the 4th meeting of the study group "Textiles from the Nile Valley"*, 138-149. Tiel.

Cornu, G. (1992), *Tissus islamiques de la collection Pfister*. Città del Vaticano.

De Jonghe, D. and Tavernier, M. (1978) Met selectie-roeden geweven koptische weefels. *Bulletin des Musées royaux d'art et d'histoire* 50: 75-105.

De Moor, A. (2002) Radiocarbon dating of Coptic woollen caps in sprang technique. *Bulletin du CIETA* 79: 26-32.

De Moor, A., Van Strydonck, M. and Verhecken-Lammens, C. (2004) Radiocarbon dating of a particular type of Coptic wollen tunics. In M. Immerzeel and J. Van Der Vliet (eds.), *Coptic studies on the threshold of a new millennium II. Proceedings of the Seventh International Congress of Coptic Studies, 1425-1442*. Leuven – Paris – Dudley, Ma

Helmecke, G. (2006) Tirāz-Inschriften im Berliner Museum für Islamische Kunst. In C. Fluck and G. Helmecke (eds.), *Textile Messages. Inscribed Fabrics from Roman to Abbasid Egypt*, 173-191. Leiden-Boston.

Kendrick, A. F. (1921), *Catalogue of textiles from burying grounds in Egypt II* (n. 300-616). Londres.

Martiniani-Reber, M., Cornu, G, *et alii* (1993) *Tissus d'Égypte, témoins du monde arabe, VIII^e-XV^esiècle. Collection Bouvier*. Thonon-les-Bains.

Pantalacci, L. and Denoix, S. (2007) Travaux de l'Institut français d'archéologie orientale en 2006-2007. C. Fayoum et Moyenne Égypte. 2. Baouit, *BIFAO* 107, 280- 284.

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Fig. 1 à 9 © Musée du Louvre – G. Poncet

András Márton, Ruth Megaw and J. Vincent Megaw

Decorated loomweights in the collection of Classical antiquities of Museum of Fine Arts, Budapest, Hungary

In the ancient Mediterranean world, loomweights were often stamped, inscribed, or otherwise decorated. Since loomweights are almost undatable by themselves, stamps, graffiti and other decoration are invaluable for dating and possibly provenancing of loomweights, particularly when they come from an unknown context. The two loomweights from the collection of Classical Antiquities of Museum of Fine Arts, Budapest, discussed in this short note, provide a good example of the information that can be gained from a detailed study of such decoration.

I. Truncated pyramidal loomweight (Figs. 1-3)

Inv. No. 50.1108. Find place: Corinth. From the collection of Béla Gerster, the chief engineer of the Corinth Canal. Truncated pyramidal shape, the sides narrower than the adjacent faces. Flat base and top. Weight: 105g. Height: 68 mm. Base: 38x38 mm, top: 20x19 mm. Stamps 14x11 mm. Clay: hard, greenish grey, fine fabric. On the top and one side there are impressions of an oval stamp. Chips are missing. Not only the find spot but the colour of the clay proves that it was manufactured in a Corinthian workshop, where this type was produced from the beginning of the fifth century B.C. onwards.

The stamps (Figs. 1, 3) represent a female figure, probably Thetis riding a hippocampus, bearing the armour of her son Achilles at Troy (Eichler 1964, 101; Boardman 1970, No. 675, 296, Pl. 675; Boardman and Vollenwieder 1978, No. 136, 31, Pl. XXV. 136; Vollkommer 1997). However, we cannot exclude that the female figure represents a Nereid (Chiesa 1966, No. 515-516, 223, Tav. XXVI. 515-516; Zwierlein-Diehl

1973, Nr. 256, 98-99, Taf. 44. 256; Schlüter, Platz-Horster and Zazoff 1975, Nr. 946, 190-191, Taf. 125. 946; Icard-Gianolio and Szabados 1992, No. 400, 813). This was a common motif for finger-rings from the Classical period onwards. It appears to have been



Fig. 1. Loom weight from Corinth, Museum of Fine Arts, Budapest (inv. No. 50.1108) (Photo by László Mátyus).



Fig. 2. Front of the loomweight in Fig. 1 (Photo by László Mátyus).

made from a solid metal bezel rather than a gemstone. Its form indicates that it could have been slightly pointed. This type can be dated to the classical period (Marshall 1968, No. 48-50, 10-11, No. 1241, 196, Pl. II. 48-50, XXX. 1241; Board-

man 1970, 212-214; Philipp 1981, 155). Since the impression of the ring on the upper and lower edge is missing, we can only speculate that it might have been of the elevated bezel type (for example types II, VII, which are the most popular ring types of this period: Philipp 1981, 155; Kilian-Dierlmeier 2002, 121). The representation of the impression fits with this dating of the ring, which can be found in the subjects of John Boardman's Classical Light Ring group



Fig. 3. Detail of stamp on top of loomweight in Fig. 1 (Photo by László Mátyus).

(Boardman 1970, 218-219). On these grounds the loomweight can be dated to the second half of the fifth – first half of the fourth century B.C. (cf. Corinth XII, No. 1195, 162, Pl. 76. 1195).

II. Conical loomweight (Figs. 4-6)

Inv. No. 52.69. Provenance unknown. From the collection of József Delhaes; transferred from the Hungarian National Museum (1952). Weight 178 g. Max. height: 97 mm. Base: max. diam. 45 mm. Relief head: 26x22 mm. Height of amphora stamp: 37 mm, oval stamp: 10x7 mm. Clay: gritty fabric, brick red in colour.

Mould-made conical weight, bottom and top rounded. It bears a decoration in relief; on one side, a human face (Figs. 4-5), on the other side, an amphora with a point enclosed by an oval at the top (Fig. 6).

The form and likely purpose of this unprovenanced piece seem clear: conical weights with a single transverse suspension hole are commonly found on later prehistoric sites where they are interpreted as part of vertical warp-weighted looms (Crowfoot 1936-37).

What is much more difficult to interpret is the decoration on opposing sides of the loomweight. On one side is what appears to be an anthropomorphised amphora, and on the other, a male profile with stylised hair and a beard running along the jaw-line. Both were stamped before firing. The stamp used for the later is roughly square but with rounded corners, as it is clear from the marginal line visible to the left of the head. The stylistic derivation of the profiled head is unclear and deserves attention.

The amphora resembles a slender Hellenistic form, but its exact type cannot be identified. Moving to the opposite side of the loom weight, the head and the stamp used to produce it recall a circular prototype, such as a coin. Other circular objects cannot be excluded, such as cameos or gems, for example. With coinage in mind, the head bears similarities to the head of Zeus or Apollo; however, it is certainly not Greek in character. Another possibility is a crude variant of a Dionysiac mask.

If a coin type was used as a model when the stamp was made it must have been a "barbarian" piece based on a Greek model. At first sight, the head with its highly stylised hair looks not unlike the obverse on some of the 1st century AD coinage of central and northern France, notably coins of the Bituriges Cubi, particularly of the so-called ABVDOS and SOLIMA group (De la Tour 1892, pl.14; Nash 1978, chap. 8, esp. pl. 10; Allen and Nash 1980, 75 and pl. 15:206-8). Not so close but sharing some features are silver coins of the Aluerici (Fig. 7) (De la Tour 1892, pl. 23). These putative parallels are, as on the loom weight, marked by a clearly delineated ear, eye, nose, mouth and chin. There are, however, a number of important differences. On the coinage of the Bituriges, the head

faces left, while that on the loom weight faces right. Perhaps of greater importance is that, while the Celtic coinage is ultimately based on a clean-shaven and wreathed head of Apollo, that on the loomweight has, at best, a vestigial wreath but appears bearded in the manner of the head of Zeus, the other main prototype for the obverse of Celtic coins based on staters of Philip II of Macedon.

There is, in fact, a possibility that the head has indeed been modelled on the bearded Zeus head, which forms the obverse of silver tetradrachms, one of the key types of the Eastern Celtic and Dacian series (see Pink 1939, 58-59. Taf. 7.18; Kolníková 1978, tab. 40-42; Torbágyi 2000 for Hungarian examples). It must also be noted that all the coins cited as possible parallels have diameters not exceeding 25 mm. The size of impression in the mould of the loom weight fits well into this category (height: 2.6 cm; width: 2.2 cm). It is, of course, unfortunate, that we know virtually nothing of the provenance, let alone possible associations of the loom weight.

To sum up, the loomweight was most probably decorated with a human representation deriving from a head of Zeus or Apollo. The details of the face suggest that it was not made by a Greek hand; on the other side, the amphora indicates connections to the Mediterranean. The master of the loom weight worked probably in the periphery of the Mediterranean world and might have had a Celtic coin in mind. However, we know of no similar stamp based on the design of

what is, in effect, a coin obverse, nor do we have any clear idea what the stamp might have looked like. We are therefore unable to localize the workshop of this piece.

Conical loomweights were known all over the Mediterranean (e.g. Wilson 1930, Fig. 284. 6, 8; Davidson and Thompson 1943, 73-78, M. 82, 74; Watrous 1980, 278-281, N. 51, 281, Pl. 29.5; Davidson 1952, 1471; Barbieri 2005, No. 117, 84) and non-Mediterranean Europe as well (Jacobi 1974, 61-2, Nr. 1713-5; von Kurzynski 1996, 10-14). In spite of the uncertainty of its provenance and the place of manufacture, it certainly dates to the Hellenistic period.

Discussion

There is a question to be raised — why were loomweights stamped at all? Looking at other products of pottery workshops, in the centres of production where they were produced on an industrial scale (as at Corinth), stamps were used in relation to the workshop's internal and external affairs and in the course of trade, for example in the case in the Roman Samian ware industry (Fülle 2000; Dannel 2002; Mees 2002). They were used to identify the objects produced by a potter, whether fired in a communal kiln or made for a specific commission. They could be used simply as a control of the production of each potter, or to mark the loomweights made for a particular owner or merchant. At Corinth the marks on the products support this idea. The workshops producing bricks and tiles



Figs. 4-6. Loom weight, unprovenanced, with stamps on two sides. Museum of Fine Arts, Budapest (inv. No. 52.69) (Photo by László Mátyus).

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There is a question to be raised — why were loomweights stamped at all? Looking at other products of pottery workshops, in the centres of production where they were produced on an industrial scale (as at Corinth), stamps were used in relation to the workshop's internal and external affairs and in the course of trade, for example in the case in the Roman Samian ware industry (Fülle 2000; Dannel 2002; Mees 2002). They were used to identify the objects produced by a potter, whether fired in a communal kiln or made for a specific commission. They could be used simply as a control of the production of each potter, or to mark the loomweights made for a particular owner or merchant. At Corinth the marks on the products support this idea. The workshops producing bricks and tiles



Figs. 4-6. Loom weight, unprovenanced, with stamps on two sides. Museum of Fine Arts, Budapest (inv. No. 52.69) (Photo by László Mátyus).

also made loomweights as a secondary product (Davidson 1952, 146). In these workshops stamps were used concurrently for different purposes by owners as well as potters (Felsch 1979, 18-19). We may suppose that some of the numerical and other symbols reflect the internal production system as well (Davidson and Thompson 1943, 74). Some of the stamps on goods indicate the weight and contents of commercial trade, others were certainly "trade marks" or potters' stamps, for example, the MEA and MEAIΣ stamps (Davidson 1952, 158-159). The first is known from Corinth and Athens, the second from Corinth, Athens, Delphi and Aradus. In a few cases, the alphabetic stamps can be connected with non-alphabetic stamps. For example, the Corinthian weights stamped with NIKO are frequently associated with an impression of a gemstone decorated with a satyr's head. Weights signed by NIKO within and outside this secondary stamp and made of Corinthian clay, can be found at Athens as well (Davidson 1952, 158). Might the NIKO stamp have been the symbol of the master or the owner of the workshop, and the gemstone with the



Fig. 7. Silver coin of the Aulerques Diablintes. AR d. 22 mm, wt. 4.80 g, Cabinet des Médailles, Paris cat. no. 6489.

satyr's head that of the potter who worked for him? Unique stamps and signs might have been used for other reasons. The different types of yarn and the different fineness of cloth needed loomweights of different, but quite standard weights (Barska 2004, 47, 53). It is difficult to produce a number of fired clay objects of the same weight. At Olynthus, loom weight give evidence of accuracy and precision during the weaving process, the loomweights decorated with the same stamp being all of the same weight, so it may be assumed that the stamps and signs were used as well to distinguish sets of loomweights (Wilson 1930, 120-121, 127; see also Davidson and Thompson 1943, 74;

Caronna 1983, 329, Fig. 125.4-5, 126.4-5, 330-331; Barska 2004, 50-51, 53). We must emphasize the fact, however, that not all loomweights employed on the same loom would have been signed. For example, signing the first and the last one was enough to distinguish the set during the different stages of production, as is the case for the bricks and tiles (Hübner 1973, 87; Felsch 1979, 19). This may explain the question, already raised by L. M. Wilson, as to why only a small percentage of the loomweights were stamped (Wilson 1930, 122).

To summarise, some of the loomweight stamps can be interpreted as owner's marks, or to determine the order in which they should be fixed or to determine the type of cloth (for a summary of the evidence in Pre-Roman Italy, see Gleba 2008, 134-137).

The two loomweights briefly discussed here can be classified into two categories. That found at Corinth was certainly signed during its manufacture following internal workshop organisation practice. The second, unprovenanced example, produced most unusually in a mould, bears a unique representation, and might be considered as a votive offering, evidence for which is not unknown at least in the Classical world (on the loom weights dedicated to divinities, see Gleba 2008, 137-138).

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Bibliography

- Allen, D. F. and Nash, D. (1980) *The coins of the ancient Celts*. Edinburgh.
- Barbieri, G. (2005) *La Collezione D'Aschenzi. Sistema Museale del Lago di Bolsena Quaderni 2*. Bolsena.
- Barska, K. (2004) The Roman Period warp – weighted loom from Ożarów Mazowiecki, Poland In J. Maik (ed.), *Priceless Invention of Humanity – Textiles. Acta Archaeologica Lodziensia* Nr. 50/1, 45-54. Łódź.
- Boardman, J. (1970) *Greek Gems and Finger Rings*. London.

- Boorman, J. and Vollenwieder, M.-L. (1978) *Ashmolean Museum – Oxford. Catalogue of the Engraved Gems and Finger Rings* Vol I. Oxford.
- Caronna, E. L. (1983) Oppido Lucano (Potenza). *Notizie degli scavi di antichità* XXXVII, 215-352.
- Chiesa, G. S. (1966) *Gemme del Museo Nazionale di Aquileia*. Padova.
- Crowfoot, G. M. (1936-1937) Of the warp-weight loom. *Annual of the British School at Athens* 37, 36-47.
- Davidson, G. R. (1952) *The Minor Objects*. Corinth XII. Princeton.
- Davidson, G. R. and Thompson, D. B. (1943) Small Objects from the Pnyx: I. *Hesperia: Supplement* VII. Baltimore.
- Dannell, G. B. (2002) Law and Practice Further Thoughts on the Organization of the Potteries et la Graufesenque. in: M. Genin and A. Vernhet, *Céramiques de la Graufesenque et autres productions d'époque romaine: Nouvelles recherches. Hommage à Bettina Hoffmann*, Archéologie et Histoire Romaine 7, 211-242. Montagnac.
- De la Tour, H. (1892) *Atlas des monnaies gauloises*. Paris (reprinted London 1965).
- Eichler, F. (1964) Thetis und Nereiden mit den Waffen Achills In L. F. Sandler, *Essays in Memory of Karl Lehmann*, 100-102. New York.
- Felsch, R. C. S. (1979) Boiotische Ziegelwerkstätten archaischer Zeit. *Athenische Mitteilungen* 94, 1-40.
- Fülle, G. (2000) Scherben und Strukturen. Zu methodischen Grundproblemen der Sigillataforschung. In: K. Strobel (Hrsg.), *Forschungen zur römischen Keramikindustrie. Produktions-, Rechts- und Distributionsstrukturen. Akten des 1. Trierer Symposiums zur antiken Wirtschaftsgeschichte. Trierer historische Forschungen* 42, 23-41. Mainz.
- Hübner, G. (1973) Dachterrakotten aus dem Kerameikos von Athen. *Athenische Mitteilungen* 88, 67-143.
- Icard-Gianolio, N. and Szabados, A.-V. (1992) Nereides. *Lexicon Iconographicum Mythologiae Classicae* VI, 785-824. Zürich/München.
- Jacobi, G. (1974) Werkzeug und Gerät aus dem Oppidum von Maching. *Die Ausgrabungen in Manching* 5. Wiesbaden.
- Kilian-Dierlmeier, I. (2002) Kleinfunde aus dem Itonia-Heiligtum bei Philia (Thessalien). *Jahrbuch Des Römisch-Germanischen Zentralmuseums, Mainz Monographien* 48. Mainz.
- Kolníková, E. (1978) Keltské mince na Slovensku. *Ars Slovaca Antiqua* 2. Bratislava.
- Marshall, F. H. (1968) *Catalogue of the Finger Rings, Greek, Etruscan, and Roman, in the Departments of Antiquities, British Museum*. London.
- Mees, A. W. (2002) Organisationsformen römischer Töpfer-manufakturen am Beispiel von Arezzo und Rheinzabern. *Jahrbuch Des Römisch-Germanischen Zentralmuseums, Mainz Monographien* 52.1-2. Mainz.
- Nash, D. (1978) Settlement and coinage in central Gaul c.200-50BC. *BAR Suppl. Ser.* 39:1-2. Oxford.
- Philipp, H. (1981) Bronzeschmuck aus Olympia. *Olympische Forschungen* XIII. Berlin.
- Pink, K. (1939) Die Münzprägung der Ostkelten und ihrer Nachbarn. *Dissertationes Pannonicae* II.15. Budapest.
- Schlüter, M. Platz-Horster, G. and Zazoff, P. (1975) *Antike Gemmen in deutsche Sammlungen* Band IV. Wiesbaden.
- Torbágyi, M. (2000) *Monete celtiche in Ungheria*. Milano.
- Vickers, M. (1999) Images on Textiles. *Xenia* 42. Konstanz.
- Volkommer, R. (1997) Thetis. *Lexicon Iconographicum Mythologiae Classicae* VIII, 6-14. Zürich/Düsseldorf.
- von Kurzynski, K. (1996) "... und ihre Hossen nennen sie bracas": Textilfunde und Textiltechnologie der Hallstatt- und Latènezeit und ihre Kontext. *Internationale Archäologie* 22, Espelkamp.
- Watrous, L. V. (1980) J.D.S. Pendlebury's Excavations in the Plain of Lasithi. The Iron Age Sites. *British School at Athens* 75, 269-283.
- Wilson, L. M. (1930) Loom weights. In D. M. Robinson, *Architecture and Sculpture: Houses and other buildings. Excavations at Olynthus* II, 118-128. Baltimore/London/Oxford.
- Zeierlein-Diehl, E. (1973) *Die antiken Gemmen des Kunsthistorischen Museums in Wien* Band I. München.

Heidi Martiskainen

Spindle whorls from 14th - 18th century Turku, Finland

Introduction

In Finnish archaeology, spindle whorls have been a very little researched find group. In this paper, I will discuss the spindle whorls found in Turku, Finland. The first certain finds of spindle whorls in Finland come from the early Iron Age. Throughout the prehistoric times and the Middle Ages, all spinning was done with a spindle. The spinning wheel was introduced in Finland in the 16th century, when it is first mentioned in documents from Turku. The spinning wheel did not replace the spindle right away, but both tools were used simultaneously for some time. In south-west Finland, where Turku is located, the spinning wheel became more common in the 17th century. In the 18th century, it probably replaced the spindle altogether. In eastern and northern parts of Finland however, the spindle continued to be used until World War II (Vallinheimo 1956, 214, 240).

In Turku, 79 spindle whorls have been found. Fifty-nine of them are complete, 18 are fragmentary and 2 are unfinished. Of all the whorls found in Turku, 37 come from the so-called Åbo Akademi excavation in 1998. The other 42 whorls come from 14 different sites. Of the 79 whorls found in Turku, 54 can be dated to 14th - 18th centuries. However, most of the datable whorls are medieval: 40 whorls

come from the 14th and 15th centuries. Ten whorls can be dated to the end of the 15th century or to the 16th century, and four to the 17th or 18th century. The whorls are made of different materials: bone, antler, stone, wood and clay (Fig. 1).

Bone and antler whorls

Of the 79 spindle whorls found in Turku, 44 (57 %) are made of bone or antler. Thirty-one of the bone whorls were cut from the head or epiphysis of animal femur or humerus. All but one of these whorls has been made of cattle bone (Figs. 2a). One small example has been made from a pig femur head.

Whorls made of epiphysis are hemispherical in shape. The spindle holes in these whorls have various shapes. Double cone shape is the most common, with 17 examples. Seven whorls have a conical hole and four have a cylindrical hole. All the whorls made of femur or humerus head are undecorated.

The diameter of the whorls made of cattle femur or humerus head varies between 34 and 55 mm. Their height varies from 12 to 29 mm. The diameters of the spindle holes are 9-14 mm. They weigh between 6.4 and 41.6 g. The whorl made of pig femur head has a 26 mm diameter and 12 mm height. It weighs 3.5 g. Ten spindle whorls have been made of other bones. Eight of them are complete and two are fragmentary. One example has been cut from a long bone. Six whorls have been lathe-turned. Many different shapes can be found in bone whorls. The most common shape is hemispherical with 5 examples. Of the other whorls, 2 are cylindrical, one is flat and one is flattened hemispherical. Three whorls have a spindle hole with double cone shape, three have a conical hole and 3 have a cylindrical hole. Six bone whorls are decorated. The only form of decoration found on bone whorls is concentric rings.

There is much variation in size of the bone whorls, partly because of many different shapes. Bone whorls are 18-50 mm in diameter and 6-29 mm in height. Hole diameter varies from 6 to 14 mm. There is much

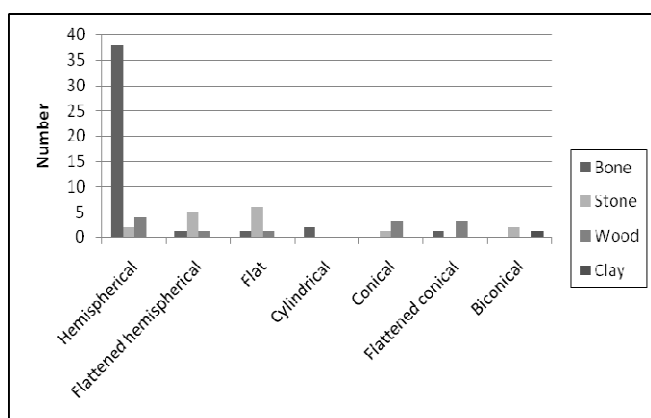


Figure 1. The forms and materials of the Turku spindle whorls.

variation in weight, too: the lightest whorl weighs only 3 g, whilst the heaviest is 33 g.

Three whorls have been made of antler. Two of them are hemispherical. The third example has flattened conical shape and is possibly lathe-turned. It is decorated with concentric rings (Fig. 2b), as is one of the hemispherical ones, too. Two of the antler whorls have a conical spindle hole and one has an double cone shaped hole.

Compared to many of the bone whorls, the antler whorls have a large diameter. Their diameters are 42, 51 and 51 mm respectively. Their height is 16-17 mm. Diameter of the spindle holes varies from 11 to 13 mm. Whorls made of antler are quite heavy, too: they weigh 24, 35 and 40 g.

Stone whorls

Sixteen (21 %) of the Turku spindle whorls are made of stone. Ten of them are complete and 6 are fragments. Many different stone types were used for spindle whorls. Five examples are made of slate. Other stone types include sandstone, limestone and diabase. Most of the stone whorls are quite flat in shape: there are 6 flat and 5 flattened hemispherical whorls. Two whorls are hemispherical and two are conical. Eleven whorls have a spindle hole with double cone shape, while 3 have a conical hole. Three of the stone whorls have some kind of decoration. One example is decorated with concentric circles (Figure 2c). Two whorls have ring-and-dot decoration in combination with rings or radial lines.

The diameter of the stone whorls ranges from 27 to 52 mm. There is much variation because the whorls represent so many different shapes. The flat and flattened hemispherical whorls, which make out two thirds of the stone whorls, are 40-52 mm in diameter. The height of all the stone whorls varies between 5 and 21 mm. The hole diameter is 8-13 mm. There is also much variation in the weight of the stone whorls: they weigh between 9.6 g and 57 g.

Two unfinished stone whorls have been found in Turku. Both of them are fragmentary. These unfinished whorls show that stone whorls were made in Turku.

Wooden whorls

Thirteen (17 %) of the spindle whorls found in Turku are made of wood. Of the 13 wooden whorls, 6 are complete and 7 are fragmentary. However, wooden whorls may have been more common. Only a part of wooden whorls would have survived since wood de-

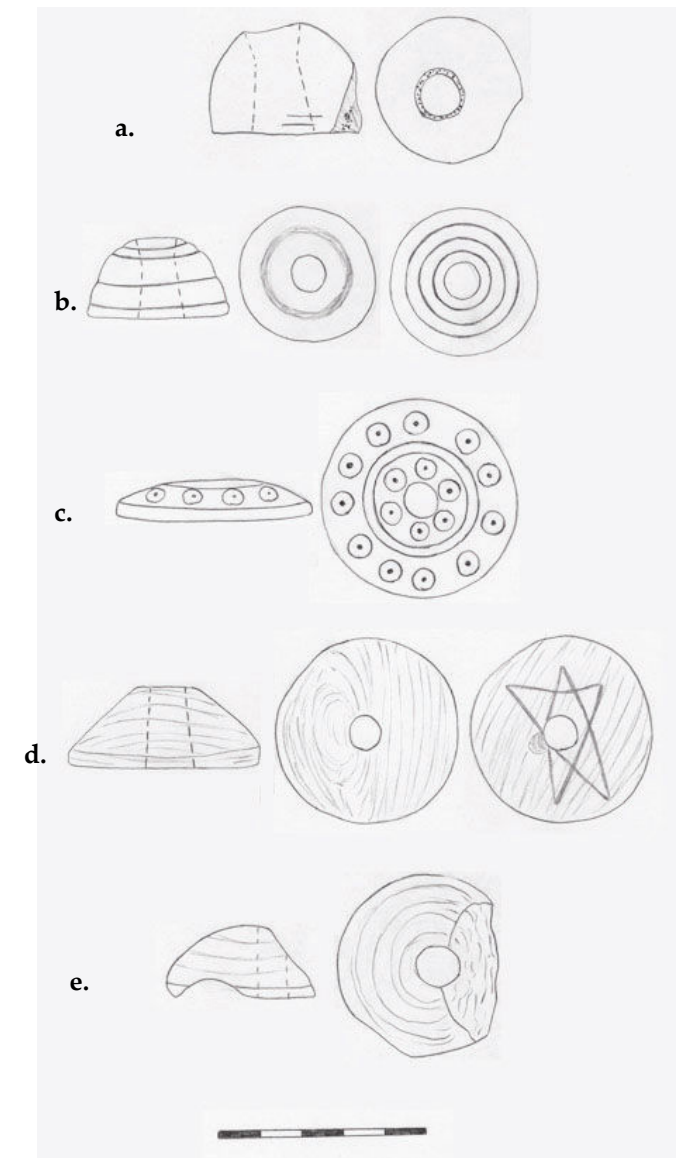


Fig. 2. Spindle whorls

a. A spindle whorl made of cattle femur-head, late 14th or early 15th century. **b.** A lathe-turned bone whorl, decorated with concentric circles, late 14th or early 15th century. **c.** A decorated stone spindle whorl, probably medieval. **d.** A wooden spindle whorl with an incised pentagram, early 14th century. **e.** A fragmentary ceramic spindle whorl of German type, 14th century (Drawings by the author)

cays easily in the soil.

Four of the wooden whorls are lathe-turned, the rest are carved with a knife. Hemispherical is the most common shape for wooden whorls with 4 examples. Of the remaining whorls, 3 are conical, 3 flattened conical, 1 flattened hemispherical and 1 is discoid.

Five whorls have a double cone shaped hole, 4 have a conical hole and three have a cylindrical hole. Six wooden whorls have some kind of decoration. Three of them are decorated with concentric circles. Two whorls have more complicated decoration consisting of dots, circles and radial lines. One whorl has an owner's mark carved on it. Another example has an incised pentagram on its base (Figure 2d). The pentagram has been a very common protective magical mark in Finland.

The diameter of the wooden whorls varies between 42 and 59 mm. One fragmentary whorl has been much bigger, c. 80 mm in diameter. The height of the wooden whorls is 7-19 mm. The hole diameter varies from 8 to 14 mm. Wooden whorls weigh between 5 and 26 g. Their original weight has probably been a bit higher, since wooden artefacts may have lost some of their weight through decay.

Ceramic whorls

Four ceramic spindle whorls have been found in Turku (Figure 2e). Only one of them is complete, the other 3 are fragmentary. The only complete ceramic whorl is biconical in shape and it clearly represents the type very common in the German area until the 17th century (e.g. Moorhouse and Hurst 1981; Pühl 1986). Two of the fragments probably come from whorls of this type, too. The complete whorl is 39 mm in diameter and 25 mm in height. Both the complete whorl and one of the fragments have a cylindrical spindle hole, 10 mm in diameter. The complete whorl weighs 30 g, and one of the fragments was probably about the same weight. One small fragment of a ceramic spindle whorl is very different from the German-type whorls. It is quite roughly made. The fragment is so small that the original shape and size of the whorl remain uncertain.

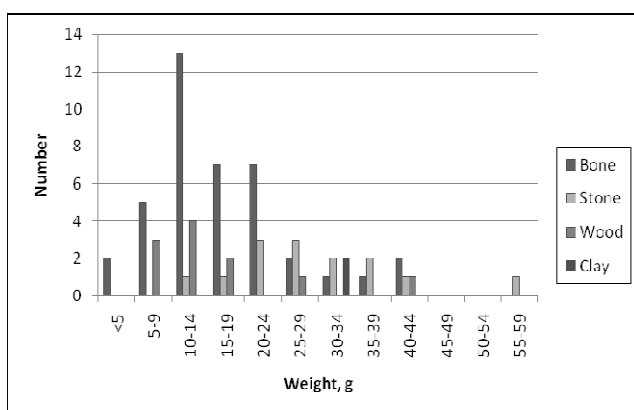


Fig. 3. The weight and the material of the whorls.

Spinning in Turku

The spindle whorls found in Turku can give some information of the types of thread that were produced. The factors affecting the quality of the thread are the weight and the diameter of the spindle whorl (Figs. 3 and 4). Other factors include the size and weight of the spindle, the quality of the raw fibres, spinning technique, tradition and the skill of the spinner (Walton Rogers 1997, 1743-1745; Andersson 1999, 24-25).

Threads of different thickness can be spun using spindles of different weight. A light spindle gives fine thread and a heavy one gives thick thread. A spindle whorl does not tell exactly the thickness of thread spun with it, but it still can give interesting information of the types of thread that were produced.

I will consider the weight distribution of Turku spindle whorls in comparison with the spinning experiments by Eva Andersson and Anne Batzer in 1999. In these experiments spindle whorls of 5, 10, 20 and 30 g were used. With the 5 g whorl a short spindle of 2.5 g was used. The heavier whorls were used with longer spindles weighing 5 to 6 g. For the yarn spun with each whorl, Andersson and Batzer give a thread count for which it would be suitable in a woven fabric (Andersson 1999, 24). This makes the experiment very useful as the given density can be compared with archaeological textile finds.

Thread spun with the lightest whorl of 5 g was suitable for a fabric with thread count 25-37.5 threads/cm. The density of the thread spun with the 10 g whorl was 10-30 threads/cm, with the 20 g whorl 5-22.5 threads/cm and with the 30 g whorl 2.5-15 threads/cm (Andersson 1999, 24). Heini Kirjavainen (2004, 25) has classified the textile finds from Turku by thread count in three groups. Thread count of a coarse fabric is 1-10 threads/cm, a medium fine 11-17 threads/cm and fine fabric more than 18 threads/cm. In general, it can be

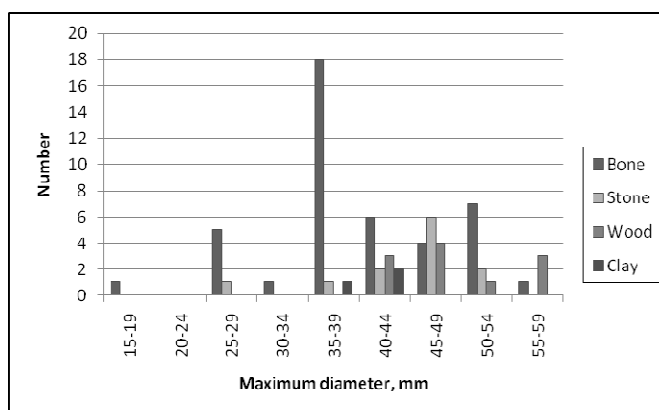


Fig. 4. The maximum diameter and the material of the whorls.

said that a 30 g whorl produces thread for coarse fabrics, a 20 g whorl for medium fine fabrics and 5 g and 10 g whorls for fine fabrics.

For closer inspection, I chose the spindle whorls from Åbo Akademi excavation. From this excavation was found a great amount of objects made of organic materials, among them textiles and textile tools. Thirty-seven of all 79 whorls found in Turku come from this site. Twenty-nine of them can be dated to the 14th and 15th centuries. Seven whorls are dated to the end of the 15th century or to the 16th century. Only one example is dated to the 17th or 18th century. Heini Kirjavainen has researched and published some of the Åbo Akademi textile finds. Hence, the information derived from the spindle whorls can be compared with the data from textile finds. Naturally, not all the textiles found at the site were produced there. However, in the Åbo Akademi excavations, lots of textile tools were found, as well as raw wool (Kirjavainen 2004, 10-12). This suggests that at least some of the textiles were produced at the site.

The weight of the Åbo Akademi spindle whorls varies from 5 to 42 g. Most of them weigh between 10 and 24 g. The whorls appear to be quite light. When compared with the information from the spinning experiments by Andersson and Batzer, the whorls seem to be suitable for spinning fine threads, which would also indicate production of fine fabrics. Could the textile production in Turku have been concentrated on such fine fabrics?

Spindle rods used in Turku may explain why the whorls are so light. Naturally, the quality of the thread is affected by the weight of the whole spindle, not only the whorl. The spindles used in the spinning experiments by Andersson and Batzer were quite light, the heaviest of them weighing only 6 g (Andersson 1999, 24). The two spindle rods found from Åbo Akademi excavation are heavier. They are also thicker than the spindles used in the experiment, which explains the difference in weight. A fragmentary wooden spindle from the Åbo Akademi site weighs 17 g, is 195 mm long and 8-16 mm thick. It has originally been longer and heavier since it is fragmentary on both ends. From the same excavation, a smaller, also fragmentary bone spindle was found. It now weighs 9 g and is 110 mm in length and 6-10 mm in thickness. The spindles used by Andersson and Batzer weighed 5 g and 6 g, and their maximum thickness was 8-9 mm (Andersson and Batzer 1999, 13).

Although not many spindle rods have been found in Turku, the spindle holes in whorls clearly show that

spindles have mostly been quite thick and heavy. The minimum diameter of the spindle hole for the wooden and bone whorls is mostly 10-13 mm. These whorls would have required a thick spindle, perhaps similar to the wooden one found at Åbo Akademi. The minimum hole diameter in stone whorls is 8-9 mm. For these whorls, the Åbo Akademi wooden spindle would be too thick and the bone spindle too thin. These heavy spindle rods could have been used with lighter whorls. The heaviest spindle used in the experiment by Andersson and Batzer was 36 g, with both rod and whorl included. If the original weight of the wooden spindle rod from Åbo Akademi site was about 20 g, a whorl weighing only 16 g would have been needed for the same result.

When the weight of the whorls from Åbo Akademi site is considered with these heavier spindles in mind, it shows that mostly thick threads and coarse fabrics were produced. Most of the whorls from the Åbo Akademi site would weigh 25-35 g if used with a 10 g or 20 g spindle rod. The threads spun with these spindles would be best suited for coarse and medium-fine fabrics with a density of 2.5-22.5 threads/cm.

The heaviest whorls that weigh over 40 g have been used for spinning very thick threads or plying yarns. In the Middle Ages plied threads were rarely used in woven fabrics, but they could have been used for other purposes. Shoemakers needed strong plied thread for sewing leather (Kirjavainen 2005, 100). There is evidence of leather working activity from the Åbo Akademi site (Harjula 2005, 69). The heaviest whorls may have been used to spin threads needed by a shoemaker. Information from the textile tools found at the Åbo Akademi site can be compared with the information from textile finds at the same site. Best suited for this comparison are the 2/2 twills since the thread count given by Andersson and Batzer is for this weave (Andersson 1999, 24-25). It is also very common among the textiles from the Åbo Akademi site (Kirjavainen 2004, 21).

Most of the 2/2 twills from the Åbo Akademi site are made of Finnish wool (Kirjavainen 2004, 65-67, 78, 80-81). It is possible that they were produced on site. The 2/2 twill fabrics from the Åbo Akademi site are mostly coarse with density 6x5-10x10 threads/cm. Medium fine twills were also found, their thread count is 11/6 – 16/8 threads/cm (Kirjavainen 2004, 28). This compares favourably with the evidence from the whorls indicating that mostly thick threads and coarse fabrics were produced.

Based on the finds of spindle whorls and textiles it

can be stated that, at the Åbo Akademi site, spinners mainly produced quite thick threads for coarse fabrics. The same can be said of the whole town of Turku. The weight distribution of the spindle whorls from other sites is very similar to that of the Åbo Akademi finds: most of the whorls are 10-24 g in weight. However, a couple of small and light whorls show that also fine threads were produced.

Household spinning or professional production?

In the Middle Ages spinning was done by women at home (Bohnsack 1985, 102). Spinning for household needs must have taken place in practically every household. Women could also spin for the needs of professional cloth production. They worked for a weaver or a clothier who provided the wool and received back the yarn (Woodland 1990, 216). Professional spinning was done at home as was the household spinning, but it exceeded the spinners' own needs and women were paid for doing it. However, spinning never became a professional craft during the Middle Ages in the same way as many other processes included in cloth production. This is indicated by the fact that spinning remained a female craft, whereas, for example, professional weavers were mostly men (Bohnsack 1985, 102).

The amount of spindle whorls found in Turku is relatively small. However, this does not mean that spinning for household needs or even professional spinning was not practiced. One explanation for the small number of whorls could be the use of organic materials to make them. Especially wood, but also bone and antler, are materials that decay easily in the soil. Also spindles without a whorl may have been used. In Turku, two spindles have been found which probably were used without a whorl. Based on the finds it is not possible to say how common spindles of this type were, only that they existed and were used. Yet another explanation could be that the spinning wheel was taken into use very early. However, that seems unlikely.

The largest collection of spindle whorls in Turku was found at the Åbo Akademi excavation, where thirty-seven whorls were found from the c. 1300 m² area. Compared to some other European towns, this is a very small amount. From the excavations of Søndre Felt and Mindes Tomt in Oslo, Norway, over 240 whorls were found in an area of c. 1000 m². From the excavations of Bryggen in Bergen, also in Norway, 410 whorls were found, although the excavated area was much bigger there, c. 7500 m² (Øye 1988, 17, 38;

Molaug 1991, 81-82).

According to Linda Mårtensson (2007, 157), the professional textile production would have required many spindle whorls of the same kind, since several spinners were needed to produce the yarn. No groups of uniform spindle whorls exist among the Åbo Akademi finds and the whorls seem to be unique. However, the whorls made of cattle femur or humerus head could be a group of tools for professional spinning, even if they are not uniform in appearance, since they were easy to make. I believe that these simple undecorated tools belonged to professional textile production, whereas the carefully made and beautifully decorated whorls were more personalised by their owners. In any case, professional spinning would have taken place at home, and probably every spinner used the kind of equipment she happened to own. The Åbo Akademi site has produced a large amount of spindle whorls when compared to other excavations in Turku. This probably indicates professional spinning. There is other evidence of professional textile production at the site, too. Based on the textile finds and finds of horizontal loom parts, Heini Kirjavainen (2003, 275-276; 2004, 89-90, 96; 2007, 94-95) suggested that there was some kind of organised textile production at the site. If professional weaving was practiced on the site, professional spinning must have taken place, too. Probably spinning was organised the same way as elsewhere in Europe: a weaver or a clothier provided the spinner with wool and received back the yarn (Bohnsack 1985, 106-107; Woodland 1990, 216).

Therefore, I assume that some kind of professional spinning as a part of textile production took place at the Åbo Akademi site. Possibly, there were professional spinners elsewhere in Turku as well. However, the finds of spindle whorls give no clear indication of that. The small quantity of whorls found at other sites in Turku may simply indicate spinning for household needs.

Literature

Andersson, E. (1999) *The Common Thread. Textile Production during the Late Iron Age - Viking Age. University of Lund, Institute of Archaeology Report Series No. 67.*

Andersson, E. and Batzer, A. (1999). *Sländspinning i Vikingatid och nutid. Stencilupplaga, Lunds Universitet. Lund.*

Bohnsack, A. (1985) *Spinnen und Weben. Entwicklung von Technik und Arbeit im Textilgewerbe*. Hamburg.

Harjula, J. (2005) Sheaths, Scabbards and Grip Coverings. The use of leather for portable personal objects in the 14th – 16th century Turku. *Archaeologia Medii Aevi Finlandiae* X.

Kirjavainen, H. (2003) Keskiäikaiset tekstiilityövälinelöydöt - käsityön jälkiä Åbo Akademin tontilta. Kaupunkia pintaa syvemmältä. Arkeologisia näkökulmia Turun historiaan. *Archaeologia Medii Aevi Finlandiae* XI, 267-280.

Kirjavainen, H. (2004) Kudo sarkaa, osta verkaa... Menetelmällinen näkökulma Åbo Akademin tontin keskiaikaisiin tekstiililöytöihin. Unpublished master thesis in archaeology, University of Turku.

Kirjavainen, H. (2005) Report on fibres from the medieval Åbo Akademi and Aboa Vetus sites, Turku, Finland. Harjula, Janne. Sheaths, Scabbards and Grip Coverings. The use of leather for portable personal objects in the 14th – 16th century Turku. *Archaeologia Medii Aevi Finlandiae* X, 98-100.

Molaug, P. B. (1991). Sneller til håndtein. *De arkeologiske utgravninger i Gamlebyen, Oslo*. Bind 8, 81-112.

Moorehouse, S. and Hurst, J. (1981) An imported stoneware spindlewhorl, with some preliminary comments on stoneware spindlewhorls found in England, their dating and origin. *Transactions of the London and Middlesex Archaeological Society incorporating the Middlesex local history council* 32, 124-128.

Mårtensson, L. (2007) Toolmakers? – On the production of tools for making and treating textiles during the Viking Age. *Archäologische Textilfunde. Archaeological Textiles. NESAT IX*, 154-158.

Pühl, K. (1986) Die Spinnwirtel aus der Kloake des Lübecker Fronen. *Lübecker Schriften zur Archäologie und Kulturgeschichte* 12, 191-203.

Vallinheimo, V. (1956). Das Spinnen in Finnland. *Kansatieteellinen arkisto* 11.

Walton Rogers, P. (1997) Textile Production at 16-22 Coppergate. *The Archaeology of York* 17/11.

Woodland, M. (1990) Spindle-whorls. Object and Economy in Medieval Winchester. *Artefacts from Medieval Winchester. Winchester Studies* (i) 7.ii, 216-225.

Øye, I. (1988) Textile equipment and its working environment, Bryggen in Bergen c 1150-1500. *The Bryggen papers. Main series. Vol 2*.

Kirill Mikhailov

New finds of Viking Age textiles in Ukraine and Russia

In recent years, in the territory of Eastern Europe, active investigations of Old Russian cemeteries dated to the Viking Age are continuing. During the salvage excavations of sites for new building developments in historical centres of Russian and Ukrainian cities, archaeologists have discovered a new series of chamber graves of the 10th c. AD with numerous important finds. Among the burial goods of these chamber graves were fragments of textiles, tablet-woven bands of silk and silver thread, passanterie and silver thread embroidery from female and male articles of

clothing. At present, these finds have not yet been conserved and are not available to investigators. Thanks to the kind permission of the excavators, however, I was able to see the organic and other objects from these graves. Among them were fragments of various funerary garments. One of the finds will soon be published in *NESAT X* (Zubkova, Orfinskaya and Mikhailov forthcoming). As far as the others are concerned, until the conservation is completed, it is only possible to make preliminary observations.

Finds from the Mikhailovsky Monastery, Kiev, Ukraine

The first find comes from one of the earliest city cemeteries of Kiev. In 1999, in grave 49 near Mikhailovsky Monastery, under the direction of G.Y. Ivakin, a wooden chamber with a rich seated female burial was opened. The burial is dated to the second half of the 10th c. AD (Ivakin 2004; Movtjan 2004). It contained over 70 finds, including a Scandinavian silver fibula of Terslev type. On the skull of the woman, fragments of a tablet-woven band in silk and silver wire were found *in situ*. These fragments are probably remains of a head cover or band. Because of the unfavourable preservation conditions, textiles in this burial were preserved only under the metal objects. For example, to the right of the deceased were parts of a chest with iron fittings. Inside the chest were a pair of iron shears and 27 thin glass elements of various colours. On the shears, a corrosion layer preserved mineralised remains of a fine textile, made of wool or linen (Fig. 1). I believe that, the remains and glass elements belonged to a second set of garments. Analogous situation is observed in the Viking Age cemetery of Hedeby in northern Germany (Hägg 1991, 91–199). To the left of the deceased were silver mounts of a purse, on which the conservators identified remains of leather. Under the fittings and the leather, there was an inner lining made of silk.

Finds from Shestovica cemetery, Chernigov, Ukraine

The second find of garment fragments is connected to the famous Viking Age Shestovica cemetery near Chernigov, Ukraine. In 2005, an excavation under the direction of V.P. Kovalenko opened a new burial chamber dated to the second half of the 10th c. AD. It contained a seated male burial with a sword, scramasax, saddle, spear, chest, horse bit and two horse skeletons (Kovalenko, Osadchii and Sitiy 2007). The burial contained at least five textile fragments and numerous pieces of a band with silver thread (wire with a round section), which belonged to the various items of the burial costume (Mikhailov 2007). In the area of the skull of the deceased, on top of the sheath of the scramasax, two textile fragments were found. The first fragment (1.7 x 1.4 cm) was on top of the ring of the scramasax handle; the second fragment (4 x 1.1 cm) was on the blade, a few centimetres from the handle. Both fragments are completely mineralised: the first in the presence of copper salts from the sheath fittings, the second in the presence of iron salts from the scramasax blade. The first textile fragment



Fig. 1. Shears with mineralised textile remains, Shestovica cemetery, Chernigov, Ukraine (Photo K. Mikhailov).

preserves a portion of a hem. Warp and weft threads of both fragments are z-twisted and have a thread diameter of 0.4–0.5 mm and a thread count of 12/18 threads/cm. It is likely that both fragments were made of wool. Based on their position in the grave, the fragments belong to the same textile.

In the central area of the grave chamber, east of the scramasax, there was a wide block of the band and textile fragments from the garments of the deceased (61 x 48 cm). The band, c. 1 cm wide, is tablet-woven of silk and silver thread consisting of drawn silver wire (Figs. 2 and 3). In one part of the block, it was possible to follow the orientation of the layers from top to bottom: wood, fur, leather, textile (wool), and corroded remains of an iron object. The textile fragment in the eastern part of the block is a tabby with a thread count of 10/18 threads/cm, probably wool. The tablet-woven band had a V-shaped position in the grave, perpendicular to the sword, with one part 50 cm long, a second 20 cm long and a third part 10 cm long. Its position suggests that it formed the edging of a wool mantle.

Two fragments of the band with a piece of wool fabric (3.2x0.8 and 4.6x1.3 cm, band width c. 1.3 cm) were found in the area of the head of the deceased, who was buried with a hat with a silver top. All these fragments are remains of the outer wear of the deceased. Three fragments of tablet-woven band and silver wire from the band (2 x 0.86, 4.4 x 0.7, 3.1x1, 2.5 x 0.7 cm) were found outside the area of the body, under the saddle located near the wall of the chamber. They probably belong to the second set of garments, which was placed in the grave together with the other burial goods, separately from the deceased. Based on its size, the band decorated the collar of the sleeves of outer wear, possibly a tunic.

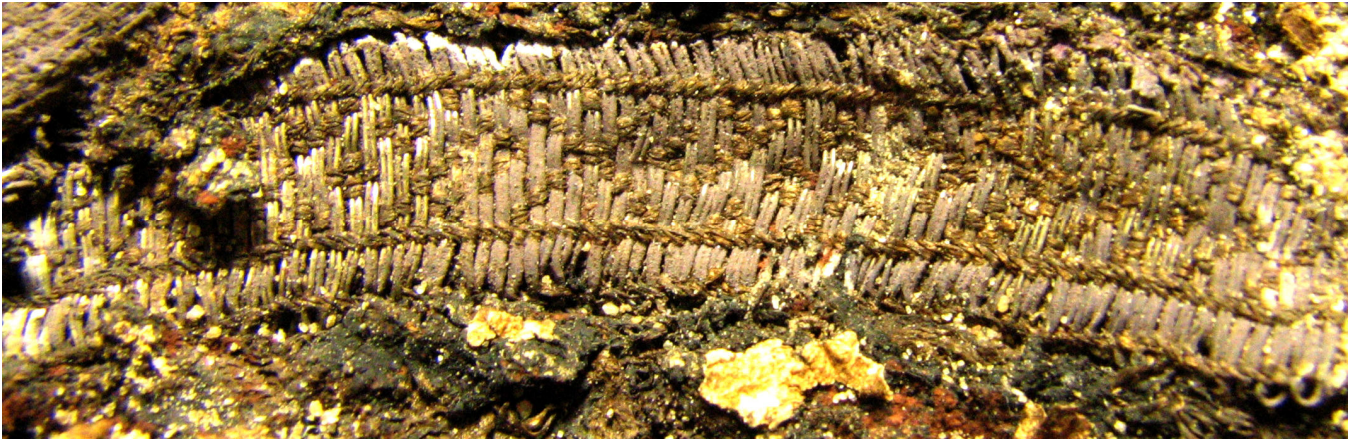


Fig. 2. Tablet-woven band from the grave chamber, Shestovica cemetery, Chernigov, Ukraine (Photo K. Mikhailov).

Based on the position and the character of the finds, it is possible to document two sets of male clothing in the grave. The position of the hat with the silver top and the band fragments suggests that costume parts shifted their position under the hat and the scramasax in the process of body decomposition. The position of garment parts may be explained by a seated or half-seated position of the deceased. The position of the

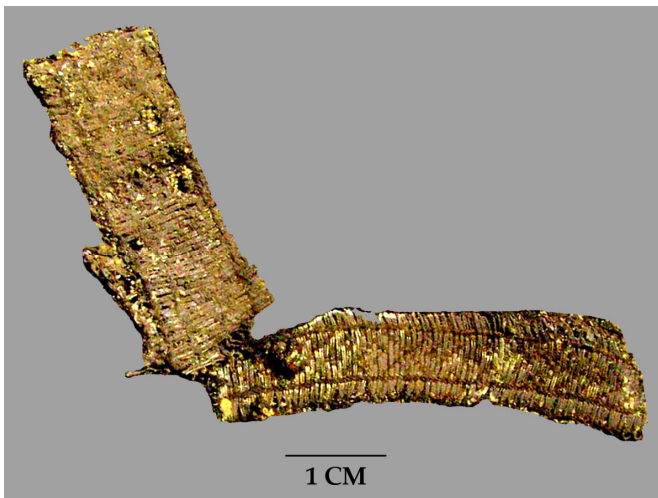


Fig. 3. Tablet-woven band from the grave chamber Shestovica cemetery, Chernigov, Ukraine (Photo K. Mikhailov).

tablet-woven band on the body indicates that it decorated a mantle, which was on the body. Separate concentrations of fur in the soil block suggest that the lining of the garment was made of some type of animal's fur, while the mantle itself was of densely-woven wool. The closest comparisons to the costume decorated with the tablet-woven band are found in Denmark and Sweden. The largest number of burials with

clothing decorated with gold and silver bands (95 finds) is known from Birka (Geijer 1938). Comparisons to such a mantle with tablet-woven edging can also be found in 10th c. AD burials of Hedeby. In contrast to the Shestovica find, in Hedeby the mantles were found in female burial chambers (nos. 188/1960, 2/1963, 5/1964) of the cemetery, located to the south of the city rampart. In two of them, the band length was 63-80 cm, with a width 1.2 cm and thread diameter 0.2-0.8 mm (Hägg 1991, 244-247, Fig. 123). A similar long mantle edged with a silver band was found in the Danish burial at Hørning, dated to the end of the 10th c. AD (Voss 1991, 189-203).

Finds from Pskov, Russia

A new cemetery of Viking Age was discovered by the Russian archaeologists in the centre of Pskov. During 2002-2008, seven chamber graves were investigated, containing burials of men and women. In most of them, remains of a second set of garments were documented next to the body of the deceased (Jakovleva 2004a-c; 2008). They were made of linen, wool, silk and tablet-woven bands with silver thread. In several cases, it was possible to identify the cut of the garments and the colour of the textiles. The chambers also contained furnishings and large objects of organic material. The Pskov archaeologists plan a detailed publication of all the burials in the near future.

It is hoped that future finds of textiles and costumes in Eastern Europe will allow scholars to widen their understanding of Viking Age costume, which at the moment is known mainly from the finds of Birka in Sweden and Hedeby in North Germany.

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Bibliography

Geijer A. (1938) Die Textilfunde aus den Gräbern // Birka III. Uppsala.

Hägg, I. (1991) *Textilfunde aus der Siedlung und aus den Gräbern von Haithabu. Berichte Haithabu* 29. Neumünster.

Ivakin G.Y. (2004) Scandinavian grave finds in Kiev. In *Historiska Nyheter. Specialnummer om Olga & Ingegerd. Statens Historiska Museum 2004-2005*, 50-53. Stockholm.

Jakovleva J.A. (2004a) Камерное захоронение из раскопок в окольном городе Пскова (предварительное сообщение) [Chamber grave from the excavations in the 'roundabout' city of Pskov]. In *XV Конференция по изучению истории, экономики, литературы и языка скандинавских стран и Финляндии. Тезисы докладов (Acts of XV Conference on the study of history, economy, literature and language of Scandinavian countries and Finland)*, part I, 253-255. Moscow.

Jakovleva J.A. (2004b) Охранные раскопки на Старовознесенском раскопе в окольном городе Пскова. Открытие камерного захоронения X в. (Salvage excavations of the Starovoznesenskij trench in the 'roundabout' city of Pskov). In *Археологические открытия 2003 (Archaeological discoveries 2003)*, 77-79. Moscow.

Jakovleva J.A. (2004c) New burial finds in central Pskov from the time of Princess Olga. In *Historiska Nyheter. Specialnummer om Olga & Ingegerd. Statens Historiska Museum 2004-2005*, 18-20. Stockholm.

Jakovleva J.A. (2008) «Камерные» погребения псковского некрополя ("Chamber" graves of Pskov necropolis). In *Труды II (XVIII) Всероссийского археологического съезда в Суздале (Acts of the II (XVIII) Russian Archaeological Congress in Suzdal)*, Vol II, 419-421. Moscow.

Kovalenko, V., Osadchiy, E., and Sitiy, Y. (2007) Нова камерна гробниця з Шестовиці (The new chamber grave in Shestovitsa). In *Археологічні дослідження в Україні 2005-2007 рр. Збірка наукових праць (Archaeological investigations in Ukraine 2005-2007)*, 295-297. Kiev/Zaporozhje.

Mikhailov, K.A. (2007) Описание находок текстиля из погребального комплекса. Шестовица – 2006 Группа курганов VI курган № 2 (Description of textile finds from the burial complex. Shestovitsa 2006, Kurgan group VI, Kurgan 2). In *Археологічні дослідження в Україні 2005-2007 рр. Збірка наукових праць (Archaeological investigations in Ukraine 2005-2007)*, 298-299. Kiev/Zaporozhje.

Movtjan I.I. (2004) Royal guard grave in Kiev (Väringagrav i Kiev). In *Historiska Nyheter. Specialnummer om Olga & Ingegerd. Statens Historiska Museum 2004-2005*, 54-56. Stockholm.

Voss O. (1991) Hørning-graven. En kammergrav fra o. 1000 med kvinde begravet i vognfading. In *Mammen. Jysk Arkæologisk Selskabs Skrifter* 28, Højbjerg.

Zubkova E.S., Orfinskaya O.V, and Mikhailov K.A. (forthcoming) Studies of the Textiles from Excavation of 2006 in Pskov. In E. Andersson Strand, M. Gleba, U. Mannering, C. Munkholt and M. Ringgaard (eds.), *NESAT X. Ancient Textile Series 5*. Oxford, Oxbow Books.

Johanna Banck-Burgess

Textilarchäologie am Landesamt für Denkmalpflege in Esslingen/Baden-Württemberg

Einleitung

Seit dem Frühjahr 2004 hat das Landesamt für Denkmalpflege in Baden-Württemberg (LAD) eine Planstelle für Textilarchäologie. Wie sehr die Notwendigkeit zur Einrichtung einer derartigen Stelle erkannt wurde, zeigt sich darin, daß die Landesregierung in Baden-Württemberg gleichzeitig einen harten Sparkurs fährt, bei dem innerhalb eines Zeitraums von wenigen Jahren 20 Prozent aller Stellen im öffentlichen Dienst gestrichen werden mussten.

Die Anlaufstellen des Landesamtes für Denkmalpflege in Baden-Württemberg sind jeweils den Regierungspräsidien von Stuttgart, Tübingen, Karlsruhe und Freiburg zugeordnet. In Esslingen am Neckar, was zum Regierungspräsidium Stuttgart gehört, befindet sich jedoch zentrale Einrichtungen des LAD, in der unter anderem die Textilarchäologie und umfangreiche Werkstätten der archäologischen Restaurierung beheimatet sind.

In Baden-Württemberg wurden bei einigen Ausgrabungen wiederholt archäologische Textilien gefunden, die Aufsehen erregt haben. So die umfangreichen Sammlungen von Maschenstoffen, Geflechten und anderen Textilien aus neolithischen Feuchtbodensiedlungen am Bodensee (Feldtkeller und Körber-Grohne 1998), der bedeutende Fundkomplex aus dem frühkeltischen Fürstengrab von Eberdingen-Hochdorf (Banck-Burgess 1999) oder die organischen Funde aus dem alamannischen Gräberfeld von Lauchheim (Schiek 1992, Hundt 1992). Herauszuheben ist sicher auch die Arbeit des Archäologen Hans-Jürgen Hundt, der seit den 60' Jahren des 20'ten Jahrhunderts in akribischer Arbeit Textilien aus frühmittelalterlichen Grä-

bern in ganz Deutschland untersucht hat (beispielhaft Hundt 1972 und 2001). Im Schwerpunkt kamen diese Funde aus Reihengräbern in Süddeutschland. Dank verfeinerte Ausgrabungs- und Dokumentationstechniken, die auf der Grabung und bei Blockbergungen zunehmend in den Restaurierungswerkstätten umgesetzt werden, wissen wir, daß sich an den meisten Metallbeigaben in den Gräbern organische Substanz erhalten hat. Mit der Einrichtung einer Planstelle für Textilarchäologie an einer zentralen Stelle der archäologischen Denkmalpflege war primär verbunden, diesem Umstand gerecht zu werden den Stellenwert der Textilien in den archäologischen Hinterlassenschaften stärker zu verdeutlichen.

Die Textilarchäologie am LAD befasst sich im wesentlichen mit drei Aufgabenbereichen. Der erste Bereich beinhaltet den laufenden Fundanfall. Anstoß und Koordination von Textilprojekten umfassen den zweiten und eigene Schwerpunktprojekte, vornehmlich unter dem Aspekt der Grundlagenforschung, umfassen den dritten Aufgabenbereich.

Laufender Fundanfall

Die Bearbeitung des laufenden Fundanfall setzt eine enge Zusammenarbeit mit der archäologischen Restaurierung voraus, da die meisten Textilfunde an Metallobjekten, vorwiegend Grabbeigaben haften, und im an-/korrodierten Zustand vorliegen. Soweit möglich werden diese Funde als Blockbergung geborgen, wobei der Bezug der Funde untereinander lesbar bleibt. Ohne Zweifel stammen die meisten Einzelfunde aus frühmittelalterlichen Gräbern, wobei das gesamte Fundspektrum wesentlich breiter ist und von neolithischen Textilien aus den Seeufersiedlungen am

Bodensee bis zu spätmittelalterlichen Latrinenfunden aus stadttarchäologischen Ausgrabungen reicht (Abb.1).

Zum laufenden Fundanfall gehören auch immer wieder Gräber, deren Befund und Erhaltungszustand so vielversprechend sind, daß sie komplett geborgen werden. Ein Beispiel dafür ist die Blockbergung eines Grabes aus Oberflacht-Seitingen, ein alamannisches Gräberfeld gehört, das für seine herausragenden Erhaltungsbedingungen für organische Funde bekannt ist (Hundt 1992, Schiek 1992). Die Untersuchungen an diesem Befund sind noch nicht abgeschlossen, wobei sich die hohen Erwartungen, die aus textilarchäologischer Sicht mit dem Befund verbunden waren, auf den ersten Blick nicht erfüllten. Nachströmendes, sedimentführendes Wasser, das langsam, in die sich destabilisierende Bettkonstruktion eingeschwemmt wurde, führte zu einer weitgehenden Auflösung und Zersetzung der Textilien, des Leders und anderer organischer Bestandteile. Auf den zweiten Blick bot die Bearbeitung dieses Befundes jedoch nicht nur die Grundlage für unschätzbare Erfahrungen bei der interdisziplinären Zusammenarbeit, sondern auch die Möglichkeit neue Wege in der textilarchäologischen Bearbeitung bei stark zersetzter Organik zu gehen (Abb.2).

Koordination von Textilprojekten und Impulse Neolithische Textilien aus den Siedlungsschichten von Hornstaad (Kreis Konstanz)

Derzeit laufen zwei Textilprojekte, die von der Textilarchäologie des LAD koordiniert werden. Ein Projekt, das schon lange auf seinen Start wartete und 2006 endlich an den Start ging, war die Aufnahme des gesamten Textilkomplexes aus den neolithischen Siedlungsschichten von Hornstaad am Bodensee. Sie wird von Aenne Schwörbel am Institut für Ur- und Frühgeschichte und Mittelalterlicher Archäologie in Freiburg durchgeführt. Die Funde stammen aus Grabungen, die in den zwei letzten Jahrzehnten des 20'ten Jahrhunderts durchgeführt wurden und an denen archäologische und naturwissenschaftliche Fachrichtungen gleichermaßen beteiligt waren (beispielhaft Schlichterle 1997). Bemerkenswert ist nicht nur die Zeitstellung dieser Funde. Im Gegensatz zu den meisten archäologischen Textilfunden handelt es sich um Siedlungsfunde, die aus einem „alltäglichen Kontext“ stammen. Der Fundkomplex zeigt eine erstaunliche Breite unterschiedlicher Herstellungstechniken und eine gezielte Auswahl von Textilfasern, die in den nachfolgenden Kulturen der Ur- und Frühgeschichte gar nicht mehr oder nur vereinzelt dokumentiert wer-

den können (Feldtkeller und Körber-Grohne 1998), was jedoch primär mit der einseitigen Befundsituation, als Grabfunde, zusammenhängt. Im Gegensatz zu den Grabfunden ist bei den Hornstaader Textilien häufig eine klare Funktionszuweisung, als Befestigungsmaterial, Fischernetz, Reuse, Behältnis oder Sieb möglich. Die Auswertung dieses Fundkomplexes wird ein wichtiger Grundpfeiler in der kulturhistorischen Beurteilung der neolithischen Siedlungsgemeinschaften von Hornstaad bilden.

Spätmittelalterliche Latrinenfunde

Das zweite Textilprojekt stammt chronologisch betrachtet vom anderen Ende in der Palette archäologischer Textilien. Im Gegensatz zum norddeutschen Raum, wo Textilien aus spätmittelalterlichen Latrinenfunden, wie z.B. aus Lübeck, schon seit geraumer Zeit unter verschiedenen Aspekten untersucht wurden (Tidow 1992), haben die entsprechenden Funde in Baden-Württemberg bisher wenig Aufmerksamkeit erfahren. Dabei ist die Menge an Funden und ihr Erhaltungszustand durchaus beachtlich. Bei dem Fundkomplex aus Latrinenfunden vom Kornmarkt aus Heidelberg, deren herstellungstechnische Fundaufnahme 2007 abgeschlossen wurde, handelt es sich um 2698 Textilfragmente. Dass sich die Textilarchäologen bisher relativ wenig damit befasst haben, liegt sicherlich auch daran, daß es aus diesem Zeithorizont gut erhaltene Textilien und Kleidungsstücke aus Gruften und anderen Befunden vorliegen, deren Auswertung jedoch mit ganz anderen Fragestellungen einhergeht. Die Menge der Latrinenfunde bietet eine hervorragende Basis für herstellungstechnische Untersuchungen. Darüber hinaus geben die Latrinenfunde spannende Details über das unmittelbare Umfeld. In Freiburg, wo die Funde aus einer Latrinengrube des Augustinereremiten Klosters stammen, können die Reste einer Werkstatt angesprochen werden, in der Ausbesserungs- und Änderungsarbeiten stattfinden. Hier bestätigen sich die Angaben aus den schriftlichen Quellen, dass das Anfertigen neuer Kleidung bestimmten Berufsgruppen vorbehalten war und es eigene Werkstätten gab, die sich ausschließlich mit dem Ausbessern bzw. Ändern alter Kleidung beschäftigten. (Banck 1995) In dem Schwerpunktprojekt über die textilen Latrinenfunde übernimmt Klaus Tidow die Auswertung der herstellungstechnischen Merkmale, wobei er bei der Funderhebung maßgeblich von Dietlind Hachmeister unterstützt wird. Für die anstehende Befundauswertung der Funde und eine ebenso wichtige Funktionsanalyse, wozu die Untersuchung von

Verarbeitungsspuren, wie Nähte und Säume, und die Analyse kleidungsrelevanter Merkmale gehören, werden noch Bearbeiter/innen gesucht.

Impulse

In den Anhang verbannt, bleiben viele textilarchäologische Untersuchungen bei der kulturhistorischen Beurteilung des Gesamtbefundes außer Acht. Abgesehen von spektakulären Einzelfunden gehört es zu den Ausnahmen, wenn bei der Bearbeitung eines Fundkomplexes die archäologischen und textilarchäologischen Komponenten gleichzeitig untersucht werden. Bedenkt man die Fragil- und Unscheinbarkeit organischer Funde, verbunden mit dem Wissen, daß der Fund ohne genaue Befundbeobachtungen einen wesentlichen Teil seiner Aussage verliert, erscheint es nahe liegend, daß die Auswertung von Gräberfeldern mit einem reichen Bestand organischer Funde, Hand in Hand mit der archäologischen Auswertung gehen sollte. Bei der Bearbeitung des alamannischen Gräberfeldes von Lauchheim, dem größten frühmittelalterlichen Gräberfeld in Südwestdeutschland, konnte dieser Ansatz umgesetzt werden. 2008 ging die Bearbeitung mit einem Pilotprojekt der Deutschen Forschungsgemeinschaft am LAD in Esslingen an den Start, durchgeführt von einem Team, daß gleichermaßen aus zwei Restauratoren, einer Archäologin und einer Textilarchäologin besteht.

Eigenes Schwerpunktprojekt

Neben dem Anstoß und der Koordination von Textilprojekten verfolgt die Textilarchäologie im Landesamt für Denkmalpflege eigene Schwerpunkte, vornehmlich im Bereich der Grundlagenforschung. Hier geht es zum einen um eine Weiterentwicklung von Präparationsmethoden bei der Freilegung von Fund und Befund und dem verstärkten Einsatz naturwissenschaftlicher Untersuchungsmethoden. Ein zweites Schwerpunktthema befasst sich mit der Kleiderforschung, bei dem vor allen drei Aspekte verstärkt berücksichtigt werden sollen. Im ersten Aspekt geht es um eine kritische Auseinandersetzung mit den Quellen, die zur Rekonstruktion von ur- und frühgeschichtlicher Kleidung herangezogen werden (Abb.3). Daran anschließend wird beim zweiten Aspekt der hohe, häufig unterschätzte Aussagewert der „Überrest-Quellen“ (Primärquellen), d.h. der tatsächlichen Textilfunden stärker herausgestellt. Im dritten Aspekt der Kleiderforschung geht es um das Eröffnen von neuen Ansätzen, anhand derer mehr über die archäologische Kleidung in Erfahrung gebracht werden

kann. Bislang steht das Aussehen archäologischer Kleidung im Mittelpunkt des Interesses, aufgrund dessen häufig Rekonstruktionen angefertigt werden, die einer wissenschaftlichen Grundlage entbehren. Neben dem „Aussehen“ von Kleidung gab es jedoch Aspekte, wie traditionelle Herstellungsverfahren, die bei den Stoffen zwar optisch nicht ins Auge fielen, aber ebenso wichtig für die Wertigkeit bzw. das Selbstverständnis der Kleidung waren. Die genannten Aspekte zur Kleiderforschung sollen anhand eines Beispiels, hier aus dem Bereich „Quellenkritik - bildliche Quellen“, näher ausgeführt werden. Aus der Realienkunde und der Kunstgeschichte ist bekannt, daß es sich bei dargestellten Menschen und ihrer Ausstattung, einschließlich der Bekleidung, nur allzu oft um „inhaltliche Sinnträger“ handelt. Alle Bildträger bzw. Darstellungen, seien es Stellen, Eingravierungen auf keltischen Situlen oder frühmittelalterliche Miniaturen in Psaltern waren mit einer Funktion bzw. mit einem bestimmten Sinngehalt verbunden. Ein Alltagsbezug oder nur ein wirklichkeitstreu abbild herzustellen, war nicht Ziel der Darstellung. Hierin ein Vorbild für Rekonstruktionen zu sehen, muß zumindestens hinterfragt werden. Der Volkskundler W. Brucher kommt sogar zu dem Schluß, daß er für „die Bekleidung der wirklichen Menschen“ das hinzuziehen bestimmter Bildquellen ablehnt, da sie einen „zu schmalen Ausschnitt der kulturellen Ideenwelten“ aufzeigen. (Brucher 1985). Die Quellenkritik benachbarter Disziplinen sollte in der Archäologie mehr berücksichtigt werden, wenn sie für die Rekonstruktion archäologischer Kleidung herangezogen wird. Der Mangel archäologischer Textilien verleitet oft dazu den bildlichen Quellen zu viel Gewicht zu geben. Gut erkennbar ist dies am Beispiel des Frühmittelalters, wo gerne die Miniaturen des Stuttgarter Psalters herangezogen werden, bei dem es sich um eine Handschrift handelt, die zwischen 820 und 830 in der Abtei Saint-Germain-des Prés nahe Paris entstanden ist. Für die Anfertigung dieses karolingerzeitlichen Gebetsbuchs wurde auf Vorlagen zurückgegriffen wurde, deren Wurzeln weit in die Spätantike hineingreifen und damit mindestens vier Jahrhunderte älter sind. Ein/e Kunstgeschichtler/in sucht in der farbenprächtigen und aufwendig dargestellten Bekleidung der abgebildeten Personen sicher keinen malerischen Realismus, sondern erschließt ihren Sinngehalt im Zusammenhang mit dem schriftlichen Kontext d.h. den Gebetstexten und berücksichtigt dabei vor allem die Gesetzmäßigkeiten, die mit der inhaltlichen Tradierung von Bild und Text in derartiger Quellen ver-

bunden ist (Stuttgarter Psalter 1995).

Verantwortung in der Wissensvermittlung

Zu den kurz genannten Aspekten der Kleiderforschung muß jedoch erwähnt werden, daß das LAD primär kein Forschungsinstitut ist und die gesteckten Zielen langfristig verfolgt werden. Dies primär aus der Intension heraus, daß die Bedeutung archäologischer Kleidung völlig unzureichend erforscht ist. Im Widerspruch dazu wird dieses Thema aber aufgrund einer steigenden Nachfrage in Museen und Fachkreisen zunehmend populärwissenschaftlich behandelt, was im Folgenden kurz ausgeführt werden soll. Aufgabe der experimentellen Archäologie ist es, über Versuche der archäologischen Wirklichkeit näher zu kommen, was sich auf die Rekonstruktion einer einzelnen Technik, Gewinnung von Rohstoffen oder eines einzelnen Konstruktionselementes beziehen kann. Diese Versuche müssen auf Ergebnissen bzw. Fragestellungen der archäologischen Forschung basieren. Nur die enge Zusammenarbeit zwischen Archäologie und Experimenteller Archäologie gewährleistet eine gegenseitige Befruchtung, worunter zu verstehen ist, daß dem Archäologen in seiner Interpretation bestimmte Grenzen und Möglichkeiten aufgezeigt werden und die experimentelle Archäologie wiederum den kulturellen Wert dieser Quellen durch die Konzentration auf diese erschließt. Eine Verfremdung bzw. Verflachung tritt dann ein, wenn die Ausgangsdaten bezüglich der Fragestellung ungenau recherchiert sind oder wenn durch gesamthafte Darstellungen die historischen Quellen nicht mehr zum Tragen kommen und nicht mehr erkennbar ist, wo uns historische Zeugnisse vorliegen oder nicht.

Wenn die „Anschaulichkeit“ in der Archäologie im Vordergrund steht, wie es in Museen häufig gewünscht wird, werden daraus populärwissenschaftliche Unterfangen mit historischen Berührungspunkten, ähnlich den zahlreichen Kinderbüchern, die sich mit Römern, Burgen und Rittern beschäftigen. Nur solange eine klare Trennung zwischen Populärwissenschaft und seriöser Wissenschaft gegeben ist, kann dies als Bereicherung für die jeweilige Zielgruppe angesehen werden und wird jeder Bereich seiner Verantwortung in der Wissensvermittlung gerecht.

Frühkeltische Kleiderforschung

Die dargestellten Aspekte zur Kleiderforschung werden ab 2009 im Schwerpunkt an frühkeltischen Textilien durchgeführt. Der herausragende Textilkomplex aus dem Fürstengrab von Eberdingen-Hochdorf,

der im Rahmen einer Dissertation bereits bearbeitet wurde (Banck-Burgess 1999), bietet die Grundlage für weitergehende Forschungen, die sich mit der regionalen, der überregionalen und vor allem der interaktiven Bedeutung von Stoffen bzw. der Kleidung im Kulturtransfer befassen. Dieser Aspekt ist eine wesentliche Ergänzung zu einem laufenden Schwerpunktprojekt der Deutschen Forschungsgemeinschaft, bei dem es um die Frage geht, inwieweit es während der Hallstattzeit in Mitteleuropa stadtartige Machtzentren mit überregionaler Bedeutung gab. (Titel des DFG-Projektes: Frühe Zentralisierungs- und Urbanisierungsprozesse - Zur Genese und Entwicklung 'frühkeltischer Fürstensitze' und ihres territorialen Umlandes“, siehe www.fuerstensitze.de).

Litteratur

Banck, J. (1995) Die Textilfunde. In: Die Latrine des Augustinereremiten-Klosters in Freiburg im Breisgau. *Materialhefte zur Archäologie in Baden-Württemberg*, Heft 31, 267-283. Stuttgart.

Banck-Burgess, J. (1999) *Hochdorf IV, Die Textilfunde aus dem späthallstattzeitlichen Fürstengrab von Eberdingen-Hochdorf (Kr. Ludwigsburg) und weiteren Grabtextilien aus hallstatt- und latènezeitlichen Kulturgruppen*. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg, Bd.70. Stuttgart.

Banck-Burgess, J. (2000) Kleidung. *Reallexikon der Germanischen Altertumskunde*, Bd.16, Berlin 2000, 603-614, bes. 603.

Brücker, W. (1985) Kleidungsforschung aus der Sicht der Volkskunde, in: *Mode-, Tracht-, Regionale Identität. Historische Kleidungsforschung heute. Referate des internationalen Symposiums im Museumsdorf Cloppenburg*, 13-22. Cloppenburg

Feldtkeller, A und Körber-Grohne, U (1998) Pflanzliche Rohmaterialien und Herstellungstechniken der Gewebe, Netze, Geflechte sowie anderer Produkte aus den neolithischen Siedlungen Hornstaad, Wangen, Allensbach und Sipplingen am Bodensee. In: *Siedlungsarchäologie im Alpenvorland V. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg*, Bd.68, 131-242..Stuttgart.

Hundt, H.-J. (1972) Die Textilreste aus dem Reihengräberfriedhof von Donzdorf. In: E.M. Neuffer, *Der Reihengräberfriedhof von Donzdorf (Kr. Göppingen)*. Forsch. U. Ber. Vor- u. Frühgesch. Baden-Württemberg 2, 97ff. Stuttgart.

Hundt, H.-J. (1992) Die Textilreste von Oberflacht. In: S. Schiek, *Das Gräberfeld der Merowingerzeit bei Oberflacht. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* Band 41/1, 105-120. Stuttgart.

Hundt, H.-J. (2001) Die Textilfunde. In: B. Sasse, *Ein frühmittelalterliches Reihengräberfeld bei Eichstetten am Kaiserstuhl. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg* Band 75,, 649f. Stuttgart.

Schiek, S. (1992) *Das Gräberfeld der Merowingerzeit bei*

Oberflacht. Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg Band 41/1. Stuttgart.

Schlichtherle, H., Hrsg. (1997) *Pfahlbauten rund um die Alpen*. Stuttgart.

Stuttgarter Psalter (1995) *Der Stuttgarter Bilderpsalter*: Bibl.Fol.23, Württembergische Landesbibliothek Stuttgart.2 Bde. Bd.II: Untersuchungen. Stuttgart.

Tidow, K. (1992) Die spätmittelalterlichen und frühneuzeitlichen Wollgewebe und andere Textilfunde aus Lübeck. *Lübecker Schriften zur Archäologie und Kulturgeschichte* (LSAK), Bd.22, 237-271. Bonn.

Margarita Gleba

Purpureae Vestes III

13-15 November 2008, Naples, Italy

With its third instalment, the Purpureae Vestes symposium has now established itself as a major forum for scholars investigating aspects of textiles, dyes and their production and use in the ancient Mediterranean area. This year, the conference was generously hosted by the Centre Jean Bérard in Naples, Italy, co-organised together with the Università Federico II di Napoli and Universidad de València. The paper presentations occupied the first two days of the conference. Of particular interest were papers on unpublished material from Italy. Maria Teresa Pappalardo, Natascia Pizzano and Claude Albore Livadie (CNRS, Centre Camille Jullian, Naples) presented results of the ongoing research on the textile tools (including wooden and bone implements) preserved at a unique waterlogged site of Longola di Poggiomarino, which will soon be published. Philippe Borgard, Fabienne Médard and Christophe Moulherat (CNRS) described another ongoing project by the Centre Camille Jullian, investigating textiles, textile tools and production areas of Pompeii. Luigia Melillo (Soprintendenza Napoli e Pompeii) presented some of the textile finds from the Vesuvius area from the collection of the National Museum of Naples, including spectacular knitted silk fragments and numerous gold textiles. The collection of over 150 fragments is currently undergoing analysis and conservation. Vincenza Morizio (Foggia University) spoke about the sources of evidence for textile

production in ancient Daunia, while Elena Di Filippo Balestrazzi (Padova University) addressed the question of purple production in the Venezia area. Angela Caspio and Stefano Musco (Soprintendenza Archeologica di Roma) presented a discovery of a very large fullonica, uncovered during urban excavation for railway construction in Casal Bertone area of Rome. Miko Flohr (Radboud University Nijmegen) argued that commercial fullonicae of Pompeii present more evidence for the patterns of consumption rather than production, especially in comparison to much larger fullonicae of Ostia. Margarita Gleba spoke about textile production in pre-Roman Italy.

Areas of the Mediterranean outside Italy were also amply represented. Ricardo González Villaescusa (Université de Reims) discussed the role of Reims (*Durocortorum*) in textile production of Gallia Belgica. Carmen Alfaro Giner (Universidad de València) gave an overview of the economic role of textile production in Saetabis. Hero Granger-Taylor (UK) and Dominique Cardon (CNRS) spoke about the textile finds from Didymoi in Egypt, including the ways of identifying the garments from fragments and the evidence for change in tunic style and construction over time. Lilian Karali and Dora Constantinidis (University of Athens) presented a proposal for a survey of East Mediterranean Murex heaps using GIS. Youlie Spantidaki and Christophe Moulherat (ARTEX, Athens) dis-

cussed purple-dyed textile remains from ancient Greece. Kordula Gostenčnik (Magdalensberg Project) gave an overview of evidence for textile production from the Roman town at Magdalensberg, focusing on tools. John Peter and Felicity Wild (University of Manchester) discussed textile production at Vindolanda. The paper by Ivan Radman-Livaja (Archaeological Museum of Zagreb) dealt with an important collection of lead tags of Siscia.

In addition to the papers, nine posters were presented, topics ranging from amphorae used for alum transport (Stefania de Majo, Pisa), to colour spectrometry as a non-destructive method of dye analysis (Robert

Fuchs, Annette Paetz gen. Schieck and Sylvia Mitschke, Mannheim), to new textile finds from Fag-el-Gamus in the Egyptian Fayum (Kristin South, USA).

The last day of the conference, the participants were taken by a bus to Pompeii, where experimental dyeing took place in a vat reconstructed inside one of the ancient dyeing shops (V I, 4). The efficient and high quality publication of the proceedings by Carmen Alfaro (the *Purpureae Vestes II* volume was presented at the conference) has guaranteed not only a quick dissemination of the results presented but also the success of the conferences. We look forward to the third volume and the next conference!

Marianne Vedeler

Workshop on the textiles from Oseberg

20-21 November 2008, The Museum of Cultural History, University of Oslo, Norway

This November, the Museum of Cultural History, University of Oslo invited 19 scholars from 6 countries to have a closer look at the textiles from Oseberg. New archaeological research on the Viking Age will be a priority for the Museum of Cultural History in the years to come. The aim of the workshop was to discuss possibilities for new research on the textiles. The textiles from Oseberg have been known for over a hundred years. One day in August 1903, a farmer named Knut Rom came to the museum to report that he had found a Viking ship on his farm. This was the start of the fantastic history of the Oseberg find in Norway. The grave, in which two women were buried, contained among other finds a great variety of textiles and textile tools. The first catalogue of the Oseberg textile collection has recently been published (see

review in *ATN* 46, 30) and provides a new generation of textile researchers with a starting point for new research. The workshop started with a tour of the Viking Ship Museum guided by Jan Bill. This was followed by lectures on the research history of the Oseberg textiles by Lise Bender Jørgensen and on conservational challenges to research on the textiles by conservator Margunn Veseth. Then it was time to study a representative selection of the textiles themselves. The workshop continued the day after by dividing the participants into four groups and discussing how to reach a common platform for further research on the collection. This section was followed by a short presentation by each of the groups. The result turned out to be very interesting. Some of the groups primarily discussed basic questions concerning public and scientific

agenda, while others discussed the potential for specific analytical methods such as DNA analysis, isotopic tracing or digital reconstruction. One of the perspectives discussed was the social and cosmological basis for the production and use of the textiles, and their role in the funerary ritual, providing a starting

point for further research. In this perspective, identity studies and studies on provenience will be important. The workshop was very fruitful and will hopefully provide a platform for a new interdisciplinary research project on the Oseberg collection.

Eva Andersson Strand

Experimental Archaeology Research – new Approaches

**1-3 October 2008, Jamtli Museum,
Östersund, Sweden**

Experimental archaeology is often used in textile research and has recently been gaining interest among the university educators and students. The focus of the workshop organised in October in Östersund was on the latest developments in the field of experimental archaeology, both theoretical and practical. It was also discussed how experimental archaeology can develop further and how it can contribute to archaeological theory building. The participants agreed that a combination of craft knowledge with experimental archaeology has already proven to be an important method that allows new interpretations and gives new perspectives on the archaeologically invisible aspects of ancient societies. However, it is important to discuss not only the potential of the method, but also its limitations.

Another important topic is the differentiation between experience and experimental archaeology. Scholars have tested traditional textile techniques and tools to find out if and how they could be used. This acquired experience and knowledge has given information and insights, on which research builds but they often need to be addressed more source-critically.

Nineteenth and twentieth century ethnographic studies of textile craft have played a vital role for the understanding of ancient spinning and weaving techniques and the revitalisation of ancient textile technol-

ogy. Experimental archaeology traditionally drew extensively on the use of ethnographic parallels. However, in my opinion, the tests were neither controlled nor conducted with the aim to interpret the textile production of the past. Furthermore, it is important to relate the results from an experiment to the archaeological context. It is not only the results of an experiment that are interesting: how these results may be used and interpreted in an archaeological context is also of the highest importance.

Finally, the use of experimental archaeology in museums, especially in open air museums was also discussed. Unfortunately, there is still a tendency to mix experimental archaeology with experience archaeology and sometimes pure guessing. Reconstructions of archaeological artefacts are not always based on scientific research, although they are presented to the public as objects produced exactly the same way as they would have been 1000 or 2000 years ago. It is very costly to produce, for example, a costume as an exact replica and other solutions may fulfil the purpose in a very good way. A copy of an artefact does not necessarily have to be an outcome of an experiment and/or produced the same way its original was, in order to be suitable in an exhibition or in an open air museum. It is important, however, not to mix experimental archaeology with reconstructions of artefacts

for an exhibition. When using copies/reconstructions in a exhibition, it is also essential to explain to the public how the reconstructions are made, and that the knowledge of the public should never be underestimated.

For the abstracts of papers, consult <http://ctr.hum.ku.dk/conferences/>

Margarita Gleba

Dyes in History and Archaeology 27

8-11 October 2008, Istanbul, Turkey

The 27th Meeting of Dyes in History and Archaeology (DHA) took place in October 2008 in Istanbul, Turkey, hosted by the Marmara University. DHA, an international group of experts with multi-disciplinary background, meets every year since 1982 to discuss chemical, analytical, biological, historical and technological aspects of natural and synthetic dyestuffs. This year, over 30 papers and 21 posters were presented ranging in subject from discussions of particular dyestuffs to overviews of early synthetic dyes. While some of the

participants dealt with the historical and archaeological issues related to dyes, the majority of the presentations were quite technical, making the non-chemists in the audience wish that in the future there should be more presentations relevant to the topic of the meeting.

More information on this and the preceding DHA meetings and publications can be found at <http://www.chriscooksey.demon.co.uk/dha/meetings.html>

Recent Publications

Ursprünge der Seidenstraße: Sensationelle Neufunde aus Xinjiang, China, edited by Alfred Wiczorek and Christoph Lind. Stuttgart, Theiss, 2007 (in German) ISBN 978-3-8062-2160-2

Sie ist die älteste Handelsverbindung der Welt – die legendäre Seidenstraße. Bereits seit der Bronzezeit – vor etwa 4000 Jahren – trieben die Menschen hier lebhaften Handel. Die besonderen klimatischen Bedingungen in der extrem trockenen Taklamakan, jener berühmten Sandwüste im Tarimbecken, haben uns sensationell gut erhaltene Funde überliefert. Walnüsse und Hirseplätzchen, die aussehen, als hätte man sie

eben erst als Grabbeigaben niedergelegt, Textilien, deren Farben kräftig leuchten, und mumifizierte Tote faszinieren uns. Niemals zuvor sah man außerhalb Chinas eine solch umfangreiche Präsentation eindrucksvoller Fundobjekte, die von den weit reichenden kulturellen Beziehungen der Bewohner entlang der Seidenstraße zeugen. Das zeitliche Spektrum der Funde reicht von der Bronzezeit bis ins sechste nachchristliche Jahrhundert. Der umfangreich bebilderte Begleitband vertieft anschaulich die zentralen Themen der Ausstellung.

Price Euro 34.90 <http://www.theiss.de/>

***Antike Musterblätter : Wirkkartons Aus Dem Spätantiken Und Frühbyzantinischen Ägypten*, by Annemarie Stauffer. Spätantike Frühes Christentum Byzanz Reihe A: Grundlagen und Monumente Band 15. Wiesbaden, Reichert Verlag, 2008 (in German)**
ISBN 978-3-89500-584-8

The use of models and pattern sheets in Antiquity is still much discussed among scholars. While lost for other works of art, a considerable number painted on papyrus and used in textile work shops has been found in Egypt. The publication emerges from a detailed study of these models with special focus on common characteristics of the patterns as well as on workshop practices transferring the information on papyrus to woven textiles. In the second part the model sheets are compared with woven textiles thus making evident the way of transformation from model to textile. The publication is not restricted to textile specialists only but touches questions of archaeology, art history and economic history as well.

Price Euro 138.00

<http://www.reichertverlag.de/default.asp>

***Textile Production in Pre-Roman Italy*, by Margarita Gleba. Ancient Textiles Series 4. Oxford, Oxbow Books, 2008 (in English)**

ISBN 978-1-84217-330-5

Older than both ceramics and metallurgy, textile production is a technology which reveals much about prehistoric social and economic development. This book examines the archaeological evidence for textile production in Italy from the transition between the Bronze Age and Early Iron Ages until the Roman expansion (1000-400 BCE), and sheds light on both the process of technological development and the emergence of large urban centres with specialised crafts. Margarita Gleba begins with an overview of the prehistoric Apennine peninsula, which featured cultures such as the Villanovans and the Etruscans, and was connected through colonisation and trade with the other parts of the Mediterranean. She then focuses on the textiles themselves: their appearance in written and iconographic sources, the fibres and dyes employed, how they were produced and what they were used for: we learn, for instance, of the linen used in sails and rigging on Etruscan ships, and of the complex looms needed to produce twill. Featuring a comprehensive analysis of textile remains and textile tools from the period, the book recovers information about

funerary ritual, the sexual differentiation of labour (the spinners and weavers were usually women) and the important role the exchange of luxury textiles played in the emergence of an elite. Textile production played a part in ancient Italian society's change from an egalitarian to an aristocratic social structure, and in the emergence of complex urban communities.

Price GB £35.00 <http://www.oxbowbooks.com/bookinfo.cfm/ID/83798/Location/Oxbow>

***Essai sur le tissage en Mésopotamie - Des premières communautés sédentaires au milieu du IIIe millénaire avant J-C*, by Catherine Breniquet. Paris, De Boccard, 2008 (in French)**

ISBN 978-2-7018-0235-0

Cet ouvrage présente une synthèse sur le tissage en Mésopotamie articulée autour de plusieurs axes complémentaires : - un recensement critique des attestations archéologiques (tissus, matériel et installations liées au traitement du fil), - l'actualisation des problématiques relatives aux fibres textiles et à leur exploitation, - les modalités d'apparition et d'évolution des techniques traditionnelles de filage et de tissage, liées à l'émergence d'un artisanat spécialisé, - la recherche d'attestations iconographiques de ces activités dans les arts figuratifs par le biais de l'ethnoarchéologie et de comparaisons argumentées avec d'autres représentations antiques, - une mise en perspective économique, sociale et symbolique de l'activité. L'ouvrage, entièrement inédit, renouvelle les acquis et les problématiques de façon originale en réconciliant des sources diverses en conflit. Écrit par une archéologue, il ambitionne aussi de s'inscrire dans des perspectives plus amples, de manière à dépasser les contraintes inhérentes à la documentation initiale et à toucher un public plus large.

Price Euro 64.00

<http://www.deboccard.com/anglais/Rub/Nouv.htm>

***Textile Manufacture in the Northern Roman Provinces* by John Peter Wild. Cambridge, Cambridge University Press, 1970 (in English)**

The much coveted detailed account of the archaeological and literary evidence for textile manufacture in the northern and western Roman provinces will soon be reprinted by Cambridge University Press.

Price GB £20.00

Textilien, Wolle, Schafe der Eisenzeit in der Schweiz, by Antoinette Rast-Eicher. **Antiqua 44, Basel, Archäologie Schweiz, 2008 (in German)**

ISBN 978-3-908006-36-7

Textiles have been a central cultural element ever since the Late Stone Age. However, they are among the rarest remains from Swiss prehistory and, to date, have only been found in fragments. Yet, the author has discovered the tiniest of remnants on Iron Age metal objects from graves – brooches, weapons and tools – and, by analysing these under a scanning electron microscope, has been able to make them talk. Firstly, A. Rast-Eicher identifies the fibres used – both wool and plant fibres. Then, she proves that textiles do not always represent clothes but were also used as shrouds or wrapping for grave goods. A further strand of the work is the analysis of the wool measurements. It is shown that as early as the Hallstatt period, sorted wool was used in the manufacture of textiles. The sheep bred at the end of the Celtic period, in the late 1st century BC, clearly had finer wool than those kept in the preceding centuries. Finally, the author puts forward a new method of interpreting wool measurements based on proportions of particular fibre thicknesses.

Price CHF 65.00 <http://www.archaeologie-schweiz.ch/de/publikationen.htm>

Review by Sylvia Mitschke

Textiltechnik im Alten Orient, by Elisabeth Völling. **Würzburg, Ergon, 2008 (in German)**

ISBN 978-3899134728

Dr. Elisabeth Völling, Assistentin am Lehrstuhl für Klassische Archäologie an der Julius-Maximilian-Universität in Würzburg hat ihre 2004 vorgelegte Dissertation zum Thema der „Textiltechnik im Alten Orient“ nun im Ergon-Verlag 2008 überarbeitet publiziert. Die Arbeit gliedert sich sehr übersichtlich in drei Teile, einem Kapitel zur Textiltechnik, einem Katalog zum textilarchäologischen Fundmaterial und einem Anhang mit der Erläuterung textiltechnischer Grundbegriffe:

Im ersten Teil gibt die Autorin zunächst den obligatorischen Überblick zum Stand der Forschung, wobei sie sowohl schriftliche als auch bildliche Quellen berücksichtigt. Großen Raum lässt sie hier und auch im Weiteren der experimentellen Archäologie sowie der Entwicklung ethnografischer Analogien. Danach widmet sie sich der Erläuterung der verschiedenen Bedingungen, die zur Erhaltung von Textilien beitragen und gibt Vorschläge zur Behandlung von Textilien wäh-

rend und nach der Bergung. Des Weiteren bespricht sie die verschiedenen möglichen textilen Rohstoffe, Methoden zu ihrer Bestimmung sowie Fragen ihrer Weiterverarbeitung und Verwendung. Das erste Kapitel schließt mit einem eigenen Beitrag zu Teppichen des Alten Orients. Der Katalog listet, getrennt nach den Textilfunden und den zu ihrer Herstellung benötigten Geräten, sehr umfänglich das archäologische Fundmaterial auf. Der letzte Teil liefert für den Leser ohne textiles Vorwissen überblicksartig Grundlagen zur Gewinnung textiler Rohstoffe und deren Weiterverarbeitung.

„Endlich!“, möchte man ausrufen, hat sich jemand die Mühe gemacht, all die versprengt publizierten, aber für das Verstehen der Entwicklung der textilen Techniken so eminent wichtigen Fundkomplexe aus dem Alten Orient zusammenzutragen, wo nach dem bisherigen Kenntnisstand die Domestikation und Kultivierung textiler Rohstoffe ihren Anfang nahmen. Leider kommt jedoch die Qualität der Abbildungen dem leichten Schauer, der den der Geburtsstunde des Textilen beiwohnenden Leser überkommt, nicht recht entgegen. Zudem mag der Nicht-Altorientalist dabei eine anschauliche Gesamtübersicht zur Geographie und Chronologie der Fundorte vermissen.

Allerdings hat auch die offenbar rein auf Literaturbasis angefertigte Zusammenstellung ihre Tücken. Sie erscheint, wie z.B. bei der Vorstellung der Rohstoffe zur Textilherstellung, nicht nur redaktionell flüchtig und gelegentlich auch wenig kritisch: so stehen etwa naturwissenschaftliche Analyseergebnisse aus dem beginnenden 20sten Jh. gleichberechtigt neben den Resultaten neuerer Forschung. Dabei wird auch die Grundlage für die eingesetzte Terminologie zur Textiltechnik nicht immer ganz klar. Die Autorin orientiert sich trotz ihrer eingangs erwähnten Ausbildung zur textiltechnischen Assistentin nicht an den gängigen Standards, wie sie z.B. durch Annemarie Seiler-Baldinger niedergelegt und definiert wurden. So bleiben die verwendeten Begrifflichkeiten häufig unscharf. Das schränkt auch die an sich gute Idee des textilkundlichen Anhangs in ihrer Verwendbarkeit ein – zumal wenn zum Teil veraltetes Lexikonwissen ohne Bezug zur Fragestellung referiert wird. Eine einheitliche, bestenfalls mehrsprachig angelegte Textilterminologie bleibt weiterhin ein Desiderat.

Außerordentlich gelungen sind dagegen die ausgesprochenen Empfehlungen zur Restaurierung und Konservierung archäologischer Textilien, die, nicht zuletzt durch den persönlichen Austausch der Autorin mit N. Reifarth, den aktuellen Kenntnisstand gut und

richtig darstellt. Es bleibt zu hoffen, dass viele Archäologen sich daran orientieren. Die Auswertungen stellen das archäologische Fundmaterial übersichtlich tabellarisch zusammen, auch wenn dessen insgesamt zahlenmäßige Begrenzung die Autorin dabei manchmal zu sehr weit reichenden Analogieschlüssen bis nach Peru oder in die Damastweberei der Nieder- und Oberlausitz zwingt. Dabei bleibt aber auch noch genügend Raum für die Betrachtung relevanter Einzelfragen, so zum Beispiel zur Deutung des in der sumerischen Kultur häufig dargestellten sog. Zottengewands. Die auf die Forschungsgeschichte des Fachs begründeten Schlussfolgerungen, die von der Darstellung von Textilien auf das verwendete Material gezogen werden, sind allerdings für den dort nicht bewan-

derten Leser nicht immer nachvollziehbar.

Der systematische Ansatz der Studie führt auch zum grundsätzlichen Überdenken einzelner Fundgattungen. Die Überlegungen zur Neudeutung eines babylonischen Zepters als Rocken oder zur differenzierten Betrachtung von Spinnwirteln sollten als Anregung für künftige Projekte in der experimentellen Archäologie dienen. Die verdienstvolle Arbeit der Erstellung des Katalogs ermöglicht erstmals den schnellen Zugriff auf das textilarchäologische Fundmaterial des Alten Orients und stellt gleichzeitig die relevante Literatur zusammen.

So macht die Publikation Lust auf mehr Forschung und dafür bietet die Arbeit eine gute Ausgangsbasis! Price Euro 68.00 <http://www.ergon-verlag.de/en/>

Rolf Haubrichs

Announcement: Tyrian purple database on the web

A new web page about the famous Tyrian purple dye will be available at the beginning of 2009. The aim is to provide to the scholars and scientific community a reliable starting place for research about this dye. First, a searchable database of pertinent multilingual literature will be presented. More than two thousand references will provide a multidisciplinary approach to purple and related subjects. A special attention is given to the biological, chemical, ethnographical, historical and malacological literature. Hundreds of copyright free publications will be available to download as PDF documents. In particular, old monographs on purple, like Colonna's *Opusculum de Purpura* (1675), Canals y Martí's *Memorias sobre la Púrpura de los Antiguos* (1779), Rosa's *Dell Porpore* (1786) and

Dedekind's monumental *Ein Beitrag zur Purpurkunde* (1898-1911) will be online, with the complete alphabetical and chronological registers. In the second step, another database will gather old artefacts like ceramics, paintings or textiles where genuine Tyrian purple was identified through analyses. The worldwide distribution of *Muricidae* shells and shell remains will also be available.

The relevant iconographical documentation will be progressively added allowing virtual visits to famous ancient places where purple has been processed or remains discovered.

Historical facts and biographies of scholars who investigated purple will complete this new resource.

The internet page will be hosted at www.porphyra.net

Dissertations

Katrin Kania has been awarded a doctorate at the Otto-Friedrich-Universität Bamberg, Germany, for her work: *Konstruktion und Nähtechnik mittelalterlicher weltlicher Kleidung* (2008)

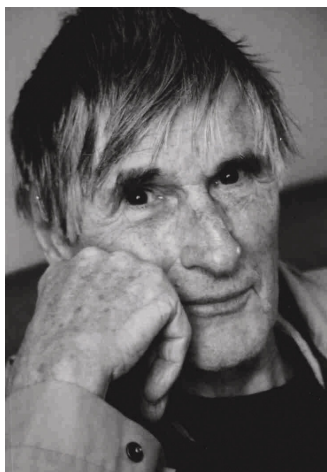
Ana Zanchi has been awarded a doctorate at the University College London, Department of Scandinavian Studies, for her work: *Dress in the Íslendingasögur and Íslendingaþættir* (2007)

Ruth Iren Øien has been awarded an MA at the University of Oslo, Norway, for her thesis: *Fra tekstilfragment til drakt. - Analyse og funksjonsbestemelse av vevde tekstiler fra middelalderens Trondheim* (2007)

Marina Fischer has been awarded an MA at the Calgary University, Canada, for her thesis: *The Prostitute and Her Headdress: the Mitra, Sakkos and Kekryphalos in Attic Red-figure Vase-painting ca. 550-450 BCE* (2008) <https://dspace.ucalgary.ca/handle/1880/46383>

John Peter Wild

Obituary: Peter Collingwood



Peter Collingwood has died aged 86.

Peter Collingwood was the pre-eminent British artist weaver of the past 50 years. His technical and aesthetic innovations have been appreciated around the world. A master craftsman and the author of several works on weaving, his work as a teacher and his generous spirit had a profound and lasting impact

on generations of students.

Qualifying as a doctor in 1946, Peter Collingwood abandoned medicine in 1950. He then trained in the workshops of Ethel Mairet, Barbara Sawyer and Alastair Morton. In 1952 he set up his own workshop in London, subsequently at Digswell House and then in Nayland, Suffolk. From 1954 onwards he taught at various London art schools, and from 1962 he began annual teaching visits to the USA.. Solo exhibitions of his work have been held in the UK, USA, Norway, Denmark, Sweden, Australia, New Zealand and Ja-

pan. His numerous commissions have been mainly for domestic pieces, but since 1990 he has worked on twenty-five large rugs and hangings for public places, most recently a 5 x 8 metre three-dimensional stainless steel piece for Kiryu, Japan. He was awarded the OBE in 1974.

Collingwood wrote six highly influential books of which the first is on Techniques of Rug Weaving (1968). Within the field of textile archaeology his book The Techniques of Sprang (1974) and The Techniques of Tablet Weaving (1982) are probably the best known. His personal favourite - and the one that gives the most insight into his inquiring mind - was The Maker's Hand: A Close Look at Textile Structures (1988), in which he analyses, with diagrams and photographs, 100 woven structures from around the world. Other books are Rug Weaving Techniques: Beyond the Basics (1991), and The Techniques of Ply-split Braiding (1998).

He was a member of the Early Textiles Study Group in the UK; for he had a very early interest in Neolithic textiles, and his major opera on sprang, tablet-weaving and ply-split weaving have an archaeological and ethnographic dimension. He was a national - and international - institution, and will be sorely missed.

Textile Calendar

December 2008 – June 2009

10 December 2008 - 29 March 2009: Magnificence of the Tsars, Victoria and Albert Museum, London, UK
http://www.vam.ac.uk/exhibitions/future_exhibs/tsars/index.html

19 January – 19 March 2009: Hautnah – Römische Stoffe aus Mainz, Mainzer Volksbank, Neubrunnen Platz, 55116 Mainz, Germany

31 December 2008: Lejre Research Grants deadline:
<http://www.lejre-center.dk/RESEARCH-GRANT.206.0.html>

5-8 March 2009: Textile Terminology in the 3rd and 2nd millennia BC, Copenhagen, Denmark
<http://ctr.hum.ku.dk/upload/application/pdf/f51d6748/web%20site%20text.pdf>

April-September 2009: Exhibition: The Merovingian graves finds from the basilica of St-Denis/Paris, Musée d'Antiquités Nationales in St.Germain-en-Laye, Paris, France
www.musee-antiquitesnationales.fr

September 2009: European Association of Archaeologists, Riva del Garda, Italy
<http://e-a-a.org/2009.htm>

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:

Archaeological Textiles Newsletter
Centre for Textile Research
University of Copenhagen

Njalsgade 102
DK-2300 Copenhagen S
Denmark

Or by electronic mail to the corresponding editor:

Margarita Gleba: margarita@atnfriends.com

Or to editors:

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Ulla Mannering: ulla@atnfriends.com

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