

BOOK REVIEWS

Susanna Harris

Institute of Archaeology, UCL

Review of:

Bichler, P., Grömer, K., Hofmann-de Keijzer, R., Kern, A. and Reschreiter, H. (eds.) 2005. *Hallstatt Textiles: Technical Analysis, Scientific Investigation and Experiment on Iron Age Textiles*. BAR (International Series) 1351. Oxford: Archaeopress. 189 pages, 20 colour plates. ISBN 1841716979. Paperback £39.00.

This book constitutes the conference proceedings of the first Symposium of Hallstatt textiles. It contains 17 papers by 19 researchers, presenting current studies on the textiles from the Hallstatt salt mines, Upper Austria, as well as giving a wider regional and chronological context for textiles in the Alpine region and central Europe. While the title of the book suggests it would mainly be of interest to specialists in the European Iron Age (c.750 BC-AD 15), it also offers a contribution to the study of Bronze Age textiles, including new research on the recently excavated Late Bronze Age textiles from the Hallstatt salt mines (c.1200-750 BC).

The Hallstatt salt mine textiles are one of the most significant collections of prehistoric cloth for several reasons. The salt mines offer an excellent preservation environment for organic material, allowing the preservation of plant fibres (tree bast, linen and hemp), animal fibres (wool), and dyes. Due to minimal post-depositional deterioration, the weave structure and shape of artefacts are also preserved. In addition, their close proximity to the Early Iron Age Hallstatt cemetery, contemporary with a number of excavated chambers in the salt mines, adds to the rich archaeological context of the textile artefacts. Formal excavation of the salt mines began in the 1960s and has since continued on an annual basis. In 1997 the region of Hallstatt was added to the UNESCO World Heritage List.

The first systematic attempt to document the Hallstatt textiles was made by Hans-Jürgen Hundt, who from 1959 to 1987 regularly published his findings in the *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz*. A number of scholars have since contributed to Hundt's research, an account of which is given in Karina Grömer's paper (pp. 17-40). The current book builds on the earlier research, both in quantity and scope, while its publication mainly in English brings the textile finds from the Hallstatt salt mines to a wider audience than the previous work published exclusively in German.

The book is organised into three thematic sections. The first includes seven papers specifically concerned with the Hallstatt cemetery and salt mine sites and the analysis of their textile finds. There are introductory papers to the Hallstatt cemetery by Anton Kern (pp. 1-10), and to the salt mine excavations by the current co-director of excavations Hans Reschreiter (pp. 11-16). Grömer compares the Late Bronze Age and Iron Age textiles of the salt mines (pp. 17-40). Her research reveals that Bronze Age threads and textiles are generally coarser than those of the Iron Age. In addition, the latter also show more evidence of dye and complex weave patterns. Helga Mautendorfer's

research (pp. 41-54) on the analysis of sewing on the Iron Age textiles allows her to suggest some of the garment types to which these fragments may have originally belonged. The dyestuffs of the woollen Iron Age textiles were analysed using chemical and microscopic methods by Regina Hofmann-de Keijzer and co-workers (pp. 55-72), who identified 25 different dyestuffs in 17 samples of thread. This section is concluded by two papers on the conservation of the textiles: a history of conservation treatment and proposed current treatment of the textiles from the salt mine by Michaela Morelli (pp. 73-76), and archive storage methods by Carine Gengler (pp. 77-79).

The second section is dedicated to experimental analysis. Here, several of the authors from the first section consider issues related to their previous papers. Grömer presents experimental results for the method of producing tablet-woven braids (pp. 81-90) and spindle whorls (pp. 107-116), in addition to creating technical replicas of finds from the salt mine and posing questions about time, technique and skills. Based on the dye analysis presented earlier in the book, Anna Hartl and Regina Hofmann-de Keijzer (pp. 91-96) create standardised reproductions of dye methods with plant and insect dyes. Ingird Schierer summarises the results from two long-term projects on weaving and weaving tools (pp. 97-100, 101-105). Her experiments with burning looms down to replicate destruction processes give surprising results for the analysis of weave types from the pattern of fallen loom weights.

The final section contains five papers dedicated to the wider geographic and chronological contexts of textiles in the central European area. Antoinette Rast-Eicher gives an overview of chronological developments and changes in raw materials and construction techniques of textiles from the Neolithic to the Bronze Age, with examples mainly from waterlogged alpine lake-dwellings (pp. 117-131). Lisa Bender Jørgensen continues the chronological theme through the Hallstatt and La Tène periods of Central Europe (Late Bronze Age to Iron Age), including a catalogue of previously unpublished mineral-replaced textiles from central Europe (pp. 133-150). For the first time in English Marta Bazzanella and co-workers present the recently discovered Iron Age leggings and footwear artefacts from the Riesenferner/Vedretta di Ries, Italy (pp. 151-160). These wool and leather artefacts from a frozen context take the discussion south of the Alps, where textile production techniques appear to be very similar to those of contemporary finds north of the Alps.

Thomas Stöllner's contribution on the textiles from the neighbouring Iron Age salt mine at Dürrnberg allows comparison with the Hallstatt finds, and at the same time widens the scope of the discussion to include issues such as specialisation in production and the role of cloth in mining activities (pp. 161-174). This section is concluded by Tereza Belanová's paper on Slovakian and Moravian textiles (pp. 175-189). The preservation of the textiles she analyses is especially intriguing, as she has recovered textile fragments from inside bronze sheet anklets found in female graves. It appears that some of her colleagues were not happy to see the anklets destroyed in search of "tiny scraps of textile" (p.179), but her research is rewarded with a range of embroidered linens.

Many of the papers are presented in English (Rast-Eicher, Bazzanella et al.), some include a short German summary (Hofmann-de Keijzer et al., Hartl and Hofmann-de Keijzer, Schierer, Bender Jørgensen, Stöllner, Belanová), or have both German and English versions (Grömer, Mautendorfer), while Kern's paper is only in German and other papers in German have a summary in English (Reschreiter, Gengler, Morelli). The layout is clear and easy to follow despite the mixture of languages, and all papers are well illustrated throughout in black and white. In addition, there are 20 colour plates at the back of the book, bringing the description and analysis of these patterned, colourful textiles to life.

I have spent some time describing the contents of the papers, as the strength of this book lies in the diversity of analytical techniques, the combined range of evidence from different preservation environments (salt preserved, waterlogged, mineral-replaced and frozen), the depth of chronology and the range of contemporary finds that are brought together. For this reason, while clearly significant for a textile specialist, this book would also be useful as an introduction to textile research for students at Master's degree level. To the period or regional specialist, the papers offer a detailed analysis of the textiles, as well as providing all the necessary bibliographical references.

The weakness of this book, particularly from a British scholar's perspective, is the scant theoretical engagement with the subject of textiles. Research questions remain in the realm of technical analysis, with comments on the social and cultural context of these finds made predominantly as concluding remarks. Such topics may well be beyond the scope of this book, but need to be addressed elsewhere. At a more technical level, unfortunately there is no catalogue of the Hallstatt textiles, which would have been useful. A niggling point, true of many specialist textile publications, is that there is no glossary of textile terms, which may sometimes leave the general reader a little baffled. Despite these criticisms, however, this book deserves to be read widely by students and researchers interested in textiles of the Bronze and Iron Ages in Europe.