



Funerary Textiles

Towards a better method for *in situ* study, retrieval, and conservation

Interdisciplinary workshop

Venue: Online event hosted by the Polish Centre of Mediterranean Archaeology (PCMA), University of Warsaw

Date: 15–16 April 2021

Coordinators: Magdalena M. Woźniak (PCMA) and Elsa Yvanez (PCMA)

Textiles have always played a prominent role in death. They were and continue to be used to hide the body and to re-create it into a “deceased”. This prominent role is well-illustrated in ethnology but often ignored in archaeology. Rarely recorded together *in situ*, textiles are removed from the human remains, stored in different locations, and studied by different specialists. We are thus destroying precious evidence and limiting our understanding of funerary events. How was the body prepared before the funeral? How was it seen and perceived by its relatives and community? What role did textiles play in its metamorphosis into a deceased?

This workshop aims at exploring these questions by bringing a small but highly specialized team of experts from the fields of bioanthropology, archaeology, textile research and conservation. Its first geographical focus will be the ancient Nile Valley (Egypt and Sudan), where climatic conditions permitted the good preservation of textiles and human remains. The second focus will be Europe, with case-studies from Greece, Finland, Poland, Austria, the Iberian peninsula, and elsewhere. Going beyond these geohistorical frameworks, the workshop will strive to build new methods for the study, retrieval and conservation of funerary textiles *in situ* during excavations. We believe that it will provide useful tools for future research in both textile archaeology and bioarchaeology and promote interdisciplinary collaborations for textile scholars.

Free registration via Eventbrite:

<https://www.eventbrite.com/e/funerary-textiles-in-situ-tickets-146833305369>

The lectures will be streamed through Zoom/YouTube. Registered participants will receive the link prior to the event.

This workshop is a collaboration between the PCMA (project *Unravelling Nubian Funerary Practices*, E. Yvanez, PPN/UWM/2020/1/00246) and EuroWeb, CA19131.



General program

Day 1. 15-04-2021. Lectures

- 8.45 - 9.00 Opening of the online platform/meeting
9.00 - 9.10 Welcome and opening statement

Session 1. Textiles and the dead: case-studies from Europe and the Nile Valley

- 9.10 - 9.35 Textiles in the funeral rite of the Wielbark culture
Magdalena Przymorska-Sztuczka (UMK, Nicolaus Copernicus University in Toruń)
- 9.35 - 10.00 Textiles from early medieval settlement in Trzcianka, gm. Janów, Poland
Małgorzata Grupa (UMK, Nicolaus Copernicus University in Toruń)
- 10.00 - 10|25 Silk textiles in funerary liturgical garments in Poland (17th–19th centuries CE)
Dawid Grupa (UMK, Nicolaus Copernicus University in Toruń)
- 10.25 - 10.40 Break
- 10.40 - 11.05 Studying funerary textiles in situ below Finnish church floors: challenges and successful practices
Sanna Lipkin (University of Oulu)
- 11.05 - 11|30 General thoughts on different kinds of functions of textiles in graves. Case-studies from 1000 BCE – 1000 CE in Europe
Karina Grömer (Natural History Museum Vienna)
- 11.30 - 11.55 Two Mycenaean textile imprints from the Tomb XXI at Deiras, Argos (Greece)
Małgorzata Siennicka (Göttingen University)
- 12.00 - 13.00 Lunch break
- 13.00 - 13.25 Wrapping practices in Medieval time. Case-studies from Gebel Adda (Sudan)
Magdalena M. Wozniak (University of Warsaw, PCMA)
- 13.25 - 13.50 Textiles and bones on site. Crypts at kom H in Old Dongola (Sudan) and Cemetery A in Naqlun (Egypt)
Robert Mahler (University of Warsaw, PCMA) & Barbara Czaja (Museum of King Jan III's Palace at Wilanów)



- 13.50 - 14.15 Funerary textiles from burial contexts at Ghazali and Old Dongola, Sudan – A bioarchaeological perspective
Robert Stark & Joanna Ciesielska (University of Warsaw, PCMA)

Session 2. Retrieving the dead and its wrappings: diversity of approaches

- 14.30 - 14.55 Naked graves? Thoughts on the recording and reconstruction of funerary attire in the Early Iron Age of southwestern Iberia
Francisco B. Gomes (University of Lisbon)
- 14.55 - 15.20 Rewinding the thread – archaeology and textile archives from the Scandinavian Joint Expedition to Nubia
Elsa Yvanez (University of Warsaw, PCMA)
- 15.20 - 15.45 Grave concerns: Complexity in documenting and studying ancient Egyptian burials
Iwona Kozieradzka-Ogunmakin (University of Manchester)
- 15.45 - 16.00 Break
- 16.00 - 16.25 Conservation approaches for pyre burial textiles excavated in Greece
Christina Margariti (Directorate of Conservation, Hellenic Ministry of Culture), Stella Spandidaki (Hellenic Centre for Research and Conservation of Archaeological Textiles – ARTEX), Maria Kinti (freelance conservator), Tina Chanialaki (Directorate of Conservation, Hellenic Ministry of Culture)
- 16.25 - 16.50 More information from funerary textiles – sampling for different natural scientific analyses
Luise Ørsted Brandt (University of Copenhagen, Globe Institute)
- 16.50 - 17.15 Introduction to digital recording
Piotr Zakrzewski (University of Warsaw, PCMA)
- 17.15 - 17.30 Closing remarks



Day 2. 16-04-2021. Panel sessions (for panelists only)

8.45-9.00 Opening of the online platform/meeting, presentation of the day's objectives.

Session 3. Panel discussion: Merging our approaches and research questions

9.00 – 11.00 (with break) Participants present their research profile and *in situ* work practices, recording processes, and needs.

11.00 - 12.00 Group discussion: What is working well and what could be improved? What would you like to see happening in the field for a better collaboration? What is needed from your perspective?

12.00 - 13.00 *Lunch*

Session 4. Building a protocol for best practices

13.00 - 16.00 Group work: building a protocol of successive steps for the best possible recording and analyses practices, considering preventive conservation measures & interdisciplinary requirements.

16.00 - 16|25 Final wrap-up and future perspectives

Scientific program of sessions 1 & 2, 15-04-2021

Textiles in the funeral rite of the Wielbark culture

Magdalena Przymorska-Sztuczka (UMK, Nicolaus Copernicus University in Toruń)

Fabrics are quite frequently discovered in the burials of the people of the Wielbark culture. One may wonder what were the functions of those fabrics. Were they parts of clothing or were they exclusively funerary textiles? Usually, fabrics are preserved with metal objects, such as brooches, bracelets or belt buckles. Thanks to the detailed photographic and descriptive documentation prepared before the conservation of metal artefacts, it is possible to determine the location of textile remnants on them. This is important if one wants to recreate the outfit. The textile remnants above the metal objects may be the remains of cloaks or shrouds. On the other hand, the fragments beneath them may be residues of clothing. In some cases, various fabrics were found in layers, which may help in understanding individual parts of an outfit. This paper presents a few examples of textile finds from Wilkowo, Lębork commune, together with an attempt at interpreting their functions.

Textiles from early medieval settlement in Trzcianka, gm. Janów, Poland

Małgorzata Grupa (UMK, Nicolaus Copernicus University in Toruń)

In Poland, past textile production is mainly known from the assemblages from Gdańsk, Wolin, and Opole, and few isolated finds of fabrics soaked with corrosion products and stuck to the surface of metal objects. In this context, the collection of fabrics from Trzcianka is unique, both in terms of textile preservation and of its archaeological discovery. During the examination of the stronghold, a burnt layer was discovered,



from which remains of heavily burnt fabrics were recovered. In some samples, 4 to 11 layers of fabric were recorded, with burnt human bones found between them. Most likely, the textiles belonged to the clothing of the inhabitants, trapped in the settlement while fleeing from the fire that led to the collapse of the wooden structures and to their death.

This exceptional context led to the rare preservation of textile fibres. Microscopic analyses revealed at least three different types of weaves, with a large variety of fabric density, making the collection from Trzcianka a very precious witness of early medieval textile production.

Silk textiles in funerary liturgical garments in Poland (17th–19th centuries CE)

Dawid Grupa (UMK, Nicolaus Copernicus University in Toruń)

In Poland, research in crypts and tombs located under church floors reveals, inter alia, the burials of priests dressed in silk vestments: chasuble, maniple, and stole. Other items of clothing are usually not preserved because they were made of wool and linen fabrics, which, in the present conditions, decompose faster than silk. The remains of silk fabrics show varying qualities and degrees of preservation, as they entered the grave in various stages of reuse and were, at the time of the funeral, already old, damaged, and not used for the liturgical service anymore. In many cases, only the so-called "bald" velvets (where the abrasion of the fleece from the surface is over 90%) are preserved. Some of the fabrics were darned, and larger holes were sewn with patches similar to the original fabric. Other isolated fragments were identical to those used in secular dress, showing the same ornamentation as contemporary men's, women's, or children's dress. Therefore, a good knowledge of tailoring techniques used for all clothing elements during the modern period is essential for this type of analysis.

Studying funerary textiles *in situ* below Finnish church floors: challenges and successful practices

Sanna Lipkin (University of Oulu)

In Finland, especially those of the higher classes (but also peasants) were buried below church floors starting from the late middle ages until the early 19th century. Because of the freezing winters, well-ventilated environment, and suitable humidity, some of the human remains have mummified. Fabrics inside the coffins are exceptionally well-preserved both on mummified and skeletonized remains. Research on these funerary textiles is challenging because the space below the floors is shallow and lighting is poor. Sometimes, chambers are crowded with coffins. The coffins and the remains are also subject to many laws that regulate their research, sampling, and relocation even for a short term. Even though some of the coffins have been CT-scanned, most of the coffins need to be studied *in situ*. This presentation evaluates CT-scanning as a methodology of studying coffins and associated textiles as well as presents the documentation and sampling methods used to study funerary textiles.

General thoughts on different kinds of functions of textiles in graves. Case-studies from 1000 BCE - 1000 CE in Europe

Karina Grömer (Natural History Museum Vienna)

Contextual analysis is essential for our understanding of the function a specific textile had in a grave. The ritual sphere is the one that is usually discussed very broadly. Textiles in graves served as garments for the deceased, as coverings or wrappings; textiles were also laid down in graves as burial gifts and grave goods. All of this had symbolism and meaning – that has to be understood and discussed due to what we know about burial rites and the ritual background within a certain time period and region.



Textiles which were used as clothing for the dead or as grave decoration, might also be placed in the ritual sphere, but they also point to a more functional aspect of textiles within the funeral ceremony. Beside the ritual context, there is also a mere functional sphere. In those cases, the textiles might not even be recognised by the people handling them (e.g. “recycled” textiles and “technical” textiles).

Two Mycenaean textile imprints from Tomb XXI at Deiras, Argos (Greece)

Małgorzata Siennicka (Göttingen University)

Recovered from the old excavations of J. Deshayes, two small objects found in the Mycenaean (Late Bronze Age) necropolis at Deiras at Argos (Tomb XXI), now in the archaeological storeroom of the French School at Athens in the Argos Archaeological Museum, may have originally belonged to the same object or feature, broken during the excavation or later. The lumps of unfired clay or well-beaten earth bear imprints of textiles, which are otherwise only rarely preserved in funeral or habitation contexts from Bronze Age Greece. They are of special significance since they may represent negatives (impressions) of a bier cloth or blanket on which the deceased was laid, or of a shroud wrapped around a dead body. The aim of the paper is both to present the objects and the imprints of textile(s), and to discuss the role of textiles in funerary context in Mycenaean Greece.

Wrapping practices in Medieval time. Case-studies from Gebel Adda (Sudan)

Magdalena Wozniak (University of Warsaw, PCMA)

Gebel Adda was located in Lower Nubia, on the eastern bank of the Nile, ca. 300 km south of Aswan. The site, explored during the Nubian Campaign, was occupied from 200 CE until the Ottoman period. It comprised a fortified town and a series of five cemeteries dated from different epochs. Unfortunately, the excavations were never extensively published. An important part of the archives and most of the textiles (retrieved from burials) are housed today in the Royal Ontario Museum, Toronto. Some pieces are also in the collections of the Nubia Museum, Aswan. However, the location of the anthropological documentation and remains is unknown. This paper will focus on the reconstruction of the textile layers in three elite burials, based on available archaeological record and archival documentation.

Textiles and bones on site. Crypts at kom H in Old Dongola (Sudan) and Cemetery A in Naqlun (Egypt)

Robert Mahler (University of Warsaw, PCMA) & Barbara Czaja (Museum of King Jan III's Palace at Wilanów)

On-site cooperation between archaeologists, bioarchaeologists, and textile specialists is not always easy. The general agenda of our work is, however, the same, and working together to reach a compromise regarding methodology may create a win-win situation for all parties involved.

The burials at medieval cemetery A in Naqlun, which contain very well preserved coffins and textiles in almost pristine condition, have provided a unique opportunity to explore the content of the sand-buried graves in the most convenient way possible – on many occasions ensuring easy access from all sides.

Three subterranean crypts from Kom H in Old Dongola in northern Sudan were very different. The state of preservation of the organic material was relatively poor, the exploration of the crypts in a restricted space



was very difficult, and there were no coffins or intact and well preserved wrappings which would have enabled us to take whole burials outside for further analysis in the laboratory.

While agreeing that the need for a common textile-human bones protocol is paramount, we would like to emphasize the importance of establishing good relations and ensuring effective communication between specialists taking part in the exploration, as well as the need for the flexibility of the procedures employed.

Funerary textiles from burial contexts at Ghazali and Old Dongla, Sudan – A bioarchaeological perspective

Robert Stark & Joanna Ciesielska (University of Warsaw, PCMA)

Christian burials within medieval Nubian contexts are typified by a distinct lack of funerary goods, save for the use of textiles for wrapping the body. The presence of textiles within medieval Nubian graves reflects broader consistencies within Christian theology and provides insight to the nature of burial practices during this era of history in Sudan.

Through an examination of burial textiles from the monastic settlement of Ghazali (c. 680 to 1275 CE) and the ancient capital of Makuria at Old Dongola (c. 6th to 14th c. CE), this presentation will provide an overview of the nature and variation of the textiles utilized as part of the burial process at these medieval Nubian sites. This presentation adopts a bioarchaeological perspective and will focus on macroscopic and stylistic designs of textiles encountered in burial contexts at these two sites, as well as the nature of textile preservation in burial contexts at Ghazali and Old Dongola, recording, collection on site during burial excavations, and field documentation to date.

Naked graves? Thoughts on the recording and reconstruction of funerary attire in the Early Iron Age of southwestern Iberia

Francisco B. Gomes (University of Lisbon)

The study and reconstruction of dress in the Early Iron Age of the southwestern Iberian Peninsula (8th – 6th centuries BCE) has been hindered by several factors. In fact, a general lack of textiles in the archaeological record due to geological and climatic conditions has been further complicated by the widespread use of cremation as a funerary treatment. Furthermore, many key sites were excavated at an early date, and the resulting record often falls below current standards.

Fortunately, in recent years, new well-preserved sites have been excavated with modern methodologies, including the key sites of La Angorrilla (Seville) and Medellín (Badajoz), in Spain, and the recently discovered necropolis of the Beja region of southern Portugal. This presentation will reflect on the impact of the records produced in these sites on the reconstruction of Early Iron Age funerary attire.

However, it will also be argued that the documentation of older excavations with more deficient records should not be overlooked. In fact, and while finely tuned interpretations of dress based on this documentation may prove difficult, recent studies at the scale of the Iberian Peninsula have shown that systematic analyses based on exhaustive *corpora* can still reveal significant trends worth exploring.



Rewinding the thread – archaeology and textile archives from the Scandinavian Joint Expedition to Nubia

Elsa Yvanez (University of Warsaw, PCMA)

The arid climate of Sudan and Nubia has led to the preservation of thousands of textiles and other organic material, mostly retrieved from cemeteries. Many were found during the UNESCO's Nubian salvage campaign of the 1960s. Among this plentiful material, a collection of +6000 textiles was unearthed by the Scandinavian Joint Expedition and sent for conservation and storage to Sweden. Today, the textiles are curated at the Gustavianum Museum, University of Uppsala, together with the rich excavation archives. In many aspects, the work conducted by the SJE in Nubia was exemplary: precise and consistent documentation of thousands of recorded archaeological features, detailed mapping and typologies of artefacts and structures, prompt publication, and specialized expertise. The textile dossier was treated by textile conservator Ingrid Bergman and published in a landmark book in 1975. Osteological remains were also analyzed and published in the same series, as well as full excavation reports and inventories of all sites. However, the evidence was never examined *together*. Textiles and bones were studied by experts in two different countries, far from the field and the archaeological context. This paper will examine how we can use this documentation today, in order to 'rewind the thread' and reconstruct the now-destroyed traces left by funerary gestures.

Grave concerns: Complexity in documenting and studying ancient Egyptian burials

Iwona Koziaradzka-Ogunmakin (University of Manchester)

Considered the most expensive material of all that was used during the mummification process in Ancient Egypt, textiles are often an unappreciated artefact recovered from funerary contexts. This presentation will focus on case studies from the late Old Kingdom/First Intermediate Period and Graeco-Roman cemetery at Saqqara to highlight the complexity of recovering, documenting, and studying textiles from burial contexts. In both time periods, textiles were predominantly, but not exclusively, used as body wrappings. Their quality and the quantity used in individual burials are commonly considered as an indicator of different levels of personal wealth and social standing of the deceased, whereas the pattern of their application offers an insight into the individual post-mortem treatment of the body. Both mummification and the burial environment directly affect the preservation of funerary textiles, often making their identification and recovery difficult if not impossible. By presenting selected case studies, this presentation will aim to contribute to a discussion on the importance of textiles as an artefact and establishing a field protocol for their recovery, documentation, and analysis to standardize archaeological practices moving forward.

Conservation approaches for pyre burial textiles excavated in Greece

Christina Margariti (Directorate of Conservation, Hellenic Ministry of Culture), Stella Spandidaki (Hellenic Centre for Research and Conservation of Archaeological Textiles – ARTEX), Maria Kinti (freelance conservator), Tina Chanielaki (Directorate of Conservation, Hellenic Ministry of Culture)

Archaeological textiles are generally made of organic materials (like plant and animal fibers), which are largely affected by micro-organisms growing in a burial/archaeological context. Special conditions that



inhibit microbial growth need to be established for textile preservation to be achieved. In Greece, the most common condition is the gradual replacement of the organic matter of the textile fibers by metal salts, a process known as mineralization. Copper is the metal that upon degradation forms salts with the highest biocidal properties. Across the country, many textiles have spent thousands of years underground in the vicinity of copper artefacts. More specifically, in the case of pyre burials, the remaining cremated bones of the deceased would have been cleansed, wrapped in textiles, and placed inside copper alloy urns to be buried. This burial custom, practiced over a span of several centuries, has preserved some of the most important textile finds in Greece. This paper gives an overview of the types of textiles and fiber identification of pyre burial textile finds and the conservation strategies followed for a selected set of case studies (dated from c. 1100-480 BCE). Linen fibers have been identified in the vast majority of textiles from pyre burials, which could either be due to the conditions established in the burial (favorable to cellulosic rather than proteinaceous fibers) or attributed to burial customs. Of significant importance is the fact that at least three different textiles seem to have been placed inside the urns, while their construction and decoration includes techniques like tapestry, embroidery and stitching, and dyes like shellfish purple and madder.

More information from funerary textiles – sampling for different natural scientific analyses

Luise Ørsted Brandt (University of Copenhagen, Globe Institute)

Well-preserved textiles and skin from the Nile Valley demonstrate that these materials were part of several stages of mortuary rituals including the preparation of the body and the funeral. Through these rituals the wrappings aided the transformation of the deceased into an ancestor. By studying the layers and characteristics of textiles and skin we can learn much about the role of wrapping in mortuary rituals, of the deceased and cultural norms.

The excellent preservation of wrapping materials provides good opportunities for thorough studies of their characteristics. This presentation will give an insight into the natural scientific analyses by which we can get closer to the raw materials constituting the wrappings, their role in wrapping rituals, and what they meant. I will introduce, amongst others, CT-scanning as a means to study the numbers of layers applied to the body, lipid analyses to study resins, oils, and wax, and protein and DNA-based strategies to identify fibres and skins.

Photogrammetry – introduction to digital recording

Piotr Zakrzewski (University of Warsaw, PCMA)

The manner of perceiving reality depends on current convictions, interpretations and/or state of knowledge, as well as other factors all of which can - and probably will - change in the future. With that in mind, the pursuit of more objective means of recording and archiving archaeological remains is important for preventing the potential loss of relevant information.

In my experience, that goal can be achieved by the application of modern digital photographic technology - photogrammetry, which allows to rapidly acquire accurate information about physical objects, providing their metric dimensions, color and shape through the process of capturing digital pictures and producing stereo-photographic images with details limited only by camera resolution. Most importantly, the acquired data can be used to create 3D representation of the captured objects, including their state of preservation, context and *in situ* position, to be later studied and analyzed.