



AUSTRIAN
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09–12 OCTOBER 2024

AUSTRIAN ARCHAEOLOGICAL INSTITUTE

SEMINAR ROOM, THIRD FLOOR

OTTO WAGNER POSTSPARKASSE

GEORG-COCH-PLATZ 2, 1010 VIENNA

INTERNATIONAL HYBRID WORKSHOP

AND ONLINE VIA ZOOM



Detail of a burial excavation in the Roman catacomb of Sts Pierre-et-Marcellin in Rom (© D. Gliksman / Inrap)

HOW TO READ A GRAVE: FIFTY YEARS OF ARCHAEOTHANATOLOGY

THE EMERGENCE OF A DISCIPLINE, CONCEPTS AND APPLICATIONS, AND FUTURE PROSPECTS

A workshop within the framework of the Bioarchaeology Lab of the ÖAI coordinated by Andreas G. Heiss and Alfred Galik, organised by Caroline Partiot (ÖAI/ÖAW, Vienna) and Estella Weiss-Krejci (University of Heidelberg, ÖAI/ÖAW, Vienna).



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Since the second half of the 20th century, under the particular influence of Leroi-Gourhan's work, archaeology has undergone a major scientific transformation by prioritizing the analysis of human remains within their depositional context. This new approach serves as a nexus between fieldwork and laboratory analysis and has gradually led to profound conceptual and methodological reconsiderations of burials as an archaeological source. This has led to the emergence of a new discipline combining biological, social and cultural aspects of death, initiated in France between 1970 and 1980 by Henri Duday, initially known as "field anthropology" and now called "Archaeothanatology" or "The Archaeology of Death". This interdisciplinary field seeks to reconstruct the funerary customs carried out around the body of the deceased, as well as the organisation and arrangement of funerary spaces, in order to draw social conclusions and interpret mortuary behaviours. One of the fundamental procedures for understanding taphonomic processes (such as anomalies in the position of bones, constraints and displacements) is to observe the sequence of disarticulation of joints in the body. This workshop, in which Henri Duday will also participate as keynote speaker, aims to review the circumstances of the emergence and development of Archaeothanatology in recent decades in France and abroad. This event will examine the various methodological and conceptual aspects of Archaeothanatology, as well as the new perspectives opened up by the development of new methods such as 3D recording.

No registration fees, registration needed.

The workshop will be held in English, with the exception of the introduction and the public evening lecture by Henri Duday. The sections marked in red require additional registration (see the registration form).

[Registration for in-person attendance](#)

[Zoom registration - Wednesday, October 9](#)

[Zoom registration - Thursday, October 10](#)

[Zoom registration - Friday, October 11](#)

PROGRAM

This workshop is dedicated to the memory of Sabine Ladstätter.

WEDNESDAY, OCTOBER 9

17:00–18:00 Opening

Martin Steskal | Head Dpt. of Historical Archaeology

Presentation of the Austrian Archaeological Institute at the Austrian Academy of Sciences

Andreas G. Heiss | Group Leader – Coordination Bioarchaeology Lab

Presentation of the Bioarchaeology Lab & word in memory of Sabine Ladstätter

Caroline Partiot & Estella Weiss-Krejci | Austria; Germany

Introduction to the conference and presentation of the ARchaeoTHAnatology in Central Europe Working Group (ARTHA)

Philippe Sutter | Director, Institut Français, & **Nina Grisot** | Institut Français, coopération scientifique et universitaire

Presentation of the Institut Français and of the public evening lecture

18:00–18:30 Keynote Lecture

Henri Duday | France

Introduction à l'archéothanatologie – Introduction to Archaeothanatology

c. 18:30 Wine reception

20:00 Welcome reception

Griechenbeisl, Griechengasse 9 Fleischmarkt 11, 1010 Vienna

THURSDAY, OCTOBER 10

8:45–9:15 COFFEE

(Chair: Andreas G. Heiss)

9:15–10:15 **Keynote Lecture**

Christopher C.J. Knüsel | France

Archaeothanatology, a work still in the process of becoming: dissemination and its obstacles

10:15–10:45 **Bruno Maureille** | France

Lost and found: archaeothanatology applied to the rediscovery of the primary Neanderthal burial site Le Moustier 2 (Le Moustier, Dordogne, France)

10:45–11:15 COFFEE BREAK

(Chair: Estella Weiss-Krejci)

11:15–11:45 **Sacha Kacki** | France, **Eline Schotsmans** | Australia, & **Sébastien Villotte** | France, Belgium

Archaeothanatology without excavation? Revealing complex mortuary practices at Cussac Cave (Mid-Upper Palaeolithic, France)

11:45–12:15 **Mark Guillon** | France

Archaeothanatology in preventive archaeology and field research archaeology: use, expected results and feedback

12:15–14:15 LUNCH BREAK

(Chair: Caroline Partiot)

14:15–14:45 **Isabelle Souquet** | France

Understanding the treatment of the dead from the archaeothanatological study of a mass grave from a Napoleonic battle

14:45–15:15 **Edeltraud Aspöck** | Austria, & **Astrid A. Notermann** | Sweden

The PresentDead project: archaeothanatology and the analysis of reopened inhumation graves

15:15–15:45 Estella Weiss-Krejci | Germany; Austria

Histotaphonomy and post-hoc archaeoethanatology: case studies from Austrian prehistory

15:45–16:30 Visit of the Austrian Archaeological Institute

18:00 Public evening lecture (in French)

Henri Duday | France

Evolution des concepts, évolution des méthodes dans l'étude des sépultures collectives néolithiques : l'Aven de la Boucle à Corconne (Gard, France)

The lecture will take place at the Institut Français, Praterstraße 38 (1020).

FRIDAY, OCTOBER 11

8:45–9:15 COFFEE

(Chair: Lukas Waltenberger)

9:15–9:45 Eline M.J. Schotsmans | Australia; France

From flesh to bone: conducting forensic experiments for a better understanding of archaeoethanatology and mortuary sequences

9:45–10:15 Hayley L. Mickleburgh | Netherlands

'Realtime' archaeoethanatology: integrating Virtual Archaeology and Forensic Taphonomy with Archaeoethanatology

10:15–10:45 Géraldine Sachau-Carcel | France

The rise of the multidimensional dig: about the virtual taphonomy

10:45–11:15 COFFEE BREAK

(Chair: Christopher C.J. Knüsel)

11:15–11:45 Katharina Rebay-Salisbury | Austria, **Magdolna Vicze** | Hungary

An unusual burial at the Bronze Age tell settlement of Százhalombatta, Hungary

11:45–12:15 **Arwa Kharobi** | Czechia

Bronze Age Khabur through an archaeothanatological lens

12:15–14:15 LUNCH BREAK

(Chair: Katharina Rebay-Salisbury)

14:15–14:45 **Hemmamuthé Goudiaby** | France

Context matters: applying archaeothanatological approaches to Ancient Maya burials

14:45–15:15 **Emilie Portat** | France, **Imed Ben Jerbania** | Tunisia & **Henri Duday** | France

The « Salammô » tophet in Carthage (6th–2nd centuries BC): a new archaeothanatological reading

15:15–15:45 **Caroline Partiot, Elise Baudouin & Martin Steskal** | Austria

Pouring new wine into old bottles: an archaeothanatological approach to burial reuse practices in Byzantine Ephesos (Turkey)

15:45–16:00 *Conclusion of the workshop*

16:00–17:30 **Practical session (with advance registration)**

Henri Duday | France, & **Christopher C.J. Knüsel** | France

SATURDAY, OCTOBER 12

Morning **Tour of the Natural History Museum exhibition halls**

meeting time to be determined

ABSTRACTS

Archaeothanatology, a work still in the process of becoming: dissemination and its obstacles

Christopher C.J. Knüsel, *University of Bordeaux; CNRS UMR 5199 Pacea “From Prehistory to the Present: Culture, Environment and Anthropology”*; Bordeaux, France

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It is hard to believe that funerary archaeology developed in the absence of the study of human remains – the remains of those individuals for which graves were created. Yet, such is indeed the case. After many attempts to synthesise these two fields of related interest, even today, human remains, associated objects, and the depositional contexts (graves and their organisation) are not treated at the same time and, many times, remain in a disparate state that hinders comparative analysis and synthesis. That these subjects are not often found in the same conference sessions, let alone the same conference or published volume tends to perpetuate their separation. This disconnection means that higher level social and biological questions are harder to address.

There has been a succession of attempts to synthesise archaeology and biological anthropology. One of these synthetic treatments – archaeothanatology – has grown considerably in recent years, alongside but separately from (human) bioarchaeology, and the relationship between the two is still not completely resolved. Despite sharing similar themes and research orientations, a shared vocabulary (e.g. lexicon) of terms has not yet been adopted. This is a fundamental shortcoming because these terms are not only linked to interpretations but also to field and laboratory procedures. This presentation highlights some of these key themes and definitions to aid discussion and further dissemination of detailed recording, analysis and study of the remains of the body within its depositional context.

Lost and found: archaeoethanatology applied to the rediscovery of the primary Neanderthal burial site Le Moustier 2 (Le Moustier, Dordogne, France)

Bruno Maureille, *Centre National de la Recherche Scientifique (CNRS), UMR 5199 Pacea "From Prehistory to the Present: Culture, Environment and Anthropology"; Bordeaux, France*

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In May 1914, a human neonate skeleton was discovered by D. Peyrony during his fieldwork at the internationally renowned Palaeolithic lower rock shelter site of Le Moustier (Peyzac-le-Moustier, Dordogne, France). For various reasons that we will only summarise in the course of our presentation, and because the specimen was not inventoried in any of the French national museum collections, the human remains recorded as Le Moustier 2 (Vandermeersch, 1971) were considered lost to science due to the events of the First World War. Fortunately, this was not the case. In 1997, together with colleagues from the Musée National de Préhistoire – Les Eyzies, we were able to rediscover a few small blocks of sediment containing juvenile human bones and Mousterian lithics, as well as isolated bones of a perinate, within the lithic collections of the site. During our talk, we will present unpublished and detailed information on how we (i) excavated the sediment blocks, a long (more or less 150 days) and meticulous process using the techniques of the Bordeaux School of Archaeoethanatology, (ii) at the end of this process, plus the restoration of the bones, were able to prove that the remains were indeed those discovered in May 1914. Today, this Neandertal fossil, Le Moustier 2, which is one of the most, if not the most, exceptional original human fossils on display in the lower part of the permanent exhibition at the Musée national de Préhistoire – Les Eyzies, is one of the most complete Neandertal skeletons, including adult ones, and the best preserved non-anatomically modern human fossil in western Eurasia. Surely this is one of the direct consequences of the fact that it wasn't completely "excavated" soon after its discovery by scientists/technicians who didn't know much about human perinatal bone morphology. We will also show how, more than 80 years after its discovery, the use of these techniques of the French school of archaeoethanatology has also allowed me to obtain new data on the position of the body of Le Moustier 2 within its primary burial pit. Today, for the Neandertal taxa, the Le Moustier 2 burial is probably one of the best documented.

Archaeothanatology without excavation? Revealing complex mortuary practices at Cussac Cave (Mid-Upper Palaeolithic, France)

Sacha Kacki, *Centre National de la Recherche Scientifique (CNRS), UMR 5199 Pacea “From Prehistory to the Present: Culture, Environment and Anthropology”; Bordeaux, France; Department of Archaeology, Durham University, Durham, UK*

Eline Schotsmans, *Centre for Archaeological Science, University of Wollongong, Wollongong, Australia; Centre National de la Recherche Scientifique (CNRS), UMR 5199 Pacea “From Prehistory to the Present: Culture, Environment and Anthropology”; Bordeaux, France*

Sébastien Villotte, *Centre National de la Recherche Scientifique (CNRS), UMR 7206 Eco-Anthropologie, Muséum National d’Histoire Naturelle de Paris (MNHN), Université Paris Cité, Paris, France; Operational Directory Earth and History of Life, Royal Belgian Institute of Natural Sciences, Brussels, Belgium; Unité de Recherches Art, Archéologie, Patrimoine, Université de Liège, Liège, Belgium*

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Discovered in 2000, the karstic cave of Cussac revealed parietal art attributed to the Gravettian period (33,000–24,000 cal BP), prehistoric surfaces, and human remains lying on the floor. The cave is designated as a national heritage site, so most research is restricted to non-invasive observations from the walking path in order to protect all traces of human and faunal activity. Consequently, analysis of the human remains is limited to remote observations and the study of photographs and 3D photogrammetric models. These methods are constrained by available illumination, extensive viewing distances for some of the remains, and bones partially or completely covered with sediment. In this paper, we present the results and interpretations obtained so far under these conditions. While highlighting the limitations of archaeothanatological analysis when excavation is not possible, we will show how a non-invasive study allows the reconstruction of diverse and complex mortuary behaviour at Cussac Cave, characterised by the association of different forms of deposition (whole bodies, parts of bodies, and dry bones, mostly deposited in bear nests), as well as the displacement and removal of elements.

Archaeothanatology in preventive archaeology and field research archaeology: use, expected results and feedback

Mark Guillon, *Institut national de recherches archéologiques préventives (Inrap), France; UMR 5199 Pacea "From Prehistory to the Present: Culture, Environment and Anthropology"; Bordeaux, France*

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Since the late 2000s, there has been an increase in the number of symposia and roundtables devoted to preventive archaeology since excavations of this type have become the norm. Such conferences have highlighted several key features of preventive excavations, not least: the scientific contributions made by the excavation of large areas in both rural and urban settings, the environmental impact of preventive excavations, and communication to the public of the discoveries made in all fields linked to the excavation of buried heritage. In addition, the publication of many specialized works in related disciplines using these archaeological results demonstrate the growing impact of preventive excavations, archaeothanatology takes an important place in these progresses.

I have had opportunities to exchange views with colleagues as part of more general debates on preventive archaeology, at meetings in Leicester, Paris, Malta, Bibracte, Bordeaux, Durham, Kiel, Belfast, etc. While we have been able to compare our practices for safeguarding buried heritage, once it has been identified, we have found that predictive tools vary greatly from one country to another, both in form and content. Furthermore, to define the notion of site potential, we need to agree on the level of knowledge available: unknown area, area with a few clues, area in a known environment, etc. The nature of the sources is very important, and the unknown is no less important; a historical mention does not make a site, the discovery of a burial site does not make a cemetery.

Concerning archaeothanatology, I will briefly present the state of the art in France, illustrated with examples ranging from small areas to major works, emphasising the methodological aspects, without glossing over the difficulties and failures. I then propose to continue the attempt to define 'archaeological potential' from a more theoretical point of view, in the light of the various sources available. How can we judge the importance of a site that has never been excavated when its presence is certain? At this point, we will apply a different focus and analyse several cases and type of burials, considering the taphonomy of the grave to highlight mortuary gestures and architecture.

Understanding the treatment of the dead from the archaeothanatological study of a mass grave from a Napoleonic battle

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The study of a mass grave requires first and foremost the observation and recording of skeletons *in situ*. Careful excavation is therefore the key to understanding the decomposition process and treatment of the dead based on the disposition of bones, joints and individuals in such a context. The principles of archaeothanatology combine all of the components to argue for simultaneous deposition of multiple individuals, including relative timing of depositions, disposition of the dead, and mode of decomposition, to identify the treatments of bodies deposited together in the same grave. The study of the simultaneous burial of 26 soldiers killed during the battle of Orthez on February 27, 1814, is the first opportunity in France to observe the treatment of the bodies of soldiers killed in battle. This presentation outlines the various stages involved in collecting field data and developing the hypotheses derived from them. It sheds light on the reality of battle and permits comparison with information gathered from historical accounts and documents.

The PresentDead project: archaeothanatology and the analysis of reopened inhumation graves

Edeltraud Aspöck, *University of Graz, Department of Classics; Austrian Academy of Sciences at the Austrian Archaeological Institute, Austria*

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The PresentDead ERC project investigates practical, conceptual and emotional interactions with the dead in early medieval central and eastern Europe (5th – 8th c. CE). It takes an interdisciplinary approach combining methods and theories from (bio)archaeology, digital archaeology, history and cultural anthropology.

Understanding the formation processes of reopened inhumation graves is key to the identification of the practices that were carried out when graves were re-entered. Application of archaeothanatology provides a systematic framework to address the main questions typically asked to reopened inhumation graves, including: What was the original appearance of the grave? When and how did the reopening of the grave take place? How was the grave altered during the reopening? And, last but not least, how did natural formation processes affect the final layout of reopened graves?

In this presentation we will focus on the application of archaeothanatology to inhumation graves that were reopened for the removal of objects. We will provide an outline of this approach based on our previous research and developments as well as providing a first insight into new case studies and the protocols that we are currently developing for the PresentDead project.

Histotaphonomy and *post-hoc* archaeoethanatology: case studies from Austrian prehistory

Estella Weiss-Krejci, *University of Heidelberg, Germany; Austrian Academy of Sciences at the Austrian Archaeological Institute, Vienna Austria*

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Over the past two decades, histotaphonomy has become a popular method in archaeology for making inferences about ancient burial practices and burial environments. Histotaphonomy is the study of the microscopic structure of bone tissue to assess post-mortem biogenic degradation (bioerosion). Although the variability, time scale, and causative agents of bioerosion are widely debated, it is generally accepted that aerobic bacteria cause tunnels in bone. When microbial tunneling is low or absent, this indicates that bioerosion has been delayed or inhibited. The reasons for this may be cultural or natural.

The presentation discusses the results of histotaphonomic research from three prehistoric sites in Austria: the Early Neolithic Linear Pottery settlement of Asparn/Schletz, the Early Bronze Age cemetery of Gemeinlebarn A and the Early La Tène cemetery of Göttlesbrunn. The investigations combine conventional transmitted light microscopy, backscattered scanning electron microscopy (BSEM) and portable X-ray fluorescence (pXRF). At all three sites, bioerosion in human bones varies greatly, ranging from complete destruction of the microstructure to no bioerosion at all. The attempt to explain the possible reasons for this variation is accompanied by a *post-hoc* archaeoethanatomical analysis.

Evolution des concepts, évolution des méthodes dans l'étude des sépultures collectives néolithiques : l'Aven de la Boucle à Corconne (Gard, France)

Henri Duday, *Centre National de la Recherche Scientifique (CNRS), UMR 5199 Pacea "From Prehistory to the Present: Culture, Environment and Anthropology"; Bordeaux, France ;*

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L'Aven de la Boucle est une cavité naturelle qui s'ouvre dans le massif calcaire du Coutach, environ 40 km à l'ouest de Nîmes. Les fouilles qui y ont été conduites pendant près de trente ans ont constitué un véritable laboratoire de réflexion sur les méthodes qui peuvent être mises en œuvre dans l'approche archéothanatologique des sépultures anciennes. Le site a fait l'objet d'une utilisation sépulcrale à la fin du quatrième et au début du troisième millénaires avant notre ère. Les aménagements complexes de l'accès et de la salle intérieure permettent d'établir un lien avec les architectures mégalithiques (dolmens). Les gestes funéraires se caractérisent par une exclusion massive des sujets immatures et un déséquilibre marqué dans la proportion hommes/femmes ; la sélection des défunts était également fondée sur des critères génétiques, ce qu'ont confirmé les recherches récentes en paléogénomique (ADN ancien). Après la décomposition des corps, certains os parmi les plus volumineux ont été repris et extraits de la cavité – d'où des inégalités manifestes dans la représentation des différentes parties anatomiques – les autres ont été empilés au voisinage de la paroi rocheuse. Du point de vue de la pathologie, on retiendra un cas de maladie de Paget, l'un des plus anciens qui soient actuellement connus, mais aussi la découverte d'un œuf de parasite intestinal piégé dans un sédiment très particulier ayant la propriété d'absorber les graisses ("terre de Sommières") que les néolithiques déposaient avec les corps. Des traces de découpe au silex sur un humérus atrophié semblent devoir être interprétées comme une véritable autopsie néolithique.

From flesh to bone: conducting forensic experiments for a better understanding of archaeothanatology and mortuary sequences

Eline Schotsmans, *Centre for Archaeological Science, University of Wollongong, Wollongong, Australia; Centre National de la Recherche Scientifique (CNRS), UMR 5199 Pacea, "From Prehistory to the Present: Culture, Environment and Anthropology", Bordeaux, France*

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Mortuary treatment of the dead provides key insights into human behaviour, social organisation and ideology of past societies. To conduct an archaeothanatological analysis, taphonomy comes into play. The depositional environment and peri- and post-mortem processes, which affect preservation and degradation, are assessed in order to discriminate human behaviour from natural processes. Many archaeo-anthropologists have never been confronted with a dead or decaying body. Without understanding of decomposition and factors that influence decay, it becomes more difficult to analyse skeletal remains and interpret mortuary practices. If one does not know what decomposition does or can do to a corpse, incorrect interpretations might be made.

This presentation focuses on human decomposition and factors that influence decay from an archaeothanatological point of view. Eline Schotsmans will discuss the actualistic experiments that she is carrying out at the Australian Facility for Taphonomic Experimental Research (AFTER) and at the Facility for Recherches en Sciences Thanatologiques Expérimentales et Sociales REST[ES] in Canada aiming to expand the methodological principles of funerary archaeology and better understand multi-stage funerary practices.

‘Realtime’ Archaeothanatology: integrating Virtual Archaeology and Forensic Taphonomy with Archaeothanatology

Hayley L. Mickleburgh, *University of Amsterdam; 4D Research Lab (4DRL) at the University of Amsterdam; Forensic Anthropology Center at Texas State University (FACTS), San Marcos, USA*

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Forensic taphonomy, through controlled actualistic experiments, provides uniquely valuable observations on the processes of decomposition, skeletal disarticulation, and bone displacement within burial contexts. By replicating diverse burial scenarios, such as individual depositions and mass graves, these experiments reveal the effects of variables like body position, condition, and voids on the arrangement of skeletal remains. These findings are highly significant for archaeothanatology, as experiments provide important information that cannot be gleaned from archaeological data alone.

In this presentation I discuss an ongoing experimental forensic taphonomic research program I developed at the Forensic Anthropology Center at Texas State University (FACTS), which uses human body donations to replicate burial contexts relevant to both traditional archaeological and forensic contexts, including individual and mass graves. The taphonomic processes in these experiments are meticulously documented in 3D, providing a detailed record of ‘realtime’ taphonomic processes. This archive serves as the foundation for virtual visualizations of complex taphonomic dynamics observed during actualistic experiments, which in turn are used for the development of VR training and teaching tools.

While static/snapshot 3D data capture of in situ archaeological graves (e.g., photogrammetry, 3D scanning) has advanced the detailed recording of burial features, virtual reconstruction and animation build upon such data and allow for a more dynamic analysis of taphonomic processes over time. This approach can be applied to archaeological cases, as I previously demonstrated in a Bell Beaker burial from the West-Frisian site of Oostwoud, showing how virtual archaeology can simulate and test hypotheses to distinguish between human actions and natural processes within graves.

Since 2015, this research has yielded valuable new insights into the relationship between bone displacement and factors like grave voids, body position, condition of the body (fresh, mummified), soil type, insect and scavenger activity, and individual biological variation. These results and insights are important to the interpretative framework of archaeothanatology. I argue that combining actualistic experimental data with advanced virtual methods offers powerful tools for future research, enabling more nuanced and accurate reconstructions of human burials.

The rise of the multidimensional dig: about the virtual taphonomy

Geraldine Sachau-Carcel, *Aix-Marseille University, Centre National de la Recherche Scientifique (CNRS) UMR 7268 ADES, Bio-cultural anthropology, law, ethics and health, Marseille, France ; UAR 3133 CNRS EFR Centre Jean Bérard*

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The last few decades have seen the democratization of computing and the facilitation of computing power. Today, everyone's computer is capable of processing images, building and updating databases and producing 3D models of the terrain. Archaeothanatology, like any other scientific discipline, has been able to take advantage of new technological developments and the tools available to it. Photogrammetry, GIS and databases are now part of everyday life, both in preventive excavations and in research. Anthropology in the field has laid the foundations for the observations to be made and the data to be acquired during excavations, in particular by introducing advanced thinking on taphonomy. The use of 3D models made it possible to build up a library of funerary structures and a virtual space for testing the restitution hypothesis. However, the reflexive frames of reference used and the hypothetico-deductive logics put in place to apprehend the funerary structure in its original state, for the dead, as constructed by the past population, gain from being enriched by prospective models. It is with this in mind that we are developing virtual taphonomy, focusing on immature subjects and the creation of 3D reference models for biomechanical simulation and reflection on the taphonomic processes affecting them.

Digital technology frees us from physical, material and ethical limitations. We will begin by proposing an example of 3D models and virtualization of the funerary environment for archaeothanatomological study. We will then use an example to explain the new multidisciplinary developments specific to a totally virtualized environment for our research.

An unusual burial at the Bronze Age tell settlement of Százhalombatta, Hungary

Katharina Rebay Salisbury, *Universität Wien; Group Leader, Research Group “Prehistoric Identities”, Austrian Academy of Sciences at the Austrian Archaeological Institute*

Magdolna Vicze, *National Institute of Archaeology, Hungarian National Museum*

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The Bronze Age tell settlement of Százhalombatta is located south of Budapest in Hungary, on a cliff on the right bank of the Danube. Occupying an area of around 100 x 200 metres and fortified with a ditch, Százhalombatta was densely populated during the Early Bronze Age, Middle Bronze Age Vatya and Vatya-Koszida periods, which left behind a complex sequence of layers up to six metres deep. Many of the houses showed traces of burning and excellent organic preservation, but human remains are rare.

During the 2024 season of the Hungarian National Museum's excavation, the so-called SAX Project (Százhalombatta Archaeological Expedition, <https://saxbronzeage.hu/>) directed by Magdolna Vicze (Hungarian National Museum), Marie Louise Stig Sørensen (University of Cambridge) and Joanna Sofaer (University of Southampton), incorporating also the University of Vienna's training excavation, a human body was found.

The deposition included highly symbolic elements, such as the inclusion of a stone axe fragment and the covering with large sherds of a storage vessel, and traces of post-funerary manipulation are apparent. In this presentation, I would like to show the documentation and 3D scans of the burial for a discussion with the participants of the workshop.

Bronze Age Khabur through an archaeothanatological lens

Arwa Kharobi, *Masaryk University, Faculty of Science Department of Anthropology, Brno, Czechia*

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Anthropological research in Syria and its surroundings began modestly in the early 1990s and expanded significantly about a decade later. Initially, excavations focused on habitations, often ignoring human bones and lacking an anthropological approach. Although Bronze Age societies left written texts on life and death, these primarily detail royal funerary practices, limiting understanding of broader social practices. This work aims to provide a comprehensive understanding of death and burial practices in the Khabur Valley by examining several sites. Some, like Tell Mozan and Tell Hamoukar, utilized the archaeothanatological approach, which includes detailed descriptions of bone positions and reconstruction of mortuary practices. Others, like Tell Khamis and Shiyukh Tahtani, offer data restricted to tomb architecture and funerary objects, with scant data on corpse treatment. The talk emphasizes the importance of applying archaeothanatology during and after excavations to better understand funerary practices, despite environmental, geopolitical, and preservation challenges in the region. It calls for broader implementation of standardized guidelines for archaeothanatology.

Context matters: applying archaeothanatological approaches to Ancient Maya burials

Hemmamuthé Goudiaby, *Archaios, Archaeology, Culture and Heritage Society; Université Paris I Panthéon Sorbonne, Paris, France*

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When archaeothanatology was first introduced in Mesoamerica during the early 1990s, it was met with great enthusiasm. As an approach that takes into account not only the human remains but also their archaeological context, it proved extraordinarily efficient in a region where funerary practices are particularly diverse and involve long-term interactions.

The Maya area is a subset of the vast Mesoamerican territory that presents a few peculiarities. Ancient Maya burials are part of a complex system that integrates them into residential architecture. Therefore, funerary sequences extend beyond the confines of the grave. In addition, frequent visits and re-openings make such sequences even more difficult to grasp, and the tropical forest that covers the sites adds the final touch to an already challenging terrain.

In this presentation, we will showcase a few case studies that illustrate the added value of archaeothanatology in such contexts. Each case highlights an aspect of Ancient Maya funerary practices that is elucidated by this approach. Following a general introduction to each burial, we will delve into their specifics and demonstrate that, although different, each one underscores the same conclusion: context matters.

The « Salammbô » tophet in Carthage (6th–2nd centuries BC): a new archaeothanatological reading.

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In 2017 and 2018, the excavation of a sector of the Salammbô tophet in Carthage, led by Imed Ben Jerbania, uncovered 548 urns dating from between the end of the 6th and the middle of the 2nd centuries BC. The operation was resumed in 2023. The precision of the excavation and the stratigraphy provided an exceptional opportunity to re-examine the significance of these deposits, which is still hotly debated: sacrifices to Ba'al Hammon and Tanit or burials of very young children, most of whom died in the perinatal period inside the sanctuary? Imed Ben Jerbania, wishing to give a fuller dimension to the anthropological aspect, asked us to collaborate, in conjunction with the École Française de Rome, on an excavation and study approach in line with the analytical and interpretative methods developed by archaeothanatology. The total number of urns studied to date is 154. In addition to estimating the ages at death as accurately as possible, there is obviously the question of investigating lethal pathologies. Furthermore, as the highest value of the NMI in an urn is 6, with an average of 2.63, it is necessary to determine the anatomical origin of the smallest remains in order to discuss the restitution of the funerary gestures that led to the presence of several children in an urn. The question is whether the presence of supernumerary pieces is due to multiple deposits or to the involuntary collection of bones left at the site of the pyre following previous cremations, which implies looking for osteological links between urns. This questioning obviously allows us to reflect on the occupation and management of this space. Finally, this programme also focuses on the relative quantification of the remains of each of the subjects contained in the same urn: we have initiated a new line of questioning and methodology that makes it possible to distinguish between simultaneous cremations and cremations spaced out over time, and in this case to discuss their relative chronology.

Pouring new wine into old bottles: an archaeothanatological approach to burial reuse practices in Byzantine Ephesos (Turkey)

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The city of Ephesos, located in Western Turkey, 55 km south of Izmir, is particularly known for being the capital of the Roman province of Asia and one of the most active ports in the Mediterranean in Antiquity. Located to the north-east of the Harbour Gymnasium and the Halls of Verulanus, the Church of Mary served as the episcopal church of Ephesos from the early 5/6th century, before being partially used as a burial ground during the Middle and Late Byzantine periods. A selection of graves, both inside and outside the church, were excavated between 1984 and 2001. However, the Byzantine burial practices on this site have only been documented to a limited extent by the previous excavations. The aim of this study was to identify general trends in mortuary practices and post-depositional processes at the site by excavating intact graves using modern archaeothanatological methods and by contextualizing these data with those of the previous excavation through a retrospective approach. The 2023 excavation results confirmed the trends identified in previous campaigns, i.e., the deposition of possibly shrouded adult and immature individuals in empty stone casings, in a position typically attributed to Christians. They confirmed the existence of reopening practices with successive deposits of up to three or four individuals per grave. A newly-excavated tomb shows the coexistence of two “reduction” types, one involving the careless discarding of some of the bones outside the grave, while the others were gathered and carefully arranged, perhaps in a wooden box-like container. These results provide new insights on the management and reuse of burial spaces in the Byzantine period and enforce the need to adapt current approaches to a very specific taphonomic situation, especially one prone to frequent earthquakes.



Practical session (with advance registration)

This practical session, led by Henri Duday and Christopher C.J. Knüsel, aims to give interested colleagues a first overview of archaeothanatological analysis using field photographs and official English terminology.

The session will be held in French, with translation into English and German when needed. It is open to anyone with a practical knowledge of archaeology, with or without advanced training in biological anthropology and mortuary archaeology.