INTERNATIONAL CONFERENCE

A WORLD IN MOTION

Between Tradition and Transformation in the Tumulus Culture along the Danube

ABSTRACTS

22–24 April 2026
Budapest, Hungary
Institute of Archaeology ELTE RCH

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Foreword

The world was in motion in the mid-second millennium BC, marked by a dynamic interplay of change and tradition. By around 1450 BC, life along the Danube had changed significantly compared with fifty or a hundred years earlier. This is particularly striking in the Carpathian Basin, where long-standing tell settlements were abandoned, pastoral communities embracing the warrior ideal emerged, and material culture was transformed, with cremation becoming a common burial practice.

This transformation took place during the Tumulus culture (c. 1600–1300 BC), which bridged the centuries of the so-called tell cultures and the Urnfield period. The Tumulus culture not only divided periods but also connected them; it did not simply erase traditions but transmitted them. This period was both a driving force of change and a medium through which traditions were passed on.

For various reasons, systematic regional and micro-regional research programmes focusing on the Tumulus period have lagged behind those devoted to the tell cultures and the Urnfield period. Despite this imbalance, multidisciplinary research projects over the past decade have clarified many fundamental questions concerning the Tumulus period and have raised many new ones.

It is therefore important and timely to raise awareness of this topic and to discuss the latest research findings, results and questions focusing entirely on the Tumulus culture and its period. The Tumulus culture deserves to be studied and evaluated in its own right, as an understanding of the broader process remains incomplete without it. This conference is dedicated to perspectives and approaches that may reshape the study of the Tumulus culture and its period, helping to advance our understanding of this significant transformation.

At the three-day conference, 32 papers and 8 posters will be presented within five major thematic sessions, addressing chronology, burials, settlements, raw materials, and the themes of tradition versus innovation:

Session 1 — Still or shifting? The dynamics of chronology

The Tumulus period lasted for at least three centuries in Central Europe (c. 1600–1300/1200 BC), with both its beginning and end connected to a broader, more unified cultural horizon. The middle of the 2nd millennium BC was characterised by dynamic change and transformation, marking the concluding stage of the preceding tell cultures and the earliest appearance of material culture associated with the Tumulus tradition. By the onset of the 1500 BC, long-standing traditions – such as burial customs, social organisation, and settlement structure – had completely dissolved. Nevertheless, a new unifying trend re-emerged during the last centuries of the 2nd millennium BC, represented by the Urnfield period.

The key question is whether a coherent temporal framework can be established for these transitions. Can the Tumulus culture be defined as a separate unit along the Danube? Are we dealing with a culture, a chronological phase, or a broader phenomenon? How can the Tumulus culture be most appropriately aligned with Reinecke's chronology, and what is its relationship to the final stage of the tell cultures and the early Urnfield period?

It is now timely to develop a more comprehensive understanding of the internal chronology of the Tumulus culture and to reconsider its metal and ceramic typology. How can these objectives be achieved, and which methods are most suitable for this purpose? What are the respective strengths and limitations of relative and absolute dating approaches, and what strategies might be most effective in reconciling them?

Session 2 — How far is near enough?

The use of raw materials by the communities of the Tumulus period has been considerably less researched than in the preceding and succeeding periods. Practicality and functionality were certainly crucial factors in the selection and utilisation of raw materials, which makes the topic accessible through comparisons with both earlier and later examples. Moreover, the study of raw materials associated with the Tumulus culture can yield broader cultural and technological insights.

The most important material was clay, employed not only in the production of ceramics but also in architecture and toolmaking. Ceramic

production techniques could be characteristic of particular cultures, periods, or groups. In this context, can we identify notable changes in comparison with earlier traditions? Is there a correlation between the function of a vessel and the type of clay, tempering agents, or firing techniques used? Might there be a relationship between settlement types and the quality or style of ceramic production?

Stone and bone also remained a significant material during this period, although it has received comparatively little scholarly attention. The analysis of glass artefacts (for example, beads) opens a new chapter in the study of materials from the Tumulus period.

Bronze was the defining raw material of the era. Its study contributes substantially to understanding the transformations between the Tumulus culture and the periods preceding and following it. Which methodologies are most effective for tracing its provenance? Did the copper and tin derive from single or multiple sources? What role did metal exchange and trade play in the reorganisation of social and economic networks? What can be inferred about practices of alloying, mixing, and recycling? Does metallurgical composition correspond to the intended function of the object? Can workshop groups be identified through metalworking techniques or object typologies? If so, what were the possible social or religious roles of metalworkers?

Session 3 — What makes a place worth living?

How do we come to belong somewhere? What gives a place its particular charm, and why do we choose to settle there – or, conversely, to move away? This session explores the experience of place attachment – or its absence – in connection with the concepts of spatial identity and the idea of home. Daily rituals, spaces of growth, memory-laden architecture, and the settings of communal life and activities all shape how we relate to a particular location. Comparable patterns may have influenced human experience during the period of the Tumulus culture.

It can be asked: what criteria guided the choice of settlement location? Was proximity to natural or raw material resources the determining factor, or did social ties, infrastructure, memories, and traditions play a more decisive role? How was daily life organised, and what principles

structured routine activities? What kinds of relationships and forms of cooperation can be identified between communities and their surrounding landscapes – whether among neighbouring settlements or within the internal organisation of a single community?

The session also raises questions concerning the motivations behind migration and re-settlement: why were new settlements founded during this period? What individual or collective decisions guided the selection of new locations, and what were the long-term consequences – in terms of social networks, food production and storage, access to water, or rituals associated with belief systems and burial practices? And resting to that, how can we evaluate possibly forcing climate and landscape factors?

The connection between past and future, the role of memory, the importance of deliberate planning, and the formation of local identity are all central themes of this session, which focuses on the human, social, and cultural dimensions of settlement.

Session 4 — What connects and what divides us?

The middle of the 2nd millennium BC was a complex period characterised by both unity and connection, as well as disunity, separation, and change. The Tumulus phenomenon encompassed much of Central Europe, comprising a variety of local variants and groups over several centuries. Each entity possessed its own distinctiveness, yet all can be identified as part of the same overarching cultural sphere. Local traditions and collective memory played a significant role in shaping how the characteristics of Tumulus material culture manifested within assemblages, while maintaining clear distinctions from preceding cultures.

Furthermore, the border regions – both between smaller local groups and the wider cultural sphere – reveal diverse patterns of interaction with neighbouring peoples and their material cultures. This session seeks to identify cultural elements such as customs, attire, modes of representation, and ways of life – both in life and death, across positions of prestige and everyday contexts – that either create unity or demarcate difference. These processes occur within the Tumulus cul-

ture, within local community traditions, and across cross-border connections.

The key questions are: what unites us, and what marks someone as the 'other'? How do tradition and innovation interact within the communities of this diverse period?

Session 5 — How deep are biographies buried?

Burials represent one of the most significant sources of information in archaeology, and this is particularly true for the period of the Tumulus culture. Cemeteries are especially well characterised during this time, and advances in bioarchaeological methods have created new opportunities for research.

Along the Danube, burial practices underwent notable transformations, although biritual cemeteries are also attested, suggesting complex belief systems and cultural interactions. Can these biritual graves or cemeteries be interpreted as the burials of newcomers within the local population? Do they reflect differences in lifestyle?

Increasing mobility, migration, and climatic change are key themes associated with the Tumulus period from its very beginning. To what extent can patterns of mobility be recognised, and can transformations in diet be detected through isotopic data?

Large tumuli constructed from earth, wood, and/or stone were frequently raised over burials, some of which still dominate the landscape today. In addition, burials with ring-ditches also appear in certain regions. Could the placement of these tumuli and cemeteries within the landscape have served purposes of representation, communal memory, or territorial demarcation?

The study of ancient DNA has advanced considerably and become increasingly widespread. Can the individuals buried beneath a single tumulus or within a single grave group be interpreted as members of the same family? Is it possible to identify kinship networks within cemeteries?

Moreover, some individuals were interred with richly furnished grave goods, including objects made of gold, bronze, amber, or glass. These

artefacts may indicate gender, social status, or group affiliation. Can we observe aspects of the social structure of communities, and can signs of social transformation be detected in comparison with the preceding period?

Finally, grave goods can convey multiple narratives, particularly in the case of cremation burials. Can we reconstruct the *chaîne opératoire* of burial practices, for instance, the process of cremation itself? Is it possible to identify traces of pyres from this period?

The original idea for the meeting emerged from the Tumulus Research Group, formed in 2024 and comprising young researchers. In view of the strong interest, the event will be realised as a three-day international conference rather than a one-day workshop. Members of the research group are Kristóf Fülöp, Polett Kósa, Péter Mali, Ákos Mengyán, Gábor Sánta, Nóra Szabó, and Anna Szigeti. The scientific advisors of the conference are Viktória Kiss and Gabriella Kulcsár.

The international scientific conference held in Hungary is organised by the Institute of Archaeology, ELTE Research Centre for the Humanities, and the MTA–ELTE HTK Lendület "Momentum" BASES Research Group, with the support of the National Cultural Fund of Hungary. Cooperating partners include HUN-REN Institute for Nuclear Research (ATOMKI) and the Isotoptech Zrt., Archaeological Department, University of Szeged, the National Institute of Archaeology, Hungarian National Museum HNM PCC and the Institute of Exploration Geosciences, University of Miskolc.

We welcome you to Budapest!
The Organising Committee

Conference programme

A World in Motion
Between Tradition and Transformation in the
Tumulus Culture along the Danube
Budapest, Hungary
22–24 April 2026
https://www.worldinmotion2026.com/

Location: Institute of Archaeology ELTE RCH
Research Centre for Human Sciences
of Hungarian Academy of Sciences
Conference hall, ground floor
H-1097 Budapest, 4 Tóth Kálmán Street

Day 1 — Wednesday, April 22, 2026

11.00– Registration

13.00–13.30 *Opening Speech and Introduction to 'A World in Motion' Conference*

Session 1 — Still or shifting? The dynamics of chronology

13.30–13.50 Alexandra Găvan: *From the Middle Bronze Age to the Late Bronze Age in the Eastern Hungarian Plain: An Overview of Absolute Dates*

13.50–14.10 Anna Szigeti et alii: *Between Tradition and Transformation in the Eastern Great Hungarian Plain: A New Chronological Study of the Hajdúbagos–Cehăluţ Ceramic Style*

14.10–14.30 Victor Sava: *Exploring Ceramic Chronology and Cultural Links in the Late Bronze Age Cemetery of Pecica-Situl 14, Western Romania*

14.30–14.50 Daria Ložnjak Dizdar and Stašo Forenbaher: *When did the Southern Urnfields Begin? The Relationship Between the Middle and Late Bronze Age in the Southern Carpathian Basin*

14.50–15.20 Coffee break

15.20–15.40 Brina Škvor Jernejčič and Bine Kramberger: *From Litzen to the Early Urnfield Culture: New Insights into Chronology and Population Dynamics in the Westernmost Pannonian Plain and the Southeastern Alps*

15.40–16.00 Jakub Godiš and Matej Styk: *New ^{14}C-AMS Data on the Tumulus Culture in Danubian Lowland, Slovakia*

16.00–16.20 Klára Šabatová and David Parma: *From Relative to Absolute: Radiocarbon Dating and the Chronology of Tumulus Culture in Moravia*

16.20–16.40 Aleksandar Kapuran and Mario Gavranović: *Tumulus Culture in the Central Balkans in Light of New Research and Absolute Dates*

16.40–17.10 Discussion after the session

17.10–17.40 Poster presentations by flash talks

Day 2 — Thursday, April 23, 2026

8.45–9.00 Registration

Session 2 — How far is near enough?

9.00–9.20 Mario Gavranović: *Middle Bronze Age Copper Raw Material Networks Between Central Europe, Italy and the Balkans*

9.20–9.40 Gábor Sánta et alii: *Archaeometallurgical Analyses of Metal Objects from the Tumulus Period: Case Studies from the Danube–Sava–Drina Region*

9.40–10.00 Ákos Mengyán et alii: *Social Interaction, Traditions and Trade in the Tumulus Period: Compositional Analyses of Ceramics, Glass Beads and Stone Axes from the Maklár Cemeteries (NE Hungary)*

10.00–10.20 Mateusz Cwaliński: *A Close Relationship: The Role of Amber in the Tumulus Culture*

10.20–10.50 Discussion after the session

10.50–11.20 Coffee break

Session 3 — What makes a place worth living?

11.20–11.40 Barry Molloy: *A Climate of Plenty? Comparing Landscape–Community–Climate Intersections in the Plains of the Carpathian Basin 1550–1200 BC*

11.40–12.00 Attila Demény et alii: *Middle Bronze Age Humidity and Temperature Variations, and Societal Consequences in East-Central Europe*

12.00–12.20 Boris Kavur and Martina Blečić Kavur: *No Tumuli in the Tumulus Culture?*

12.20–12.40 Nóra Szabó: *Choosing Space, Managing Storage: Settlement Location and Everyday Economy in the Tumulus Culture*

12.40–13.40 Lunch break

13.40–14.00 Gábor Szilas: *Settlement-structural Changes during the Tumulus Culture Period in the Area of Budapest*

14.00–14.20 David Parma: *Settlement Networks of the Middle Bronze Age in Moravia (Czech Republic)*

14.20–14.50 Discussion after the session

Session 4 — What connects and what divides us?

14.50–15.10 Wolfgang David: *"From South-east to North-west? – From North-west to South-east?" The 'Spread' of the Middle Bronze Age Tumulus Culture along the Danube: Archaeological Evidence and History of the Historical Interpretation of a Phenomenon*

15.10–15.30 Magdolna Vicze: *The Question of Tradition and Transformation on the Százhalombatta-Földvár Tell Settlement*

15.30–16.00 Coffee break

16.00–16.20 Györgyi Parditka and Paul R. Duffy: *The Lower Körös: Home of the Reluctant Late Bronze Age*

16.20–16.40 Orsolya Gyurka: *Hajdúbagos–Cehăluț Pottery in Focus: Stylistic Characteristics and Social Dynamics*

16.40–17.00 Péter Mali: *Not Yet, But not Anymore. Tumulus Phenomenon on the Cultural and Chronological Boundary*

17.00–17.20 Florin Gogâltan: *Foreigners and Locals in the Southeastern Carpathian Basin: Insights from an Older Funerary Discovery at Mokrin*

17.20–17.50 Discussion after the session

19.00– Evening reception

Day 3 — Friday, April 24, 2026

8.45–9.00 Registration

Session 5 — How deep are biographies buried?

9.00–9.20 Katharina Rebay-Salisbury: *Bridging the Analytical Gap: Inhumations and Cremations in Middle Bronze Age Burial Transitions*

9.20–9.40 Tamás Hajdu et alii: *Complex Bioarchaeological Analysis Reveals Radical Changes in Mobility, Diet and Social Structure Around 1500 BCE at the Carpathian Basin*

9.40–10.00	Kristóf Fülöp: *The Technology of Cremation: Rethinking Ritual, Knowledge, and Practice*
10.00–10.20	Hannah Skerjanz: *In the Midst of Change. Middle Bronze Age Funerary Practices in Upper and Lower Austria*
10.20–10.40	Emília Pásztor et alii: *Similarities and Differences – Analysis of the Burial Rites of Early Tumulus Culture*
10.40–11.10	Coffee break
11.10–11.30	Polett Kósa et alii: *Limited Sample, Extensive Insight: Evaluating a Small Late Bronze Age Cemetery from Mány-Méhes-dűlő East*
11.30–11.50	Mateusz Stróżyk: *Early "Urnfield" Traditions in the Middle Bronze Age (1600–1300 BC): Evidence from Cemeteries in Western Poland*
11.50–12.10	Szilvia Guba: *Influence or Presence? The Role of the Tumulus Culture in the Formation of the Piliny Culture Cemetery in Zagyvapálfalva*
12.10–12.40	Discussion after the session
12.40–13.10	Closing remarks

End of conference

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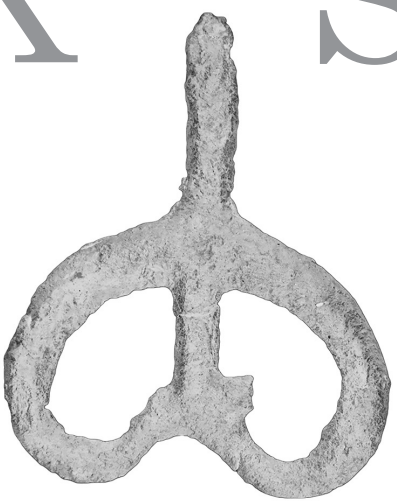
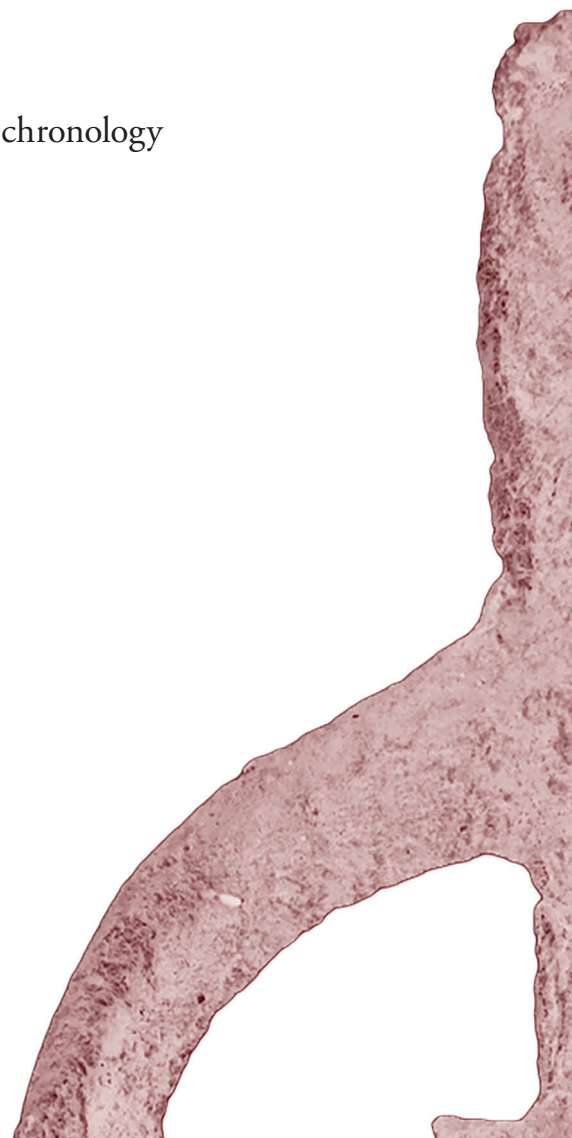


Session 1

Still or shifting? The dynamics of chronology



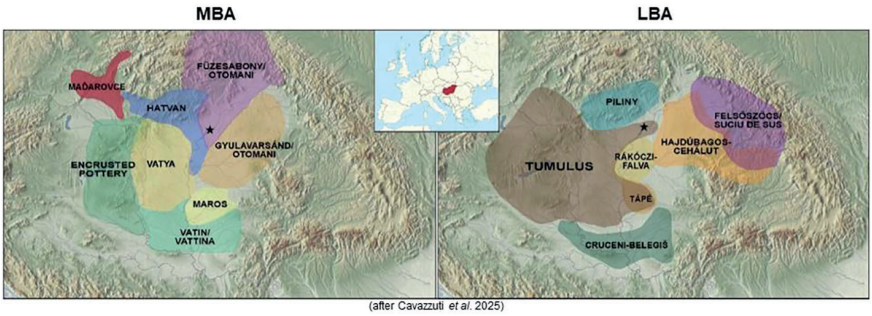
From the Middle Bronze Age to the Late Bronze Age in the Eastern Hungarian Plain: An Overview of Absolute Dates

Alexandra Găvan

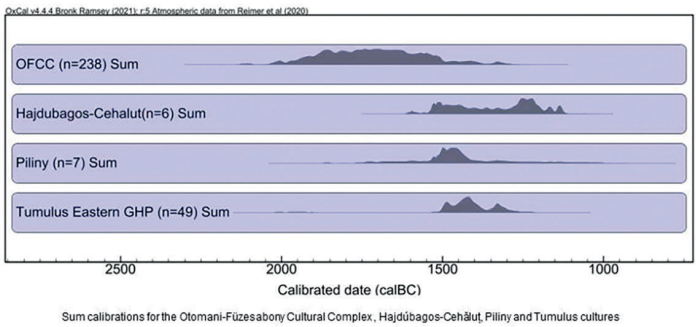
Institute of Archaeology and Art History of the Romanian Academy, Cluj-Napoca Branch, Romania

The transition from the Middle to the Late Bronze Age in the Great Hungarian Plain is marked by the end of tell settlements in the region. While this phenomenon was once considered a brief period linked to a specific historical event – the alleged invasion of the Tumulus Culture into the Carpathian Basin – it is now recognised as a prolonged process involving the occupation and abandonment of individual tells at different times. Relatively little is known about the settlement system that characterised the first phase of the Late Bronze Age in the eastern part of the Great Hungarian Plain. Similarly, absolute dates associated with this horizon are few.

In this presentation we will discuss all the available radiocarbon dates from the end of the Middle Bronze Age and the first part of the Late Bronze Age in the eastern part of the Great Hungarian Plain and review the archaeological evidence from these periods. Special attention will be paid to the transition from the Middle to the Late Bronze Age and the settlements and cemeteries that can be ascribed to this important period in the prehistory of the Carpathian Basin.



(after Cavazzuti *et al.* 2025)



Sum calibrations for the Otomani-Füzesabony Cultural Complex, Hajdúbagos-Cehăluț, Piliny and Tumulus cultures

Above: Cavazzuti et al. 2025, Fig. 1; below: Sum calibration for the Otomani–Füzesabony Cultural Complex, Hajdúbagos–Cehăluț, Piliny and Tumulus cultures (model: Alexandra Găvan)

Notes

Between Tradition and Transformation in the Eastern Great Hungarian Plain: A New Chronological Study of the Hajdúbagos–Cehăluţ Ceramic Style

Anna Szigeti[1,2,3], István Major[1], János Dani[3,4]

[1]Radiocarbon Competence Centre HUN-REN Institute for Nuclear Research (ATOMKI), Hungary

[2]Isotoptech Zrt., Hungary

[3]Archaeological Department, University of Szeged, Hungary

[4]Déri Museum, Hungary

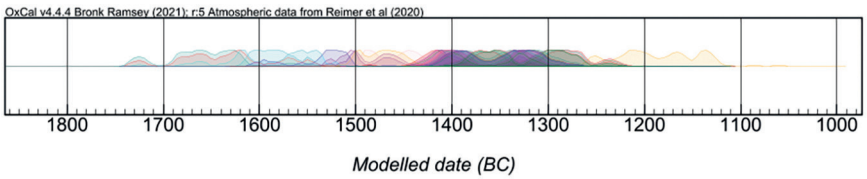
The sites of Tumulus culture (TC) can be found in both the southern and northern parts of the Great Hungarian Plain (GHP), spanning from the Koszider period in the south and the early Late Bronze Age (LBA) in the north. However, in the intermediate zone and further to the east, local Middle Bronze Age (MBA) traditions remained dominant alongside the impact of the TC. Examples include the Hajdúbagos–Cehăluţ ceramic style, which covers a significant area of the Northeastern Carpathian Basin. The Hajdúbagos–Cehăluţ is referred to as a local subgroup of the TC by most scholars, which lasted from approximately the end of the Koszider period (1600–1500/1450 BC) until the Reinecke BD (1200 BC). However, we did not have any absolute dates for the Hajdúbagos–Cehăluţ ceramic style, but this has changed in recent years.

This presentation will provide an overview of the latest chronological results relating to the ceramic style, with a particular focus on its initial and final phases. It will also be demonstrated how these results fit into the radiocarbon model for the eastern part of the Carpathian Basin.

The new data reveal some important conclusions. For example, the early phase of this ceramic style appears to have coexisted with the final stage of the MBA tell cultures in the GHP, in a manner similar to the Maďarovce–TC transition in Southwestern Slovakia. This supports the view, consistent with the latest archaeological concepts, that the tran-

sition between the Middle and Late Bronze Ages was not a brief, diachronic event, but rather a longer, synchronous process.

Project No. KDP-2023-C2321722 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the 2023-2.1.2-KDP-2023-00002 funding scheme.



Stacked plot showing the radiocarbon dates associated with the Hajdúbagos–Cehăluţ ceramic style (model: Anna Szigeti using OxCal v.4.4.4)

Notes

Exploring Ceramic Chronology and Cultural Links in the Late Bronze Age Cemetery of Pecica-Situl 14, Western Romania

Victor Sava

Institute of Social Sciences and Humanities „Titu Maiorescu", Romanian Academy, Timişoara Branch, Romania

The presentation focuses on a Late Bronze Age cemetery discovered in 2011 at Pecica-Situl 14, located in Arad County, western Romania. Although smaller than the famous Tápé cemetery near Szeged, it represents a significant piece in understanding the Bronze Age in this region. The cemetery was investigated during the pre-development excavations for the Arad–Makó highway construction. In the excavated area were documented 38 graves. Radiocarbon dating indicates the cemetery was in use from the 16th to the 10th century BC, with inhumation graves predominantly from the 16th to 14th centuries BC, and cremation graves from the 13th century BC onward.

The graves were furnished with a variety of items; ceramic vessels being the most numerous. The ceramics were analyzed stylistically and chronologically, revealing three phases of ceramic evolution corresponding to the periods of use. The first phase retains Middle Bronze Age traditions, the second introduces forms from Central European tumulus graves, and the third marks a shift with cremation practices and new urn types. Radiocarbon dating helped calibrate these phases.

In line with the topic, the spatial distribution of ceramic forms and decorations similar to those discovered in the Pecica cemetery is considered. To obtain relevant results, the spatial distribution analysis incorporates published data from 432 contemporary sites. The interpretation of the data indicates that during the 16th and 14th centuries BC, the most numerous analogies for the shapes and decorations of ceramics are found in the area between the Tisza River and the Apuşeni Mountains. At the same time, some interesting connections were observed with more distant regions such as Slovakia and Bohemia. Starting with the 13th century BC, as the funerary ritual changed, we also notice a concentration of the main ceramic analogies toward Transylvania and other eastern areas.

Excavating a Late Bronze Age grave from the Pecica–Site 14 cemetery (photo: Victor Sava)

Notes

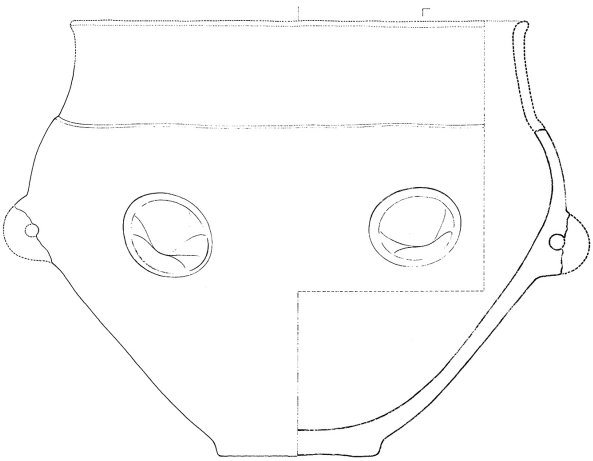
When did the Southern Urnfields Begin? The Relationship Between the Middle and Late Bronze Age in the Southern Carpathian Basin

Daria Ložnjak Dizdar[1], Stašo Forenbaher[2]

[1]*Institute of Archaeology, Croatia*

[2]*Independent researcher, Croatia*

The southern Carpathian Basin (present-day continental Croatia) is poorly researched for the Middle Bronze Age period. A few settlements (Poljana Križevačka, Kurilovec) and cemeteries (Poljana Križevačka, Sirova Katalena, Moravče) have been excavated, but the majority of known stray finds from the late 19th and early 20th centuries (Bijelo Brdo, Orolik, Erdut) come from eastern Croatia. In northwestern Croatia, the cremation cemetery of Poljana Križevačka, with 50 graves dated to Br C and Br D phases, has been excavated. Typo-chronological analysis places this cemetery within the Virovitica group of the Urnfield culture. Absolute dates from a total of nine graves (eleven dates) indicate a range between the 15th and 13th centuries BC, which fits well into the regional framework of absolute dating for this type of grave (e.g., Teržan, Črešnar 2014). Finds of single inhumation graves with preserved costume demonstrate direct influences of the Tumulus culture in continental Croatia. What are the chronological and spatial relationships between the more numerous cremation cemeteries and individual inhumation graves from this period? When can "the first Urnfields" (Cavazzuti et al. 2022) be dated in the area between the Middle Danube and Italy? Local ceramic production forms the basis of regional chronologies, which are linked by widely distributed metal finds that can be integrated into Central European chronological systems, as demonstrated through numerous studies (e.g., Hänsel 1968). This overview aims to present the current state of research and discuss the funerary customs and typo-chronological relationships in light of absolute dating for the period between the 15th and 13th centuries BC within the regional framework of the southern Carpathian Basin.



Poljana Krizevacka, Urn from grave 47
(drawing for the Institute of Archaeology Martina Roncevic)

Notes

From Litzen to the Early Urnfield Culture: New Insights into Chronology and Population Dynamics in the Westernmost Pannonian Plain and the Southeastern Alps

Brina Škvor Jernejčič, Bine Kramberger
ZRC SAZU, Institute of Archaeology, Slovenia

Large-scale highway construction projects in Slovenia have brought to light an exceptional number of settlements dating to the mid-2nd millennium BC. Through systematic analyses of material culture, extensive radiocarbon dating, and the publication of these sites over the past twenty years, a solid corpus of data has been established for the chronology, burial practices, settlement patterns, and population dynamics of this period. These data are of key relevance not only for Slovenia but also for neighbouring and culturally related regions such as northeastern Croatia, Austrian Styria, and western Transdanubia.

The study area corresponds geographically to the westernmost part of the Pannonian Plain and the southeastern Alpine region of present-day Slovenia. Within this territory, three major shifts in material culture and mortuary practices can be observed during the mid-2nd millennium BC: the Litzen horizon, the Tumulus Culture, and the Oloris–Podsmreka horizon. This study had two goals. The first was to establish a more robust internal chronology for all three phenomena by applying Bayesian modelling to the existing radiocarbon dates. The second goal was to analyse palaeodemographic trends by combining counts of archaeological site phases with radiocarbon-date-based analyses. Two models were employed: a Kernel Density Estimation model using Summed Probability Distributions (KDE-SPD) to mitigate calibration-curve effects, and a KDE model based on occupation-phase counts.

The results demonstrate for the first time that all three shifts in material culture correspond to significant changes in population dynamics. These results contribute to a more refined chronological framework for the middle of the 2nd millennium BC and offer new perspectives on the temporal and demographic character of the Tumulus culture period in the westernmost Carpathian Basin and the southeastern Alpine region.

The settlement of Velike njive (Slovenia), dating to the Middle and Late Bronze Age (Mason, Kramberger 2024)

Notes

New ^{14}C-AMS Data on the Tumulus Culture in Danubian Lowland, Slovakia

Jakub Godiš, Matej Styk

Department of Archaeology, Faculty of Arts, Constantine the Philosopher University in Nitra, Slovakia

The contribution aims to present the results of an analysis of about twenty radiocarbon AMS dates from inhumation and cremation graves dated to the Final Early to the Advanced Middle Bronze Age (1700–1350 BC) discovered in south-western Slovakia. This dataset, collected in recent years, significantly contributes to the study of the absolute chronology of the Tumulus period in the Danubian Lowland, representing the very first radiocarbon dating of archaeological features excavated in Slovakia, which are associated with the Middle Danube and Carpathian Tumulus cultures. Samples consisting mostly of human bones, teeth, and some wood charcoal from a total of ten graves documented at the sites of Černík, Častkovce, Svätý Peter, Nové Zámky, Salka, and Šamorín-Šámot were analysed, some of them even multiple times to obtain more accurate and reliable results. All selected burial features were intact and mostly furnished with typo-chronologically distinctive metal and ceramic artefacts, whose relative dating was thoroughly compared with the results of the ^{14}C measurements. The entire modelled chronological sequence represents a complex period of major socio-cultural transformations – including gradual changes in burial rites and material expression – that occurred during the 16th and 15th centuries BC north of the Danube within the north-western Carpathian Basin. The interpretation of the absolute dates provides a basic framework for the Middle Bronze Age chronology in the lowland area extending between the Little Carpathians in the north-west and the Lower Ipeľ (Ipoly) valley in the south-east. Future work will need to further refine and verify this framework with new data, which will also open possibilities for research into other, more complex aspects of the Tumulus culture phenomenon in the region, as this remarkable topic has not been a priority for Slovak archaeology for many decades.

Burials of prominent women from the 16th century BC (Častkovce) and the 15th century BC (Šamorín-Šámot) in the Danubian Lowland of southwestern Slovakia (photo: Michal Ontko, Romana Ferencová; modified by Jakub Godiš)

Notes

From Relative to Absolute: Radiocarbon Dating and the Chronology of Tumulus Culture in Moravia

Klára Šabatová[1], David Parma[2]

[1]*Masaryk University, Czech Republic*

[2]*Archaeological Heritage Institute Brno, Czech Republic*

The Middle Bronze Age in Moravia is generally considered to be the Tumulus Culture period. The chronology of the Middle Danubian Tumulus Culture *(Středodunajská mohylová kultura)* was last summarised by Professor Stanislav Stuchlík in his evaluation of the Borotice burial mound (2006). During the study of the transition between the skeleton and cremation burial rites, it was decided to date some of the graves using radiocarbon dating and by combining of relative and typological dating to enable study this phenomenon. The biggest problem turned out to be the reliability of the archaeological record in Moravia. Although more than 20 radiocarbon-dated burials in Moravia can be linked to the Middle Bronze Age, only some of them are characteristic in terms of their inventory.

Burial evidence determined by typological criteria and radiocarbon dating was used to synchronise Moravian data with established models for southern Germany and Switzerland, revealing close parallels in the timing of Reinecke's periods. We constructed a chronological axis based on pin typology independently to refine the understanding of cultural transitions.

The results indicate that the onset of the Middle Bronze Age was a prolonged process, marked by the coexistence of late Early Bronze Age and early Tumulus Culture artefacts. This study demonstrates that Moravian development was not exceptional, but part of wider regional dynamics.

This paper shows how the recent research has refined the chronological framework of this cultural period through absolute dating and help us to understand social and cultural transformations during the Tumulus period in Moravia.

This paper is a result of the OP JAK project *Prepared for the Future: Understanding the Long-Term Resilience of Human Culture (RES-HUM)*, registration number: CZ.02.01.01/00/22_008/0004593.

Borotice, burial mound, Moravia region (photo: Klára Šabatová)

Notes

Tumulus Culture in the Central Balkans in Light of New Research and Absolute Dates

Aleksandar Kapuran[1], Mario Gavranović[2]

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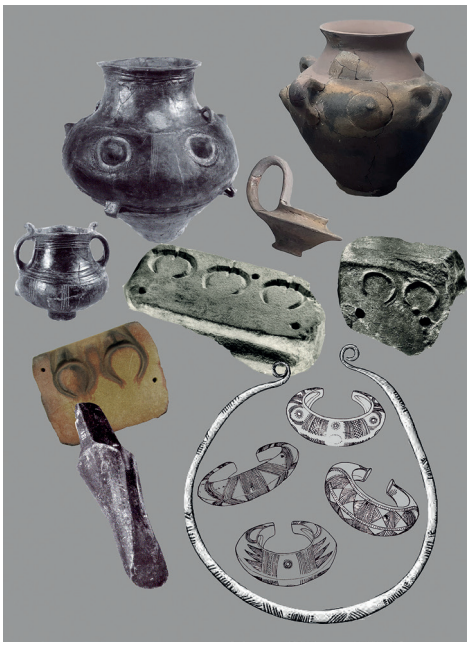
[2]*Austrian Archaeological Institute, Austrian Academy of Sciences, Austria*

Although the Tumulus Culture is far less prominent in the Central Balkans than in the Carpathian Basin, its influence in this region is clearly recognizable in burial practices and the associated material culture. According to the chronological framework commonly used in Serbian archaeology the transition zone between the Pannonian Plain and the Dinaric Mountain area was, from the mid-2nd millennium BC, inhabited by communities of the Belegiš, Paraćin, and Brnjica groups, all attributed to the Late Bronze Age.

To date, no unequivocal settlements connected with the Tumulus Culture have been identified in the Central Balkans. Nevertheless, we propose that its impact is visible in the material culture of the prehistoric communities occupying the basins of the Western, Southern, and Great Morava rivers. This influence is most clearly expressed in the stylistic traits of pottery decoration found both in some aspects of burial practices within the Paraćin-type flat cemeteries. An analysis of burial customs further indicates that the Tumulus Culture played a significant role in shaping funerary practices, especially within the Brnjica group and, to some extent, in the Timok group of eastern Serbia during the transition from the Middle to the Late Bronze Age. These changes are reflected primarily in the increased presence of bronze objects in graves, a notable difference from practices of the Middle Bronze Age.

In the past decade, the first absolute dates for Tumulus-related contexts in the Central Balkans have been obtained. These results provide important confirmation of the cultural influence exerted on Late Bronze Age communities in the region. Based on current research, we suggest that southern Serbia and northern Montenegro represent the southernmost boundary of Tumulus Culture influence in the Central Balkans.



Tumulus Culture finds from Serbia (after Kapuran 2019; Armbruster, Jockenhoevel, Kapuran, Ramadanski 2019; Kapuran, Gavranović, Jovanović 2022; Todorović 1975)

Notes

Session 2

How far is near enough?

Middle Bronze Age Copper Raw Material Networks Between Central Europe, Italy and the Balkans

Mario Gavranović

Austrian Archaeological Institute,
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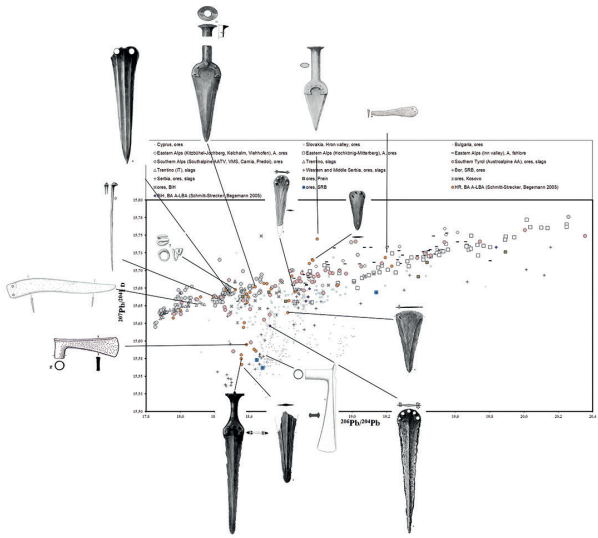
Over the past decades, a substantial increase in archaeometallurgical research has greatly enhanced our understanding of Bronze Age copper supply networks. Although lead isotope analysis has become the most widely applied and robust method for tracing copper provenance, significant challenges remain. The mixing of ores from different deposits during production and the isotopic similarity of geologically related ore fields often hinder precise source attribution. These limitations underscore the need to integrate additional lines of evidence, including chemical composition, chronological alignment, and archaeological context in order to reconstruct copper circulation more reliably.

From the Middle Bronze Age onward, rising demand for metal objects contributed to expanding connectivity between copper-producing and copper-consuming regions across the Alps, the Apennine Peninsula, the Carpathian Basin, and the Balkans. As we are still in the process of reconstruction of possible routes of raw material between mining and smelting areas and the places of final processing (alloying) of copper, current data point to the emergence of major copper production districts in the Alpine region, particularly Hochkönig–Mitterberg and the Southeastern Italian Alps. At the same time, local production in copper-rich regions such as eastern Serbia and Slovakia declined markedly between the 17th and 15th centuries BCE. The apparent "disregard" for nearby ore sources and the growing reliance on distant raw materials reflect profound socio-economic transformations, technological advances in mining and smelting, and the formation of stable long-distance exchange networks.

Even with the ideological and social changes that accompanied the rise of the Urnfield phenomena in the 14th–13th centuries BCE, these

long-established copper supply systems not only persisted but intensified, highlighting their structural resilience and the increasingly integrating character of Bronze Age societies in Europe.



Lead isotope values of selected objects from the western Balkans (modified by Alberta Arena)

Notes

Archaeometallurgical Analyses of Metal Objects from the Tumulus Period: Case Studies from the Danube–Sava–Drina Region

Gábor Sánta[1,2], Mario Gavranović[2,3], Emília Pásztor[4], Evelin Papp[4], Alberta Arena[2], Mathias Mehofer[5], Nicole Mittermair[2]

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[4]Türr István Museum, Hungary
[5]Vienna Institute for Archaeological Science, University of Vienna, Austria

In this paper we will present results of recent archaeometallurgical analyses (chemical composition and lead isotope analyses) on metal objects from sites in southern Hungary (Sükösd-Árpás-dűlő, Érsekcsanád), northern Croatia (Vinkovci area) and eastern Bosnia along the Drina River (cemeteries of Jezero and Pađine). Based on typological assessment most of the discussed finds date to the 16th and 15th centuries BC and are in general regarded as indicative of Tumulus culture and its regional groups. In terms of chemical composition and alloy practices (tin concentration), we will compare different object groups (trapezoidal hilt-plate daggers, bi-conical headed pins, bracelets) and focus on possible typological, chronological and regional patterns.

Considering copper provenance, the beginning of the Tumulus period (c. 1600 BC) is marked by restructuring of Bronze Age metal supply in Carpathians Basin and all adjacent regions of central- and south-east Europe. During this period, the copper production in north-eastern Serbia (Bor area) ceased and the presence of copper from Slovakia (Hron valley) significantly decreased, while the first analytic results point to influx of copper raw material from the Alps (Mitterberg area and Trentino). Although the presence of Alpine copper in some MBA objects coincides with the spread of Tumulus culture, suggesting a possible link between metal supply and cultural expansion, the number of analyses is still not sufficient for such general conclusions.

Türr István Museum, Baja; Museum of Vinkovci; Tuzla and Tolisa; ÖAW – Österreichisches Archäologisches Institut (photo: Gábor Sánta, Mario Gavranović)

Chemical composition of objects from the Szeged region suggests additional copper sources that cannot yet be identified due to the lack of lead isotope analyses; similarly, some objects from the Kelebia hoard show compositions comparable to copper deposits in north-eastern Serbia (Bor, Majdanpek), although lead isotope analyses are also lacking.

Based on preliminary results, we hypothesize that during the 16th and 15th centuries BC different regional groups within the southern Carpathian Basin and northern Balkans obtained copper from various sources, reflecting distinct exchange networks between different communities within a broadly shared cultural horizon. Some of them appear to be relied more on supply from Mitterberg area, while other were more oriented toward supply routes coming from southwestern direction (Trentino).

Notes

Social Interaction, Traditions and Trade in the Tumulus Period: Compositional Analyses of Ceramics, Glass Beads and Stone Axes from the Maklár Cemeteries (NE Hungary)

Ákos Mengyán[1,2], Zita Hrabák[3,4], Bernadett Bajnóczi[5], Veronika Szilágyi[6], Zsolt Kasztovszky[6], Ferenc Kristály[1]

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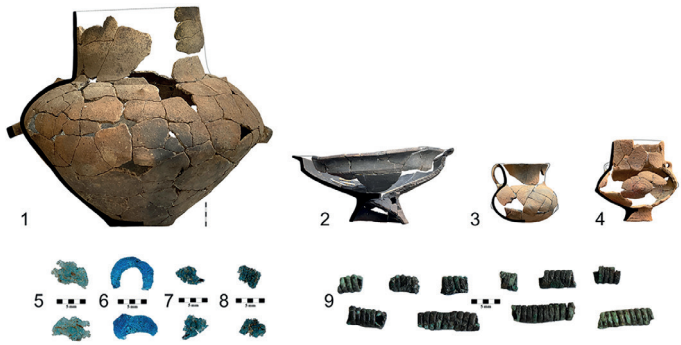
Located on the northern Great Hungarian Plain of Northeastern Hungary, two partially excavated cemeteries have been identified in the vicinity of Maklár. The sites are Maklár-Koszpérium (121 burials) and Maklár-Nagyrét II (210 graves), and date primarily to the Tumulus period, roughly between 1600/1500 and 1300/1200 cal BC. However, radiocarbon dating indicates a minor chronological difference between the sites. In this period, the research area was a contact zone between Tumulus and Piliny communities, an interaction reflected slightly in the stylistic variations of the ceramic assemblages. Both cemeteries consist exclusively of cremation burials, including urn graves and scattered cremation graves. Most burials contained multiple vessels, forming diverse ceramic sets. Among the finds, thirty-four blue glass beads were unearthed in the Nagyrét II, and two stone axes were found, one from each site.

This research examines the composition and provenance of ceramics, glass beads and stone axes, in order to analyse the networks and traditions of communities. The raw material procurement and tempering practices of the two ceramic assemblages were studied by thin-section petrography. The primary objective is to define the technological traits

of pottery production and to identify similarities and differences in manufacturing processes. Furthermore, the study explores how technological traditions relate across the two cemeteries and how vessels found within the same grave are technologically associated. By employing the *chaîne opératoire* approach, this study provides insights into social and cultural boundaries.

The stone axes were analysed by non-destructive PGAA and XRD analyses, indicating both local and imported raw materials. The glass beads were studied by SEM-EDS and LA-ICP-MS. Their provenance sheds light on complex social relations and long-distance trade networks between Central Europe and the Eastern Mediterranean.



Grave assemblage of burial 49 from Maklár-Nagyrét II: 1–4 ceramics, 5–8: glass beads, 9: bronze spiral-tubes (photos: Zita Hrabák, László György, Ákos Mengyán)

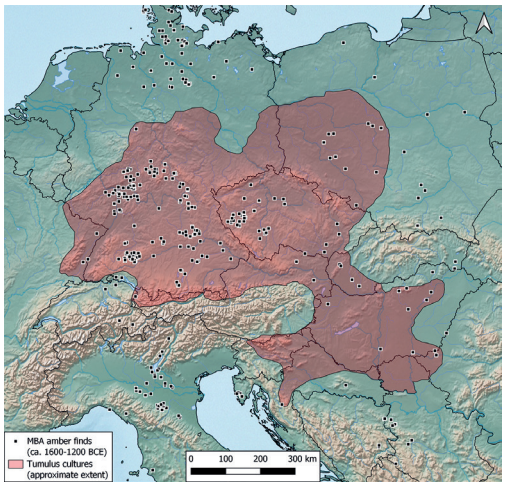
Notes

A Close Relationship: The Role of Amber in the Tumulus Culture

Mateusz Cwaliński
Institute of Archaeology, University of Gdańsk, Poland

The Early Bronze Age witnessed the first large-scale dissemination of amber in Europe beyond the zone of its natural occurrence. During the Middle Bronze Age – here understood as the developmental phase of the Tumulus culture – this process intensified further. Among the clearest signs of this trend is the widening of amber's distribution range to include regions that had previously received the material only sporadically, if at all. Another clear marker is a shift in stylistic conventions, discernible in the appearance of new forms of amber artefacts, most notably biconical beads. At this time, practices of amber utilisation became increasingly standardised, particularly with regard to its role within dress assemblages as observed in funerary contexts. Amber ceases to co-occur with weapons and is instead ever more closely associated with items of personal adornment. Closely tied to this development is a growing homogenisation in the social attribution of amber, which became a resource allocated almost exclusively to women and children. Amber also serves as a first-rate proxy for reconstructing mobility. Initially procured from the Baltic and the North Sea coastal zones, it was subsequently transported over long distances before eventually reaching its consumers. This raises a series of further questions: which areas supplied raw amber; where, and by whom, was it worked; and along which routes did it circulate? To date, no amber workshop securely dated to this phase has been identified, making it plausible that itinerant craftsmen were responsible for both the processing and distribution of the material. Moreover, in light of recent advances in provenance analyses, it appears increasingly credible that this period saw the progressive commodification of amber as a trade good exchanged for other raw materials, including copper and tin. Taken together, these considerations suggest that the significance of amber within the Tumulus culture should not be underestimated; indeed, it may be regarded as one of the material hallmarks of this phenomenon.

The paper was prepared and presented within the framework of the scientific project *Amber and copper in the Early and Middle Bronze Age in Polish lands: acquisition, processing, circulation and use* (no. 2023/51/D/HS3/00778), financed by the National Science Centre of Poland.

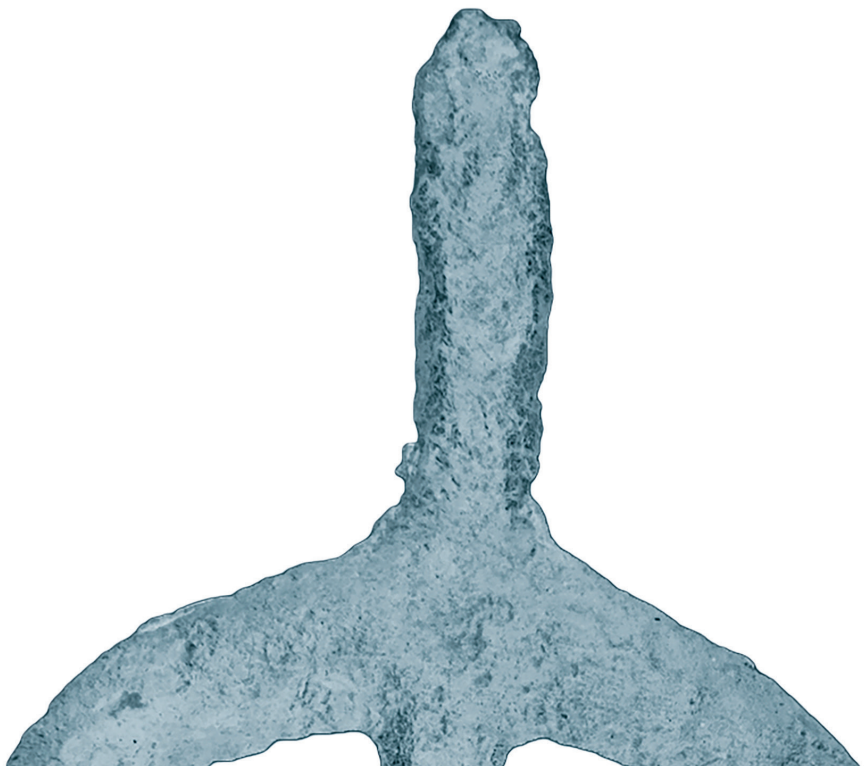


Distribution of amber finds dated to the Br B–Br D phases (ca. 1600–1200 BCE) in Central Europe (map: Mateusz Cwaliński)

Notes

Session 3

What makes a place worth living?



A Climate of Plenty? Comparing Landscape–Community–Climate Intersections in the Plains of the Carpathian Basin 1550–1200 BC

Barry Molloy
University College Dublin, Ireland

There was a major disruption in settlement systems in the mid-second millennium BC in the Carpathian Basin. The most visible marker of this is what was lost – central places and cemeteries were abandoned in many areas. Around the same time, new cultural traditions emerged, broadly punctuated by the adoption of Tumulus culture ceramics in the central and north plains and Belegiš and LBA Pannonian encrusted wares in the south. These new ceramic traditions did not emerge in isolation; they were associated with new settlements that contrasted in organisation and preferred location with those of centuries before the disjuncture. Something had materially changed that impacted on the performance of lifeways, enabling and enabled by new relationships with the landscape. We might point to climate change as a factor – often viewed as catastrophic, we may also ask whether one person's difficulty was another's opportunity? Old ideas may be challenged alongside old certainties when structuring conditions shift, paving the way for new ideas of community organisation and the distribution of resources, potentially influenced by shifts in demographics or articulations of power. Beginning with a brief overview of climate data, I will then consider what topography and settlement design can tell us about some physical and environmental factors influencing how communities structured their social landscapes. I argue that while people showed resilience – evident in material culture and social practices – defining elements of how societies were organised changed fundamentally from the late 16th century BC, demonstrating reactive and innovative decisions by community leaders. The scale at which we choose to view social units will impact on how we measure the political and economic dimensions of change, which I will address in the context of shifting social networks and mobility patterns.

Grave 12 at Iđoš-Budžak Livade (Molloy et al. 2023, fig. 3)

Notes

Middle Bronze Age Humidity and Temperature Variations, and Societal Consequences in East-Central Europe

Attila Demény[1], Zoltán Kern[1], György Czuppon[1], Szabolcs Leél-Őssy[2], Bernadett Bajnóczi[1], Viktória Kiss[3], Gabriella Kulcsár[3], Mária Bondár[3]

[1]Institute for Geological and Geochemical Research, HUN-REN Research Centre for Astronomy and Earth Sciences, Hungary
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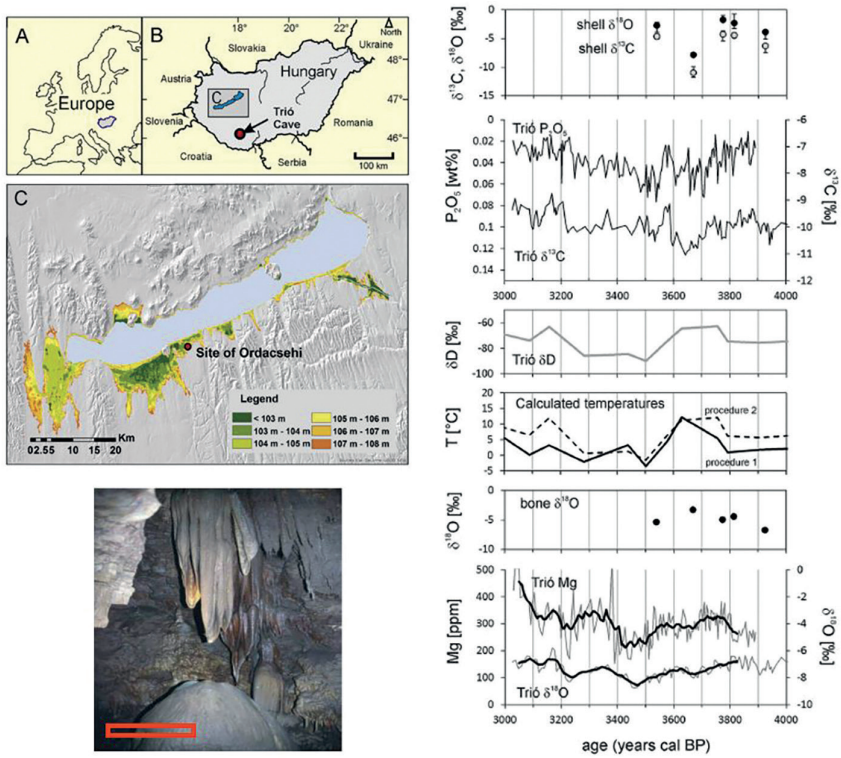
[3]Institute of Archaeology, ELTE Research Centre for the Humanities, Hungary

Archaeological evidence points to substantial changes in Bronze Age societies in the European- Mediterranean region, which were investigated in this study using stable isotopic and trace element multiproxy analyses of a speleothem, bivalve shells, and human skeleton remains. The data indicate warm and humid conditions with elevated summer precipitation around 3.7 cal ka BP, followed by a short-term deterioration in environmental conditions at about 3.5 cal ka BP due to a major volcanic event, most probably the Thera eruption. The environment became humid and cold with winter precipitation dominance around 3.5 to 3.4 cal ka BP, then gradually changed to drier conditions at ~3.2 cal ka BP. The most straightforward consequences of environmental variations have been found in changes of settlement structure in the Carpathian basin. The paleoclimatological picture agrees with other East-Central European climate records, indicating that the climate fluctuations took place on a regional scale.



Locations of the studied shells (Ordacsehi) and speleothem (Trió cave), the picture of the speleothem with the drill core location (red box), and the geochemical compositions used as paleoclimate proxies (modified after Demény et al. 2019)

Notes

No Tumuli in the Tumulus Culture?

Boris Kavur, Martina Blečić Kavur
University of Primorska Koper, Slovenia

Over the past three decades, our understanding of the Bronze Age in eastern Slovenia has changed significantly. This is due not only to the highway construction project that cut through the landscape and revealed a much denser prehistoric settlement pattern than previously expected, but also to a shift in research focus. Attention has moved from individual sites to entire landscapes and from the artefacts themselves to questions of their dating and chemical composition. Today, with a detailed absolute chronology, we can document the increase in the number of sites in eastern Slovenia, observe shifts in settlement patterns and changes in settlement structures, analyse the regional variability of pottery forms and decoration, and study practices such as pottery fragmentation and hoarding.

We can reconstruct when, where, and what the people of the Tumulus Culture were doing – but where are these people? Where and how did they bury their dead? The tumuli are simply missing. Consequently, one of the major questions today is the discrepancy between the number of settlement sites and the very few known tumuli, which are located on the foothills of Pohorje, on the western edge of eastern Slovenia.

Our paper presents the history and current state of debate in Bronze Age research and highlights the major research questions that need to be addressed in the future.

Notes

Choosing Space, Managing Storage: Settlement Location and Everyday Economy in the Tumulus Culture

Nóra Szabó

Institute of Archaeology, ELTE Research Centre for the Humanities, Hungary

Understanding changes in settlement organization, and economic strategies between the Middle and Late Bronze Age in the Carpathian Basin is essential for interpreting broader social transformations. The Middle Bronze Age is generally associated with relatively stable settlement systems, including fortified sites, tells, and extensive open settlements. In contrast, the Late Bronze Age has often been interpreted as a time of increased mobility and shifting economic priorities. However, recent archaeological evidence suggests that this transition may have been more complex.

This paper examines changes in everyday life through settlement structure, storage capacity, and ceramic production. These elements offer insight into economic organization and the scale of community integration. One key question is whether these transformations reflect a restructuring of local economies and social relations: did settlements become smaller and less integrated, with more household-based subsistence strategies?

Ceramic assemblages from the transition show notable stylistic continuity, indicating that traditions were not abruptly abandoned. At the same time, shifts in vessel quality and production emphasis suggest changes in daily practices and consumption patterns.

Settlement evidence also reveals both continuity and change. Some sites show long-term occupation across the Middle and the very beginning of the Tumulus period, while others demonstrate clear shifts in spatial organization and territorial use. Earlier interpretations connected the Tumulus period with a more mobile lifestyle and greater emphasis on animal husbandry. Yet recent discoveries complicate this view: large settlements are now known not only from the Middle Bronze Age but also from the Tumulus period, including examples from the Budapest region.

To explore these questions, the paper investigates these processes through two extensive Bronze Age settlements in the Budapest area, examining how changes in settlement structure, storage practices, and material culture reflect broader transformations.

Reconstructed activity zones of the Tumulus Culture settlement at Budapest-Rákoscsaba-Majorhegy (Szabó 2024)

Notes

Settlement-structural Changes during the Tumulus Culture Period in the Area of Budapest

Gábor Szilas
Budapest History Museum, Hungary

In the region forming part of the Carpathian Tumulus cultural sphere, the presence of the Tumulus Culture can be demonstrated from the Koszider period onward (settlement: Budapest District XVII, Rákoscsaba-Majorhegy; cemetery: Budapest District XXIII, Nagytétény-Érdliget). A key assemblage of the classical period (Reinecke BB2–C) is the vessel hoard from Budapest District XI, Október 23 Street, which suggests a local concentration of political power within the culture.

Our knowledge of settlement conditions during the final phase of the culture (late Reinecke BBC–D) has increased significantly due to excavations carried out since the 2000s.

Late Tumulus Culture settlements – primarily on the Pest side – have been outlined through large-scale excavations (Dunakeszi-Székesdűlő) or through the investigation of several adjacent smaller areas (Budapest District XI, Egressy Road; I. Fischer Road). In contrast, on the Buda side, remains typically came to light in small, topographically isolated areas (Budapest District II, Bokor Street; District III, Bojtár Street; Királyok Road). Overall, these sites were established in similar geomorphological and palaeohydrological settings, and they lack earlier Tumulus Culture antecedents.

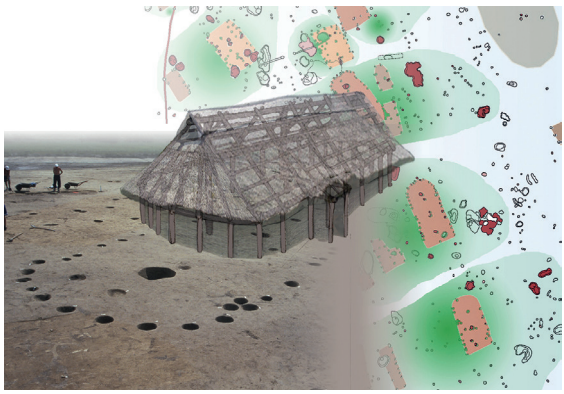
However, the novel structural characteristics of the settlements (ground-level buildings, settlement units, space-dividing elements) raise several questions.

To what earlier architectural traditions can the physical characteristics of the documented building remains be traced? Were the designs of these structures shaped by practical or more abstract considerations? Did the observed building types emerge from cultural traditions, from contacts with more distant regions, or from local innovations? Can

functional distinctions be identified within the clearly defined typological groups?

The lecture also seeks to determine whether the distinct settlement-structural phenomena can be interpreted as independent economic units, and if so, whether their development reflects continuous internal evolution or the adaptation of an already established economic structure.

To address these questions, the study aims to combine the analysis of settlement structures with statistical and scientific examination of the associated artefact assemblages.



Remains, reconstruction, and spatial context of a semi-circular ended post-frame building at the Dunakeszi-Székesdűlő site of the Tumulus Culture (graphic: Orsolya Kangyal, Gábor Szilas)

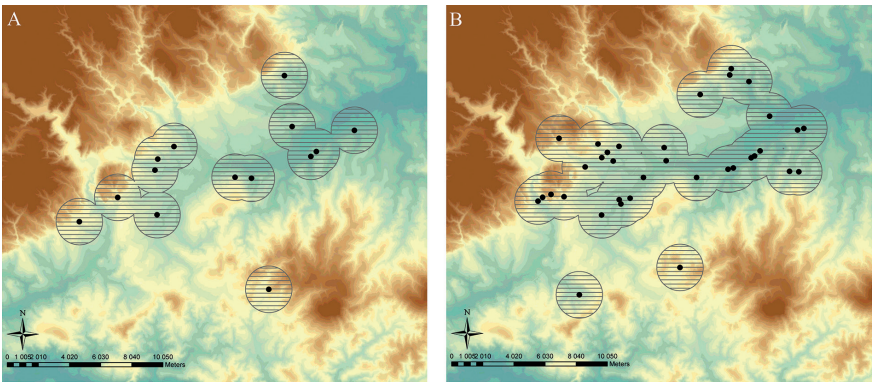
Notes

Settlement Networks of the Middle Bronze Age in Moravia (Czech Republic)

David Parma

Archaeological Heritage Institute Brno, Czech Republic

Thanks to long-term rescue excavations, it is now possible to describe the basic units of the settlement network, which are archaeologically manifested in very different forms. Often these are only individual sunken features or units of them, accompanied by finds from cultural layers, but we also know settlements with dozens of sunken features of various types and with house plans. Most of them can be linked to the distinctive ceramic style of the classic Tumulus culture, with only a few dating back to the early Middle Bronze Age. Typologically indistinct finds from this period (16th century BC) need to be dated absolutely to confirm their age. Settlements with pottery from the end of the Middle Bronze Age and the beginning of the Late Bronze Age can be clearly distinguished on the basis of distinctive pottery styles (late Tumulus and early Urnfields), but it seems that they are in fact at least partly contemporary. So far, we know of only one case of a fen enclosed site from the early Middle Bronze Age, whereas enclosed sites appear relatively frequently at the turn of the Middle and Late Bronze Age in the 14th century BC, but rather in connection with the ceramic style of the early Urnfield period. A typical phenomenon in Middle Bronze Age settlements is the deposition of whole pieces or large fragments of vessels and the occurrence of fragments of copper ingots and individual bronze items in the settlement layers. In a long-term comparison, it is clear that the basic settlement units of the Middle Bronze Age are much less prominent archaeologically than settlements in the previous and subsequent periods and are therefore more difficult to find. However, rather than a real difference in the size of settlement units and the density of the settlement network, this is due to different customs regarding the digging of pits and the storage of grain.



Settlement network in Vyškov area in Middle Bronze Age (A) and Late Bronze Age (B) (Parma et. al. 2017, fig. 9–16)

Notes

Session 4

What connects and what divides us?

"From South-east to North-west? – From North-west to South-east?" The 'Spread' of the Middle Bronze Age Tumulus Culture Along the Danube: Archaeological Evidence and History of the Historical Interpretation of a Phenomenon

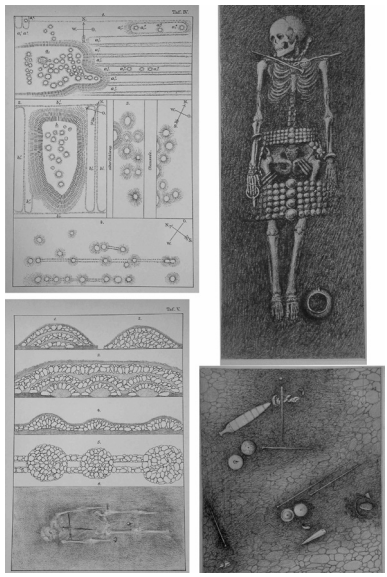
Wolfgang David
Archaeological Museum Frankfurt, Germany

For a long time, particularly intense influences from the Middle Danube region at the beginning of the Middle Bronze Age (Reinecke B) have been held responsible for the emergence of the South German Tumulus culture. This idea essentially goes back to the work of Friedrich Holste in the late 1930s and early 1940s. At that time, due to the profound contrast between Early and Middle Bronze Age culture in terms of burial customs, settlement patterns and artefacts, he considered it impossible to view the Tumulus culture of southern Germany as the successor culture to the Early Bronze Age groups of Adlerberg and Straubing. In line with his historical conception of a continuing conflict between East and West and in keeping with the general tradition of the discipline, he attributed the cultural change to external influences. Research soon moved away from the idea of a violent end to the Straubing culture and saw the transition from the Early to the Middle Bronze Age, or rather the emergence of the South German Tumulus culture, as the result of a continuous process of change. However, the concept of the decisive role played by Middle Danube influences in this cultural change was not fundamentally questioned but merely referred to in more abstract terms with the assumption of a short-term 'innovation horizon'.

However, the idea of increased eastern influences from the Middle Danube region at the beginning of the Middle Bronze Age is inextricably linked to the view that these influences noticeably declined during the developed Bronze Age (Reinecke C) – in some respects even leading to the assumption that the decisive influences changed direction. While some researchers now assume a direct influence from central Europe on

the Carpathian Basin, pointing to burial mounds and warrior burials with specific grave goods, famous Hungarian researchers in particular (e.g., Amália Mozsolics, István Bóna, Tibor Kovács) have put forward the idea of a violent end to the large fortified tell settlements of the Carpathian Basin as a result of a warlike invasion by a population coming from the north-west, armed with long swords and buried in tumuli. This would have caused the end of the so-called autochthonous Bronze Age in the Carpathian Basin and led to the formation of the several groups of Tumulus culture.

The now expanded archaeological source base and changes in chronology make it necessary to critically question traditional ideas.



Historical drawings documenting the excavations carried out by Julius Naue (1832–1907) at burial mounds south of Munich in southern Upper Bavaria: site plans of tumulus necropolises, cross-sectional and plan views of tumuli, and drawings of burials within the tumuli (Naue 1894, Taf. 4–7)

Notes

The Question of Tradition and Transformation on the Százhalombatta-Földvár Tell Settlement

Magdolna Vicze

National Institute of Archaeology,
Hungarian National Museum, HNM PCC, Hungary

Recent investigations at the Bronze Age tell settlement of Százhalombatta-Földvár have focused on the material signatures of settlement abandonment and the social processes underlying them. Rather than identifying a sudden destruction horizon or abrupt occupational break, this research highlights a sequence of gradual transformations that suggest an extended and potentially voluntary process of disengagement. Such findings invite a reconsideration of abandonment not as a singular event, but as an extended social trajectory embedded in everyday practice.

This paper examines the dynamic interplay between continuity and change as reflected in domestic architecture, settlement layout, craft production, and patterns of daily activity. Life on a tell is structured by accumulated deposits, inherited spatial arrangements, and long-standing architectural traditions. These material and social frameworks both constrain and stabilize community life: they reinforce collective memory and cohesion while simultaneously limiting flexibility and generating tensions. The durability of house forms, the persistence of spatial organization, and the conservatism of ceramic and craft traditions testify to the strength of these inherited norms.

At Százhalombatta-Földvár, however, close analysis reveals subtle but significant shifts in these domains. Modifications in building practices, alterations in the use of space, and changes in production routines point to a gradual loosening of the established "tell way of life." Rather than a simple rupture, the evidence suggests a negotiated transformation in which tradition and innovation coexisted for an extended period.

By foregrounding selected aspects of material culture and settlement organization, this study reconstructs a process through which incremental change ultimately culminated in the community's departure.

The abandonment of the tell thus appears not merely as a response to external pressures during a tumultuous period, but as the outcome of longer-term internal transformations that reshaped social practice and collective identity.

View of the Százhalombatta-Földvár tell with the Danube from southeast (photo: SAX Project)

Notes

The Lower Körös: Home of the Reluctant Late Bronze Age

Györgyi Parditka[1], Paul R. Duffy[2]

[1]Independent researcher, Hungary
[2]Kiel University, Germany

This talk presents our key findings on Bronze Age developments in the Lower Körös Region and explores what they reveal about the Middle to Late Bronze Age (LBA) transition. The presentation draws on past projects and discusses our emerging research directions. Investigations by the Bronze Age Körös Off-Tell Archaeology (BAKOTA) project at the Békés 103 cemetery site (Eastern Hungary) have significantly reshaped our understanding of the Middle to Late Bronze Age (LBA) transition in the Lower Körös Region. The cemetery, primarily used between 1600 and 1300 BC, demonstrates a stronger persistence of Middle Bronze Age (MBA) ceramic traditions beyond 1500 BC than previously assumed. We discuss elements of the cemetery that indicate resistance to cultural change, alongside the potential social factors that may have contributed to these behaviors. These include newly recognized patterns of community connectivity and fragmentation across the broader region during the MBA. The patterns point to localized ceramic practices and a generally segmented social system – factors that likely promoted resilience and influenced the distinctive trajectory of the MBA to LBA transition in the Lower Körös area. We then outline ongoing and forthcoming research projects, including stable isotope analysis of cereals and bone from Middle and Late Bronze Age sites, and additional specific questions we seek to address concerning the period from 1600 to 1300 BC.

Vessels from the BAKOTA Project excavation at the Békés 103 cemetery (restoration and photo: László Gucsi; illustration: Györgyi Parditka)

Notes

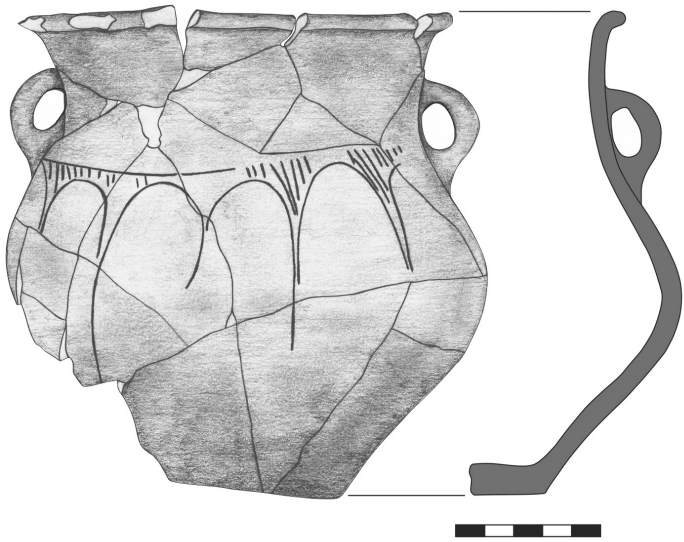
Hajdúbagos–Cehăluţ Pottery in Focus: Stylistic Characteristics and Social Dynamics

Orsolya Gyurka
Móra Ferenc Museum, Hungary

The Hajdúbagos–Cehăluţ pottery style represents a distinctive ceramic tradition in north-western Romania and north-eastern Hungary during the Late Bronze Age, approximately between 1600 and 1200/1150 BC. Emerging within the transitional phase from the Middle Bronze Age Otomani–Füzesabony cultural complex to the Late Bronze Age, this pottery style exhibits a remarkable hybridization of local and extralocal elements. Its assemblages demonstrate a deliberate reworking of established Middle Bronze Age vessel forms while incorporating new stylistic motifs, such as amphora-shaped vessels, spiral ornamentation, and geometric incisions, reflecting both continuity and innovation.

The chronological framework of Hajdúbagos–Cehăluţ ceramics is primarily established through typological analysis and radiocarbon dating from key sites. The coexistence of Otomani–Füzesabony traditions with the Tumulus culture's pottery features exemplifies a dynamic process of cultural negotiation, in which communities selectively adopted and adapted external influences to local aesthetic and functional norms. In addition to these influences, the material culture also incorporates characteristic features of Inner Transylvanian ceramic styles, attesting to far-reaching interaction networks within the eastern Carpathian Basin.

This phenomenon can be interpreted as a form of glocalization, where imported stylistic elements were reinterpreted within local ceramic repertoires, resulting in a hybridized tradition that bridges two major cultural spheres of the Carpathian Basin. The Upper Tisza region emerges as a key conduit for these exchanges, linking western and eastern communities and facilitating the diffusion of stylistic innovations. By focusing on the morphological and decorative traits of Hajdúbagos–Cehăluţ ceramics, this study highlights how material culture functions as a lens to explore social dynamics, and transformation during the Late Bronze Age.



Late Bronze Age vessel from Tasnád/Tășnad-Sere site (drawing: Orsolya Gyurka)

Notes

Not Yet, But not Anymore. Tumulus Phenomenon on the Cultural and Chronological Boundary

Péter Mali

Government offices of Jász-Nagykun-Szolnok County, Bureau of Construction and Heritage Protection, Hungary

The beginning of the Tumulus Period is characterized by varied and unique structures and representations. This is most obvious on the fringes of the cultural territory. The presentation deals with the questions of cultural hybridization, local traditions and outside influences in two border areas, the Baranya and the Middle Tisza region.

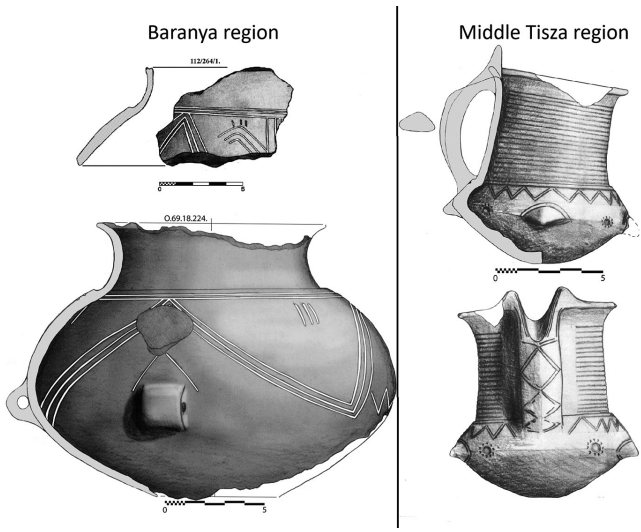
These regions provide a good sampling of the underlying processes. They are opposite to each other but still show the high innovation of the formative period of the Tumulus culture. The source material available to us is different from each region, the Baranya region is known from the settlements found there, while the Rákóczifalva group is mostly known from cemeteries. But they have in common that the underlying materials are less known, the Baranya region is a new area in the research except for vague mentions about Siklós-Téglagyár, while the Rákóczifalva group is widely known since the 1960s, but the materials it is based on are still unpublished.

The Baranya region is an open, border region where the Tumulus culture and the surrounding Belegis–Cruceni culture, Szeremle–Dalj Brdo Pottery and *Litzenkeramik* bleed into each other with an underlying Transdanubian Incrusted Pottery tradition. This resulted in highly innovative and open community with a unique pottery style with a Tumulus base and using all the traditions and influences of the surrounding areas seen in the settlements.

The Rákóczifalva group is the opposite, a geographically closed unit in the middle of Great Hungarian Plain where the previous era's cultural traditions mix to bring a new style into the picture that is heavily influenced by the Tumulus style and cultural innovations. The large cemeteries of the area are known for the highly decorated vessels that accompany the biritual graves. The vessels bear Tumulus, Vatya, Füzesabony,

Gyulavarsánd and Maros cultural attributes. Here the hybridization is not about open borders and strong connections but a closed community of old local traditions in a new era.

The presentation aims to look at the underlying causes, processes and the final representation of the irregular interactions on the fringes of the Tumulus culture.



Characteristic decorated vessels from the Baranya region and the Rákóczifalva group (drawing: Péter Mali)

Notes

Foreigners and Locals in the Southeastern Carpathian Basin: Insights from an Older Funerary Discovery at Mokrin

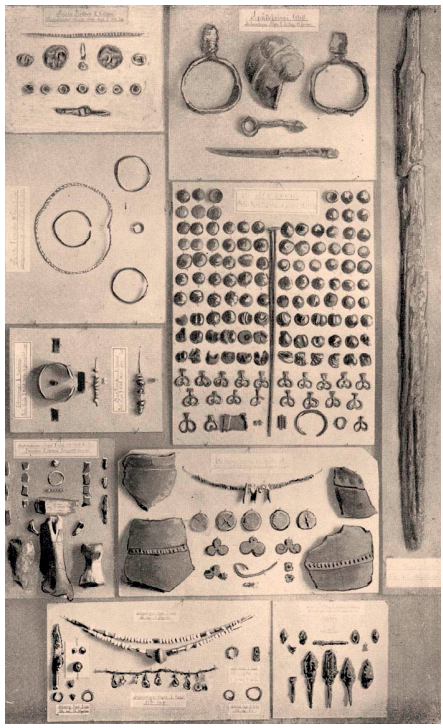
Florin Gogâltan
Institute of Archaeology and History of Art Cluj-Napoca, Romania

The collections of the Banat Museum in Timişoara preserve the inventory of a rich burial discovered at the end of the 19th century or the beginning of the 20th century in a sand quarry on the outskirts of Mokrin, in the northern Serbian Banat.

This find entered the collection of the amateur archaeologist Gyula Kisléghi Nagy (1861–1918), who received it as a gift from engineer Viktor Marghita. In 1911, he recorded it – together with other archaeological discoveries – in the monograph of Torontal County edited by Samu Borovsky. On that occasion, he listed 110 thin bronze discs with two perforations (2.3–2.8 cm in diameter), 21 heart-shaped pendants, a fragmentary open bracelet with a square cross-section decorated with incised lines, a disc-headed pin 38.5 cm long (with 5 cm missing from the lower end), and a ring or piece made of rolled wire. The illustration accompanying this discovery also shows a bronze plate with a rolled end, probably three saltaleoni, and two small bronze fragments.

In the collections of the Timişoara museum, I was able to document 107 bronze sheet appliqués, 21 complete and fragmentary heart-shaped pendants, as well as three additional fragments that most likely come from the broken pieces; a decorated bracelet with a quadrangular section; a pin with a seal-shaped head; a bronze plate with a rolled end, decorated with repoussé dots; and a fragmentary ring made of bronze sheet decorated with ribs.

Starting from analogies within the Central European Tumulus Culture, I will discuss the cultural features of the Late Bronze Age on the southeastern periphery of this cultural milieu.



Mokrin. Bronze Age finds (in the center of the image) from the former collection of Gyula Kisléghi Nagy (1911, 319)

Notes

Session 5

How deep are biographies buried?

Bridging the Analytical Gap: Inhumations and Cremations in Middle Bronze Age Burial Transitions

Katharina Rebay-Salisbury
Department of Prehistoric and Historical Archaeology, University of Vienna, Austria

The Middle Bronze Age represents a transformative period marked by significant changes in burial practices across much of Northern and Central Europe. One of the most striking developments during this time is the transition from inhumation to cremation, a shift that unfolds unevenly across regions; in some areas, this transition is characterized by a gradual experimentation with funerary rituals, while in others, it signifies a radical departure from traditional practices. In this contribution, I will explore the profound implications of this shift, focusing on how the treatment of cremated remains differs fundamentally from the burial of intact bodies. I will examine how these emerging burial practices challenge conventional notions of death and the afterlife, and I will discuss how the evolving funerary rituals reflect broader societal changes in the world of the living. The second theme of this talk will address the scientific advancements made over the past two decades in the study of cremated human remains. These developments have significantly enhanced our ability to extract meaningful data from cremation contexts, including improved methods for estimating sex and age, more precise radiocarbon dating, and the application of isotope analysis. These breakthroughs are beginning to reshape our historical narratives, offering new insights into the lives and identities of past populations. Despite these advances, challenges remain in directly comparing inhumations and cremations due to data differences. However, we are making strides toward bridging this gap, enabling more comprehensive analyses of bi-ritual and cremation cemeteries. These integrated approaches are providing valuable perspectives on community structures, social relationships, and kinship networks during the Middle Bronze Age.

A Middle to Late Bronze Age urn from St. Pölten, Lower Austria, in the CT scanner (photo: Fabian Kanz)

Notes

Complex Bioarchaeological Analysis Reveals Radical Changes in Mobility, Diet and Social Structure Around 1500 BCE at the Carpathian Basin

Tamás Hajdu[1,2], Claudio Cavazzuti[3], Anikó Horváth, Anett Gémes, Kristóf Fülöp, Tamás Szeniczey, János Gábor Tarbay, Ashley McCall, Beatriz Gamarra Rubio, Magdolna Vicze, Annamária Bárány, Ákos Pető, Enikő Katalin Magyari, Gabriella Darabos, István Futó, Zsuzsa Lisztes-Szabó, Erika Molnár, Mario Novak, Erika Gál, Klára P. Fischl, Gabriella Kulcsár, Vajk Szeverényi, Géza Szabó, Edit Mester, János Dani, László Palcsu, Viktória Kiss, István Major[4]

[1]Department of Biological Anthropology, Institute of Biology, Faculty of Science, Eötvös Loránd University, Hungary
[2]Centre for Applied Bioanthropology, Institute for Anthropological Research, Croatia
[3]Department of History and Culture, Alma Mater Studiorum, University of Bologna, Italy
[4]Radiocarbon Competence Centre HUN-REN Institute for Nuclear Research (ATOMKI), Hungary

The transition from the Hungarian Middle to the Late Bronze Age (around 1500 BCE) in the Carpathian Basin was paralleled by drastic cultural changes in Central Europe, which strongly influenced the dynamic of prehistoric Europe. The cultural fragmentation of the Hungarian Middle Bronze Age (2000–1500 BCE) in the Carpathian Basin was followed by a more homogeneous development at the dawn of the local Late Bronze Age (1500–1300 BCE), with the appearance of the Tumulus culture. In the beginning of this period, the long-used tell-settlements were abandoned, furthermore new pottery styles and metal types appeared. Whether these changes were caused by immigration, or a local adaptation to external influxes, has long been a matter of debate. Our study investigates this transition from the perspective of diet and

Grave B54 of the Tiszafüred-Majoroshalom cemetery (MNM KK MNM KA HaGY Tibor Kovács's personal collection)

mobility based on a number of key sites from this period. Our results show (1) low migration rates and a shift of migration trajectories; that (2) the beginning of the systematic consumption of *Panicum miliaceum* was from 1540–1480 BCE; and that (3) the decrease of average animal protein intake was corresponded with an increase of cereal consumption and a tendency to a less unequal diet. This latter may reflect new types of communities that are more socially balanced and less hierarchical.

Notes

The Technology of Cremation: Rethinking Ritual, Knowledge, and Practice

Kristóf Fülöp

Institute of Archaeology, ELTE Research Centre for the Humanities, Hungary

The spread of cremation beginning in the mid-2nd millennium BC was a complex and far from linear process. The diversity of funerary rituals, continuously negotiated at both communal and individual levels and observable on both micro and macro regional scales, reflects the complex interplay of political, economic, social, geographical, and ideological factors underlying the emergence and diffusion of cremation.

The practice of cremation, however, not only led to the appearance of new ritual elements and the redefinition of earlier burial practices but also led to the development of a new kind of technological knowledge. This was accompanied by transformations in the social organization of rituals, their associated toolkits, as well as their spatial and temporal frameworks. The rite of cremation and the knowledge associated with it, however, encompass far more than the burning of the body, which has most often been the primary object of study. Although the comprehensive investigation of cremation is not straightforward, it is complicated by the typically secondary nature of the archaeological context and the data loss caused by fire.

In my presentation, I examine cremation technology through two large biritual cemeteries: Jobbágyi-Hosszú-dűlő and Rákóczifalva-Bivaly-tó (Hungary). By integrating methods from experimental archaeology, object and artefact biography, as well as bioarchaeology, archaeobotany, and archaeozoology, it becomes possible to investigate the temporally and spatially complex sequence of cremation processes not only through human remains, but also through grave goods, pyre remains, and their contexts. By including additional cemeteries and methods (e.g., isotopic analyses), as well as refining the dating of graves, it will eventually become possible to reveal cultural differences within and between cemeteries, as well as diachronic changes in the technological processes and elements of cremation.

Pyre good from Grave 223/252 in the Jobbágyi-Hosszú-dűlő cemetery, Hungary (photo: Kristóf Fülöp)

Notes

In the Midst of Change. Middle Bronze Age Funerary Practices in Upper and Lower Austria

Hannah Skerjanz

Department of Prehistoric and Historical Archaeology, University of Vienna, Austria

Burial practices in parts of Central Europe underwent a significant shift during the Middle Bronze Age (1600–1300/1200 BCE), especially evident in the transformation from inhumation to cremation. Research on this period in present-day Austria is limited, primarily due to poor preservation and unpublished data from previously excavated burial sites.

This paper outlines an ongoing PhD project which aims to address this issue by examining funerary practices in Upper and Lower Austria, focusing on regions north of the Danube. The study will assess smaller inhumation, cremation, and bi-ritual sites (e.g. Gaweinstal, Unterweitersdorf, Leobendorf), which span different chronological phases of the MBA. Planned ^{14}C dates as well as the typo-chronological classification will establish a chronological framework within which to discuss how funerary practices changed over time and regionally, ultimately leading to the adoption of the 'urnfield package' at the beginning of the Late Bronze Age. Combining archaeological and bioarchaeological approaches will further investigate how the treatment of the dead persisted or changed both at the individual and community levels.

Ultimately, the project aims to evaluate existing datasets, address a research gap, and provide insights into changes of funerary behaviour and their potential social implication for MBA communities.

Burial mounds, urn graves and scattered burials at the site Unterweitersdorf (Upper Austria). Middle to Late Bronze Age transition, Bz D, c. 1300 BCE (©Archaeonova)

Notes

Similarities and Differences – Analysis of the Burial Rites of Early Tumulus Culture

Emília Pásztor, Evelin Pap, Réka Andrási
Türr István Museum, Hungary

Archaeologists of Türr István Museum excavated an inhumation grave of the Bronze Age Tumulus culture with an exceptionally rich jewellery collection at Sükösd-Árpás-dűlő V site on December 28, 2020.

The bronze bracelets from the grave, the rings found on all ten fingers, the unique amber beads worn around the neck and the pair of anklets are the accessories of a woman of prominent social status who lived at the beginning of the Late Bronze Age. The site is located approx. 1.4 kilometres west of the settlement of Sükösd, next to the Danube River Valley. The volunteers also collected significant scattered bronze finds from the area, therefore the museum launched an excavation in March 2021 to rescue the finds still hidden deep underground. The excavations resulted in 29 graves, 12 of which contained human bones and accessories. Three of these were cremation urn graves and the other nine were skeleton graves lying on their back. Based on the finds found in the graves, the cemetery belongs to a smaller closed community associated with the Tumulus culture.

The detectable burial conditions did not follow the eponymous ritual of the Tumulus culture. Neither burial mound, nor stone cists and elaborate features like circular ditches and stone rings surrounded more prominent burials were observed.

In the presentation, we offer details and comparative study on the mortuary rite of the Sükösd-Árpás-dűlő graves with the burial rite detected in the "contemporary" cemeteries of the culture.

Aerial photograph of the excavation at Sükösd-Árpás-dűlő (photo: Türr István Museum)

Notes

Limited Sample, Extensive Insight: Evaluating a Small Late Bronze Age Cemetery from Mány-Méhes-dűlő East

Polett Kósa[1], Csilla Líbor[1], Nóra Szabó[2], Kristóf Fülöp[2], Anett Gémes[3,4], László Gucsi[2], Viktória Kiss[2]

[1] National Institute of Archaeology, Hungarian National Museum HNM PCC Hungary
[2] Institute of Archaeology, ELTE Research Centre for the Humanities, Hungary
[3]Department of Biological Anthropology, Institute of Biology, Eötvös Loránd University, Hungary
[4]Salisbury Ltd, Hungary

During 2021, a large-scale excavation preceded the development of the M100 motorway in Fejér County, Hungary. The work uncovered features from several periods. Among these were a small number of graves and part of a Late Bronze Age settlement. On the basis of the finds, some of the burials can be dated to the classical phase of the Tumulus culture, indicating far-reaching cultural connections.

One of the most intriguing phenomena of the Tumulus period is the richly furnished burial of women, for which close parallels can only be identified through broader regional comparison. Rich female burials appear from the 16th century BC across several regions with differing cultural backgrounds; however, in the following centuries, they exhibit attributes that often link them in various ways.

The outstanding burial of a young woman from Mány yielded 70 items, including bronze rings, pins, bracelets, various pendants and two gold hair rings. Another noteworthy feature is a burial richly furnished with pottery (including large storage jars, bowls and pots). In addition to the inhumation, it also enclosed some cremated human remains in a large container that can be dated to the Early Iron Age.

Alongside typological and anthropological examinations, radiocarbon dating aims to further refine the chronology of the burials. The position of the graves within the landscape offers additional insights into the

communities living in the area and their interaction with their environment. However, the settlement associated with the cemetery has not yet been detected.

The rich female burial discovered at this site may contribute to the identification of interregional connections and raises the question of the possible mobility and migration of socially significant women during the Bronze Age. Why does this burial stand out from the other graves in the cemetery? What similarities and differences can be observed among the rich burials of the various regions? These questions constitute the central focus of the present paper.

Bronze finger rings from the outstanding grave SNR 83 at Mány (photo: Balázs Némethi)

Notes

Early "Urnfield" Traditions in the Middle Bronze Age (1600–1300 BC): Evidence from Cemeteries in Western Poland

Mateusz Stróżyk
Archaeological Museum in Poznań, Poland

Across much of Central and Western Europe, the Late Bronze Age witnessed profound cultural and social transformations, most visibly reflected in funerary practices: the shift from inhumation to cremation and the emergence of a remarkably uniform burial custom. It is widely accepted that after ca. 1200 BC cremation became the dominant mortuary rite (Sørensen, Rebay-Salisbury 2008). This phenomenon is traditionally referred to as the Urnfield Culture/Period (Sørensen, Rebay-Salisbury 2023). The scale and synchronicity of the processes driving this homogenization were unprecedented. Yet the origins of the shift toward cremation in Central Europe can be traced back to the Middle Bronze Age, approximately 1600–1300 BC. In Central Europe, the key substrate underlying these cultural transformations was formed by regional groups associated with the Tumulus Culture (Harding 2000).

This presentation examines three cemeteries – Pudliszki, Domasław, and Kietrz – that provide exceptional insights into the emergence, early development, and long-term continuity of large cremation-ground cemeteries. These sites embody an early "Urnfield" model that would later become characteristic of the Late Bronze Age. At the same time, evidence from neighbouring regions reveals highly variable and strongly regionalized responses to cremation during the Middle Bronze Age. In western Poland, some communities adopted cremation rapidly and comprehensively, while others rejected it or adopted it only sporadically. Isolated cremation graves within predominantly inhumation cemeteries, as well as collective burials in which only a single individual was cremated, point to acts of individual agency rather than community-wide acceptance.

By situating these western Polish sites within broader European trajectories (Cavazzuti et al. 2022), the presentation highlights the complexity

and uneven pace of the transition toward cremation long before its full consolidation in the Late Bronze Age. In addition, newly obtained radiocarbon dates from these cemeteries refine their internal chronologies and provide a more precise framework for understanding the earliest phases of cremation practices in the region.

This research was conducted as part of a project funded by the National Science Centre, Poland (grant no. 2022/47/D/HS3/00158).

Pudliszki. Examples of bronze artifact and pottery discovered in collective cremation graves (photo: Patrycja Silska, Archaeological Museum in Poznań)

Notes

Influence or Presence? The Role of the Tumulus Culture in the Formation of the Piliny Culture Cemetery in Zagyvapálfalva

Szilvia Guba

Hungarian National Museum –
MNMKK MNM Forgách-Lipthay Castle Museum, Hungary

Within the distribution area of the Piliny and Kyjatice cultures, approximately 5,300 individual burials from some 160 cemeteries are currently known. At the well-known cemetery of Salgótarján-Zagyvapálfalva, 815 cremation graves were excavated in the Late Bronze Age cemetery during investigations conducted in 2007 and 2008. The majority of the burials belong to the Piliny culture (Bz B2 and Bz D) and the subsequent Kyjatice cultural phase (Ha A–B); however, 13 cremation graves attributable to the Hatvan culture and 41 graves dating to the succeeding Koszider period were also identified. The transition from the Middle Bronze Age Hatvan culture to the Late Bronze Age Piliny culture within the cemetery can be traced through observable changes in burial practices, as well as through modifications in grave inventories and specific ceramic types. The appearance of stone and earthen tumuli, together with the presence of characteristic bronze artefacts and ceramic assemblages associated with the Tumulus culture, indicates a strong influence – if not an actual presence – of this cultural horizon within the Zagyvapálfalva cemetery.

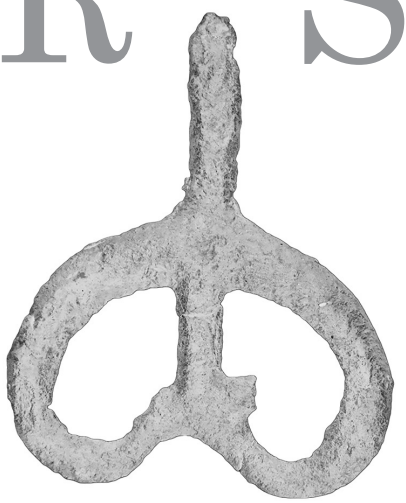
The large and continuously used Late Bronze Age cemeteries of northeastern Hungary constitute an exceptional source of information for detailed archaeological analysis. The present study focuses on selected grave types and grave inventories and examines their implications for understanding the formation of the Piliny culture.

Multiple burial of the tumulus culture in Zagyvapálfalva (photo: Szilvia Guba)

Notes

P O S

T E R S



The King of Rapiers: New Results on the Eponymous Weapon Found in Keszthely-Legelő-dűlő

János Gábor Tarbay[1], Boglárka Maróti[2], Mihály Braun[3], Zoltán Kis[2], Balázs Lukács[4]

[1]Department of Archaeology, National Institute of Archaeology, Hungarian National Museum, HNM PCC, Hungary
[2]Budapest Neutron Centre, Institute for Energy Security and Environmental Safety, HUN-REN Centre for Energy Research, Hungary
[3]HUN-REN Institute for Nuclear Research (ATOMKI), Hungary
[4]Works of Art Conservation and Restoration Department, Hungarian National Museum, HNM PCC, Hungary

Rapiers are among the most thoroughly discussed weapon types of the Late Bronze Age, having been examined from a typo-chronological perspective from the 19th century to the present day. Except for the archaeometry results from the Olmo di Nogara cemetery in Italy, one major aspect remains largely unexplored: the *chaîne opératoire* of these artefacts. This approach would allow us to address key questions about what materials these objects were made from, how they were cast, what post-casting steps were involved in shaping and decorating them, how they were used, and whether they underwent any special manipulation before being deposited in the few Carpathian burials or in the River Danube.

The multi-expert team dedicates the poster to one of the most emblematic Keszthely rapiers, discovered in the 19th century in the Legelő-dűlő area. The poster synthesizes both previous (Tarbay et al. 2024 CAH; Tarbay et al. 2025 JAS:REP 64) and newly obtained results (Tarbay–Lukács in progress) from the project *The Technology, Use and Manipulation of Weapons from Late Bronze Age Transdanubia*. Within this framework, the Keszthely rapier was subjected to non-destructive elemental analysis (PGAA, Prompt Gamma Activation Analysis, Budapest Neutron Centre) and invasive elemental analysis (LA-ICP-MS,

The rapier from Keszthely-Legelő-dűlő (Tarbay 2023)

Laser Ablation Inductively Coupled Plasma Mass Spectrometry, HUN-REN ATOMKI) to determine its raw material composition. X-ray radiography was employed to investigate the hidden internal structure and casting defects of the artefact. In addition, a use-wear analysis was carried out to characterise both the technological traces of production and the wear patterns resulting from use on this specific rapier as well as on all other rapiers available for study in Hungarian museum collections between 2020 and 2024.

Notes

Final Occupation at Tószeg-Laposhalom and the Early Tumulus Culture: Settlement Networks and Material Culture in the Tószeg Microregion at the Close of the Middle Bronze Age

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Independent researcher, Hungary

Tószeg-Laposhalom is a key site of Hungarian Bronze Age research, known since the late 19th century and subject to numerous excavations over the past 150 years. The site was inhabited from the late Early to the late Middle Bronze Age (ca. 23rd–17th centuries BC), with its final occupation layers and abandonment dated to the Koszider period on the basis of recent radiocarbon dates and material culture evidence. While no cemetery associated with this late phase of the tell has yet been identified in its immediate surroundings, a significant Bronze Age cemetery is known on the opposite bank of the Tisza, approximately 6 km away at Rákóczifalva-Kastélydomb, where more than 100 graves dating to the Early and late Middle Bronze Age have been uncovered, attesting to the site's long-term function as a sacred place. Based on burial rites and grave goods, scholarship attributes most of the burials to the Rákóczifalva group of the Tumulus culture, while also emphasizing that the pottery tradition of the community using this cemetery displays features comparable to late Vatya and Füzesabony pottery styles, which are characteristic of the upper layers at Laposhalom.

On the poster, I present the available evidence concerning the final phase and abandonment of the tell at Tószeg-Laposhalom, followed by an overview of current knowledge regarding the Middle Bronze Age settlement network in the Tószeg microregion, in comparison with the early Late Bronze Age situation known to date, based on both earlier findings and ongoing systematic field surveys. I then highlight some aspects indicative of interaction in material culture and exchange of beliefs between the tell's late inhabitants and the users of the nearby cemetery at Rákóczifalva.

Tószeg-Laposhalom and Rákóczifalva-Kastélydomb (illustration: Csaba Bodnár)

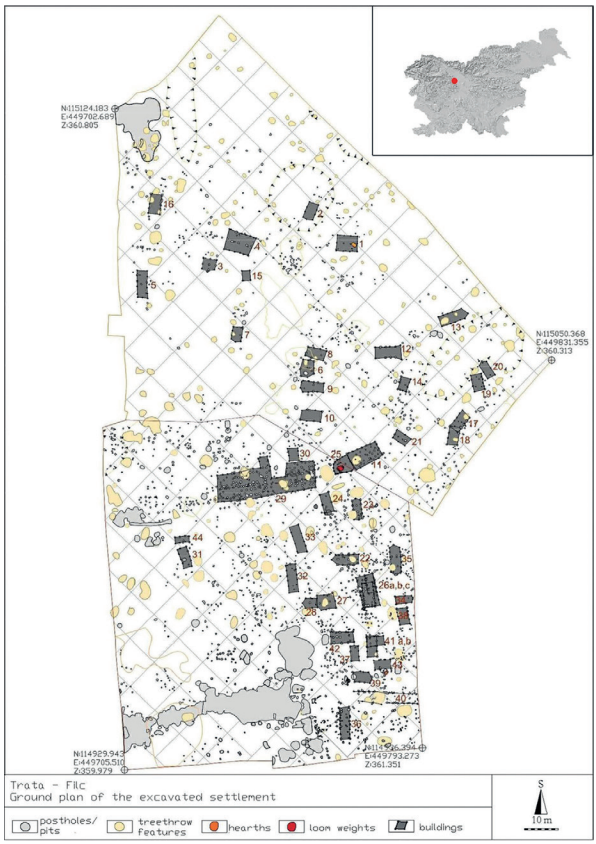
Notes

First Insights into Life on the Fringes of the Tumulus Culture: The Bronze Age Settlement at Trata near Škofja Loka, Slovenia

Anja Ipavec
ZRC SAZU, Institute of Archaeology, Slovenia

In 2018 and 2020, part of a Middle and Late Bronze Age settlement located on a fluvial terrace of the Sora River near Trata, Škofja Loka, in central Slovenia was excavated. So far, the results have only been published in preliminary reports and articles (Brezigar, Klokočovnik 2018; Brezigar 2021; Škvor Jernejčič et al. 2022; Leghissa et al. 2023), while the site is examined in detail in my doctoral dissertation. Based on the ceramic repertoire and available radiocarbon date, the settlement was occupied during the Oloris–Podsmreka horizon (Bz B2/C1–Bz D/Ha A), which partially overlaps with the Tumulus Culture. The site has yielded an exceptionally large ceramic assemblage, providing an important new dataset for understanding the Middle and the beginning of the Late Bronze Age, a period that until recently remained poorly documented in the south-eastern Alpine region.

Numerous postholes reveal the ground plans of at least 40 rectangular buildings and other wooden structures, with the densest concentration in the central and eastern parts of the excavated area. The most striking feature is a building approximately 30×10 m in length, which has no parallels in contemporary Slovenian settlements and can be compared to the 20 m long timber-framed house discovered at Gelsesziget in Hungary (Horváth 1994, 219). Some ceramic shapes and decorations from Trata show clear similarities with Tumulus Culture sites, including incised hatched triangles, oriented upside down and knobs encircled with a groove. In this poster, I focus on a particular settlement feature which can be interpreted as a place where a vertical weaving loom stood, which provides a small insight into life in the Trata settlement, located at the very edge of the Tumulus Culture in terms of both geography and cultural influences.



Geographical position of the site Trata near Škofja Loka and an interpreted ground plan of the excavated site of Trata near Škofja Loka (modified after Brezigar 2021, priloga 3; načrt 2)

Notes

The Middle and Late Bronze Age at the Székelyudvarhely (Odorheiu Secuiesc, Romania) Kadicsfalvi-rét/Alsólok Site

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Babeș-Bolyai University, Romania

The town of Székelyudvarhely (Odorheiu Secuiesc) is situated in the eastern-southeastern fringe of the Transylvanian Basin, on the eastern edge of the Küküllő (Târnava) Hills, along the upper course of the Nagy-Küküllő (Târnava Mare) River within the Udvarhely (Odorhei) Basin, in the southwestern part of Harghita County. The site is located on the northeastern outskirts of the town, in the agricultural area, on the edge of the river's floodplain. During the preventive archaeological excavations preceding the construction of the planned industrial zone, features of a 3rd–4th century Goth village were identified, alongside structures belonging to the Middle Bronze Age Wietenberg culture. The latter were located near the riverbank, dug into the gravelly subsoil in the southern/southeastern part of the site. At the same time, burials of the Noua culture and associated features – appearing as stony surfaces and cultural layers – were uncovered on the northwestern edge, excavated into the brown humus and the yellowish-clayey subsoil.

A significant amount of archaeological material has been recovered from the features. Through the analysis of these finds, along with the observations and interpretation of settlement features made during the excavations, we can gain a more accurate picture of the characteristics, lifestyle, and customs of the Middle Bronze Age Wietenberg culture and the Late Bronze Age Noua culture populations that inhabited the region. The material remains of the Wietenberg culture allow us to understand the specific traits of this population, while the complex of features concentrated around the burials of the Noua culture provides insight into the characteristics of this period. Thus, a more comprehensive picture emerges regarding the transition between the Middle and Late Bronze Age, as well as the defining traits of the cultures in question.

Burial of the Noua culture fromthe Székelyudvarhely/Odorheiu Secuiesc-Kadicsfalvi-rét/Alsólok archaeological site (photo: Zsolt Nyárádi, from the archives of the Haáz Rezső Museum, Székelyudvarhely/Odorheiu Secuiesc)

Notes

Tumulus Culture Female Burial with Bronze Sheet Belt from Hajós

Eszter Bódai[1], Kristóf Fülöp[2], Viktória Kiss[2]

[1]*Katona József Museum, Hungary*
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In recent years, several richly furnished female burials dated to the early phase of the Tumulus period have been uncovered. The typological composition, quantity, quality, and raw materials of the associated grave goods point to the existence of a socially prominent stratum of women whose members likely played a significant role in the communities of the mid–second millennium BC. The exceptionally rich female burial recently discovered at the Hajós-Méhes-dűlői-csatorna site can be situated within this broader phenomenon. The site is located in the southern part of the Danube–Tisza Interfluve, approximately 20 km from the cemetery at Sükösd, which likewise yielded a female burial of outstanding wealth and status.

Although the grave – excavated in 2024 by the staff of the Katona József Museum in Kecskemét – had been subject to minor disturbance and the skeletal remains were poorly preserved, the principal elements of the deceased woman's funerary costume can be reconstructed with confidence. In addition to a necklace distinguished by the diversity of its raw materials and its complex structure, various ankle and arm ornaments, and a dress pin, the most remarkable component of the assemblage is the bronze sheet belt preserved in situ. Beyond its rarity and state of completeness, the significance of this object lies in the well-documented circumstances of its recovery. In contrast to most belts of the Szeged–Sieding type, these contextual data permit a precise reconstruction of its mode of wear. Planned archaeometric and other scientific analyses will further contribute to a comprehensive understanding of the manufacture, technology, and use of this more than one-metre-long, uniquely crafted and richly decorated artefact.

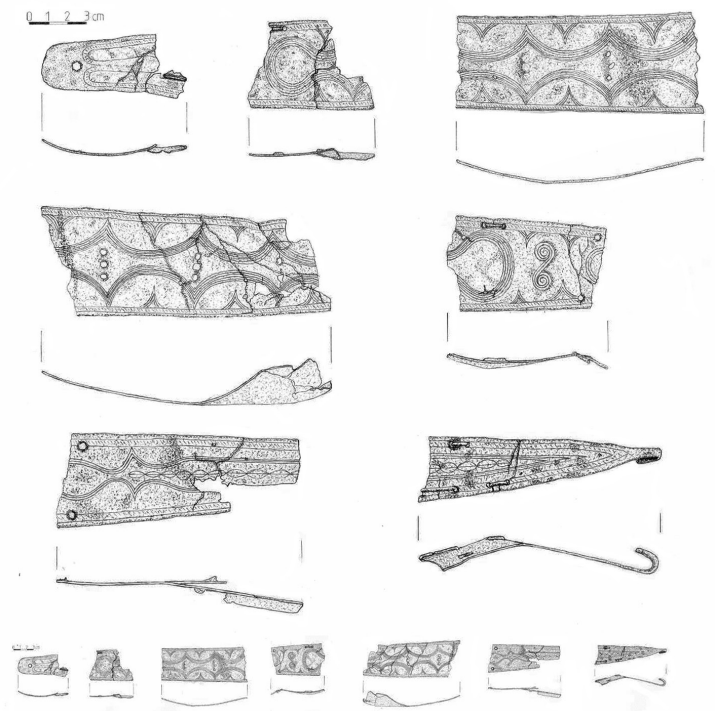
The female burial with a bronze belt from Hajós (photo: Eszter Bódai)

Notes

A Unique Find of the Tumulus Culture from Bátya

Andrea Lantos
Viski Károly Museum Kalocsa, Hungary

The staff of the Viski Károly Museum unearthed artefacts belonging to the Tumulus culture in the Bátya-Oroszpuszta site during a 2022 fieldwork project using metal detectors. During the investigation, we unearthed several matching pieces of a bronze plate belt, bronze bracelets, bronze pins and fragments of spiral rings. Bátya is in the southern part of Bács-Kiskun County, 5 km from Kalocsa, on the left bank of the Danube, in the Kalocsai Sárköz. The site is located in the southern part of the settlement, directly south of Lake Remenyicei, on the southern side of a NW–SE-oriented hill ridge that barely stands out from its surroundings. In 2023, a further field visit and instrumental investigation was conducted in the area, thereby enabling the extent of the Tumulus culture site to be clarified. In the summer of 2023, a rescue excavation was conducted at the site, during which four graves, three prehistoric pits and an Árpád-era well were unearthed. The excavation revealed the presence of skeletal remains from the Tumulus culture. The dimensions of the cemetery are estimated to be approximately 150×50 m, with a maximum of 20–25 graves located within its boundaries. This estimation is based on the distribution of the archaeological finds. In the course of the excavation, seven fragments of the bronze plate belt were unearthed in Bátya. These fragments were recovered from the plowed layer. It is hypothesised that the object was removed from its original context by the action of the plough. It is evident that parallels can be identified in Tetétlen, in Szeged-Nagyszéksós, in graves 73 and 132 of the Tápé cemetery, and in grave 94 of the Velebit cemetery.



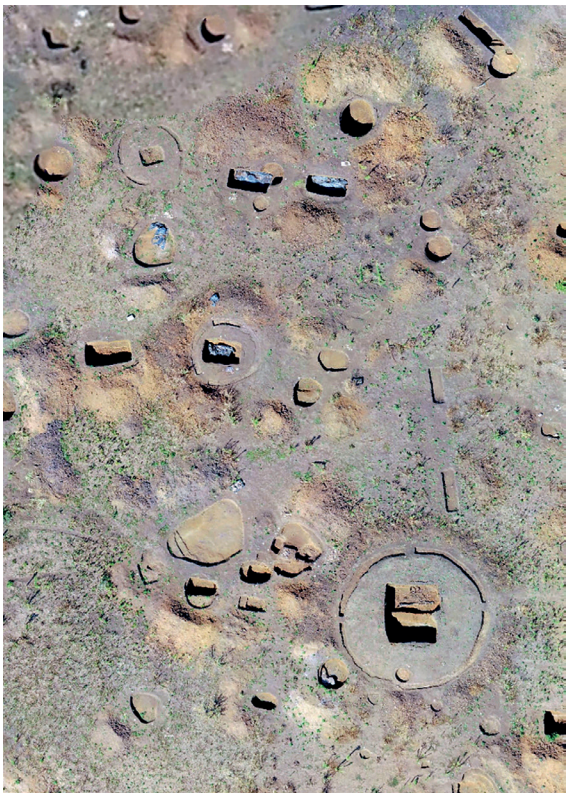
Drawing of a bronze belt found at the site (drawing: Bálint Szalontay)

Notes

Lords of the (grave) Rings

Nikolett Kovács, Attila Németh
Herman Ottó Museum, Hungary

Since 2007 the staff of the Herman Ottó Museum have been conducting excavations in the Bükkábrány lignite mine. A location is very specific, because entire sites can be studied in large area. From 2022 we have been working in the northernmost part of site VIII, where we have found features from multiple periods. The most significant is a cemetery, including more than 200 graves, dated to the Middle–Late Bronze Age. In its structure rows, parcells and family groups can be distinguished. The rite was very strict, females were oriented eastward, males westward. The burial customs of the Füzesabony and the Tumulus cultures mingled very specifically, cremations appeared, several occurred in normal sized and depth graves, moreover in one case the calcinated bones were organized in anatomical order. Some of the central burials were surrounded with ring-shaped ditches and probably had mounds on them, also inhumation and cremation practice also used in these graves. Unfortunately the cemetery was 90% looted, with grave robberies occurring shortly after the funeral, as implied by well targeted robbing pits. Even more extraordinary is the 200 m diameters circular trench, which can be dated between the Middle and Late Bronze Age and completely encircles the burials. So far three gates have been excavated, a southern, a western and a north-western one, which is pointing to the tell settlement of the Füzesabony culture, which lies approximately 500 m from the site. The structure of the cemetery fits perfectly in the cicular trench and on the roads, that are reconstructed from the gates. Together with the existing ^{14}C dates this indicates a necropolis that was in use for at least 200 years.



Graves with circular ditches (photo: Szabolcs Honti)

Notes

Mapping the Tumuli: New Perspectives on Late Middle Bronze Age Barrows in the Lake Fertő Region (Western Hungary)

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The landscape around Lake Fertő (Neusiedl), one of the largest standing bodies of water in Central Europe, shared today by Austria and Hungary, is characterised by a high density of prehistoric tumuli. Recently, with the support of the ELTE Research Centre for the Humanities, an airborne laser scanning (ALS) survey was conducted over approximately 60 km² in the Hungarian territory west of the lake. Within this study area, our research focuses on Bronze Age features, integrating published and archival sources with non-destructive field methods (UAV-based ALS, systematic fieldwalking, metal-detector survey, magnetometry, and photogrammetry).

Although a significant proportion of the dated barrows around the lake can be assigned to the Early Iron Age, Middle Bronze Age tumuli have been known since the 19th century within the administrative territory of Sopron, near the Austrian border (Sopron-Városi-puszta site). One of these mounds yielded a pseudo-corded (Litzen-decorated) jug, a vessel type also characteristic of the Tumulus Culture period. Recent analysis of ALS data, combined with a field survey, has identified more than thirty barrows at the site, enabling a more precise delineation of the tumulus field and detailed mapping of the individual mounds. Metal-detector surveys conducted in the surrounding area have produced pendants and pins that further support a Middle Bronze Age date. The

results of this investigation are interpreted within the broader framework of prehistoric barrow-building practices in the Lake Fertő region.

The project is supported by the NKKP STARTING Grant (No. 152650) and the MTA–ELTE HTK Lendület "Momentum" BASES Research Group (LP 2023-8).

Bronze pendant (Ráksi-type) from the metal-detector survey at Sopron-Városi-puszta (photo: Attila Mrenka)

Notes