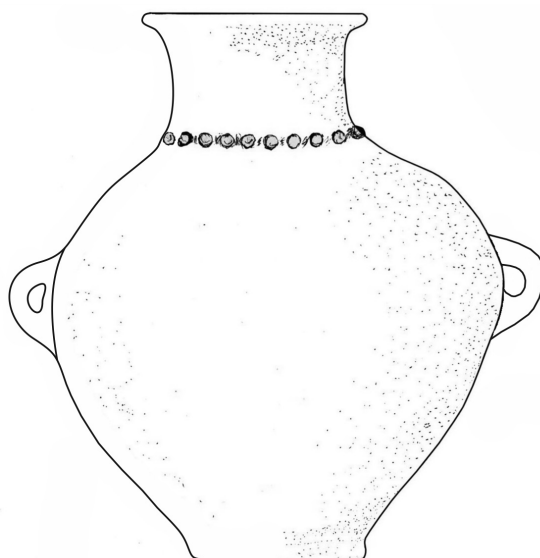


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“Avars before Avars”? On the “first generation” of the conqueror population in the 6th century in the regions east of Tisza in the light of archaeological and ¹⁴C analyses¹

Erwin Gáll

Abstract: The aim of the research is to offer archaeological answers to the question of the identifiability of burial cultures at the end of the migration phenomenon in the regions east of the Tisza river and to identify the “first generation” of the population arriving as a result of migration in the Carpathian Basin during the second half of the 6th century. As we have shown at length in the discussion, analogy-based dating involves major risks, and the specialist ventures providing what one may call *circular arguments* that do not take into account the context of the items, possible different time periods, their “lifespan” (i.e. these artefacts might have been used differently over time), but the possible typochronologies established in a unitary manner in disregard of the social-human contexts, centre-periphery relations, the region where the items had been discovered, etc. A key role in the identification of the few graves is undoubtedly played by the radiocarbon dating method.

We reached the conclusion that a new burial culture is very difficult to identify, however not impossible. Out of a total of 195 burial sites or burial finds datable to the first part of the Avar period (the early Avar period) east of the Tisza, we were able to date, with more or less relative security, to the second half of the 6th century – or, if approached biologically, to link to the specific population that could/would travel from the Caucasus and the Don areas to the Carpathian Basin – only thirteen (+one) burial sites or graves. The geographical distribution of those sites which we had relatively linked to the new migrants from the east is sporadic, diffusive and disproportionate, being recorded mainly in the areas of most important rivers: the middle area of the Tisza, the Mureş area and the dried Szárazér stream, the Crişul Repede – Barcău area, further to the north-west, in the Hortobágy area (Hajdúszoboszló), the Kissárét area, namely the Crişul Triplu and Crişul Repede river areas.

Concurrently, together with the ¹⁴C AMS data from Pecica-Smart Diesel-Gr. 448, Nădlac-1M-Grave Ftr. 86, Szegvár-Oromdúló and some graves from Makó-Mikocsa halom, combined with *strontium* data (indicative of their locality) begs the question: prior to AD 568, could not there have been unrecorded migrations from the east to the Carpathian Basin?

Keywords: Avars; regions east of Tisza (*Transtisza*); typochronology; ¹⁴C; “firstgeneration”.

1. Introduction: aim of work

Migration as a sociological phenomenon is as ancient as humankind itself², nevertheless the extensively-used notion of “*Völkerwanderung*” has been implemented into historiographical usage under the influence of 19th century German classical philology. The lengthy investigation of the migration phenomena, until almost the present day, has been impacted by the spirit of 19th century Romanticism, leading Stefan Burmeister to state: “A striking gap is revealed here between archaeological research and that of the other social sciences”³. The migration phenomenon is atemporal, as it occurs periodically, fuelled by external factors and the human communities’ choice for mobility. Among the most common external factors driving migration, the following stand out: 1) livelihood difficulties,

¹ The paper is part of the habilitation thesis defended in 2023: Erwin Gáll, *Migrație, cronologie și ritualuri funerare. Analize cronologice și probleme ale eterogenității culturale în regiunile de la est de Tisa în lumina descoperirilor funerare (ultima treime a secolului VI–primele două treimi ale secolului VII)* (*Migration, chronology and funerary rituals. Chronological analyses and issues of cultural heterogeneity in the regions east of the Tisza in the light of funerary finds [last third of the 6th century–first two thirds of the 7th century]*). Habilitation thesis. Bucharest 2023. The article has been written in the frame of the project no. TKP2021-NKTA-24 implemented with the support provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development and Innovation Fund, financed under the TKP2021 funding scheme.

² Hautzinger, Hegedüs, Klenner 2014, 5, 18.

³ Burmeister 2000, 539.

2) natural and political (politico-military) disasters, and 3) the desire for conquest, usually on the part of the elites. Despite the concept's relativeness, three types may be determined in terms of the involved geographical distances: 1) short-distance migration, 2) medium-distance migration and 3) long-distance migration. These may involve both small and large groups of populaces.

Unlike migrations involving a small number of individuals, the “Avar” migration, namely that of a *political ethnos*⁴, has had extremely varied consequences, resulting in very complex social, economic and political processes, from inter-human to community contacts, and in the change of the economic nature of the space (in this case subsequent to the conquest of large areas in the Carpathian Basin, mid-regional nomadism was practiced)⁵. Since in this case one may not speak only of populational migration, but also of a political-military conquest, *asymmetrical* relations were established between the conquerors and the conquered, which undoubtedly impacted the symbolic background of the defeated⁶. To date, we are not fully familiar with the demographic background of the newcomers/ conquerors on the one hand, and of the local, native population they found in the Carpathian Basin on the other (*Romanised* populations for example in the Lake Balaton area; Germanic-speaking populaces: Gepids and Lombards; remnants of Asian Huns, etc.⁷).

Geopolitically speaking, the Avar migration is also a “migration” of nomadic-type steppe structures⁸ into the Carpathian Basin (Walter Pohl used the term *steppe state*)⁹, as previously that of the Huns or later that of the Hungarians¹⁰.

The aim of the research is to offer archaeological answers to the question of the identifiability of burial cultures at the end of the migration phenomenon, of ritual specificities of the newly arrived population on a given space but also of the period of its recognizability, considering that in this case, at least theoretically, we have available a historical *terminus post-quem*, namely the year 568.

2. The investigated space

The region concept termed *Transtisza* is largely identical to the geographical area of eastern Hungary, western and north-western Romania and northern Serbia. Fragmented by the three rivers of the Criş, the Mureş and other smaller rivers, most of which flow on an E–W direction, the region called *Transtisza*¹¹ thus has three distinct geographical parts: 1. the areas north of the Criş rivers; 2. the Mureş–Criş rivers–Tisza area; 3. the Banat. Areas from the Upper Tisza southwards to the Banat are divided into several environmental regions, and these in turn into micro-regions, most of which are low, horizontal, and high plains.

The geomorphology of this macro-region is closely linked to the rather branching hydrographical network, mostly tributary to the Tisza; only the Timiş and Caraş rivers flow directly into the Danube. Territorially, the discussed area largely belongs to the Inland Sea area, or the Late Neozoic (late Miocene) Pannonian Lake, which by the early Pliocene had become a limited lake¹². After its definitive filling, the hydrographic network began to form during the Quaternary¹³. Over the course of the Pleistocene, the alluvial fans continued to fill the plain east of the Danube up to the Carpathian line (including the Apuseni Mountains in this chain)¹⁴. Thus, until the Holocene, the course of the Tisza

⁴ Pohl 2018, 17–20, 44–47.

⁵ Nomadism is often mistaken for migration; however, the two concepts are by far not the same social-political-economic phenomenon. Nomadism is a lifestyle, as well as an economic system, the essence of which is the cyclical and regular mobility, which means that the community visits different locations in different months and returns to the same location within a year cycle. On the nomadism: Khazanov 1994; Kradin 2016, 1–6.

⁶ With many examples Gáll 2014, 295–323; a contextual analysis applied to three burial sites: Gáll 2017.

⁷ Pohl 2018, 100–117, 215–220.

⁸ “*The Avars were a vertically organized macrofederation...*”. Pohl 2018, 12.

⁹ Pohl 2003, 571–574. On the concept of the steppe state, see also Hall 2018, 17–37.

¹⁰ Gáll 2020, 21–26.

¹¹ Moreover, one must note that the term *Transtisza* (*Tiszántúl*, *Transtisia* in Latin, also taken over in English) did not exist during the Middle Ages, being a modern term. Kristó 2000, 9.

¹² Borsy 1989, 1. ábra.

¹³ On the geological history from the Pannonian Sea to the emergence of the Great Pannonian Plain (*Nagy Alföld* or *Alföld* [Grecu 2010, 62]), and its eastern part known as the Tisza Plain / the Banat-Crisian Plain / Western Plain or Trans-Tisza Plain: Grecu 2010, 65; Mezősi 2011, 15–24. A valuable geomorphological analysis on Banat and Bačka: Bugarski 2008, 437–455.

¹⁴ Lovász 2006, 117–121.

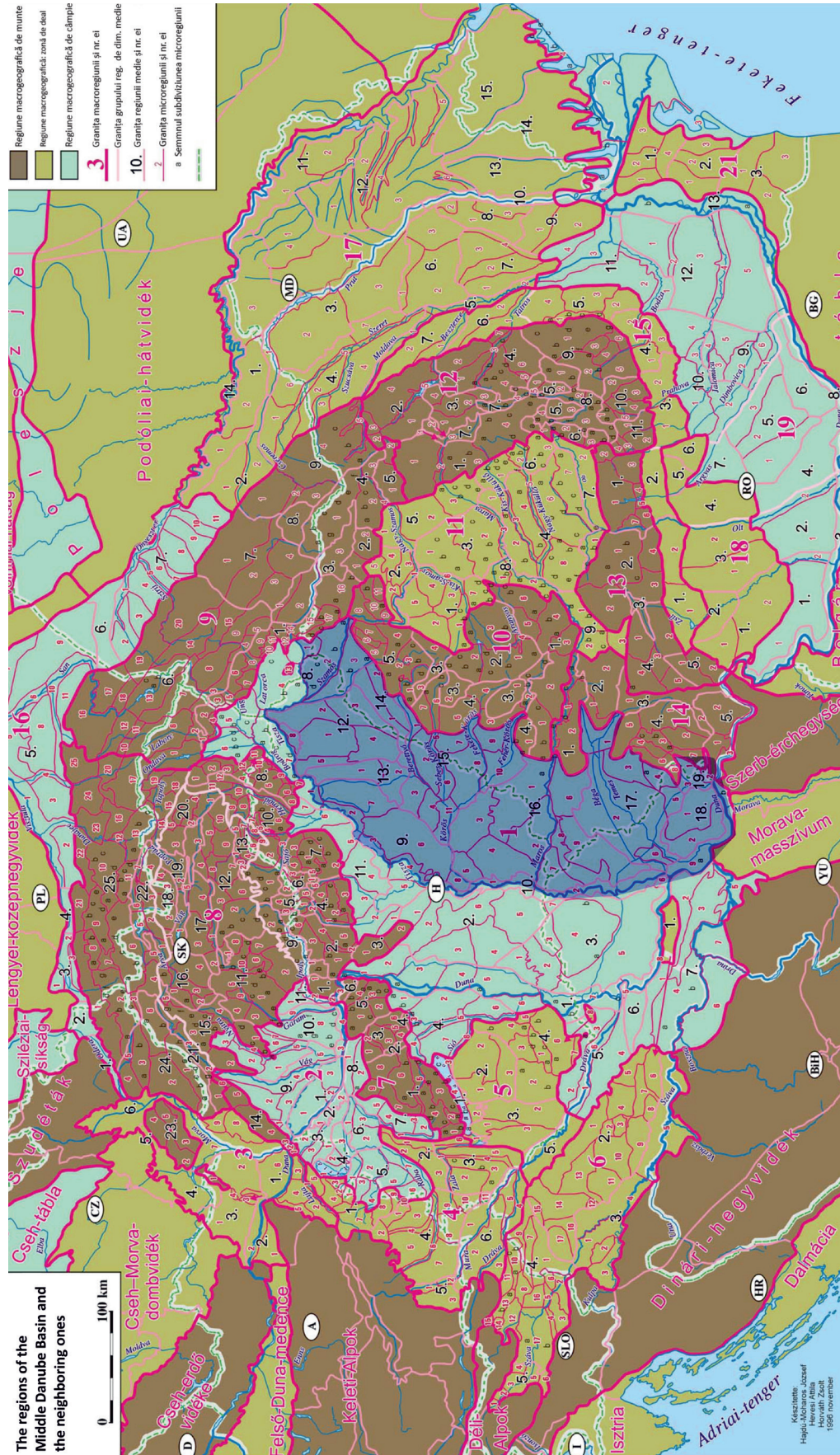


Fig.1.¹⁵ Regions and micro-regions of the Middle Danube Basin and adjacent macro-regions (Transtisza area marked in light blue) (after Hajdú-Moharos, Hevesi 1997, see also footnote 15).

¹⁵ For a list of geographical regions and their Hungarian, Romanian, and Ukrainian names see: <https://www.arcanum.com/hu/online-kiadvanyok/pannon-pannon-enciklopedia-1/magyarorszag-foldje-1D58/magyarorszag-tajai-2807/a-karpat-pannon-terseg-tajtagolodasa-hajdu-moharos-jozsefhevesi-attila-2809/tajbeosztasunk-szempontjai-281B/>. See also: Kormány 2006, 3–16; Posea 1995.

River in the northern area had formed an alluvial plain, while in the southern area it had formed a loess plain crossed by the beds of the tributary rivers, which in turn changed their course¹⁶.

The study of the 1938 map reconstructed based on 18th and 19th century military maps, clearly shows that the landscape in the modern period had radically changed as a result of human intervention, which must be taken into consideration here¹⁷.

To summarize, the image of a wide-open space between the northern Eastern Carpathians – the Apuseni Mountains – the Banat Mountains to the east and the Tisza rivercourse to the west, with a rich tributary hydrographic network, mostly east-west oriented, is relevant for the areas discussed here. Moreover, rivers have always not only divided but also connected various regions. In the regions east of the Tisza too, the large rivers have shaped the landscape, connecting the banks and the surrounding landscape, linking them in all aspects related to human existence.

Intensified human settlement has produced substantial changes to the landscape over the course of time; however in the past, particularly during the 6th–7th centuries, much larger areas were covered by woodlands and marshlands. Thus, one may rightly presume that high hill areas and further east the western streams of the Carpathians were dominated by woodlands, while the lowlands were wet or even marshy.

3. A few notes on the state of research

The archaeological research of the 6th–7th centuries areas located between the Apuseni Mountains, the Tisza River and the Danube, similarly to other periods and regions, is influenced by several factors, starting from the research tradition, often determined by the scientific authority of an important scholar¹⁸, the historiographical tradition of a school, but also by intellectual insight or political trends, such as the nationalism of the 19th–21st centuries¹⁹, which interpreted, in a modern fashion, that the entities known from written sources had been set-up like a real *horizontal society*²⁰, only to further add that the creators/editors of the written sources (the Byzantine authors), had in most cases no direct knowledge, often adopting hundreds of years old historical *topoi*²¹. Furthermore, there are other aspects that had also determined, determine and will still determine scientific works, such as the background, roots, past, social (and economic, political) condition of the knowledge producer, and the skills, education and training of the individual – the accrual of human subjective factors.

The same applies to the archaeology of the Avar period, which *de facto* commences in the 19th century²², yet material of the 6th–9th centuries was first systematized by Joseph Hampel in his monumental work of 1905²³. In areas east of the Tisza, the archaeological research began by the late 19th century, when, for instance, Gyula Nagy Kisléghi investigated several graves in the Dudeștii Vechi and Vizejdia area, where, in addition to human skeletons, horse heads and shins were also discovered, the deceased being placed in the grave pit on a E–W and N–S direction²⁴. Kisléghi was followed by János Banner²⁵, and Ferenc Móra who made a detailed description, photography and introductory discussion, coining the term “*catacomb-niche grave*”²⁶, searching for parallel funerary practices in the Xinjiang Uygur Autonomous Region (in the former territories of the Uyghur Khaganate).

The first specialist to address the *Transtisza archaeological issue (areas east of the Tisza)* in an article, who also laid the foundations for the research trend that endures almost 100 years later, was Dezső Csallány. In his 1933–1934 article, he concludes based on the grave orientation (E–W) and material

¹⁶ Sümeghy *et al.* 2013, 276.

¹⁷ KMF 2012, 835–836. Between the 18th and 20th centuries, for the agricultural use of the regions and in order to eliminate flooding throughout the plain, state measures were taken to regulate the rivers, whose first effect was a deepened water table, and more saline soil.

¹⁸ In this regard, see: Pruitt 2011.

¹⁹ In addition to the classical analyses, we find fundamental the recent analysis of Siniša Malešević: Malešević 2019.

²⁰ Friedmann 1999.

²¹ Regarding the topic here, the closest is Walter Pohl's analysis: Pohl 2018, 1–11.

²² On the history of research, see: Vida 2003, 302–303.

²³ Hampel 1905.

²⁴ Kisléghi Nagy 2010, 20, 105–108; Kisléghi Nagy 2015, 25–26, 121–125.

²⁵ Banner 1927, 152, 8. kép.

²⁶ Móra 1932, 59–60.

culture that the Szentes-Lapistó grave was that of a *Bulgar-Kutrigur*. Csallány’s observations were very complex, from issues concerning the identification of macrogroups based on archaeological sources (burial sites), migrations, long-distance inter-group relationships. Csallány’s 1934 ethnicizing theory on the *Bulgar-Kutrigurs* that deeply marked the evolution of research, his 1930s observations remained virtually unchanged for almost 70 years, slipping away and re-emerging like an underground stream²⁷.

A major change became apparent in his views in the article published in 1939. Thus, while publishing the brief discussion of the catacomb-niche graves (*Stollengrab*) investigated in the burial sites from the Mureş – Tisza – Aranca area, Csallány turned the tables on his previous views, defining the populace buried in the catacomb niche graves with horse depositions as *Avar*. If in 1934, these regions were inhabited by the *Kutrigurs*, in his 1939 historical construct they were replaced by the *Avars* of Bayan, an idea which he would never abandon. Csallány devises a territorial division of these populations’ habitat, which he called *gens*, it being very elastic, where the *Avar* group is especially notable by the *catacomb-niche graves* with an *E–W or NE–SW orientation*, while in the case of the *Kutrigurs* case, he establishes a territory extending from Felnac to the regions south of Balaton in Transdanubia²⁸.

To sum up, Dezső Csallány’s work is a chronological landmark in terms of 6th–7th centuries archaeological research – in general of the Carpathian Basin – and since he attempted to apply regional research as early as the 1930s, he is undoubtedly an original scholar. However, his views – as István Bóna pointed out in 1978²⁹ – were strongly impacted by the ideologies of his time (the influence of Gustaff Kossina and the *Siedlungarchäologie* movement), whereby the concepts of *ethnicity/people* and *archaeological culture* overlapped, so that the Szeged archaeologist defined the *Avars* and *Kutrigurs* based on burial rituals and material culture.

In the post-1945 period, the Budapest School, represented by Ilona Kovrig and József Korek criticised Csallány’s results³⁰, followed by the three articles by István Bóna³¹ and the studies by Károly Mesterházy³², Mária Némethi and László Klima³³. Thus, the representatives of the Budapest school, while not dismissing regionality in their archaeological analyses and observations, tended nevertheless to be more global, macro-regional (for instance Bóna and Mesterházy traced the horse burial ritual to Central Asia).

After Bóna’s criticism of Csallány’s ideas (and not only) in the 1960s and 1970s, his “revived” theory, which would diffuse in the academic literature as the “*Transtisza phenomenon*”, is linked to the name of Béla Kürti³⁴ and, much more marked, to that of Gábor Lőrinczy, who addressed the issue in several articles³⁵. His article underlines that the main source of the idea to bring together the E–W, NE–SW orientations was Csallány’s 1934 article³⁶. In another article, Lőrinczy, practically the only paper to tackle chronological issues, rightly observes that catacomb-niche graves are dated more by 7th century coins³⁷. Chronological issues are also approached in the volume discussing the Szegvár-Oromdűlő cemetery, where radiocarbon analyses³⁸ are also included. Other studies have been published in recent years, among which the most important one by Bence Gulyás, where Csallány’s and Lőrinczy’s results are largely accepted, with some critical comments³⁹.

Thus, by the end of this analysis of the state of research, which also led to the present investigation, several conclusions may be reached:

²⁷ Csallány 1933–1934, 206–214.

²⁸ Csallány 1939, 121–155.

²⁹ Bóna 1978, 127–128.

³⁰ L. Kovrig, Korek 1960, 257–287.

³¹ Bóna 1979, 3–32; Bóna 1980, 31–95; Bóna 1982–1983, 88–98.

³² Mesterházy 1987, 219–242.

³³ Némethi, Klima 1987–1989, 173–245.

³⁴ Kürti 1983, 191–192.

³⁵ Lőrinczy 1987–1989, 161–171; Lőrinczy 1994, 311–335; Lőrinczy 1998, 343–372.

³⁶ In another article, where he again addresses the issue of grave orientations, he erroneously mentions the E–W direction of a grave at Szentes-Borbásföld, which oriented on 12/13 – 212° degrees should obviously be catalogued as on a N–S direction. Lőrinczy 1996, 177–189.

³⁷ Lőrinczy 1994, 318.

³⁸ Lőrinczy, Siklósi 2022, 669–699.

³⁹ Gulyás 2015, 499–512.

I. In the last one hundred years, most archaeological debates on the burial finds east of the Tisza datable to the 6th–7th centuries have been dominated by the question of the eastern origin of this populace, these sites being linked to Eastern Europe, while analyses concerning the more precise dating of the burial sites have not been a particular research interest (see above).

II. Basically, starting with Csallány, among the specialists dealing with the *Transtisza* region of the 6th–7th centuries, the idea of the politically homogeneous macro-group and corroboration with archaeological sources has remained intact⁴⁰. Practically, the search for the origins (through artefacts and rituals) of a supposed macrogroup or macrogroups has remained the main goal of the research, while certain determinisms, such as geographical, geomorphological or the new socio-cultural and political contexts have been disregarded.

III. This outlook is underlain by the persistent 19th century Romantic-national dogmas, which obviously suffered changes, embroideries (for instance: *Eastern European steppe population*⁴¹), however, it may be argued that the archaeology of the *migrations* and early medieval period in Eastern and Central Europe remained intimately linked to national Darwinian and linear evolutionary views of the 19th century (*the attempt to find the eastern origin!*), practicing the linear and/or retrospective method, *mixed reasoning*, nonetheless under a strong influence of the cultural determinism.

4. Generally, about the chronology issue. The system of the Avar period chronology

Chronology is one of the foundations of archaeological research, and one of its primary goals in the attempt to establish the development over time of relations within and between human groups (or persons), as cultural reflections. Obviously, such goal remains very difficult to achieve, given the weight of distinguishing the synchronous and diachronous nature of these complex relations via traditional archaeological methods:

A. dating by coins;

B. dating with the aid of horizons and analogies, using the statistical method [data insertion, for instance by the *PAST* software], but also observations integrated into these analyses on artefacts' wear as chronological landmarks;

C. radiocarbon dating by the new *AMS* method.

Undoubtedly, dating by *mixed argumentation*⁴² – methodologically flawed – has been and is still practiced. However, this method is not used here.

A. Dating with the aid of coins provides a secure *terminus post quem* and from this point of view it would be the most reliable method, but in the case of the Avar period, only a small number of graves have been dated with coins⁴³, while in the *Transtisza* area of the 6th–7th centuries – although a lot of rescue excavations have been conducted recently – their number does not exceed twenty-seven⁴⁴.

B. Dating with the aid of *horizons of artefact types* on the one hand is the most widespread, yet concurrently this method is intimately related to the coin dating method, as it relies on dating identical or similar artefacts in features that also yielded coins⁴⁵.

In this case though, another social-psychological and economic issue arises: it is impossible to surmise a homogenous mechanical use and storage of the material culture elements, both chorologically and chronologically. One must keep in mind that the status of certain territories and/or communities was different from others (differences in terms of how these were able to access goods). Such a difference between *Centre* and *Periphery* (both geographically and socio-politically) certainly determined major differences with regards to the storage of artefacts in graves as well, causing different artefact classes to go out of use more quickly in some territories (having been stored more quickly), while in other areas – usually marginal, border areas – these objects remained fashionable for a longer time period, leading to chronological differences between the respective regions.

⁴⁰ Deviations from this trend: Gáll 2017.

⁴¹ Gulyás 2015, 499–512.

⁴² Criticism of *mixed argumentation* in the Romanian archaeological school (not much echoed!): Niculescu 1997, 63–69.

⁴³ In 1992, these counted twenty-two throughout the Carpathian Basin: Garam 1992, 137–147.

⁴⁴ Somogyi 2014, Tabelle 1–4. In these coin-dated graves we were able to record 108 types or subtypes of different categories of artefacts (we did not consider the bead types, subtypes and variants), obviously a part (from simple rectangular buckles to strap buckles) having absolutely no chronological relevance. Gáll 2023, 41 (unpublished) (see footnote 1).

⁴⁵ In this respect see Bóna 1982–1983, 81.

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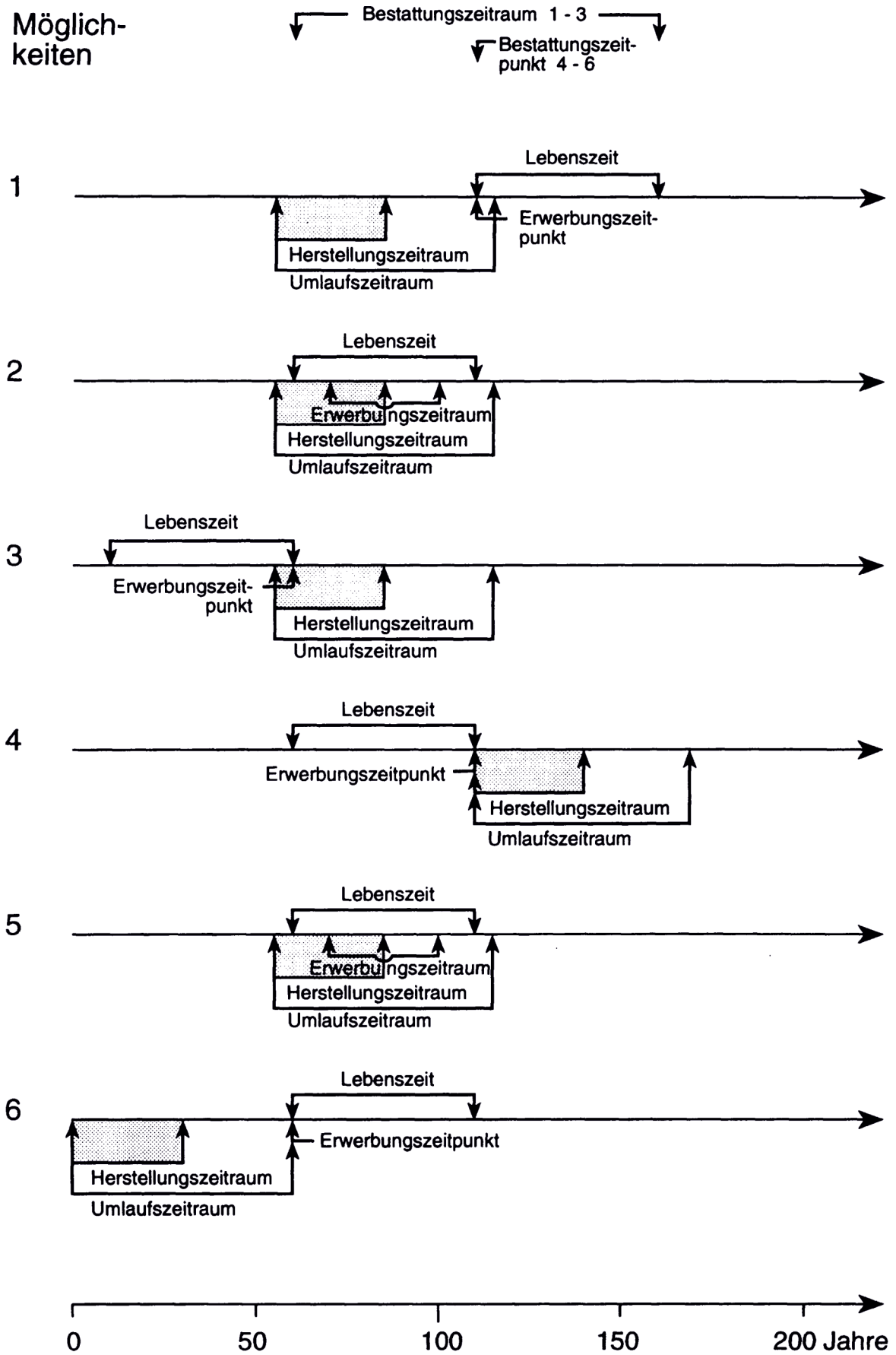


Fig. 2. Possible variations in the production, purchase, use and storage of artefacts (after Steuer 1998, 141: Abb. 4).

Furthermore, one should consider that, for instance, the use of different weapon and harness item types is related to practical aspects, while jewellery wearing is linked to fashion, namely to socio-psychological aspects that may change radically or slowly⁴⁶. In this respect – and we shall be able to provide more examples in the following subchapters – the most chronologically relevant elements are those connected to fashion, such as jewellery, but also certain elements of prestige, which can be linked to social competition (after all, these elements may also be categorised as fashion elements). Their emergence and disappearance fluidity in the social spectrum is the greatest.

One should also be aware of the infinite number of variations occurring during the period from the production of an object, through its purchase and use until its deposition, a phenomenon that markedly and variously influences dating. Thus, the table drawn up by Heiko Steuer with six variations illustrates this more than thorny issue of archaeology.

C. Undoubtedly, recently, radiocarbon dating by the new AMS method is a breath of fresh air, but its effects are still not very significant in the archaeology of the early medieval period of the Carpathian Basin, however, as a methodological conclusion, one may infer that analyses must focus on combining data in terms of the biological age of the individual, the specificities of the material culture dynamics (the production, purchase, use and storage issue) and – inasmuch as funds allow – to associate ¹⁴C analyses, as illustrated below:

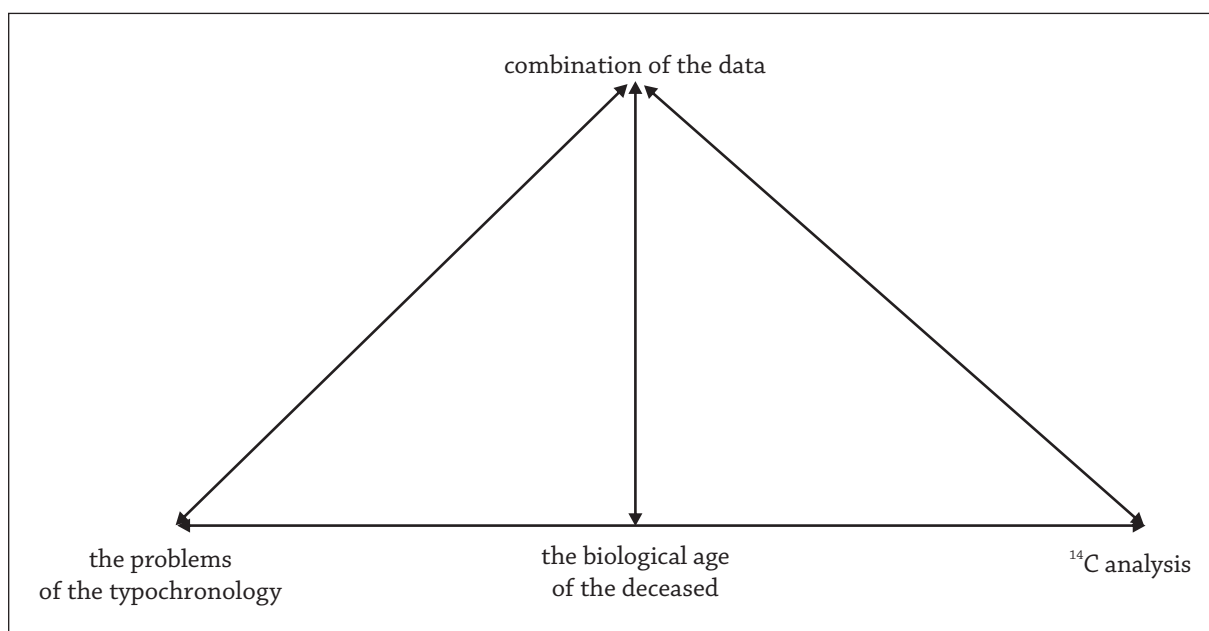


Fig. 3. Methodology to combine ¹⁴C data with material culture dynamics and biological age of the skeletal remains (after Gáll *et al.* 2020, Fig. 4).

5. The Avar period chronology system

The effect of the research traditions originating in 18th–19th centuries Central Europe is felt most strongly in what the Avar period is concerned. According to said insight trend, the events and *ethnicities* (macro-groups) known from historical sources are directly mirrored by the archaeological heritage, which may be dated with more or less differences. Thus, by the late 20th century, a relative chronology with an unprecedented accuracy was established, dividing burial sites according to twenty-three years phases. The beginning was placed in the year of the Avar conquest known from narrative sources (567/568), while the end was represented by the Carolingian campaigns. There are only a few fluctuations in the end dates: the conquest (796–800) was considered the upper limit of the archaeological chronology by 20th century research, while most recently, the last mention of an Avar embassy (*Annales Laurissenses* a.D. 822) has been utilised.

⁴⁶ At the same time, ceremonial weapons cannot be considered *weapons* in the true meaning of the word.

According to the traditional chronological division, the chronological system used today, especially based on the works of Falko Daim and Jozef Zábajník, established a threefold division – *early*, *middle* and *late*–Avar periods, which is not accepted by some archaeologists. Thus, according to Livia Bende, based on the cemeteries analysed in her work, one may speak of the *first* and *second part of the Avar period*⁴⁷, which means that the early Avar period could be dated approximately until the 660s and 670s.

	568							850
Kovrig 1963	EAA: 568–650	MAA: 650–680	LAA: 680–?					
Daim 1987/I	EAA: 568–650	MAA: 650–710		LAAI–IIIb: 710–810				
Daim 1987/II	EAA: 568–670		MAAI–II: 670–730		LAAI–IIIb: 730–810			
Zábajník 1991	EAA: 568–650	MAA: 650–700	LAAI: 700–720	LAAII: 720–750	LAAIII: 750–780	LAAIV: 780–800/825		
Stadler 2005	EAA: 568–630	MAA: 630–680	LAAI: 680–720	LAAII: 720–760	LAAII: 760–822			
Martin 2008	EAA: 568–630	MAA: 630–700	LAA: 700–800					
	EAA - Early Avar Age MAA - Middle Avar Age LAA - Late Avar Age						A	

	Kovrig 1963	Bóna 1971	Čilinská 1975	Daim 1987	Bóna 1988	Martin 1990	Zábajník 1991	Vida 1998
568–600	Gruppe I	FA	a	FG 2	I.1	FG 1		Periode I
600–626/630					I.2	FG 2		
626/630–650/660			b		I.3 ↓	FG 3 FG 4		Periode II

Fig. 4/A–B. Avar period chronology divisions in the main chronological analyses⁴⁸.

Regarding the macro-regional chronological systems, or the prospects for future research, three observations may be made:

1. We believe these are methodologically erroneous, as they started from a uniform concept, namely that communities behave socially, including ritually in a certain manner in all regions, consequently the dynamics of the material culture deposited in the graves was similar.

2. As we have proven in the case of the Nädlač-3M-S burial site (Late Avar period)⁴⁹ J. Zábajník’s chronological system was extended without any critical regional analysis to the macro-region called the Carpathian Basin, although the analysis of the renowned Slovak archaeologist referred to a middle region. Thus, there are serious grounds to argue that regional and contextual analyses of burial sites remain the main future research choices.

3. In the present analysis we wish to broaden the dating options of the burial assemblages, focusing on the time development of the buried individual, and on the material culture ensemble, as a replica of its social evolution, which we believe necessary to corroborate with ¹⁴C data, namely analyses that may provide most restricted and specific data (archaeogenetics, anthropological analyses) on its age. Chronological analyses should include the *small, local, everyday life history*. In this phase, we wish to discuss the graves deemed the earliest in the regions east of the Tisza.

⁴⁷ Bende 2017, 10.

⁴⁸ Academic literature on the chronology of the period: Kovrig 1963; Daim 1987; Zábajník 1991; Stadler 2005; Martin 2008.

⁴⁹ Gáll 2017, 78–82.

6. The “first generation” issue or the last third of the 6th century burial horizon

The “*first generation*” term has long been present in post-Roman archaeological analyses that have addressed the issue of migration. Thus, in this case too, the term refers to the populace arriving as a result of the *migration* phenomenon in 568, likely also during subsequent periods in several waves until mid-7th century (e.g. the famous Kuber figure⁵⁰), especially in the lowlands of the Carpathian Basin.

However, the term “*first generation*” itself needs to be much more nuanced, as it is difficult to approach from a sociological and demographic point of view: human society in general was/is very diverse biologically, composed of individuals of different ages, from children to the elderly. All this leads to difficulties in dealing with the archaeological material given the issue of the demographic-sociological evolution. For instance, a child born in the East (the Don or Volga areas), involved in what one calls the *Avar migration*, might have died around 600, yet might have also lived into his 20s and 30s (reaching senile age) of the 7th century, just as an old man in the 60s of the 6th century would certainly not outlive the last decades of this century. If, hypothetically, we were to compare the archaeological belongings of an individual who died around 570, as a *juvenis*, with that of an old individual in the 590s or 600, they would be entirely different, although both individuals had been actively involved in the migration during the second half of the 6th century. Untaken into account – in terms of cultural anthropology – is the fact that their material culture could have changed during this period moderately or radically, from one individual to another!

Moreover, according to certain archaeological observations, a number of items might have been transferred from one generation to the next. In this case, the holder of the items was no longer connected to those who changed their livelihood location, hence with the “*first generation*” biologically, but nevertheless represents the **first chronological layer of material culture**.

In some cases it may be noted that various artefacts are chronologically stratified, namely that in addition to the possible items arriving in the Carpathian Basin as a result of peoples’ migration and not as a result of trade, there also emerge items that were definitely produced in the Carpathian Basin. In these cases, one must speak of stratified material culture.

For this reason, we believe that the “*first generation*” notions should be separated and nuanced:

1. Biologically, which obviously encompasses a large variety of ages.
2. *The contextual analysis* of the material culture dynamics⁵¹, whereby a number of issues *may be theorised*, among which first would undoubtedly be *which materials are chronologically relevant* and how/which is the method to determine such relevance?

The Early Avar period is also distinguished by the issue of archaeological identification of the “*first generation*”, regardless if one approaches the issue from a biological (1) and/or cultural (2) view. Such an approach, which attempts a more nuanced analysis from a demographic-sociological and cultural perspective, cannot yet be identified among the analyses, even though a significant number of works have addressed the issue. For instance, Csanád Bálint emphasized that certain types or categories of artefacts have been used over long or very long periods, without attempting to combine biological (anthropological) observations with those of material culture, although he draws attention to this matter⁵². Furthermore, the author underlines that especially the richly furnished graves and their inventory benefited from more accurate dating attempts⁵³. Likely owing to this, without going into further details, different concepts have been proposed in the archaeology of the Avar period, making less use of biological data (the first three generations) and are simply chronological datings⁵⁴, in connection with which two notes may be made:

- A. most listed graves come from the Transdanubia area;
- B. commonly, only two burial sites have been mentioned from regions east of the Tisza, being the richest graves, yet destroyed in the 19th century (Kunágota, Kunmadaras⁵⁵).

⁵⁰ On Kuber, see for instance: Bálint 2005, 35–65.

⁵¹ For instance, the use of different categories of weapons and harness items is related to practical aspects, while jewellery wearing to fashion, i.e. to socio-psychological aspects, which can change radically or slowly.

⁵² Bálint 1995, 104–105.

⁵³ Bálint 1995, 105.

⁵⁴ Kovrig 1955, 177; Bóna 1980, 48–52; Bóna 1982–1983, 120; Garam 1983, 154.

⁵⁵ Bóna 1982–1983, 88–98, 115–117, 11. kép/Fig. 11; Hampel 1905, Vol. II: 362, vol. III: Taf. 27.

7. The “first generation” issue east of the Tisza during the last third of the 6th century in the light of archaeology and radiocarbon analysis

7.1. A methodological issue: “first generation” graves⁵⁶ in the regions east of the Tisza in the light of archaeology

We addressed the issue of the term *Avar* and its meaning, the issue of the archaeological definition of the term *Avarat* at the beginning of this article; here we tackle the archaeological views on defining the population that arrived in the regions under discussion.

Two questions require clarification in order to try to understand the above mentioned:

1. Is there a difference between the burial culture among the large cemeteries well datable to the first two thirds of the 6th century and the later funerary sites? We can state that there is a clear difference in the cultural *habitus* (through funerality, from the burial ritual and material culture elements placed in the graves [apparel, weaponry, harness items, including new horse riding elements, unknown until that date, namely the stirrup]) between the two aforementioned periods⁵⁷.

2. What happened to the local population? In the region east of the Tisza – unlike Transdanubia – cemeteries, some comprising hundreds of graves, are abandoned⁵⁸. However, some elements – which we shall present below – suggest a direct contact between the newcomers and the conquered.

As a result of the last few decades of research, as seen from *Appendix 1*, several early dates have been suggested, yet the results are questionable.

Thus, we believe beneficial to list and briefly discuss the chronology of those graves framed or that may be framed – with more or less arguments – in the second half of the 6th century.

I. Biharkeresztes-Lencsés hát

The grave goods of the Biharkeresztes-Lencsés hát grave, with its E–W orientation, and horse burial next to human remains, were dated by the publisher to the second half of the 6th century. Thus, according to Mesterházy, the spearhead, whose socket is longer than the blade⁵⁹, almost faithfully duplicates exemplars from the East⁶⁰. The Biharkeresztes sword with grip pommel is the simple version, which both Mesterházy and Gergely Csiky dated to the early phase of the Avar period⁶¹, similarly to the stirrups, which are specific items pieces of the early Avar period, but especially the buckle or bone applique (with close analogies at Hódmezővásárhely-Szárázér dűlő and Szentes-Borbásföld⁶²) and the Martinovka applique⁶³ (Pl. 3/10). Mesterházy’s analysis relies on dating with the aid of analogies, thus, obviously the grave’s chronology, very clearly framed to the second half of the 6th century, carries obvious risks, but nevertheless the individual buried near Biharkeresztes could biologically belong to the first generation of Avars, given that he was an adult, namely more than 20 years of age⁶⁴ (Pl. 1–3).

II. Gyoma-site 264

The three graves at Gyoma-site 264, dated to around 600, also pose questions. The chronological argument relied on a combination of burial ritual and scarce grave goods (especially on a supposed Martinovka-type applique)⁶⁵. Regardless, if one agrees with a date around 600 as suggested by the publisher, biologically they belong to the second generation of the population arriving from the East, given the fact that the female in grave 3 was 22–28 years old, the two infants were 8–11 years and 10–16 months old, respectively (Pl. 4–5).

III. Hódmezővásárhely-Szárázér dűlő

The Hódmezővásárhely-Szárázér dűlő grave⁶⁶ was dated by means of the horizon of parallels of the already mentioned clasps (at Biharkeresztes-Lencsés hát and Szentes-Borbásföld), the oval buckle

⁵⁶ We could not include the Makó-Mikocsa halom site in the analysis, as it is unpublished, while controversy related to the ¹⁴C dates at Makó-Mikocsa halom, published without archaeological material, continues to this day.

⁵⁷ Academic literature in Romanian on this issue see: Harhoiu, Spânu, Gáll 2011, 53–54.

⁵⁸ See last: Kiss P. 2022 with related literature.

⁵⁹ Csiky 2015, 29.

⁶⁰ Mesterházy 1987, 231.

⁶¹ Mesterházy 1987, 232; Csiky 2015, 185.

⁶² See Lőrinczy 1996, 182.

⁶³ Mesterházy 1987, 8. kép 10, 15. See also Bálint 1992, 406.

⁶⁴ I wish to thank here my colleague Andrei Soficaru for the anthropological observations (made from the publication’s photos).

⁶⁵ Somogyi 1997a, 106–107, Abb. 5–6.

⁶⁶ Korek 1942, 156.

and according to a hypothesis that the “*first generation*” of the population arriving from the East did not yet use stirrups⁶⁷. Unfortunately, there are no data on the individual’s age.

IV. Hajdúszoboszló

The cast appliques in the form of a human mask from Hajdúszoboszló⁶⁸ were also dated to the second half of the 6th century on the basis of analogies.

V. Magyarcsanád-Belezi dűlő

Hypothetically – and via the topographical relationship and few grave goods resembling the Nádlaç graves, which we shall discuss later – the four graves in the Magyarcsanád-Belezi dűlő burial site⁶⁹ may also be very early dated, especially Gr. 4 of a female, who died aged 22–28.

VI. Kardoskút-Molnár Z. földje

In contrast to the analogy-based dating, the destroyed grave at Kardoskút-Molnár Z. földje is *post-dated* by a coin of Justinian I (527–566), which unfortunately can no longer be determined, otherwise it was found together with human and animal skeletal remains⁷⁰. The grave (unavailable anthropological data) – with many questions – may hypothetically be biologically identified with the “*first generation*” of conquerors, nonetheless without conclusive data this is also questionable.

VII. Szentes-Borbásföld

The single grave, destroyed as early as the 10th century, with a N–S orientation⁷¹ at Szentes-Borbásföld bears early features, being dated by the publisher among the members of the “*first generation*” on the basis of a clasp identified as the so-called “*Fischschwanzförmige*” appliqué type, these being considered the earliest finds in communities involved in the second half of the 6th century migration⁷². Regardless, the *juvenile* could belong to the “*first generation*” only in this case (Pl. 8).

VIII. Szentes-Lapistó

The adult male grave of Szentes-Lapistó⁷³ dated through very different parallels (sword with guard,⁷⁴ Martinovka-type cast appliques⁷⁵) is believed to date still to the 6th century⁷⁶.

IX. Szentes-Derekegyháza

The Szentes-Derekegyháza burial (remains of two horses, remains of cattle, skull of a sheep and grave goods consisting of a shield umbo, bow bone plates, bone items, belt fittings, one stirrup) (Pl. 9–10)⁷⁷ was dated in the late 6th century and is mentioned among the earliest nomadic graves in the Carpathian Basin⁷⁸. It should be noted, though, that the shield umbo is typical to the Germanic population, in which case one may think of archaeological traces of possible marriage relationships between the newcomers and the conquered populace.

X. Klárafalva B Gr. 60

The grave at Klárafalva B, Gr. 60 was also dated on the basis of Martinovka-type cast appliques to late 6th century, but unfortunately there are no data on the age of the individual believed a *blacksmith*⁷⁹ (Pl. 6).

⁶⁷ Lőrinczy 1996, 185.

⁶⁸ Lőrinczy 1991, 136; Balogh 2004, 248, 5. kép 25. On cast human masks’ chronology: Balogh 2004, 260–261.

⁶⁹ Lőrinczy, Szalontai 1993, 287, V. tábla.

⁷⁰ Csallány 1943, 167; Somogyi 1997b, 18, Note 19, No. 2 (Kardoskút); ADAM 2002, Vol. I: 185.

⁷¹ Lőrinczy 1996, 177 mentioned “22–202°”, which would have been NNE–SSE, but it is actually 12.5–192.5°, i.e. N–S direction.

⁷² Bálint 1992, 406; Lőrinczy 1996, 185.

⁷³ According to Lőrinczy 1996, 185 the Szentes grave does not contain stirrups among the grave goods, which would be indicative of very early dating. It should be noted, however, that the grave was not excavated and documented by an archaeologist, the grave goods and some information being recovered at a later date. Csallány 1933–1934, 206.

⁷⁴ Bóna 1982–1983, 119.

⁷⁵ Bálint 1992, 406; Balogh 2004, 263.

⁷⁶ Bálint 1992, 406.

⁷⁷ Csallány 1939, 116–120.

⁷⁸ Bálint 1992, 406: “Soweit es der gegenwärtige Stand der frühawarischen Feinchronologie erlaubt, kann noch gesagt werden, daß die Beschläge vom Typ Martynovka eher in der ersten Phase der Frühawarenzeit verbreitet gewesen sind, da ich einige, mit gewissem Vorbehalt datierbare Funde im Einklang mit anderen Forschern zur ältesten Schicht der Awarenfunde reiben würde (Tolnanémedi, Leobersdorf, Szentes - Lapistó und - Derekegyház, vielleicht auch Szegvár - Oromdűlő, Szekszárd - Bogyiszló, Környe und Mandjelos, während Gater und Adony schon in die erste Blüte der sich selbständig entwickelten awarischen Kunst zu setzen wären).” Also Balogh 2004, 263.

⁷⁹ Balogh 2004, 266–267, 15–18. kép.

XI. Szegvár-Oromdűlő Gr. 1 and 165

Gr. 1 from Szegvár-Oromdűlő⁸⁰ (Pl. 11–12) was linked to the last third of the 6th century based on its grave goods. We though express reservations regarding such conclusion:

1. The *Szegvár-type* earring is, according to latest research, more likely to be dated to the 7th century, and in the case of the Szegvár-Sápoldal, Grave 1 grave around mid-7th century⁸¹, so we seriously doubt that the grave could be framed to the 6th century (Pl. 11/4).

2. An analogy for the metal applique in the form of “*Fischschwanz*” (Pl. 12/15, 19) is known from Mokrin-Vodoplav, Grave 58, a cemetery that may be dated to the 7th century, and the grave likely to the second half of the 7th century⁸².

3. If one agrees that the female was aged 16–18⁸³ and a participant in the migration of certain communities⁸⁴ towards the Middle Danube Basin, this must mean that the *juvenis* female died around 575–580. Otherwise – if she died around 590 – on one hand, she must have belonged biologically to the “*first generation*” born in the new “*homeland*”, although the archaeological material in the grave is, according to Lőrinczy, a typically Eastern cultural heritage, however certain elements, like the comb (Pl. 12/16), point to the material culture of the Germanic world!

In contrast, Gr. 165 in the same burial site may be linked with much higher probability to the “*first generation*”. Thus, the 41–60-year-old female⁸⁵ with modest, scant inventory (shield-shaped buckle, cast *mask-style* belt fitting, biconical vessel of *Gepidic* tradition, bronze chain) (Pl. 13) was dated by the excavator to the last third of the 6th century⁸⁶, with which we agree, although (also) in this case radiocarbon analysis would be required. However, we agree with the dating to the late 6th–early 7th centuries, which means that either as a young woman or as a child she arrived in these areas around 568.

In conclusion, in the vast majority of cases the dating of these graves or groups of graves to the second half of the 6th century relied entirely on the basis of parallel horizons of the items and in only one dating, one may assume based on a coin of Justinian I, a *post-quem* period in the second half of said century.

7.2. Radiocarbon research and the issue of identifying the “*first generation*” (last third of the 6th century)

Until recently, radiocarbon dating has had little impact on the chronological framework outlined for the Early Middle Ages. Anomalies in the calibration curve raised uncertainty, as there were no data sets at hand, whose statistical assessment might have remedied mentioned anomalies in the focus area and period. Moreover, scholars have often believed that political or military events directly affected material culture and funerary rituals, thus defining the events as precise chronological markers, for instance, the arrival period of the Avars in the Carpathian Basin in AD 567/568.

In this analysis we benefited from nine radiocarbon analyses from three burial sites, the results of which we considered important to compare and analyse together. The radiocarbon was analysed using a MICADAS-type AMS system in-house. ¹⁴C-ages calibrated⁸⁷ using the dataset IntCal20. Calibration graphs are generated using software OxCal v.4.4.

As they originate from separate sites, we found it necessary to present these individually.

⁸⁰ Lőrinczy 1991, 141.

⁸¹ Lőrinczy 2018, 78–79.

⁸² Ранисављев 2007, Т. XX/9.

⁸³ Lőrinczy 1991, 127.

⁸⁴ See the archaeological analysis of Lőrinczy 1991, 130–140.

⁸⁵ Lőrinczy 1998, 350.

⁸⁶ The *Martinovka-type* belt fitting was also dated to this period by Balogh 2004, 261.

⁸⁷ Bronk Ramsey 2009, 337–360.

1. *Nădlac-1M.*

Out of the four graves at Nădlac-1M ¹⁴C analysis was performed on grave Ftr. 86 (Pl. 7). The four graves, lacking almost entirely any grave goods⁸⁸ (characteristically very similar to those at Magyarcsanád-Belezi dűlő), have both similarities and differences:

1. The graves' orientation is diverse, being placed on NE–SW, N–S, ENE–WSW directions.

2. In the case of Ftr. 86 (female, *adultus*, 30–33 years of age), the skull, distal limbs, and first vertebra of an adult domestic cow (*Bos taurus*) were identified on both steps of the grave, spatially separated from the deceased, at a distance of about 20–25 cm⁸⁹, while in the pelvis and right femur area was found the complete skeleton of a newborn calf.

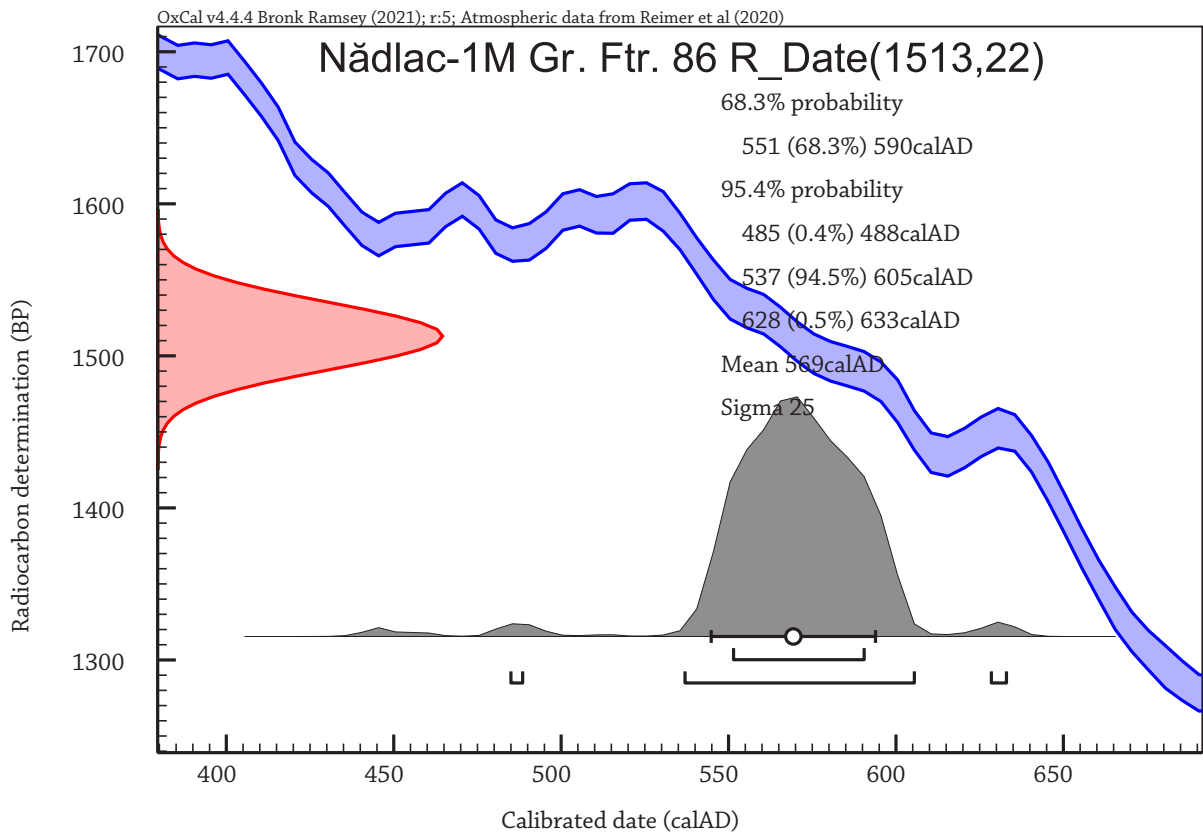


Fig. 5. Analysis of the ¹⁴C sample from Gr. Ftr. 86.

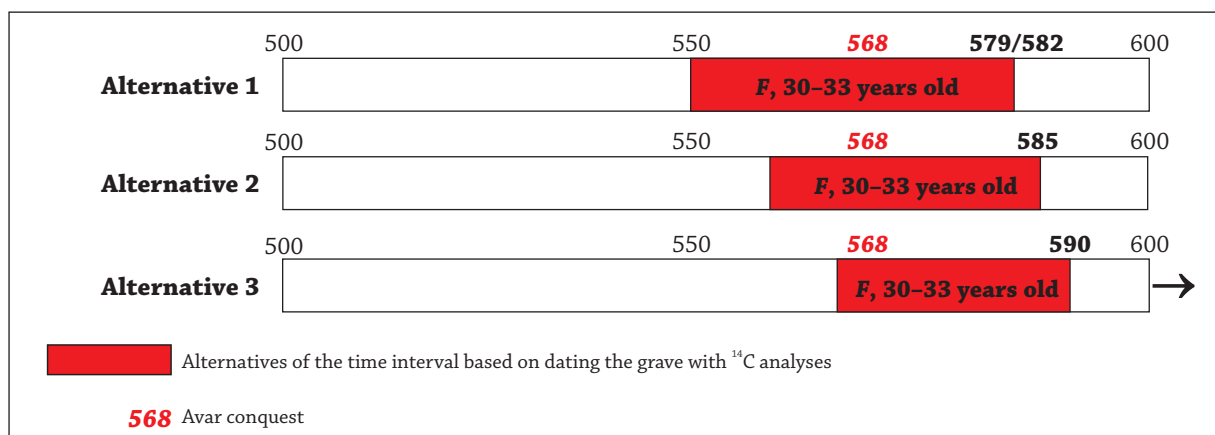


Fig. 6. Alternative ¹⁴C dating variants.

⁸⁸ Gáll, Mărginean 2020, 45–79.

⁸⁹ The situation is very similar to the finds at Kővegy-Nagy-földek (grave 12, belonging to a 23–25-year-old female) (Benedek, Marcsik 2017, 371–372, Fig. 7, 24.).

Practically missing all datable grave goods, we attempted to date the grave Ftr. 86 via ¹⁴C. The calibrated result was quite shocking, given that 68.3% of the grave dates between 551–590.

Notably, dating alternatives imply at least three dating possibilities, following which it may be argued that only in the case of the 30-33-year-old-female one might not speak of belonging to the “first generation”, since if she died around 600 then she might have been born around 570 (i.e. *post-migration*). In the other two dating alternatives, it is certain that the female might have belonged to the “first generation” of the migrant communities (given the burial rituals) and might have been involved in the migration phenomenon as an *adult* (Alternative I–II) or *infant* (III).

2. Pecica-Smart Diesel

The nine graves researched at Pecica “Est/Smart Diesel” stand out due to the fact that the analysed skeletal remains have proved to be, apart from one case, either males or *infansi*. Of the nine graves, four were surely disturbed and robbed in the past (Graves Ftr. 412, Ftr. 430, Ftr. 437, Ftr. 455)⁹⁰. Taking into account the fact that these graves were dispersed over a large territory (ca 1.8 ha), at a distance of dozens of meters from one another, without any organised set-up of the burial place (like in other cemeteries), and with a heterogeneity of orientations, we suppose that these individuals were not biologically related and did not form a community, but that they were buried by different mobile communities at different times. In conclusion, it seems that the so-called “individual dating” of these graves could be the best method for understanding the nature of this burial place. If one takes into account the individual calibration of the ¹⁴C samples, it is possible to observe the very different dating of these graves, one being very definitely from before AD 600, and two others after 600, in the first half – mid 7th century⁹¹.

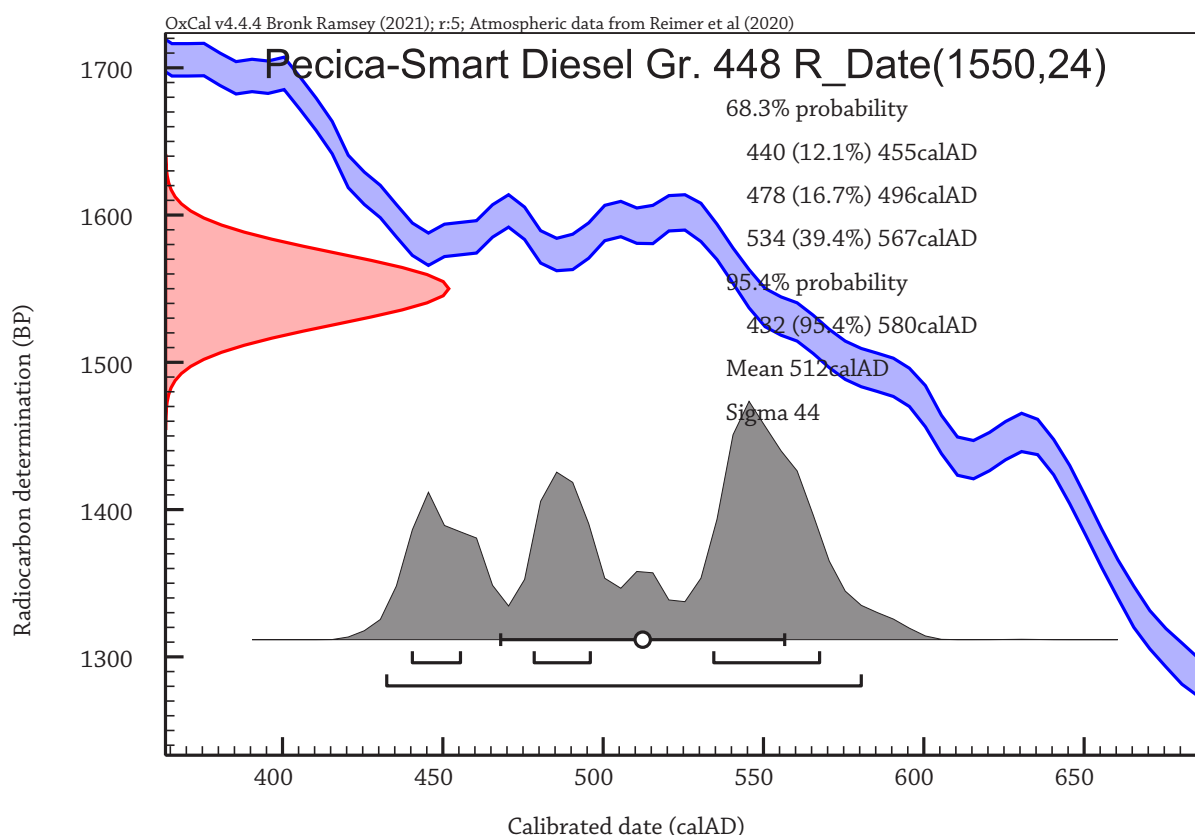


Fig.7. Analysis of the ¹⁴C sample from Ftr. 448.

⁹⁰ Mărginean, Gáll 2022, 267–300.

⁹¹ A more extensive discussion: Mărginean, Gáll 2022, 267–300.

In grave 448, a 40–50-year-old female had only a *IIID*₅/*a*₂ type pottery as inventory placed next to the head⁹². Radiocarbon dating in this case also indicates in a 95.4% proportion, that she might have been buried between 432–580.

Without presenting dating alternatives, it is very clear: if one agrees with the ¹⁴C sample, the 40–50-year-old female was born around 550 at the latest.

3. Szegvár-Oromdűlő

Out of the 467 graves of the burial site, twenty-one graves were examined by radiocarbon method. Out of these, archaeological material and individual grave calibration only for graves 65, 111 convincingly frame the graves in the 6th century.

Grave 111, looted, a 40–50-year-old female had modest grave goods (bone needle case, iron needle, spindle hoop, buckle, a little mount) without specific chronological relevance. Given the ¹⁴C data (68.3% between 537–593 and 95.4% between 453–603) (Pl. 14), and the anthropological data, the grave was dated to the 6th century, thus undoubtedly the female individual in the grave is a representative of the first generation of migrants.

Grave 65, a male grave with similarly very few grave goods (Pl. 15), was aged between 48–57. Anthropological and ¹⁴C data (68.3% between 543–590 and 95.4% between 436–605) converge towards the observation that the individual was part of the “*first generation*” of migrant-conquerors, yet if he died in the last years provided by radiocarbon dating, such observation is not acceptable.

In the rest of the graves, earlier ¹⁴C dates converge in part towards the 7th century, thus such variability together with anthropological data and typo-chronology of the grave goods compel us to date these to the first half of the 7th century, thus not part of the group that arrived in the area during the 6th century (Pl. 16–20).

7.3. Benchmarking analysis of the Nădlac-1M, Pecica-Smart Diesel, and Szegvár-Oromdűlő graves

Based also on Bayes-analysis results in the case of the Szegvár-Oromdűlő cemetery, we attempted to order the ¹⁴C data into a benchmarking statistic. Results are rather clear in terms of the graves which may be linked to the “*first generation*”. Thus, the few graves share common features in terms of grave goods (poor) and rituals. The only grave with distinct features than the group is grave 33 at Szegvár-Oromdűlő, with varied grave goods, unlike the previous graves. Concurrently, the age of the 40–59-year-old individual may suggest that if he died around 600, his material culture might have changed fundamentally, so neither this case may be excluded from the group of graves of those individuals that may be linked to the so-called “*first generation*”:

Moreover, as it may be seen from the table, the other graves, with varied grave goods, are undoubtedly dated to the 7th century (Szegvár-Oromdűlő, Graves 866, 727, 121, 90).

The benchmarking analysis of the graves raises a number of questions about the accuracy of the Avar period typo-chronology. Thus, one may infer a number of observations regarding the earlier dating of certain categories of items, dated so far to a later period (the case of grave 33 at Szegvár-Oromdűlő).

8. Conclusions

Thus, by the end of this analysis, we may draw a few more nuanced conclusions on the issue of the “*first generation*” members of the population, who had partaken the migration which occurred in the second half of the 6th century:

1. The main goal was to identify the “*first generation*” of the populace arriving as a result of the migration phenomenon in the Carpathian Basin during the second half of the 6th century, and the methodological possibilities for their detection. As shown at length in the analysis, dating based on analogies carries major risks and the specialist risks arriving at what one may call, *circular arguments*, which disregard the context of the items, the possible different time intervals, their “*lifespan*” (namely, these artefacts might have been used differently over time), but of possible typo-chronologies established in a unitary way and which did not consider social-human contexts, centre-periphery relations, the region where the item was discovered, etc. As we attempted to discuss each case, we wished to carry out an internal analysis – but as it may be seen – with very few results. In general, however, we agreed with the dates suggested in the literature in the case of *Martinovka*-type appliques,

⁹² Vida 1998, 144–145, Abb. 58–59.

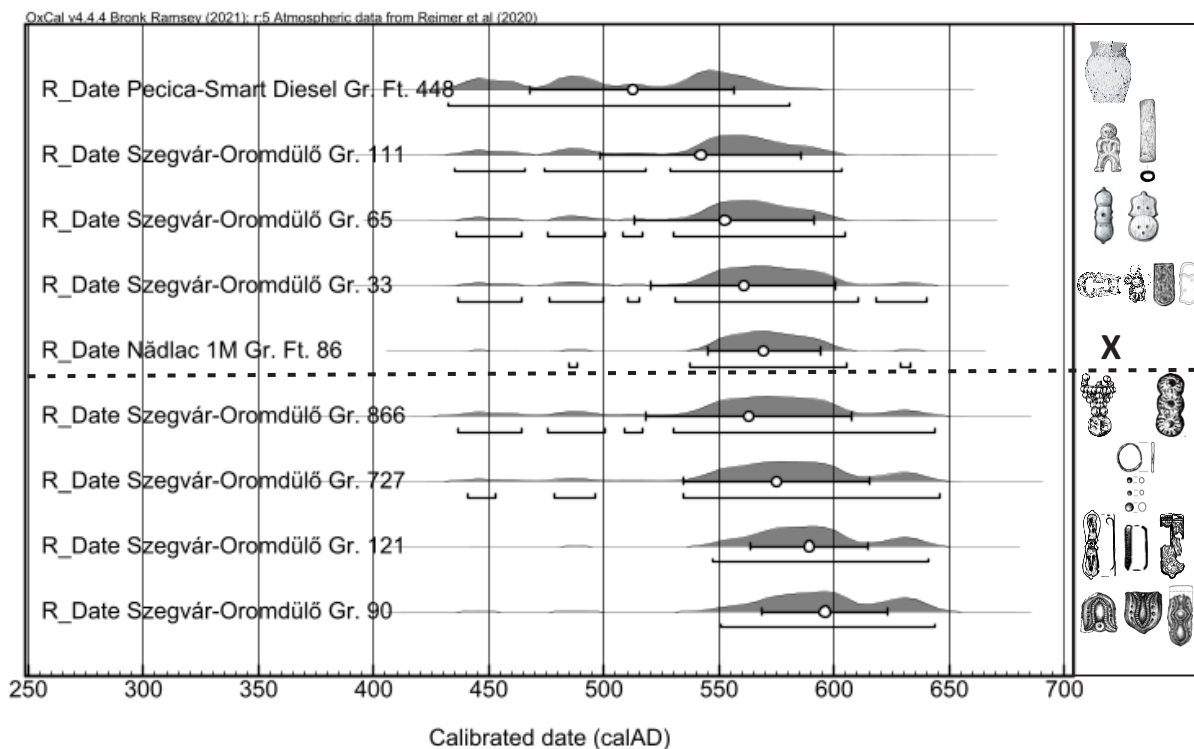
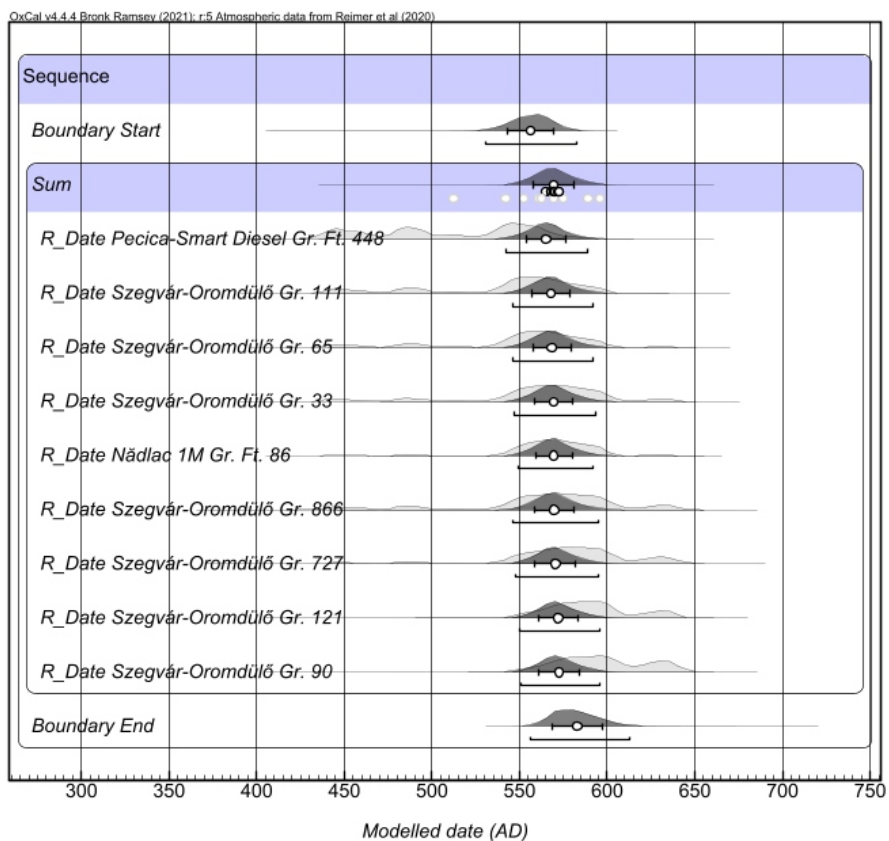


Fig. 8. Benchmarking analysis of the graves of individuals related to the “first generation”.

the so-called “Fischschwanzförmige” appliques and oval buckles, although we would like to point out that in all these cases internal chronological analysis using ¹⁴C analysis is required.

2. *Post-quem* dating to the second half of the 6th century provided by the coin material⁹³ – with many questions – is available for only one case.

⁹³ These data are not accepted by Péter Somogyi 2014, 44.

3. Dating by ^{14}C , was possible in a few cases, given that a number of finds remain unpublished (Makó-Mikocsa halom), while interpretations of unpublished graves with ^{14}C results ensued contradictory discussions.

4. It could be concluded that a new burial culture is very difficult to identify, but not impossible. Out of a total of 195 burial sites or grave finds datable to the first part of the Avar period (early Avar period) east of the Tisza⁹⁴ we were able to date, with more or less relative security, to the second half of the 6th century – or, if approached biologically, link it to that populace that might/would move from the Caucasus and Don areas to the Carpathian Basin – only thirteen (+1⁹⁵) burial sites or graves.

5. The geographical distribution of those sites relatively linked to the new migrants from the east is sporadic, diffusive and disproportionate, being recorded mainly in the area of most important rivers: middle area of the Tisza, the Mureş and dried *Szárazér* stream area (near the Tisza, the *Szentes* – *Szegvár* area: Derekegyház, Lapistó and Oromdúló; *Százazér*: Hódmezővásárhely-Szárazérdülő, Rostás-tanya and perhaps Kardoskút-Molnár Z. özvegyének földje; *Mureş* area: Nădlac-1M, Pecica-Smart Diesel and presumably Magyarcsanád-Belezi dűlő, and south maybe Klárafalva B). Other finds dated to this period may be found in the *Crişul Repede* – *Barcău* area (Biharkeresztes-Lencsésbát), further northwest, in the *Hortobágy* area (Hajdúszoboszló), the *Kissárét* area, namely the areas of the *Triple Körös/Criş* and *Crişul Repede* rivers (with question marks on Gyoma). Such disproportionality may, on one hand have somewhat to do with the demographic realities of the second half of the 6th century, but on the other hand the current state of research may also be considered a negative factor.

The small number of graves, and the few sites relatable to these groups, may be explained by their simple, poor archaeological culture, which is very difficult or impossible to identify by archaeological methods alone, instead the radiocarbon analysis is a great aid. Starting also from the issue of grave Ftr. 86 from Nădlac-1M and Pecica-Smart Diesel Gr. 448, most likely, especially among the horizon of graves with poor or inexistent funerary inventory, one must look for the 6th century burial horizon. This ultimately explains the failure of the research, which sought to identify (sociologically and biologically) this generation – imagining a highly stratified society, favouring the publication of richly furnished graves that could be dated based on analogies (and numismatic material), while those with poor or no grave goods remained uninvestigated and unpublished and/or did not benefit of ^{14}C dating.

6. Their small number may be explained by demographic realities and the economic system (nomadism) of the time; nonetheless, the state of research plays a negative role, since in the absence of radiocarbon analysis a number of fifty-four sites can only be dated very broadly due to the few grave goods, namely between the last third of the 6th century and the first two thirds of the following century. Likely, also because of the state of research, it is impossible to identify the local population, their cemeteries having been abandoned beginning with the second third of the 6th century.

7. Moreover, together with ^{14}C AMS data from Pecica-Smart Diesel-Gr. 448 (between 439-600), Nădlac-1Gr. Ftr. 86 (between AD 532-605), Szegvár-Oromdúló, and from some graves from Makó-Mikocsa halom, combined with *strontium isotope* data (showing that they were either native or were born and lived in their early years in areas geologically similar to the area where they were buried) (see *Appendix 2*)⁹⁶ beg the question: **prior to 568, could not there have been unrecorded migrations from the east to the Carpathian Basin?**

8. If the archaeological material of the conquerors (“*first generation*”) is relatively difficult to detect and in small numbers (Fig. 9), from the 7th century onwards, especially from the second quarter to the second third, in the regions east of the Tisza one is practically witnessing a quantitative “explosion” of burial sites on one hand, and of the number of graves on the other, some veritable necropoleis.

⁹⁴ Gáll 2023, Anexa 1 (unpublished).

⁹⁵ Even though the authors mentioned that “*The opening of the cemetery must have started between AD 559-578 (68.2%) or AD 545-593 (95.4%) (Figure 3, Table S1). The cemetery was abandoned between AD 641-660 (68.2%) or AD 616-656 (95.4%). The estimated span of cemetery use by Model 2 [67-97 yr (68.2%), 43-121 yr (95.4%)] correspond to three generations as proposed by archaeochronology*”, the cemetery not being archaeologically published, yet may be integrate into the benchmark statistics with many question marks. Gulyás *et al.* 2018.

⁹⁶ The values for Nădlac-1M Grave Ftr. 86 and Pecica-Smart Diesel Grave Ftr. 448 are 0.709707 and 0.709950, respectively; which indicate loess soil or alluvium sediments, a very common soil from Hungary to Ukraine (Knipper *et al.* 2020; Ventresca Miller *et al.* 2021).

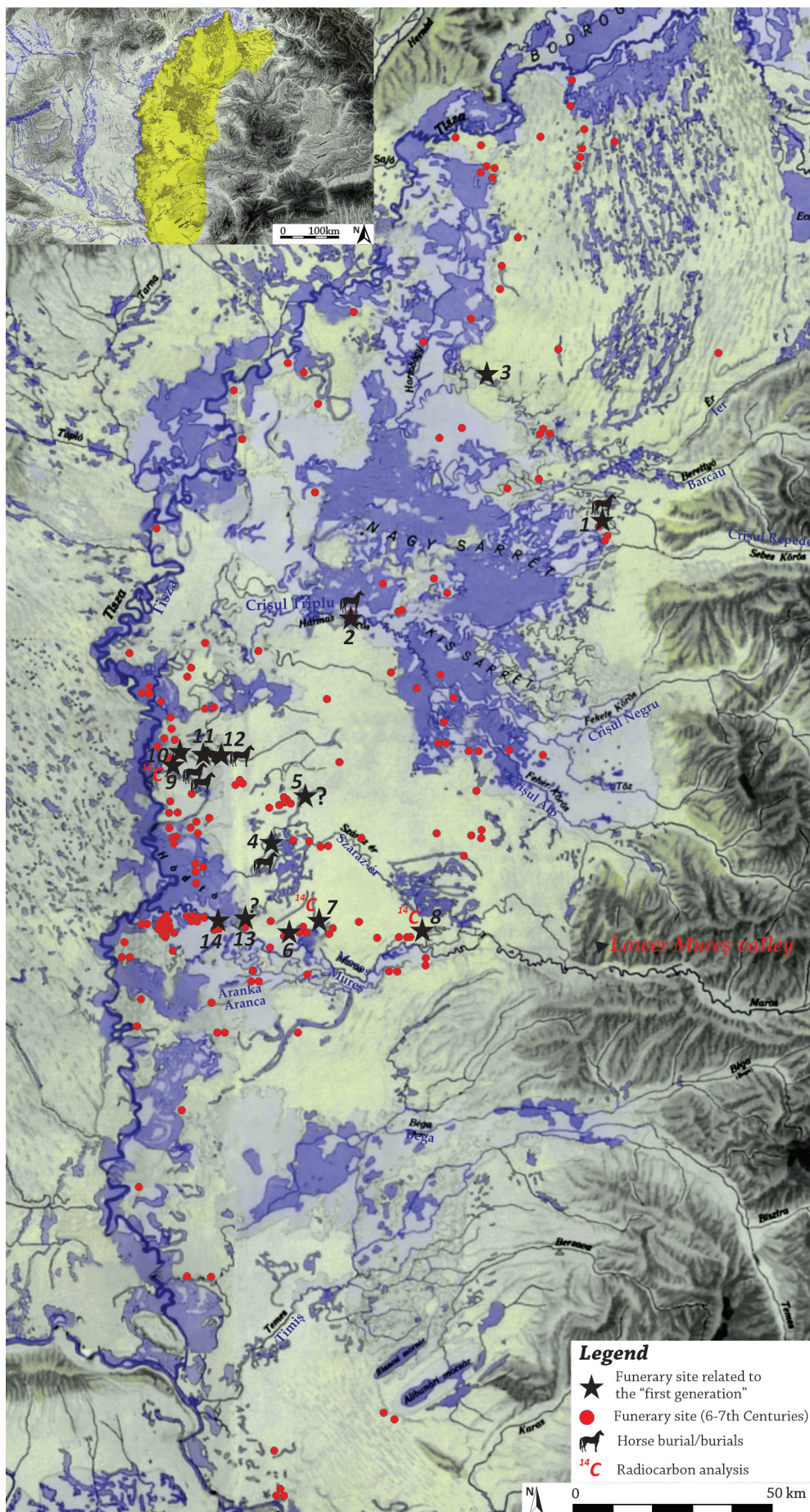


Fig. 9. A. Geographical distribution of burial sites that may be identified with the "first generation".

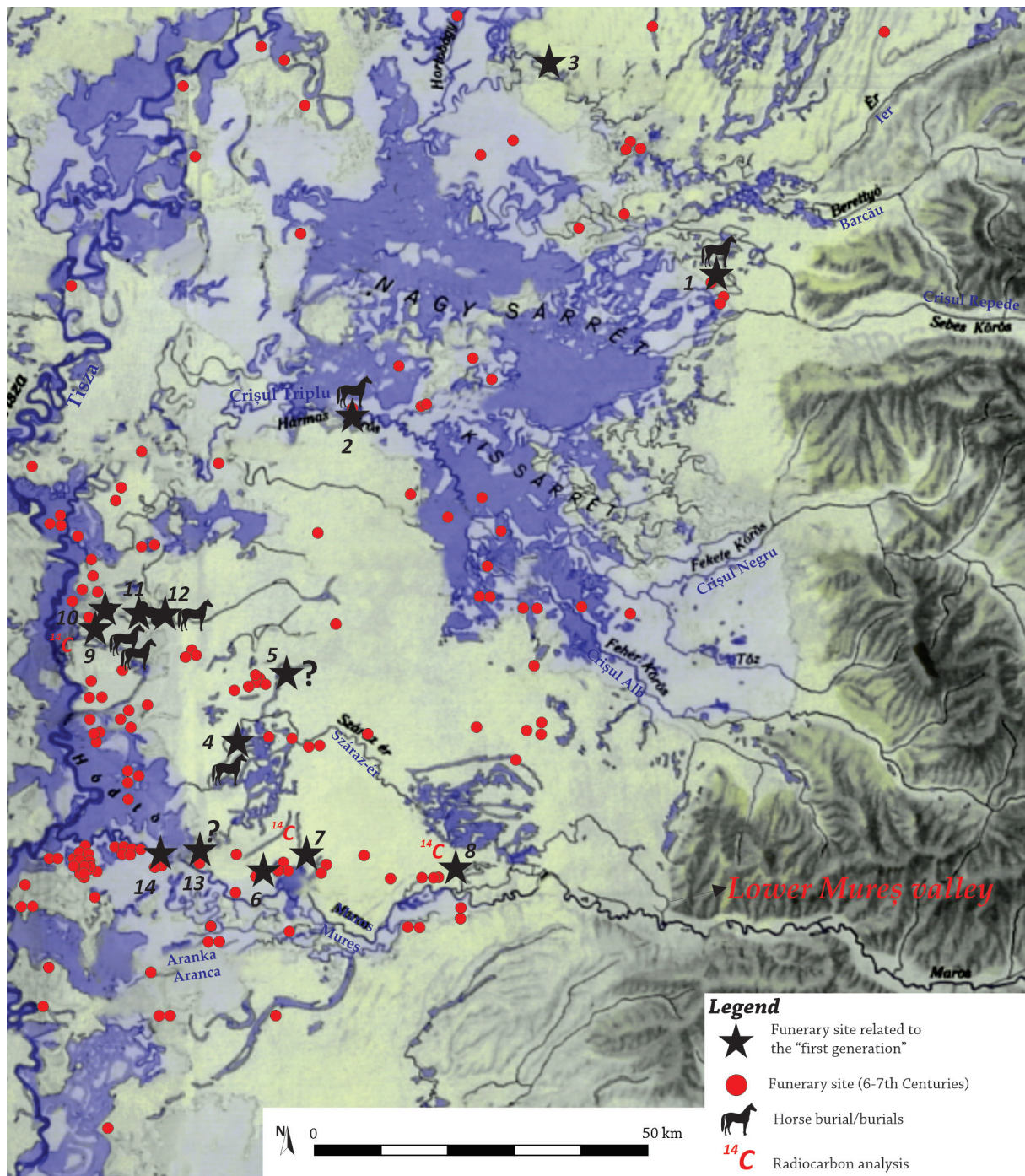


Fig. 9. B. Geographical distribution of burial sites that may be identified with the "first generation".

The explanations of the phenomenon are many, extremely complex, and likely, there is probably a percentage of truth in each:

A. The slow change in lifestyle likely resulted in demographic growth;

B. More than likely, migrations occurred within the Khaganate itself, so that groups from Transdanubia settled east of the Tisza (see burial sites like Pecica-Rovine, Tiszabura etc);

C. Part of the production in the Transdanubia area began to move to the present-day Szeged area, which in turn led to demographic growth of the regions east of the Tisza;

9. Burial sites with clear archaeological traces of the conquered population have not been discovered in the investigated regions. During the first decades of the 7th century, however, several burial sites have been documented along the Tisza river course (the coin-dated Tiszagyenda-Búszerző dűlő⁹⁷),

⁹⁷ Kocsis, Molnár 2021, 137–192.

where the members of a “Germanic” tradition populace were undoubtedly buried. Their number in Transisza regions is insignificant, and may be explained rather by their immigration and not by the continuity of the population from the 6th century.

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Annex 1. Funerary sites and other funerary discoveries related to the “first generation”

Nr.	Funerary site	No. of the graves	Orientation	Horse burial	Dating	Bibliography
The region north of the Crişuri						
1.	Biharkeresztes-Lencsésahát	1	E-W	Partial horse burial	VI/4-4	Mesterházy 1987, 222, 229.
2.	Gyoma Site 264, Ugari tanyák-dűlő	3	E-W, SE-NW	Partial horse burial	around 600	Somogyi 1997a, 97–116, Abb. 1–6.
3.	Hajdúszoboszló	1 (?)	–		VI/4	Fettich 1937, Taf. XXVI/1–3; Lőrinczy 1992, 115; Garam 2001, 40, Taf. 16/1.
The regions between the Mureş – Crişuri – Tisza/Tisa						
4.	Hódmezővásárhely-Szárászérdűlő, Rostás-tanya 634	1	?; SE-NW	Partial horse burial	VI/4	Korek 1942, 156–159, II. tábla; ADAM 2002, Vol. I: 165.
5.	Kardoskút-Molnár Z. özvegyének földje 5	1	–		VI/4 (?)	Csallány 1943, 167; Somogyi 1997b, 18, Note 19, No. 2 (Kardoskút); ADAM 2002, Vol. I: 185.
6.	Magyarcsanád-Belezi dűlő 6	1 (out of 4)	E-W, N-S		VI/4-4	Lőrinczy, Szalontai 1993, 287, V. tábla.
7.	Nádlaç-1M 7	1 (out of 4)	N-S, NE-SW, ENE-WSW		VI/4-4	Gáll, Mărginean 2020, 373–407.
8.	Pecica-Smart Diesel	1 (out of 9)	ENE-WSW, E-W, SW-NE, NW-SE,		VI/4, VII/1	Mărginean, Gáll 2022, 267–300.
9.	Szegvár-Oromdűlő	3 or 4 (out of 467)	E-W, NE-SW, SW-NE	Partial horse burial, entire horse burial	VI/2–VII/1	Lőrinczy 1991, 127–150; Lőrinczy 1992, 81–124; Lőrinczy 1994, 328; Lőrinczy 1998, 350, 14–15. kép; ADAM 2002, Vol. I: 338; Lőrinczy 2022.
10.	Szentes-Borbásföld	1	N-S	Partial horse burial	VI/4-4	Lőrinczy 1996, 177–189; Vörös 1996, 191–194.
11.	Szentes-Derekegyházaoldal 77/a, Pataki-föld	1	NE-SW	Partial horse burial (two horses)	VI/4-4	Csallány 1939, 116–120, Taf. I–II; ADAM 2002, Vol. I: 353.
12.	Szentes-Lapista 26., Lami I. és Pál F. földje	1	SE-NW	Partial horse burial	VI/4-4	Csallány 1933–1934, 206–214, Taf. LVIII/1–14; ADAM 2002, Vol. I: 356.
13.	Makó-Mikócsa-halom	251	?		VI/2–VII/1	
Banat						
14.	Klárafalva-B, Rákóczi út 113-114. sz. Gr. 60	1	NW-SE	Partial horse burial	VI/4	Balogh 2004, 266–267.

Legend: VI/4 – the last quarter of the 6th century, VI/4-4-VII/1 – the last quarter of the 6th century, VI/2-VII/1 – the first part of the 7th century, VI/2-VII/1 – the second half of the 6th century / the first part of the 7th century

Annex 2. The strontium isotope data of the samples from Nădlac and Pecica

Identification no. of the project	The name of the sample	$^{87}\text{Sr}/^{86}\text{Sr}$	$\pm 1\sigma$
I_3215_1	Nădlac-Gr. Ftr. 86	<i>0.709707</i>	<i>0.000015</i>
I_3215_3	Pecica-S.M. Gr. Ftr. 448	<i>0.709950</i>	<i>0.000015</i>

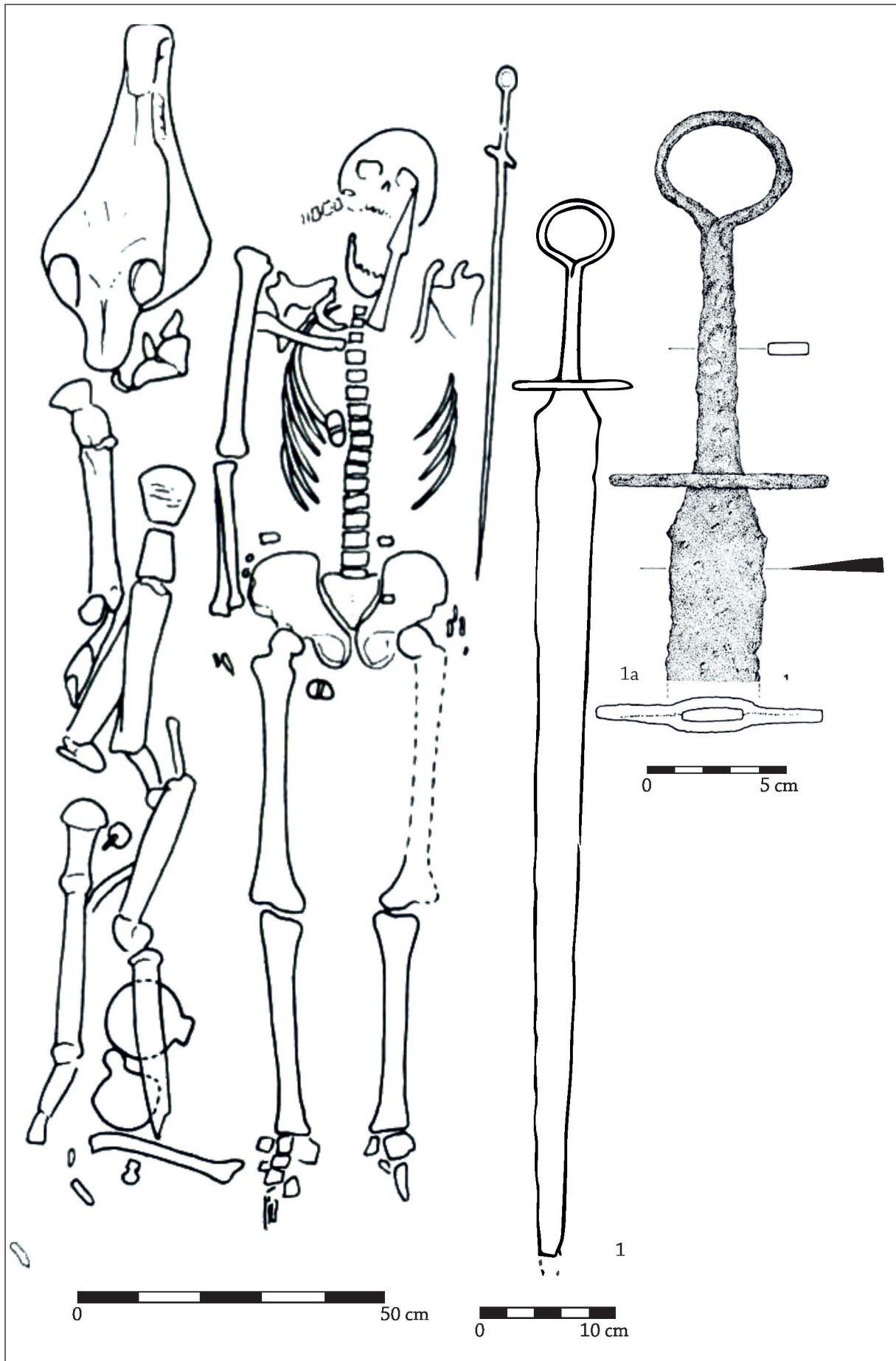


Plate 1. Biharkeresztes-Lencsésbát: 1 (after Mesterházy 1987, 5. kép/Abb. 5, 6. kép/Abb. 6).

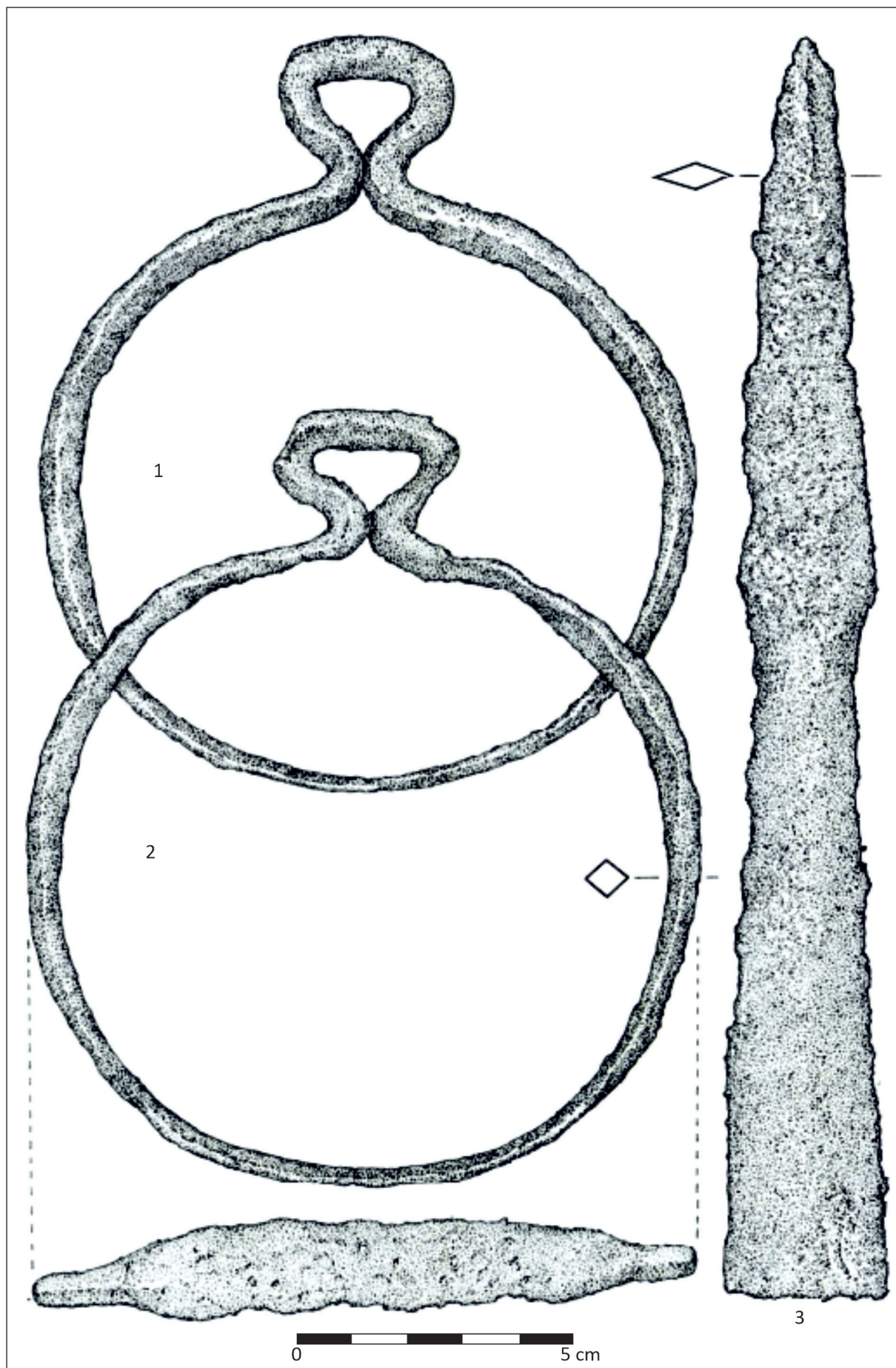


Plate 2. Biharkeresztes-Lencsés-hát: 1-3 (after Mesterházy 1987, 7. kép/Abb. 7).

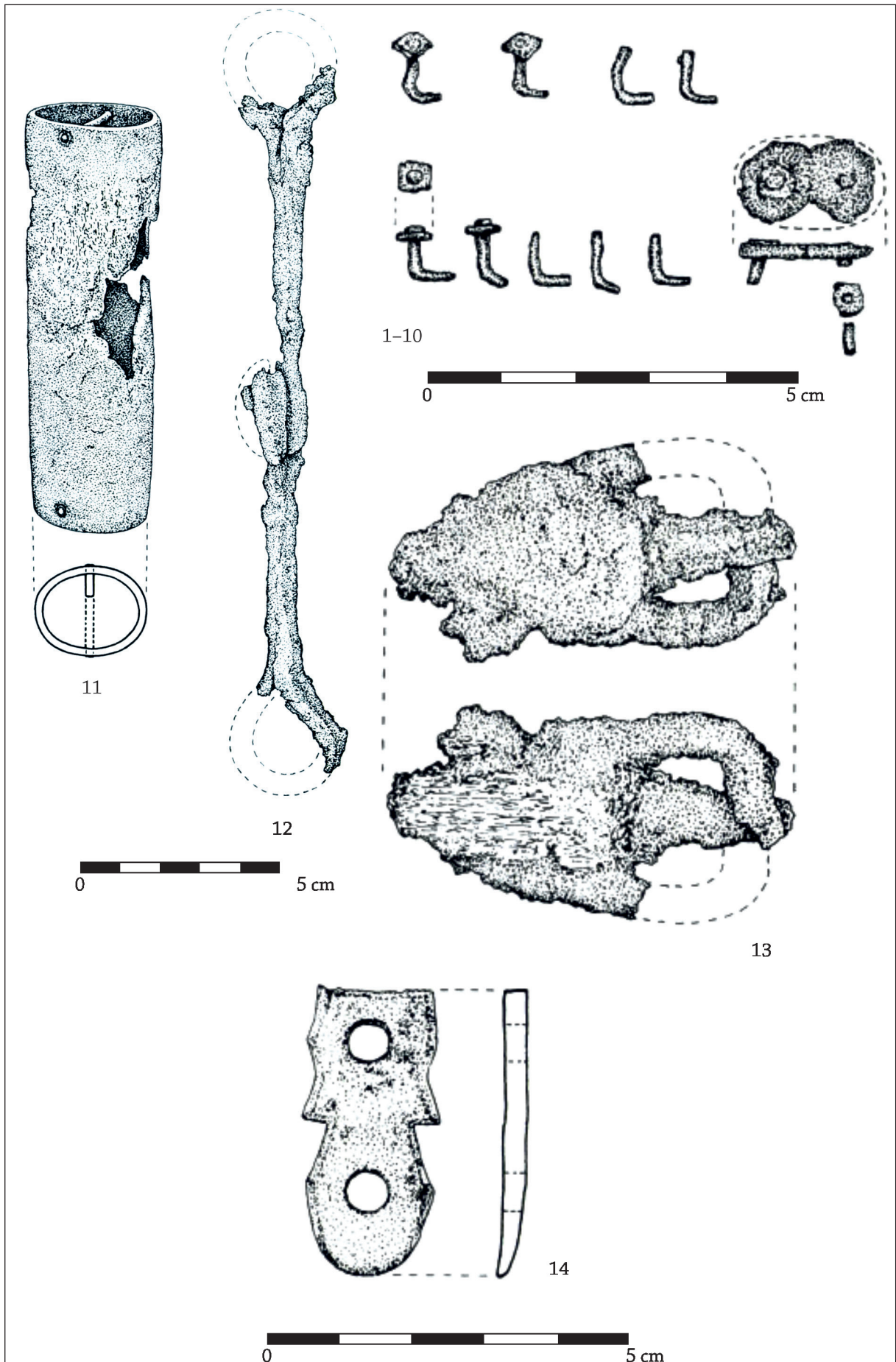


Plate 3. Biharkeresztes-Lencsésbát: 1-14(after Mesterházy 1987, 8. kép/Abb. 8, 9. kép/Abb. 9).

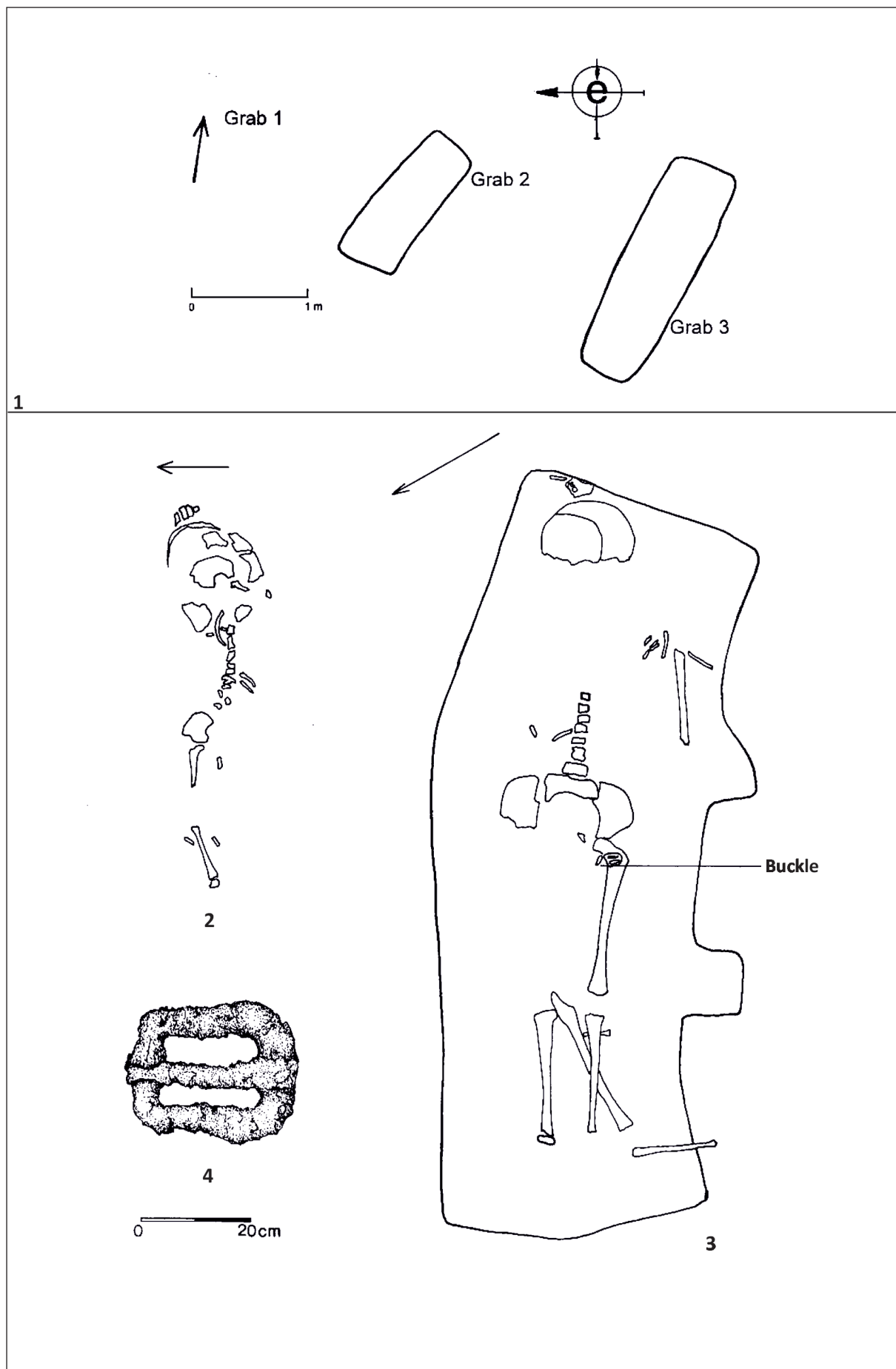


Plate 4. Gyoma-Site 264: 1. the map of the funerary site; 2. Gr. 1; 3-4. Gr. 2 (after Somogyi 1997a, Abb. 2).

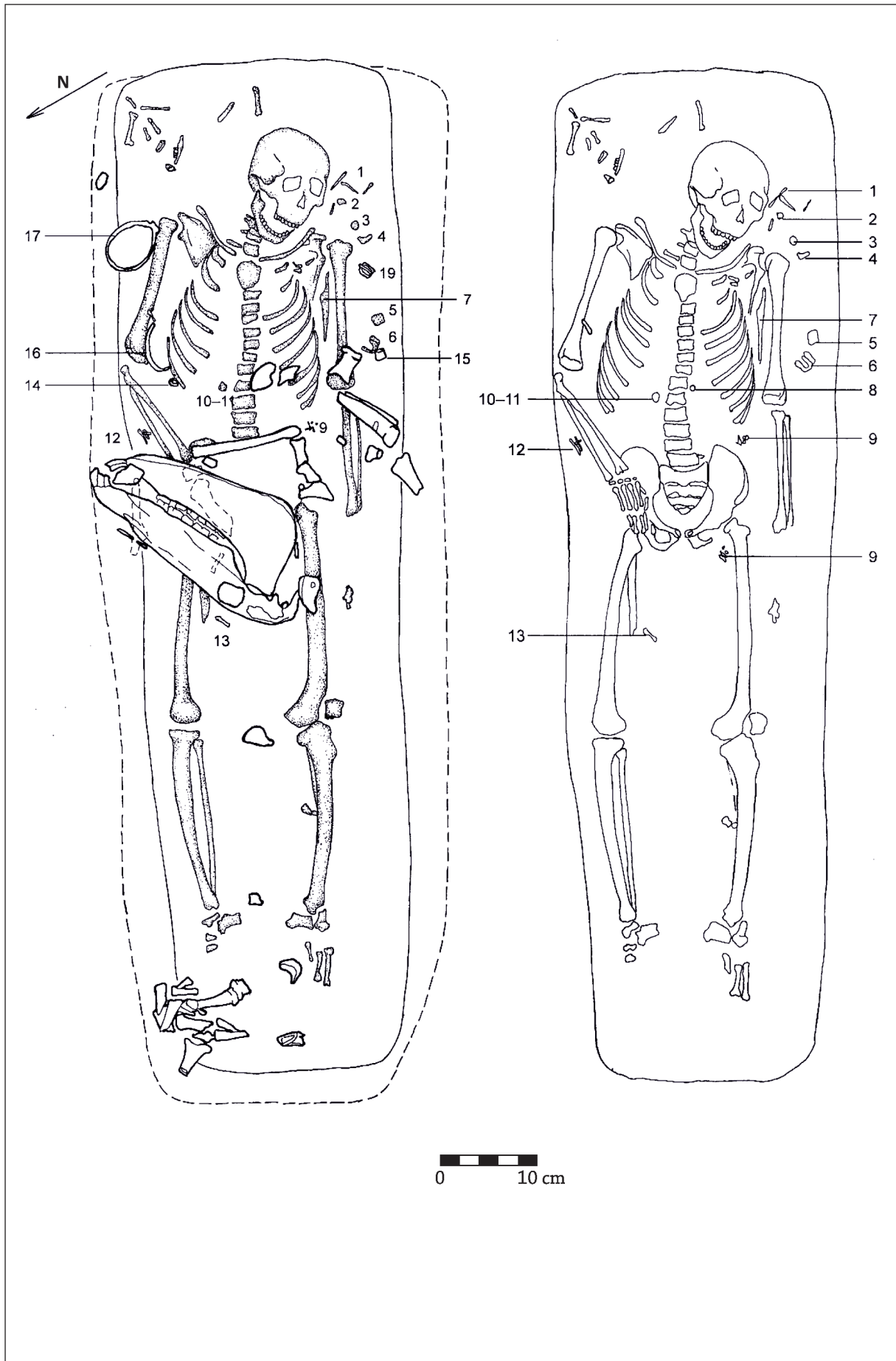
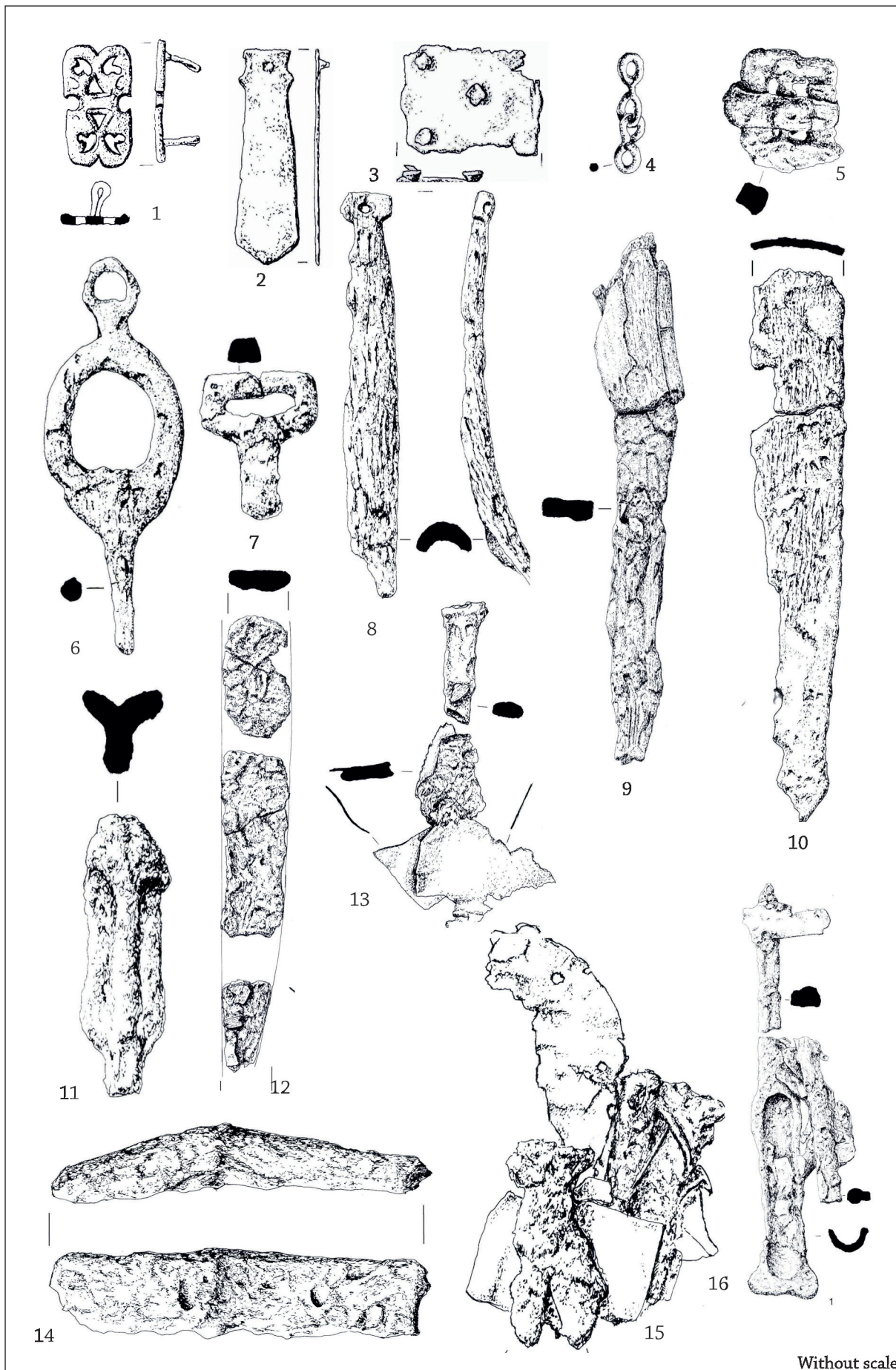


Plate 5. Gyoma-Site 264: Gr. 3 (after Somogyi 1997a, Abb. 3).



Without scale

Plate 6. Klárafalva-B Gr. 60: 1-3 (redrawn after Balogh 2004, 15-18. kép / Abb. 15-18).

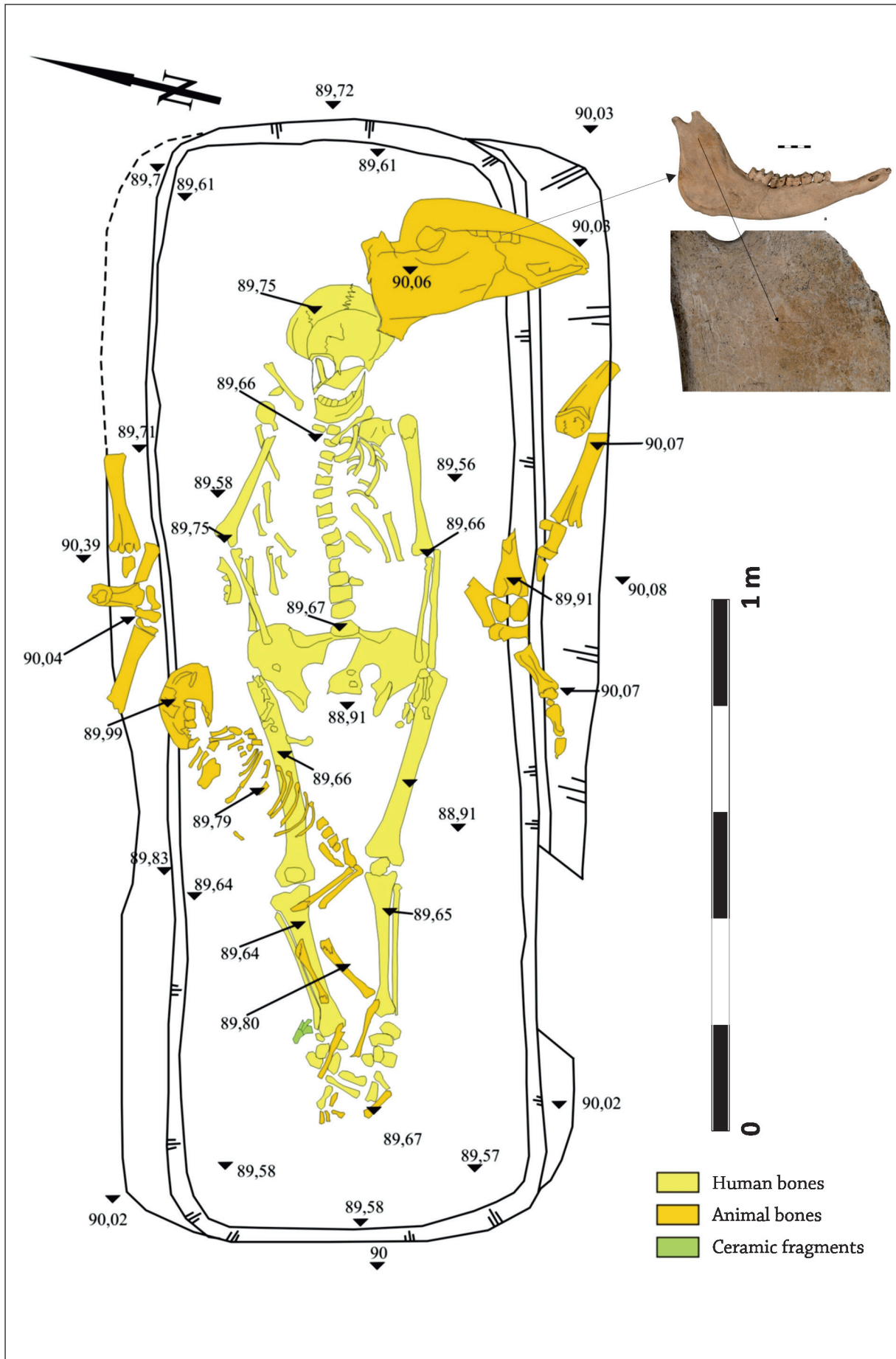


Plate 7. Nädlac-1Gr. Ftr. 86 (after Gáll, Mărginean 2020, Fig. 20).

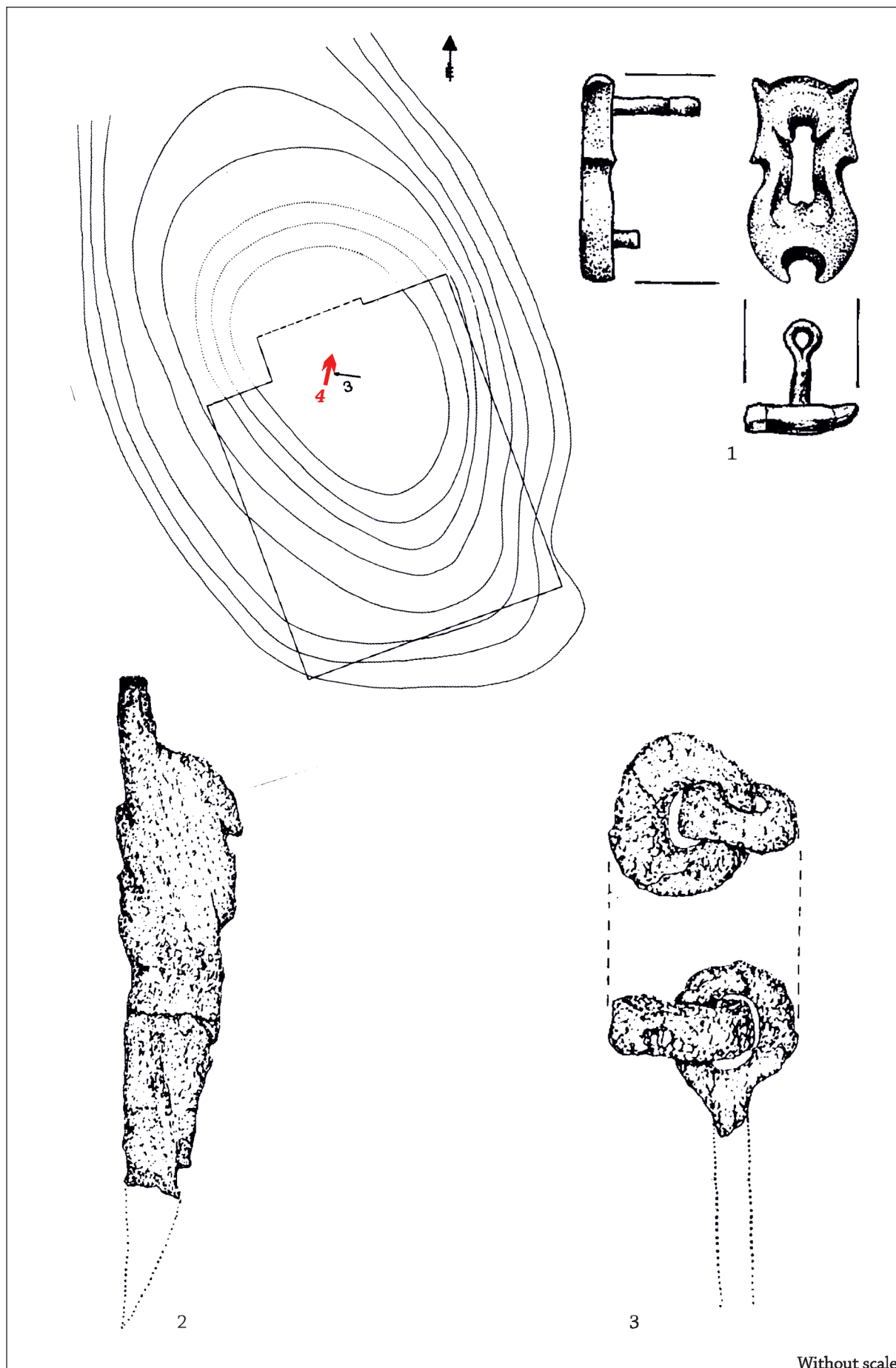


Plate 8. Szentes-Borbásföld M. 4: 1-3 (redrawn after Lőrinczy 1996, 1-3. kép / Abb. 1-3).

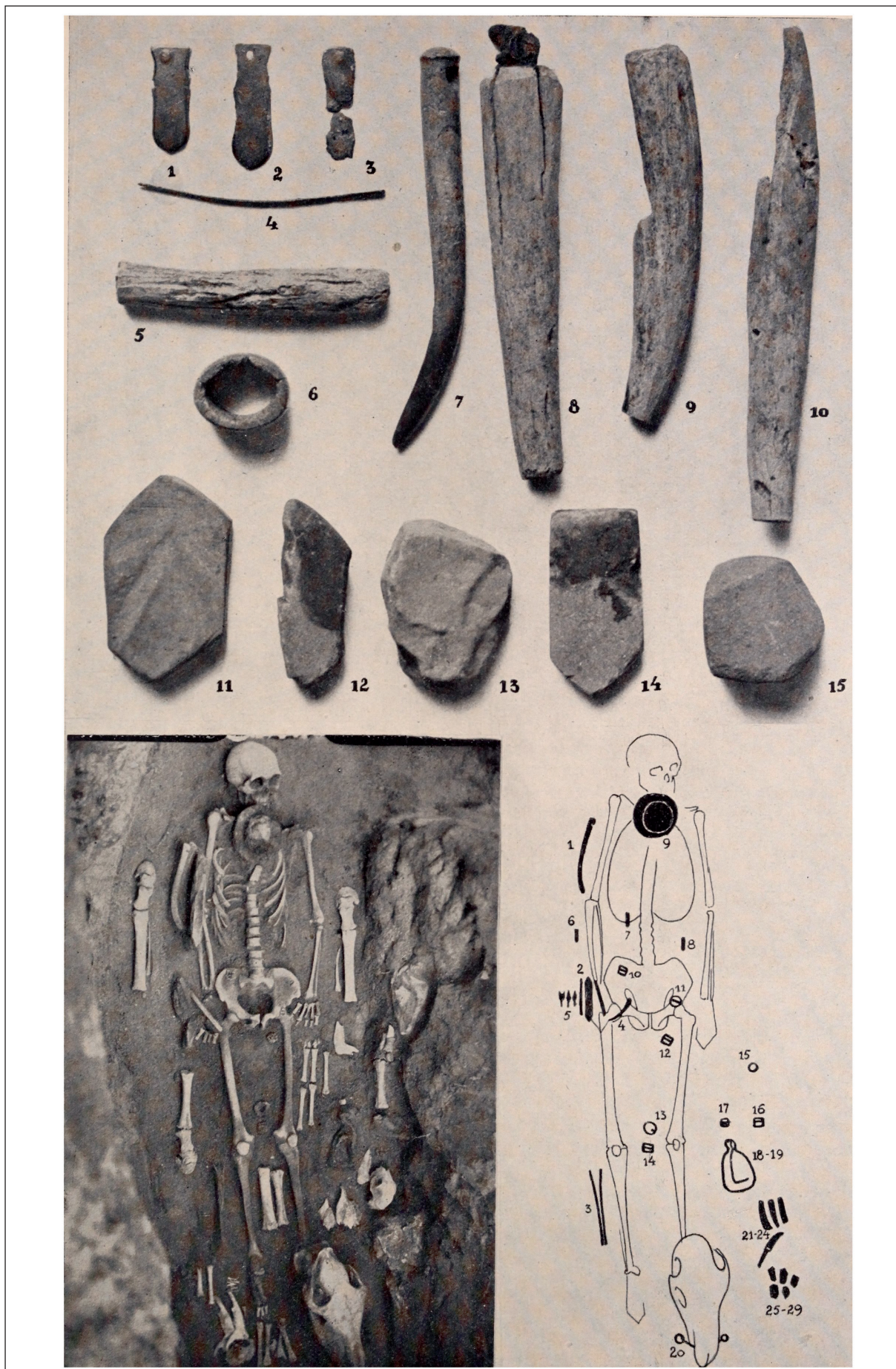
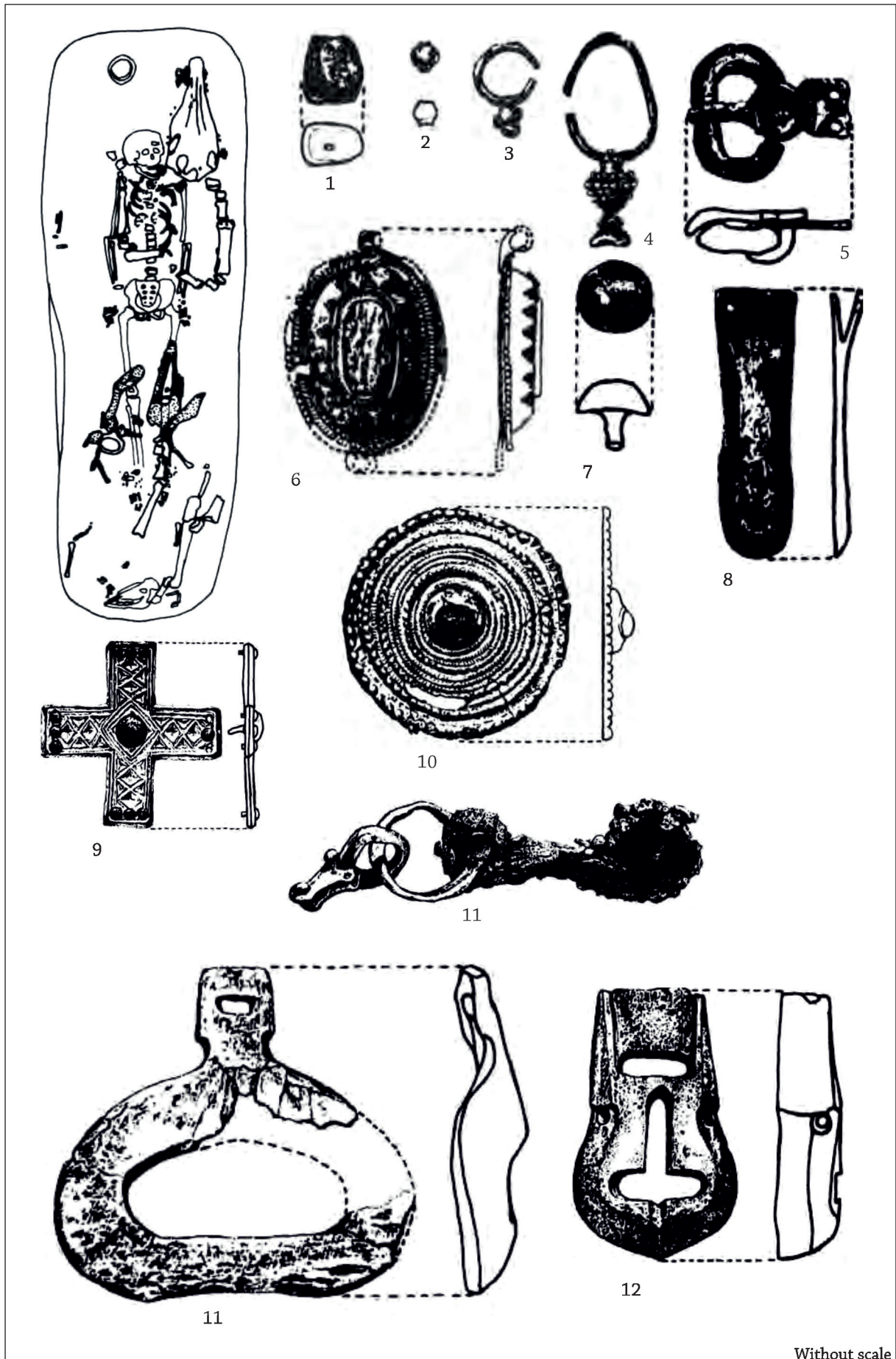


Plate 9. Szentes-Derekegyháza (after Csallány 1939, I. tábla / Tafel I).

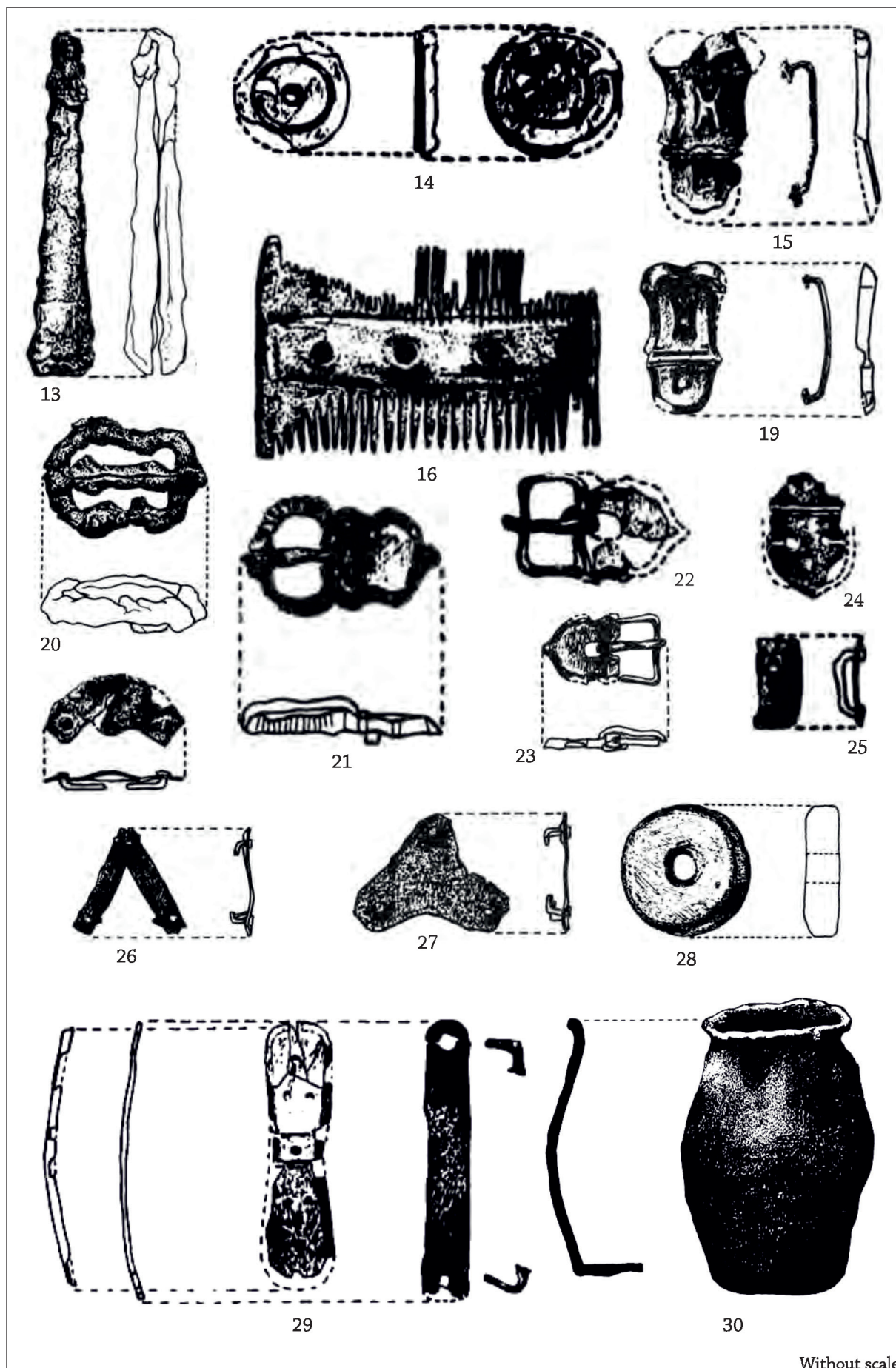


Plate 10. Szentes-Derekegyháza (after Csallány 1939, II. tábla / Tafel II).



Without scale

Plate 11. Szegvár-Oromdűlő Gr. 1: 1-12 (redrawn after Lőrinczy 1991, I-III. tábla).



Without scale

Plate 12. Szegvár-Oromdűlő Gr. 1: 13–30 (redrawn after Lőrinczy 1991, II–V. tábla).

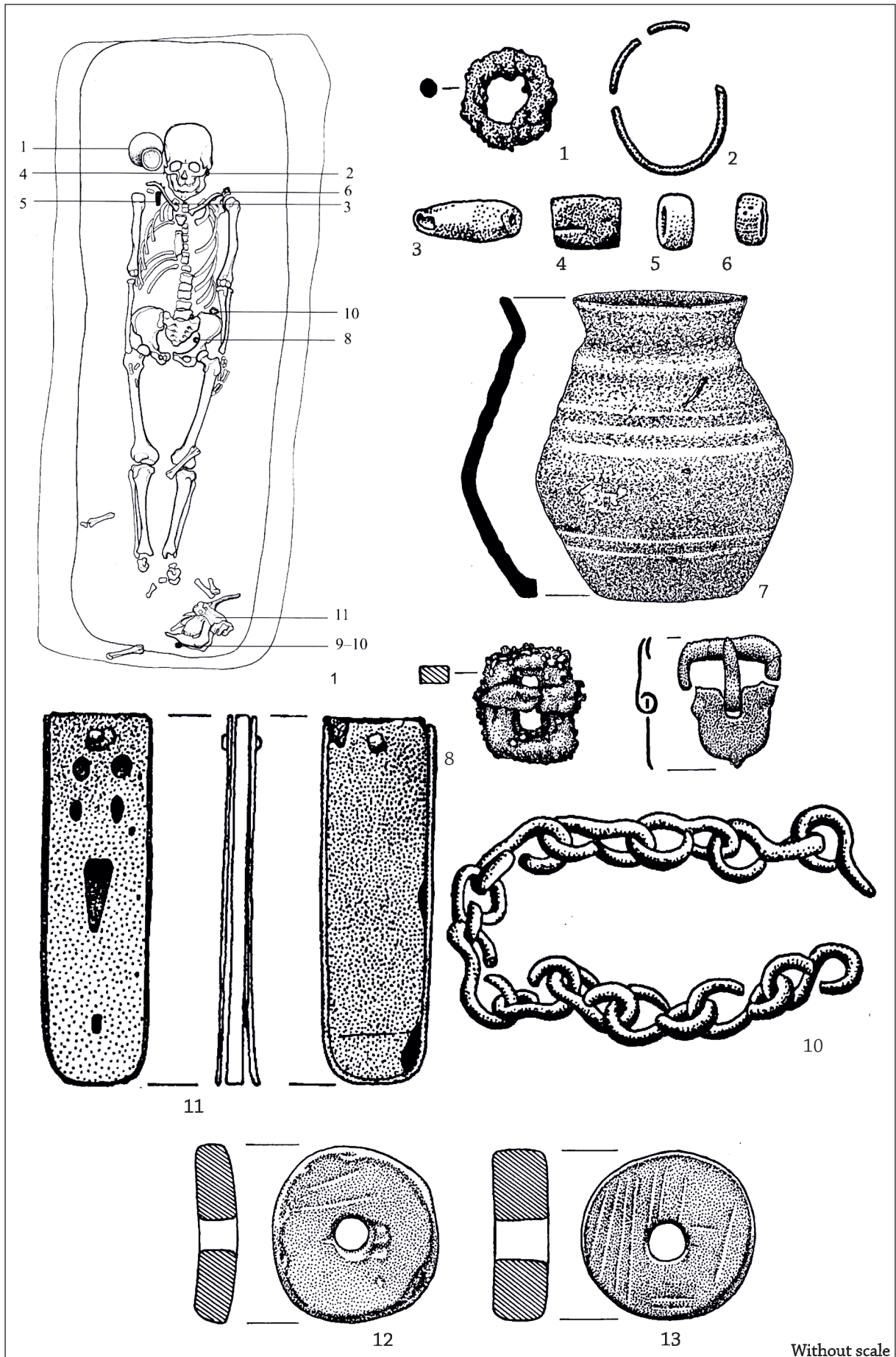


Plate 13. Szezvár-Oromdűlő Gr. 165 (redrawn after Lőrinczy 1998, 14–15. kép / Abb. 14–15).

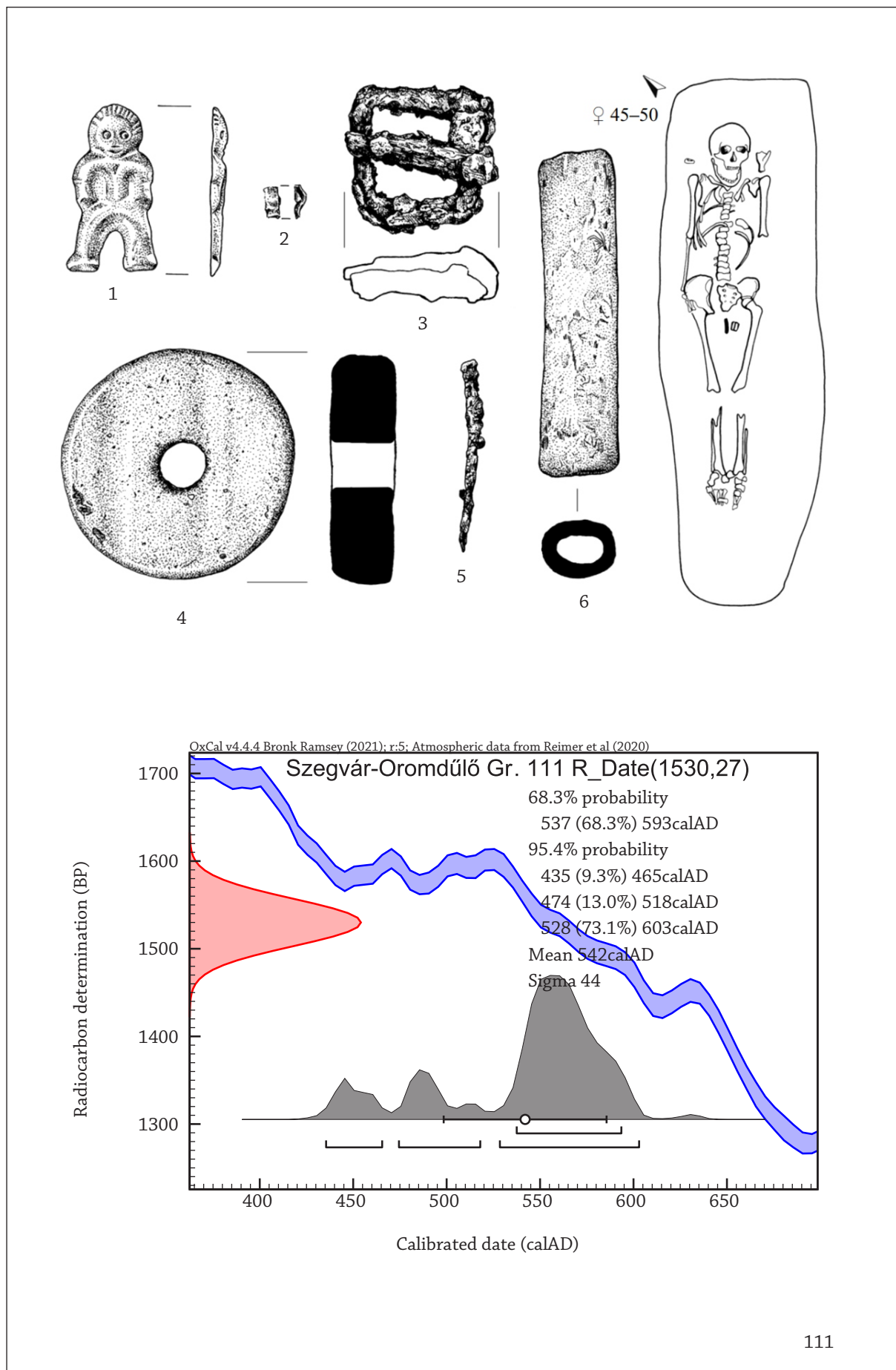


Plate 14. Szegvár-Oromdűlő Gr. 111 (after Lőrinczy 2022, Fig. 71/111 and 1. táblázat).

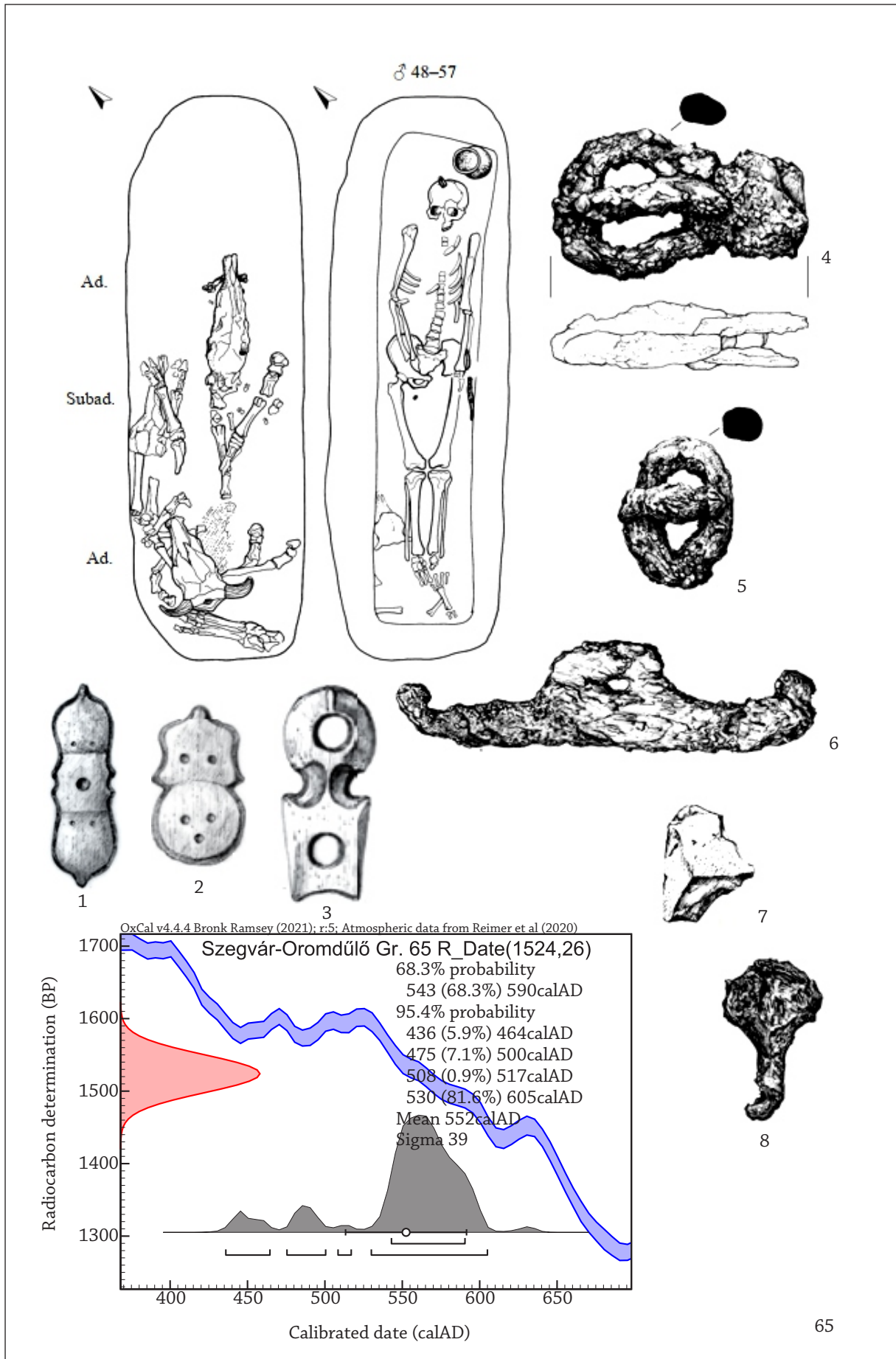


Plate 15. Szegvár-Oromdűlő Gr. 65 (after Lőrinczy 2022, Fig. 31/65 and 1. táblázat).

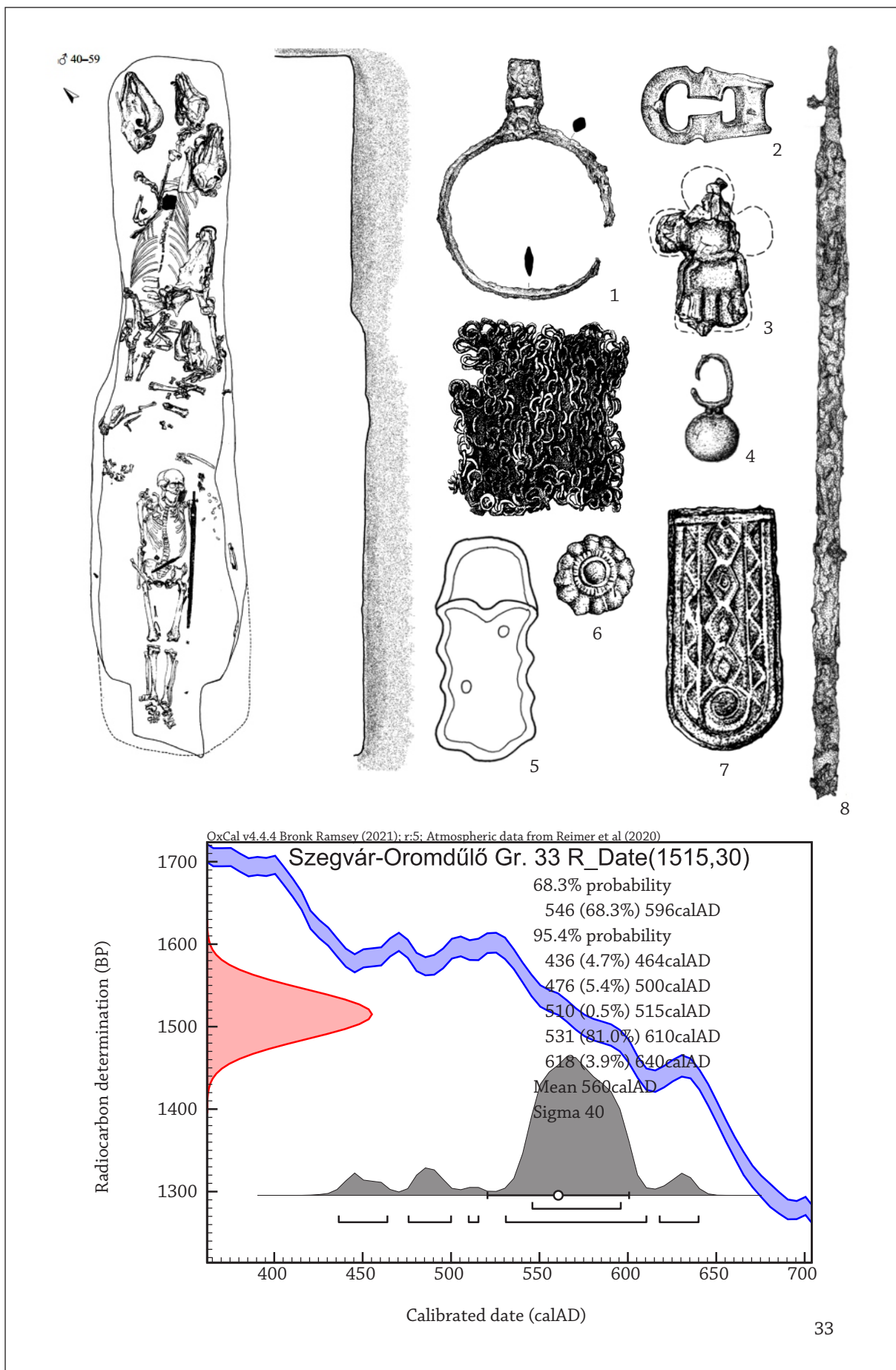


Plate 16. Szegvár-Oromdűlő Gr. 33 (after Lőrinczy 2022, Fig. 17, 21, 22/33 and 1. táblázat).

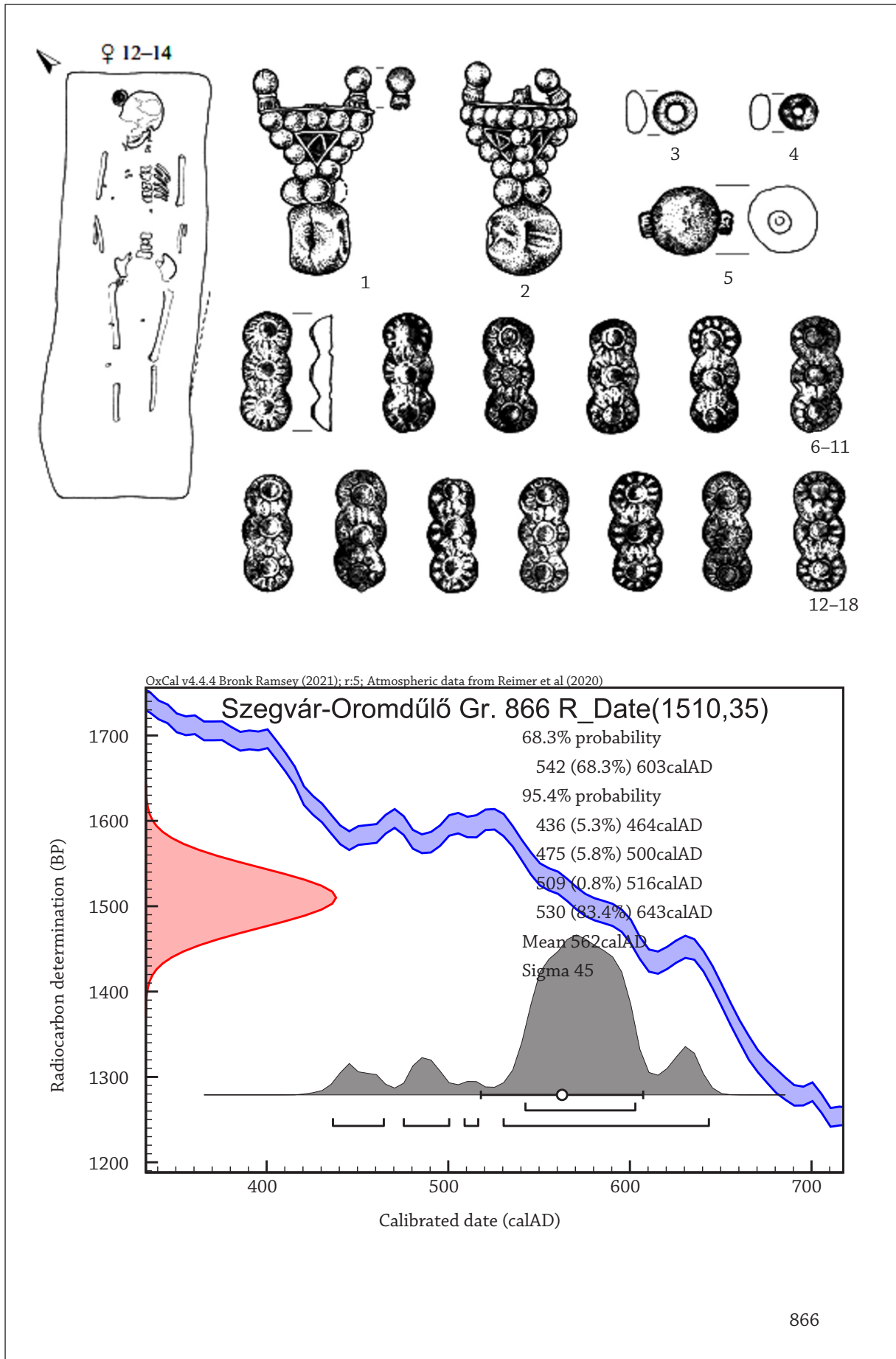


Plate 17. Szegvár-Oromdűlő Gr. 866 (after Lőrinczy 2022, Fig. 371 and 1. táblázat).

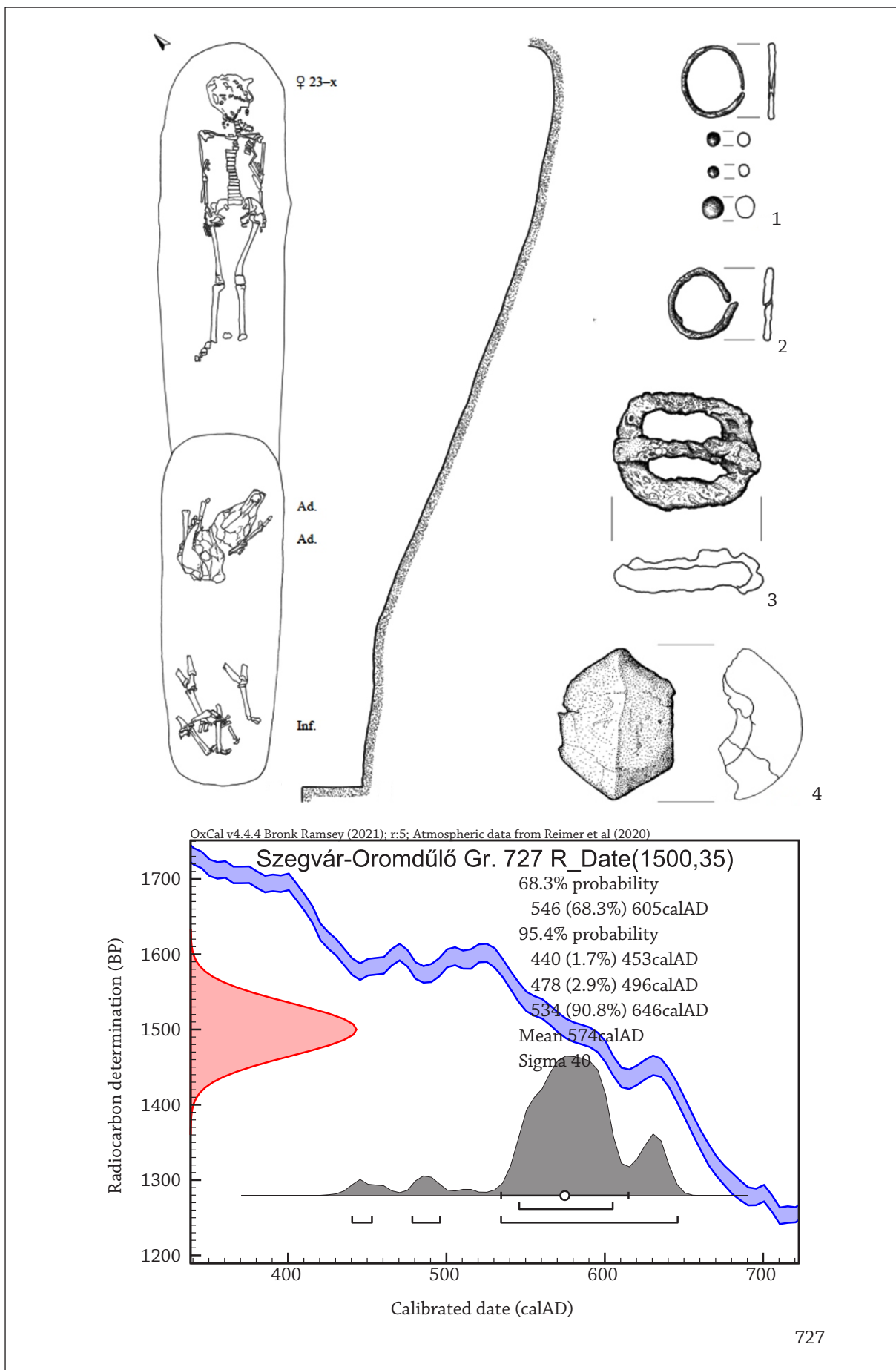


Plate 18. Szegvár-Oromdűlő Gr. 727 (after Lőrinczy 2022, Fig. 306 and 1. táblázat).

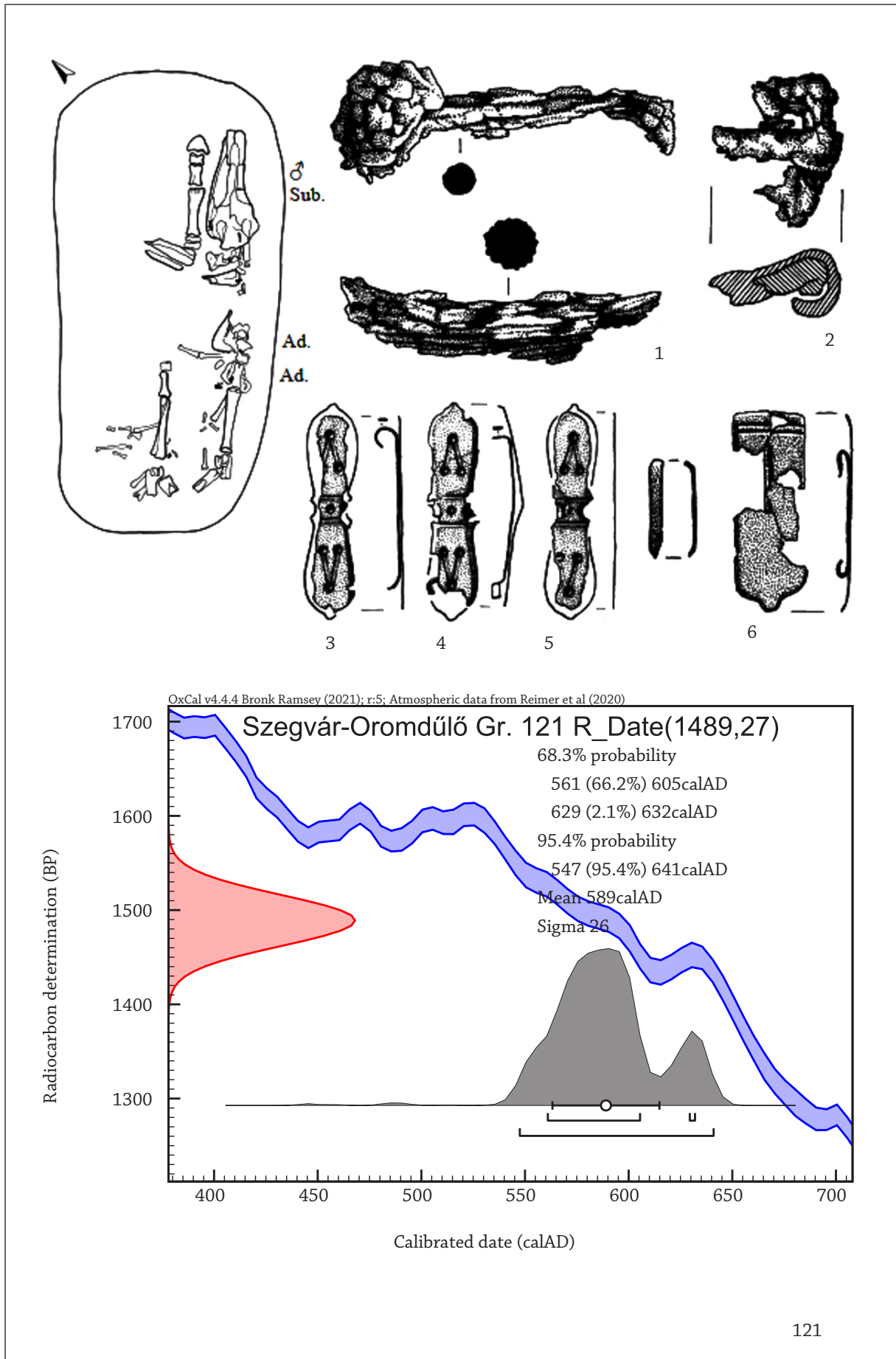


Plate 19. Szegvár-Oromdűlő Gr. 121 (after Lőrinczy 2022, Fig. 76 and 1. táblázat).

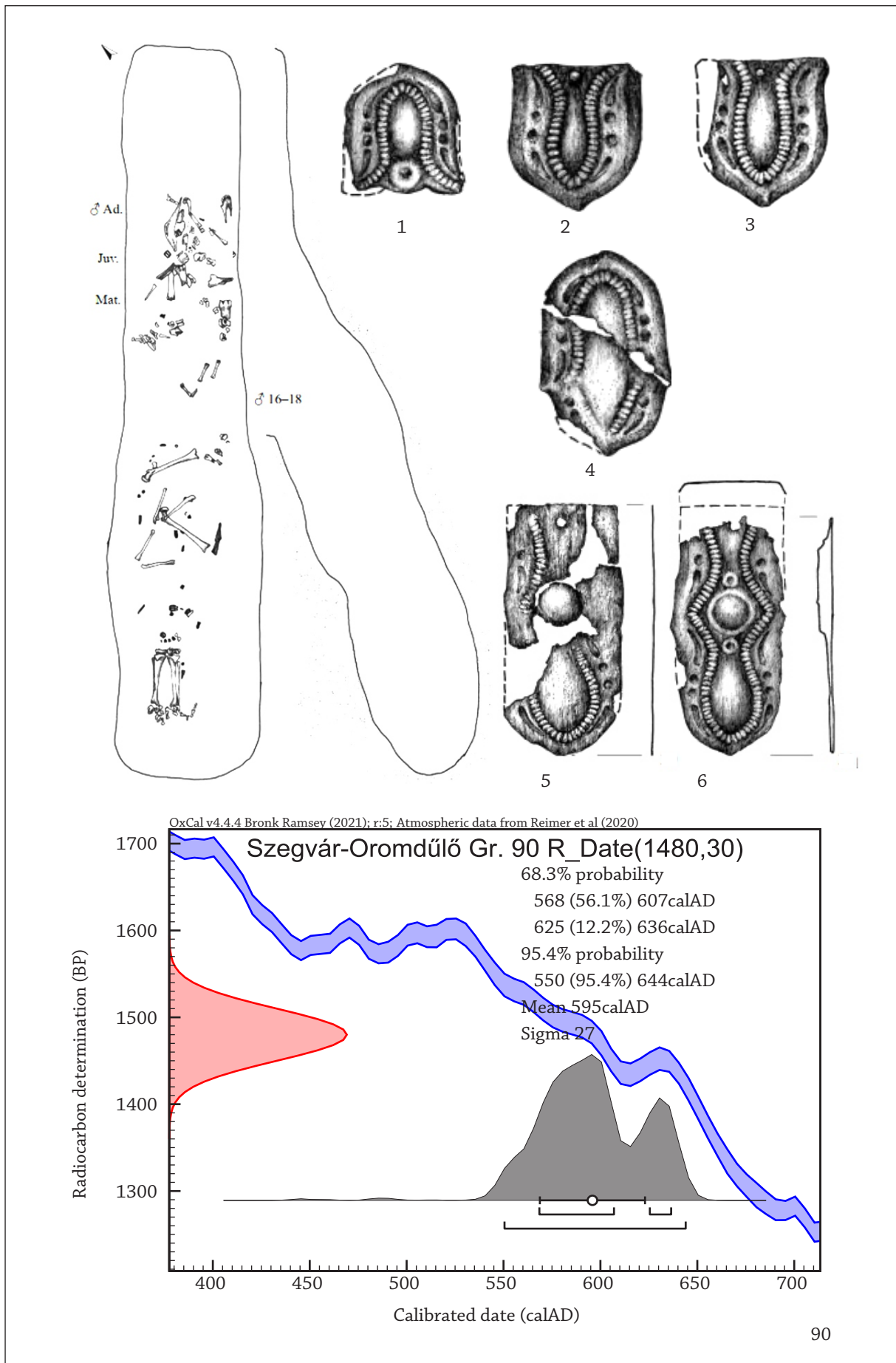


Plate 20. Szegvár-Oromdűlő Gr. 121 (after Lőrinczy 2022, Fig. 53, 54 and 1. táblázat).

