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ANTHROPOLOGICAL ANALYSIS OF IRON AGE CREMATION BURIALS FROM TRANSYLVANIA¹

Szilárd Sándor GÁL*

The bio-archaeological analysis of cremated bones is an interesting scientific challenge. The study is based on Scythian and Celtic cemeteries from Transylvania. In all cases significant parts of the skeleton are missing, especially at children (over 90% of the remains). During the research the analysis focused on the weight, fragmentation caused by the burning procedure, post mortem mutation and colour of the human remains. The morphologic investigation brought information about demography (gender distribution, child mortality, etc.), funerary practices and pathological changes in the Iron Age communities.

Keywords: cremation burials, Scythians, Celts, Transylvania, Iron Age **Cuvinte cheie**: morminte de incinerație, sciți, celți, Transilvania, epoca fierului

This paper presents the results of the study on human bone remains collected from several archaeological sites, seeking to find data about gender distribution, lifestyle, diet and pathology of the Iron Age communities in Transylvania. From the methodological point of view, the osteological analysis of cremated human remains is a complex procedure, since in many cases the samples are poorly preserved and the anthropological representation is heterogeneous. The examination of these bones requires different techniques in comparison with the morpho-taxonomic methodology of the inhumation graves.

The study focuses on several burials unearthed in sites dated to the Transylvanian Late Hallstatt (Scythian) and Early and Middle La Tène horizons. Both horizons are characterized by the existence of bi-ritual cemeteries. For the Scythian horizon, cremated remains from the bi-ritual cemeteries in Mărişelu—Coasta Domneștilor (Bistriţa-Năsăud County) and Sâncrai (Alba County) were examined.

The La Tène period is represented in this study by human remains from Fântânele–*Dâmbul Popii*, Fântânele–*La Gâța / Dealul Iușului*, Sălcuța–*Coasta Oilor* (all three cemeteries in Bistriţa-Năsăud County) and Sâncrai (Alba County).

The cremated human bones are poorly preserved; still, in many cases, cranial fragments, roots of teeth and epiphysis ends could be found among the bones. The major issue in the morphological analysis is the small number of human remains. In order to obtain significant results regarding several aspects of the cremation process, the archaeological evidence - number, depth, orientation of the graves - or information about burial practices - funerary offerings, structure of graves, etc. - should be also taken into consideration. The archaeological background can reveal direct and indirect evidence for the stages of the cremation process: the preparation of the body, the construction of the pyre, the burning of the body, the sorting, selection and treatment of the ashes, the burial

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	Mays	1998	Sh	ipman et al. 1984
	, C	Colour	°C	Colour
Phase I	185° C	red, orange	under 285° C	white or yellow
Phase II	285° C	dark brown, black	285-525° C	red-brown, red-yellow, dark
Phase III	360° C	black	525–645° C	grey-brown or grey black, blue or red-yellow
Phase IV	440° C	grey-brown		
Phase V	525° C	grey, brown (lighter than that observed at 440° C)	645–940° C	white, light grey or light blue-grey
Phase VI	625–1200° C	white, some pale yellow	940° C	white, some grey or red-yellow

Table 1. Colours observed after heating fresh goat bone.²

of the cremated remains and the above-ground arrangement of the grave, etc.³

The relevance of the anthropological analysis is also influenced by the accuracy of the field survey. It is well known, for example, that for several prehistoric communities the placing of the skull alone in the grave is documented. For such conclusions it is important to know if during the archaeological excavation the entire or only a part of the bones were recovered. Both anthropological and archaeological field researches should involve new methods, for example, it is recommended to apply CT scan before opening a funerary urn.⁴ Also, it is useful to use a bolter to verify minutely the excavated soil, especially in the case of simple piles of cremated bones without urns.⁵

The present study focuses on sex and age determination,⁶ the health and nutrition data of the community, together with the pathological cases⁷ and dental analysis.⁸ Both during the late phase of the Early Iron Age and the La Tène period the osteological remains were collected from an open-air pyre; where the human

skeletons burnt very fast. In the morphological analysis of cremated bones the study of the combustion was the first to be approached (Tab. 1).9 The burning process study was followed by measuring the human bone's weight (Tab. 2)10 after which the classification of the bone samples based on their colour¹¹ was carried out. The bones are not destroyed by firing, but their structure and composition will change. During combustion, the moistness drastically decreases and the organic component (chiefly collagen) is burned, leaving only the mineral composition.¹² The fragmentation and distortion suffered by the bone during cremation are probably due to rapid water loss. In low cremation temperature environment linear grooves appear on the surface of the bones, while at high temperatures the fractures on the bone become U-shaped.¹³ The shrinkage may be associated with the structural changes which affect the bone's mineral composition (Hydroxyapatite). The cremated bones from archaeological discoveries have a fairly high mechanical resistance and are not so much affected by decomposition in the soil.

² Shipman et al. 1984; Mays 1998.

³ McKinley 1994.

⁴ Paja et al. 2014.

⁵ Williams 2015, 262.

ÉRY ET AL. 1963; DOKLÁDAL 1970; MEINDL-LOVEJOY 1985; MASSET 1989; KEY ET AL. 1994.

⁷ Ortner 2003.

⁸ Lovejoy 1985; Simpson et al. 1990a; 1990b.

⁹ Shipman et al. 1984.

¹⁰ Trotter-Hixon 1974. In the paper only in a half part of the graves the weight of bones could be evaluated.

¹¹ Shipman et al. 1984; Mays 1998.

¹² Mays 1998.

¹³ Paja et al. 2014.

Age groups	Average weight of bones (gram)	
0–6 months	54	1
6 months-3 years	185	
3–13 years	661	
13–25 years	2191	
•	Male	Female
Adult	1919	1550
	(1530-3600)	(952-2278)

Table 2. Weight of the human skeleton.¹⁴

The demographic study¹⁵ of the communities is not feasible. The anthropological representation is reduced and in several cases most part of the human remains are missing.

For a comprehensive examination of cremation burials all cemeteries were analysed according to their chronological and regional background and also the funerary rite.

LATE HALLSTATT (SCYTHIAN) PERIOD

1. Mărișelu-Coasta Domneștilor

The site from Mărişelu–Coasta Domneștilor is a partially excavated bi-ritual cemetery. During a field survey G. Marinescu discovered eight graves. Osteological analysis could be carried out on one incineration and six inhumation graves. The human remains from the cremated burial are poorly preserved, 95% of the skeleton is missing; the bones belong to an adult person. Sex and more precise age determination was not possible, the stature could not be calculated, pathological or epigenetic traits could not be observed.

2. Fântânele - Dealul Iușului / La Gâța

The cemetery from Fântânele–*Dealul Iuşului*/ *La Gâţa* was discovered in a sand quarry east of the village. Starting from 1999 systematic excavations took place; so far 60 graves were identified.¹⁷ From the Scythian horizon two incineration graves were examined: grave no. 45 and 47 (Table 3).

Grave no.	Sex	Age
45	male	> 30 years, Adult
47	?	Adult

Table 3. Scythian cremation graves at Fântânele— Dealul Iuşului/ La Gâţa.

3. Sâncrai

Lying along the Sebeş-Turda railway, so far only a part of the cemetery in Sâncrai was examined, since a significant part of the necropolis extends east and west from the highway. The Scythian necropolis consisted of 93 archaeological features: 77 inhumation graves, 2 double burials, 6 incineration graves, 7 pits without human osteological remains (cenotaph?) and 1 pit with an inhumation horse gave.¹⁸

The bi-ritual cemetery has two chronological horizons, one fron the end of the Early Iron Age and one from the LT C2 period, both periods with inhumation as well as incineration graves. Most of the burials belonged to the Scythian horizon, when inhumation was predominant. During the anthropological analysis seven incineration graves (Tab. 4) were identified. All of the remains belonged to adult individuals.

Grave no.	Sex	Age
M97	?	Adult
M114	F	20–30 years, Adult
M107	?	Adult
M78	?	Posible Adult
M93	F?	Adult
M106	F?	Adult
M90	;	Adult

Table 4. Scythian cremation graves at Sâncrai.

¹⁴ Trotter-Hixon 1974.

¹⁵ Bernert 2005; 2008; Gál 2016.

¹⁶ Marinescu 1984, 56–57.

¹⁷ Berecki 2015, 125, with further bibliography.

 $^{^{18}\} http://ran.cimec.ro/sel.asp?descript=sancrai-municipiul-aiud-alba-situl-arheologic-de-la-sancrai-sit-arheologic-nr.-9-km-38+470---38+870-de-pe-tronsonul-autostrazii-sebes-turda-lot-2-cod-sit-ran-1311.02$

EARLY AND MIDDLE LA TÈNE PERIOD

1. Fântânele–*Dâmbu Popii*, LT B–C cemetery

The necropolis located in the upper valley of the Meleş creek, on the territory of the village was investigated through several archaeological campaigns, between 1961 and 1974. With its 94 graves the site is one of the largest Celtic cemeteries known in Transylvania. Osteological analyses could be carried out in the case of 57 graves out of which 5 were inhumation and 52 were cremation burials (see Fig. 1 and Tab. 5). Although the cremated bones were relatively poorly preserved, in several cases epiphysis ends, dental roots, skull fragments with suture section etc. could be examined. Generally, in the case of the cremation graves the major challenge of the morphological examination was the sex

Grave no. Sex Age female > 20 years, Adult 1 ? 4 3-7 years, Infans I 6 female Adult 7 ? > 25 years, Adult ? > 20 years, Adult 8 male 10 > 30 years, Adult ? 7-14 years, Infans II 11 13 ? Infans I ? Adult 14 ? 15 ? 16 17 male Adult ? 18 Adult 19 ? ? 20 Adult male Adult 21 ? 22 **Iuvenis** ? Adult 23 26 ? Adult ? Infans I 34 35 female > 25 years, Adult 36 ? Infans I Infans I 39 ? Adult 40 42 female (?) 25-40 years, Adult 7-9 years, Infans II 42A ? ? Adult

determination and age estimation. The gender distribution is not balanced (9 females and 6 males), infant mortality is high, 17 individuals died before the age of 14. It should be noted that for a significant part of the graves (over 30 cases) the sex determination based on osteological analyses was not possible; in these cases only information regarding their ages could be obtained. Two double burial were also identified: graves no. 42/42A (a female and a child) and graves no. 69/69A (a male and a female). Because of the poor preservation or owing to the incompleteness of the skeletons in the case of the cremated bones only periodontal diseases (caries and dental plaque) could be identified.²⁰ There is no data to help determine the stature

	1	
Grave no.	Sex	Age
44	3	Adult
45	3	Adult
46	?	Infans I
48	female	> 25 years, Adult
49	female	Adult
50	3	Adult
51	female	Adult
54	?	5–7 years, Infans I
57	3	Infans I
58	male	23-30 years, Adult
59	?	Infans I
60	3	> 20 years, Adult
61	3	25-40 years, Adult
64	?	Infans I
65	?	14–17 years, Iuvenis
69	male	> 25 years, Adult
69A	female	14–19 years, Iuvenis
71	3	7–14 years, Infans II
72	š.	Infans I
73	-	-
80	male	> 25 years, Adult
81	female	> 25 years, Adult
83	3	> 30 years, Adult
84	3	-

Table 5. Fântânele–*Dâmbu Popii*. Anthropological data of Late Iron Age cremation graves.

¹⁹ Berecki 2015, 119, with further bibliography.

²⁰ Ortner 2003, 590–593.

of the buried persons and no pathological or epigenetic traits could be observed. The presence of periodontal diseases and dental calculus suggest malnutrition of the community.²¹

2. Sălcuța-Coasta Oilor, LT B-C cemetery

After several incidental discoveries in 2014, the bi-ritual cemetery was first researched in 2016, when eight graves from the Celtic period were identified.²² Six of the eight graves were cremations out of which five could be anthropologically examined. In grave 3 and 7 there were adult individuals, while grave 8, 9 and 10 belonged to children (*Infans* I). None of the cremated graves yielded relevant data for sex determination.

3. Fântânele-*Dealul Iuşului / La Gâţa*, LT B-C cemetery

The necropolis from the Celtic horizon is a bi-ritual cemetery.²³ A number of nine inhumation and 18 incineration graves could be anthropologically analysed. The state of preservation of the osteological material from the cremation graves is rather poor, and in several cases 90% of the skeleton is missing. Two double graves were documented: grave no. 27/27A and grave no. 46/46A. All examined adult individuals died over the age of 30 (Fig. 2). Sex determination was possible only for two male graves. Pathological cases could not be observed.

4. Sâncrai, LT C2 cemetery

The number of the graves belonging to the La Tène horizon from Sâncrai (Tab. 7) is considerably smaller than the Scythian ones: only one bi-ritual double grave (grave no. 1/1A, an adult and a child) and 3 other single graves (two adults and one *Infans* II) were found. Because of the poor condition of preservation of the

human remains, no observation regarding sex determination or pathology could be made.

Grave no.	Sex	Age
3	male?	Adult
20	?	Adult
56	?	Adult
59	?	14-17 years, Iuvenis
19	?	Iuvenis
16	?	12-15 years, Infans II
29	?	Adult
48	-	-
21	?	> 25 years, Adult
52	?	Infans I
24	?	Infans I
17	?	4–6 years, Infans I
25	?	2–4 years, Infans I
26	-	-
27	?	-
27A	Male?	Adult
46	Male	Adult
46A	?	-

Table 6. Fântânele-*Dealul Iuşului / La Gâţa*. Anthropological data of the cremated Late Iron Age graves.

Grave no.	Sex	Age
1		
(incineration	;	Adultus
grave)		
1A (inhuma-	2	0–6 months,
tion grave)	:	Infans I
3	?	Adultus
5	male	23-39 years, Adultus
2.1	female 7–14 years, Infans II	7–14 years,
31		31 female

Table 7. Sâncrai. Anthropological data of the Late Iron Age cremated graves.

The morphological analysis of the human remains contributed to the recovery of several information regarding the paleodemography of Scythian and Celtic communities. In the Scythian horizon, the gender distribution is balanced in all cemeteries and the infant mortality is low;

²¹ Lovejoy 1985; Simpson et al. 1990a; 1990b.

²² VAIDA 2017, 237–238.

²³ Berecki-Vaida 2017, 14.

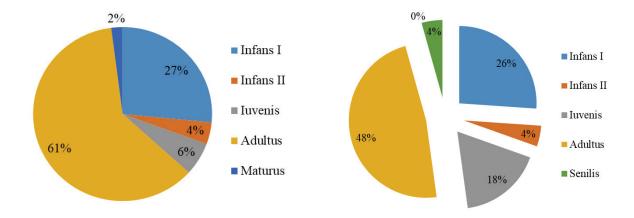


Fig. 1. Fântânele–*Dâmbu Popii*. Age distribution of Celtic graves (inhumation and cremation burials).

Fig. 2. Fântânele-*Dealul Iușului / La Gâța.* Age distribution of the examined cremation graves.

in small burial grounds no children graves could be observed, while at Sâncrai and Fântânele–*La Gâța / Dealul Iuşului* they were documented only in a few cases. However, in the case of the Fântânele–*La Gâța / Dealul Iuşului* cemetery it should also be taken into consideration that the cemetery is not entirely researched. Most of the females died between 25 and 35 years (probably birth complications or chronic diseases), while the males between 25 and 50 years. Senile, old persons of both sexes were identified.

The bio-archaeological analysis of the cremated bones is the sensitive part of the entire research (study of inhumation and cremation burials from Transylvania in the Iron Age). In all cases, especially from children graves, a significant part of the cremated skeleton is missing (over 90% of the human remains). In children graves, in most cases, only the skull was recovered from the pit (cranial vault and a few fragments from the facial bones), therefore it is possible that only a part of the skeleton was collected from the pyre. As such, in many situations, the weight of the human remains is not relevant.

The brown, black, yellow colour and in many cases the straight furrows on the bones show a lower firing temperature (520–650 °C), while the white, white-grey and white-blue colour and fractured bones in U-shape indicate higher

temperatures (Fig. 1). Often, the cremated human bones were collected together with carbon. Both in the Early and Late Iron Age horizons the greatest part of the cremated skeletons are missing.

In the Celtic horizon the child mortality is higher, especially at Fântânele–*Dâmbul Popii* cemetery, where some of the inhumation graves also belonged to children. The gender distribution is generally balanced, with a little higher percentage of females in Fântânele–*Dâmbul Popii*. Double graves could be observed in several cemeteries from the Celtic horizon: Sâncrai, Fântânele–*Dâmbul Popii* and Fântânele–*La Gâța / Dealul Iuşului*.²⁴ The only paleo-pathological cases which could be identified on the examined cremated bones were the periodontal diseases (caries, dental plaque)²⁵.

In conclusion it ca be stated that in both horizons the communities had nutrition deficiency starting from childhood and several periodontal diseases could be observed in Late Hallstatt and Early and Middle La Tène cemeteries too. For future research, more accurate processing of the osteological material (CT analysis, etc) could be very useful and also a meticulous collection of human remains during archaeological excavations is highly recommended to get as much data as possible from this type of archaeological discoveries.

²⁴ For the discussion regarding double burials in the Carpathian Basin see: Berecki-Vaida 2017.

²⁵ Ortner 2003, 590–593.



Fig. 3. Fântânele-*Dâmbu Popii*, grave no. 44. Cremated human bones.

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ABBREVIATIONS

AARGNews Aerial Archaeology Research Group Newsletter

Acta Acta. Muzeul Național Secuiesc, Sfântu Gheorghe

Acta Archaeologica Academiae Scientiarum Hungaricae, Budapest

ActaMB Brukenthal. Acta Musei, Sibiu/Hermannstadt

ActaMN Acta Musei Napocensis, Cluj-Napoca

Acta Moldaviae Meridionalis. Anuarul Muzeului Județean Vaslui

ActaMP Acta Musei Porolissensis, Zalău

Acta Materialia Transylvanica. Technical Sciences Department of the Tran-

sylvanian Museum Society, Cluj-Napoca/Kolozsvár

ActaPraehistA Acta Praehistorica et Archaeologica

ActaSic Acta Siculica, Sf. Gheorghe/Sepsiszentgyörgy

ActaTS Acta Terrae Septemcastrensis, Sibiu

AISC Anuarul Institutului de Studii Clasice Cluj

AJA American Journal of Archaeology

Aluta Aluta. Studii și cercetări

AmJPhysAnthropol American Journal of Physical Anthropology

AnatRec Anatomical Record. American Association of Anatomists

Angustia Angustia Muzeul Carpaților Răsăriteni, Sfântu Gheorghe

AnMuzOlt Anuarul Muzeului Olteniei
AnnForRes Annals of Forest Research

AnnHN Annales Historico-Naturales Musei Nationalis Hungarici, Budapest

ANsachs Archäologie in Niedersachsen

AnthrK Anthropológiai Közlemények, Budapest

Antiquity Antiquity. A Quarterly Review of Archaeology
Apulum Apulum. Acta Musei Apulensis, Alba Iulia

ArchAust Archaeologia Austriaca

ArchBulgArchaeologia Bulgarica, SofiaArchÉrtArchaeologiai Értesítő, BudapestArchHistArchaeologia Historica, Brno

ArchHung Archaeologia Hungarica, Budapest

Archäologisches Korrespondenzblatt, Römisch-Germanischen Zentralmu-

seum Mainz

ArchPol Archaeologia Polona,

Areopolisz Areopolisz. Történelmi és társadalomtudományi tanulmányok,

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Argesis Argesis. Studii și comunicări, Pitești

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BÁMÉ A Béri Balogh Ádám Múzeum Évkönyve, Szekszárd

Banatica, Muzeul Banatului Montan, Reșița

BAR (I.S./B.S.) British Archaeological Reports, International Series / British Series, Oxford

BerRGK Bericht der Römisch-Germanischen Kommission BMI Buletinul Monumentelor Istorice, Bucureşti

BMJT (S.A.) Buletinul Muzeului Județean Teleorman (Seria Arheologie), Alexandria BuletinCIVA Buletinul Cercului de Istorie Veche și Arheologie "Vladimir Dumitrescu",

Sibiu

Bulletin Peabody Museum of Natural History

CA Cercetări Arheologice

CCAR Cronica Cercetărilor Arheologice din România

CommArchHung Communicationes Archaeologicae Hungariae, Budapest

Cumania Cumania. A Bács-Kiskun Megyei Múzeumok Közleményei, Kecskemét

CurrSwedA Current Swedish Archaeology

CsSzMÉ Csíki Székely Múzeum Évkönyve, Csíkszereda

Dacia (N. S.) Dacia. Recherches et décuvertes archéologiques en Roumanie, I–XII

(1924-1948), București; Nouvelle série (N. S.): Dacia. Revue d'archéologie et

d'histoire anciene, București

Dissertationes Archaelogicae ex Instituto Archaeologico Universitatis de

Rolando Eötvös Nominatae, Budapest

DolgKolozsvár (Ú.S.) Dolgozatok az Erdélyi Nemzeti Múzeum Érem- és Régiségtárából, (új soro-

zat, 2006-), Kolozsvár

DolgSzeged Dolgozatok a Szegedi Tudományegyetem Régiségtudományi Intézetéből,

Szeged

Drobeta

EphemNap European Journal of Archaeology
EphemNap Ephemeris Napocensis, Cluj-Napoca

FI File de Istorie. Muzeul de Istorie al Județului Bistrița-Năsăud, Bistrița

FolAntFolia Anthropologica, SzombathelyFolArchFolia Archaeologica, Budapest

Gallia Gallia. Fouilles et monuments archéologiques en France metropolitaine Georeview Georeview. Scientific Annals of Ștefan cel Mare University of Suceava,

Geography Series

Germania Germania. Anzeiger der Römisch-Germanischen Kommission des

Deutschen Archäologischen Instituts

Hierasus. Muzeul Județean Botoșani

HOMÉ A Herman Ottó Múzeum Évkönyve, Miskolc

HTRTÉ A Hunyadmegyei Történelmi és Régészeti Társulat Évkönyve, Déva

HZ Historische Zeitschrift

IJOsteo International Journal of Osteoarchaeology

Istros. Muzeul Brăilei

JAHA Journal of Ancient History and Archaeology

JAMÉ A Nyíregyházi Jósa András Múzeum Évkönyve, Nyíregyháza

JASc Journal of Archaeological Science

JAT Journal of Ancient Topography – Rivista di Topografia Antica

JbAS Jahrbuch Archäologie Schweiz

JbRGZM Jahrbuch des Römisch-Germanischen Zentralmuseums, Mainz

JCerEnvD Journal of Ceramics and Environmental Design

JHumEvol Journal of Human Evolution

INES Journal of Near Eastern Studies

JOM. The Journal of The Minerals, Metals & Materials Society

JRAJournal of Roman ArchaeologyJROmPotStJournal of Roman Pottery Studies

JSchrVgHalle Jahresschrift für Mitteldeutsche Vorgeschichte Halle (Saale)

KJb Kölner Jahrbuch für Vor- und Frühgeschichte

KM Keresztény Magvető. Az Erdélyi Unitárius Egyház Folyóirata, Kolozsvár

KRRMK A Kaposvári Rippl-Rónai Múzeum Közleményei

KuBA Kölner und Bonner Archaeologica

Levant Levant. Journal of the Brithish School of Archaeology in Jerusalem and the

British Institute at Amman for Archaeology and History

MacActaA Macedoniae Acta Arhaeologica, Prilep

Marisia (V–), Studii şi Materiale, Târgu Mureş

Marisia: Archaeologia, Historia, Patrimonium, Târgu Mureș

MCAMateriale şi Cercetări Arheologice, BucureştiMFMÉA Móra Ferenc Múzeum Évkönyve, SzegedMMMKA Magyar Mezőgazdasági Múzeum Közleményei

MTAK (II) A Magyar Tudományos Akadémia II. Társadalmi-Történeti Tudományok

Osztályának Közleményei (1950–1966), A Magyar Tudományos Akadémia II. Filozófiai és Történettudományi Osztályának Közleményei (1966–1981)

NMMÉ Nógrád Megyei Múzeumok Évkönyve, Salgótarján

OxfJA Oxford Journal of Archaeology

PBF Prähistorische Bronzefunde, Stuttgart

Probleme KfsNsg Probleme der Küstenforschung im südlichen Nordseegebiet

ProcPrehistSoc Proceedings of the Prehistoric Society

PZ Praehistorische Zeitschrift

RCRFA Rei Cretariae Romanae Fautorum Acta, Tongeren

RevBis Revista Bistriței, Complexul Județean Muzeal Bistrița-Năsăud

Sargetia (S.N.) Sargetia. Acta Musei Devensis, Deva SCA Studii și Cercetări Antropologice

SCIV(A) Studii și Cercetări de Istorie Veche (și Arheologie 1974–), București

SlovArch Slovenská Archeológia, Bratislava

SMMK A Somogy Megyei Múzeumok Közleményei, Kaposvár

StAntArchStudia Antiqua et Archaeologica, IașiStarinarStarinar. Arheološki Institut Beograd

St Cerc Num Studii și cercetări de numismatică, București

StComSM Studii și Comunicări Satu Mare

StComVranceaVrancea. Studii și comunicări, FocșaniStudiaAAStudia Antiqua et Archaeologica, Iași

SUBB-HistoriaStudia Universitatis Babeș-Bolyai, series Historia, Cluj-NapocaSzázadokSzázadok, A Magyar Történelmi Társulat Folyóírata, Budapest

Terra Sebus Terra Sebvs, Acta Musei Sabesiensis, Sebeş

Thraco-Dacica Thraco-Dacica. Institutul de Arheologie "Vasile Pârvan" Centrul de Tracolo-

gie, București

Tyragetia Tyragetia. The National Museum of History of Moldova, Chişinău UPA Universitätsforschungen zur Prähistorischen Archäologie, Bonn

VAH Varia Archaeologica Hungarica, Budapest

VMMK A Veszprém Megyei Múzeumok Közleményei, Veszprém

WMMÉ A Wosinsky Mór Múzeum Évkönyve, Szekszárd

ZBf Zeitschrift für Balkanforschung