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The Yamnaya Impact North of the Lower Danube

A Tale of Newcomers and Locals

Bianca PREDA-BĂLĂNICĂ, Alin FRÎNCULEASA, Volker HEYD

Abstract: This paper aims to provide an overview of the current understanding in Yamnaya burials from north of the Lower Danube, particularly focussing on their relationship with supposed local archaeological cultures/societies. Departing from a decades-long research history and latest archaeological finds from Romania, it addresses key research basics on the funerary archaeology of their kurgans and burials; their material culture and chronology; on steppe predecessors and Katakombnaya successors; and links with neighbouring regions as well as the wider southeast European context. Taking into account some reflections from latest ancient DNA revelations, there can be no doubt a substantial migration has taken place around 3000 BC, with Yamnaya populations originating from the Caspian-Pontic steppe pushing westwards. However already the question if such accounts for the term of 'Mass Migrations' cannot be satisfactorily answered, as we are only about to begin to understand the demographics in this process. A further complication is trying to assess who is a newcomer and who is a local in an interaction scenario that lasts for c. 500 years. Identities are not fixed, may indeed transform, as previous newcomers soon turn into locals, while others are just visitors. Nevertheless, this well-researched region of geographical transition from lowland eastern Europe to the hillier parts of temperate Europe provides an ideal starting point to address such questions, being currently also at the heart of the intense discussion about what is identity in the context of the emerging relationship of Archaeology and Genetics.

Keywords: Yamnaya, Lower Danube, kurgans, burials, Early Bronze Age, transformation, identity.

Résumé : Cet article vise à donner un aperçu général de notre connaissance actuelle des sépultures Yamnaya au nord du Bas-Danube, en mettant l'accent sur leurs relations avec les cultures locales. Il aborde les questions élémentaires de la recherche en archéologie funéraire portant sur les tertres et sépultures, leur culture matérielle et leur chronologie, leurs prédécesseurs steppiques et leurs successeurs de la Culture des Catacombes ainsi que les liens avec les régions voisines et le contexte de l'Europe du Sud-Est.

À la transition du IV^e au III^e millénaire av. J.-C., un nouveau rituel funéraire émerge sur de vastes zones : ce sont des tombes recouvertes de tertres appelés kourgan, de mâles adultes allongés sur le dos dans des fosses rectangulaires ou parfois ovales, avec les genoux initialement fléchis, la tête orientée vers l'ouest et souvent parsemés d'ocre rouge. Les fosses funéraires, qui avaient souvent des marches intérieures menant aux chambres funéraires, étaient apparemment garnies de nattes, de peaux et de coussins, et étaient recouvertes de poutres en bois et de nattes textiles d'origine végétale. Le mobilier funéraire est très rare et se compose principalement d'anneaux de cheveux en métaux précieux, de colliers de dents animales et/ou de céramique.

Ce nouveau rituel funéraire est apparemment une conséquence de la migration des populations Yamnaya de la steppe vers le Sud-Est de l'Europe. Dix milliers de tertres ont été érigés dans les régions ressemblant à la steppe. Ils constituent la seule source de nos connaissances, puisqu'aucune habitation n'a été identifiée dans toute la région occidentale. Au Nord du Bas-Danube, sur le territoire roumain actuel, 177 tertres funéraires ont été fouillés, contenant un nombre total de 714 sépultures. Les recherches archéologiques effectuées au cours des deux dernières décennies (42 tertres) ont permis de mieux comprendre ce phénomène complexe.

Malgré certaines variations, la domination de ce rituel funéraire est écrasante. Tous ces paramètres correspondent au standard funéraire Yamnaya connu dans les steppes pontique-caspiennes d'Europe de l'Est, mais d'autres ne sont pas aussi communs ou ne figurent pas dans les recherches archéologiques, comme les stèles en pierre anthropomorphes, les chariots et les roues en bois, les sépultures d'artisans, les poignards à languette au manche ou les haches à emmanchement transversal en cuivre.

Il y a un autre aspect à souligner : les populations Yamnaya ont occupé et dominé le paysage de plaine, mais elles n'ont jamais été seules. Les communautés locales ont habité les zones de collines et des traces de leurs interactions avec les nouveaux arrivants de la steppe sont parfois apparentes dans les découvertes archéologiques. Par conséquent, plusieurs sépultures situées au Nord du Bas-Danube présentent certaines des caractéristiques typiques du rituel Yamnaya, tels que la position du défunt, la présence d'anneaux de cheveux en spirale ou d'ocre, même si celles-ci étaient présentes dans des tombes plates, accompagnées de céramiques des cultures locales ou ont été implantées dans les régions montagneuses, en dehors du paysage habituel des Yamnaya. Dans d'autres cas, le mobilier funéraire disposé dans les sépultures Yamnaya est clairement d'origine locale, telles que des pots et des anneaux de cheveux en argent en forme de croissants. Même si différents scénarios de cette interaction ont été proposés, en tant qu'hypothèses allant de la violence à l'échange en passant par la neutralité, aucune réponse simple ne peut saisir la complexité de ce processus dans une région aussi vaste. Une évaluation minutieuse des particularités locales des sépultures et de leurs coutumes pourrait fournir des indices sur les mécanismes d'interaction et de transmission qui ont eu lieu.

Cela devient encore plus évident quand on regarde une zone plus large. Bien sûr, les caractéristiques du phénomène Yamnaya, décrit au Nord du Bas-Danube, sont communes à toute son aire de répartition occidentale, comprenant les pays modernes de la Bulgarie, la Hongrie et la Serbie. De plus, les dates radiocarbone disponibles indiquent l'émergence de ces sépultures à la toute fin du IV^e millénaire av. J.-C./environ 3000 av. J.-C. dans toutes ces régions. Cependant, certaines nuances régionales de la coutume funéraire peuvent également être remarquées et nous sommes encore loin de les comprendre en termes d'identité des différents groupes impliqués.

En fin de compte, que signifie être étranger et local dans un contexte de 2000 ans d'interactions entre la région Pontique-Caspienne du Nord-Est et les steppes Pontiques occidentales du Sud-Est de l'Europe ? Il ne faut pas oublier que les premiers contacts entre les populations des steppes et le Bas-Danube remontent bien avant le III^e millénaire av. J.-C. Ils ont déjà commencé dans le dernier tiers du V^e millénaire av. J.-C., en continuant pendant le IV^e millénaire av. J.-C. avec des oscillations en fréquences, et ont également dépassé la période Yamnaya, même si l'impact des inhumations successives de la Culture des Catacombes semble avoir été considérablement réduit. Le processus d'interactions qui a duré 500 ans entre les sociétés proprement Yamnaya et les sociétés contemporaines considérées comme locales a bien sûr créé des coutumes et des assemblages funéraires mixtes. Les nouveaux arrivants précédents sont peut-être devenus des locaux, alors que d'autres n'étaient que des visiteurs. L'identité peut être négociée, elle peut être changée, transformée en un mélange ou en quelque chose de nouveau ; on peut aussi avoir une identité mixte ou plusieurs. Il en va de même pour la culture matérielle, qui subit un processus de transformation du sens et de la valeur, transformant les idées originales. Néanmoins, cette région de recherche bien étudiée, qui passe de la plaine d'Europe orientale aux régions montagneuses de l'Europe tempérée, constitue un point de départ idéal pour étudier ce processus.

Mots-clés: Yamnaya, Bas-Danube, kourganes, tombes, début de l'âge du Bronze, transformation, identité.

Burial mounds, also known as tumuli or kurgans, and dating back several thousand years, are a common presence in all the steppe-like regions north of the Lower Danube, in the territory of the present-day state of Romania. They can be found west of the Prut River, in Bukovina and Moldavia, as well as in Dobruja and the Romanian Plain covering the southern area of the country, in the provinces of Muntenia and Oltenia; even though not many have been investigated, such funerary monuments are also known in the Romanian Banat and the intra-Carpathian region of Transylvania (Burtănescu, 2002, p. 222; Motzoi-Chicideanu, 2011, p. 230). Several mounds have been mapped in the Romanian part of Crișana, however, given the lack of archaeological research, they cannot be securely dated to the Early Bronze Age (Marta and Fazecaș, 2018). While some kurgans, still boasting impressive dimensions, can be easily spotted from a great distance even today, others, probably the majority, vanished during the last century because of intensive agriculture or unsupervised industrial and transportation infrastructure development. Estimating their total number seems impossible and those not registered as archaeological sites are continually facing destruction.⁽¹⁾ Systematic mapping studies using old cartographic documents and field surveys are exceptions

and only cover small regions, such as northern Muntenia (Frînculeasa *et al.*, 2017a) and Dobruja (Topoleanu *et al.*, 2008; Oltean, 2013). Still, the number of existing mounds is probably closer to several thousand.⁽²⁾

Of these existing mounds, from the archaeological literature we know of 177 which have been excavated, especially in Moldavia, Muntenia, and Dobruja, fewer in Oltenia, Transylvania and Banat (Table 1), while Crișana is still absent from the picture. They contained a total of 714 burials, but the information they provide is patchy, to say the least, dependent upon factors such as excavation type and period or publication manner. It is also true that this topic never constituted a priority for Romanian archaeological research, for both practical and ideological reasons. In practical terms, excavating burial mounds demands great resources, yielding scarce results or poor grave-goods that do not make them good candidates for enriching museum collections (Frînculeasa *et al.*, 2017b, p. 25). Furthermore, during the first half of the twentieth century the main research focus was national identity, while in the period following the instauration of Communism the vetted topics were those useful to official propaganda (Dragoman and Oanță-Marghitu, 2006). After the fall of the regime and especially after 2000, the adoption of new legislation provided a different framework.⁽³⁾

Region	Mounds	Burials
Banat	3	3
Dobruja	47	244
Moldavia	49	168
Muntenia	55	257
Oltenia	20	39
Transylvania	3	3

Table 1 – Mounds and burials researched in Romania according to regions.

Tabl. 1 – *Tertres funéraires et tombes répertoriés en Roumanie par région.*

Research on burial mounds is currently dependent upon economic development, excavations taking place prior to the beginning of construction works.

During the past two decades 42 mounds have been excavated, most of them in northern Muntenia (25), where extensive research was carried out in the industrial area near the city of Ploiești, followed by Dobruja (14), only two in Moldavia and Bukovina, and one in Banat. This wave of archaeological research, along with some new approaches to old finds, created the basis for a better understanding of this complex phenomenon north of the Lower Danube and provided a significant series of radiocarbon dates, which had previously been almost completely lacking. It is now known that the oldest burial mounds predate the presence of the Yamnaya populations in this area. Also, that the pace of constructing kurgans dramatically increased after their arrival at the turn of the fourth and third millennia BC and that they continued to be built or used throughout the first half of the latter millennium (Frînculeasa *et al.*, 2015a; Ailincăi *et al.*, 2016; Frînculeasa *et al.*, 2017b).

The authors of this paper aim to present the current state of knowledge regarding the relationship of Yamnaya newcomers, as well as their chronological predecessors and successors on the steppe, with contemporary locals and neighbours. In doing so, we would like to address issues such as burial customs, material culture, and site superpositions, and advance some hypotheses regarding the mechanisms of two thousand years of interaction between the North and West Pontic steppes and the descendants of Neolithic farming societies around the Carpathians.

YAMNAYA KURGANs AND BURIALS

At the transition from the fourth to the third millennium BC a new burial ritual emerged following the migration of steppe Yamnaya populations in south-eastern Europe. Thousands of mounds were built in the plain or on top of naturally higher places such as ridges or promontories, in some cases extending over 4 m high and 50 m in diameter. These mounds usually covered the graves of adult male individuals, in rectangular or some-

times oval pits, lying on their backs, with their knees initially flexed up, with the head oriented westwards and often sprinkled with red ochre (Fig. 1, nos 1 to 6) (Burtănescu, 2002, p. 228; Frînculeasa *et al.*, 2015a, p. 83). Special attention was paid to arranging the new “houses of the dead”, the grave pits, which often had internal steps leading to the proper burial chambers and were covered with wooden beams and mats made of vegetal textiles (Boloșan and Lazanu, 2018). Ochre was sprinkled on the pit bottom, on the deceased, especially around the head, or small lumps were placed near the body (Burtănescu, 2002, p. 242-243; Frînculeasa *et al.*, 2015a, p. 66). Grave-goods were rare and they mainly consisted of hair rings made of precious metals, and necklaces made of animal teeth or pottery. The most common hair rings are the simple, spiral-shaped adornments made of silver wire (Fig. 2, nos 1 and 2) (Burtănescu, 2002, p. 256). However, several burials contained more massive hair rings made using a different technique of plating a copper wire with a silver sheet or, in exceptional cases, plating a silver wire with a gold sheet (Fig. 2, nos 3 and 4) (Frînculeasa *et al.*, 2015a; Ailincăi *et al.*, 2016; Frînculeasa *et al.*, 2019). Necklaces made of animal teeth are more frequently found in child burials, and in some cases include teeth of wild and domesticated species – fox and dog (Fig. 2, No. 5) (Frînculeasa *et al.*, 2017b, p. 94; Frînculeasa, 2019). Pottery is rare and has analogies east of the Prut River, especially the one from Moldavian burial sites, demonstrating the ceramic repertoire of local societies or cord-decorated beaker vessels (Fig. 3, nos 1 to 14) (Burtănescu, 2002, p. 249-251; Frînculeasa *et al.*, 2015a, p. 83; Frînculeasa *et al.*, 2019).

All the above-mentioned traits fit the Yamnaya funerary standard known from the eastern European steppe; however others are not that common or are missing from the archaeological record. Only one anthropomorphic stone stele was found in a secondary position near a burial mound at Hamangia in Dobruja (Fig. 5, No. 3) (Comșa, 1986), while all the others come from Transylvania and were made of local stone (Fig. 5, No. 1) (Rișcuța, 2001, p. 141). In most cases these were stray finds with the notable exception of Florești, where the stone stele was found at the periphery of a burial mound encircled by a ring of stones, a discovery not yet culturally attributed for certain (Fig. 5, No. 2) (Rotea *et al.*, 2014). Other absences include burials of craftsmen (Bátora, 2002), or wooden carts and wheels, even though in the latter case this could be due to the state of the research, taking into account that such findings are known from Placidol in Bulgaria (Panayotov, 1989, p. 100). The Yamnaya-type tanged daggers are often found on settlements and as stray finds, and only rarely in destroyed burials, which do not provide information on the burial ritual (Băjenaru and Popescu, 2012, p. 388, p. 399). Copper shaft-hole axes are also completely absent from mound burials. They were part of a set of innovations originating in the richly equipped burials of the northern Caucasus area and reached the Lower Danube and the Carpathian Basin at the end of the fourth millennium BC. However here they are usually

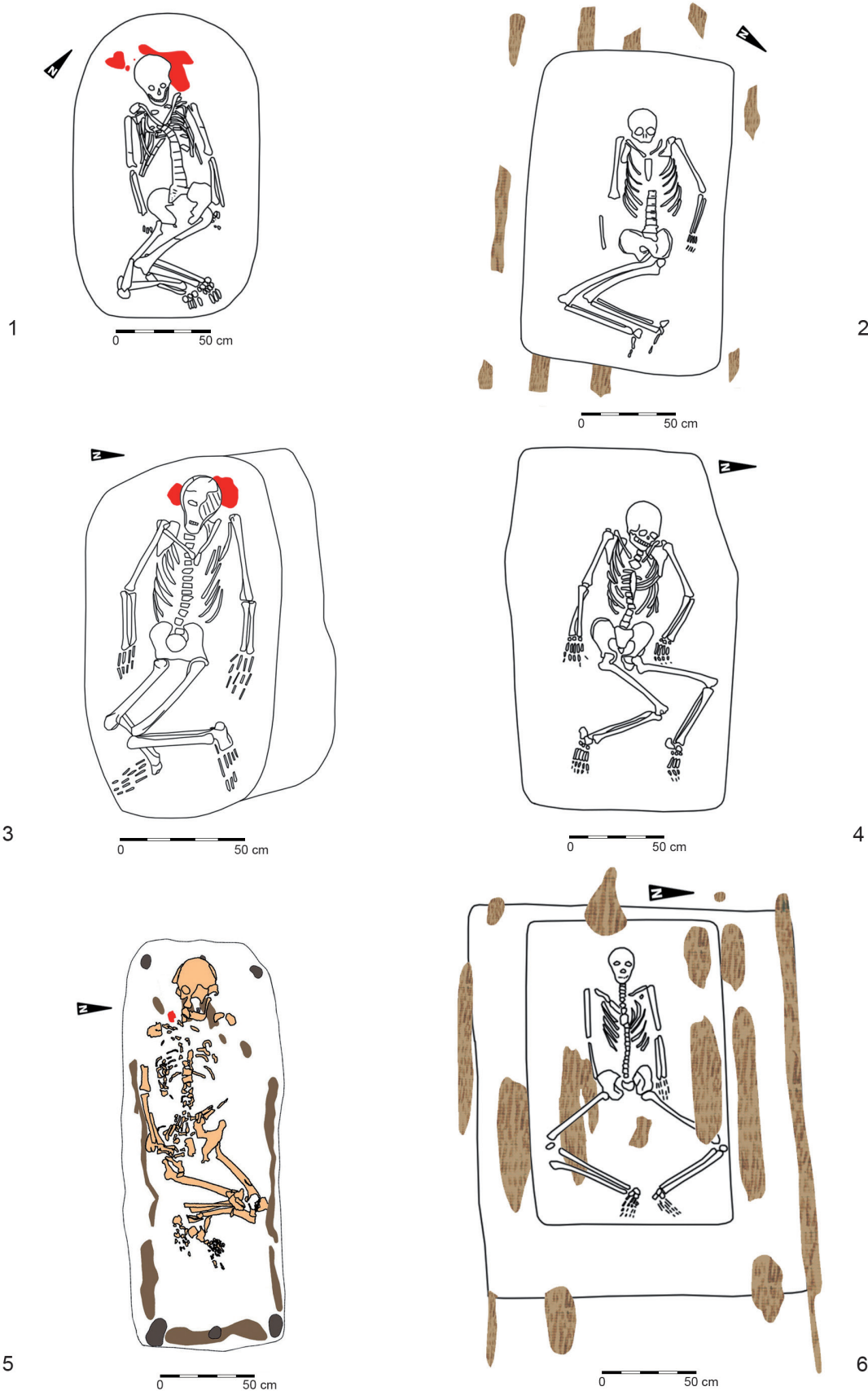


Fig. 1 – Typical Yamnaya burials north of the Lower Danube: Costâna/Gr.1 (1), Rahman I/Gr.2 (2), Aricești II/Gr.1 (3), Rast/Gr.5 (4), Bucova – Puzsta/Gr.1 (5), Vânători/Gr.13 (6) (1, Boghian *et al.*, 2016, fig. 7/2-3; 2, Ailincăi *et al.*, 2014, fig. 3b; 3, Frînculeasa *et al.*, 2015a, Pl. 3; 4, Dumitrescu, 1980, Pl. LXXXVIII/5; 5, Krauß *et al.*, 2016, Abb. 6; 6, Brudiu, 1985, fig. 2/1).

Fig. 1 – Inhumations typiques des Yamnaya au nord du Danube Inférieur : Costâna/tombe 1 (1), Rahman I/tombe 2 (2), Aricești II/tombe 1 (3), Rast/tombe 5 (4), Bucova – Puzsta/tombe 1 (5), Vânători/tombe 13 (6) (1, Boghian *et al.*, 2016, fig. 7/2-3; 2, Ailincăi *et al.*, 2014, fig. 3b; 3, Frînculeasa *et al.*, 2015a, pl. 3; 4, Dumitrescu, 1980, pl. LXXXVIII/5; 5, Krauß *et al.*, 2016, Abb. 6; 6, Brudiu, 1985, fig. 2/1).



Fig. 2 – Typical grave goods in Yamnaya burials: hair rings from Blejoi IV/Gr. 1 (1-2), Aricești I/Gr. 1 (3), Blejoi III/Gr.1 (4), and animal teeth from Târgșoru Vechi, Gr. 10 (5) (1-2, 4, Frînculeasa *et al.*, 2019, Pl. 7; 3, Frînculeasa *et al.*, 2015a, Pl 2/2; 5, Frînculeasa, 2019, fig. 5).

Fig. 2 – Mobilier funéraire typique des Yamnaya : anneaux de cheveux de Blejoi IV/tombe 1 (1-2), Aricești I/tombe 1 (3), Blejoi III/tombe 1 (4), et dents d'animaux de Târgșoru Vechi, tombe 10 (5) (1-2, 4, Frînculeasa *et al.*, 2019, pl. 7 ; 3, Frînculeasa *et al.*, 2015a, pl 2/2 ; 5, Frînculeasa, 2019, fig. 5)

found in hoards or as single depositions (Hansen, 2011, p. 143). Even though they have received less attention than their copper counterparts, stone battle axes represent an intriguing category of finds. They occur in various contexts, such as local flat burials (Tudor, 1973), sometimes in secondary positions, and in the filling of mounds, especially in Moldavia (Diaconu, 2010, p. 18), or as stray finds in Dobruja, Muntenia, Oltenia and Transylvania (Vasilii, 1996, p. 11; Ilie *et al.*, 2010, p. 37; Boroneanț and Boroneanț, 1992, p. 94; Irimia, 1978, p. 225). Most of them are carefully polished and were produced with a lot of work and skill. It is therefore likely that they were a component in the practice of deposition. Given their absence from typical Yamnaya burials and presence in some Glina and Schneckenberg settlements, they were assigned to local populations (Vulpe, 1959, p. 268). However, some of them, made of local stone, bear formal resemblance to the A-type stone battle axes usually found in graves of the early Corded Ware culture north of the Carpathians, hundreds of kilometres away, perhaps indicating that Corded Ware A-type axes derived from Yamnaya specimens (Fig. 6, nos 1 to 3). In any case, this and other material culture items, as well as customs, demon-

strate the existence of supra-regional networks through which innovations and knowledge circulated and connected faraway regions (Furholt, 2014, p. 73, Fig. 4).

Despite a certain internal variation, the burial ritual presented above dominated and was rarely deviated from. Such an exception from the new standard was identified in Grave 3/Mound I from Vitănești (Fig. 4, nos 1 and 2). The primary burial, whose radiocarbon data clearly indicates the beginning of the third millennium BC, contained the skeletal remains of a person of unknown sex lying in an extended position, with the upper limbs stretched along the body and the head oriented north-eastwards, a reminder of older Kvityana traditions (Frînculeasa *et al.*, 2017c, p. 76, p. 81).

STEPPE PREDECESSORS IN THE FIFTH AND FOURTH MILLENNIA BC

The first contacts between the steppe populations and the Lower Danube area date long before the third millennium BC. They started during the last third of the fifth

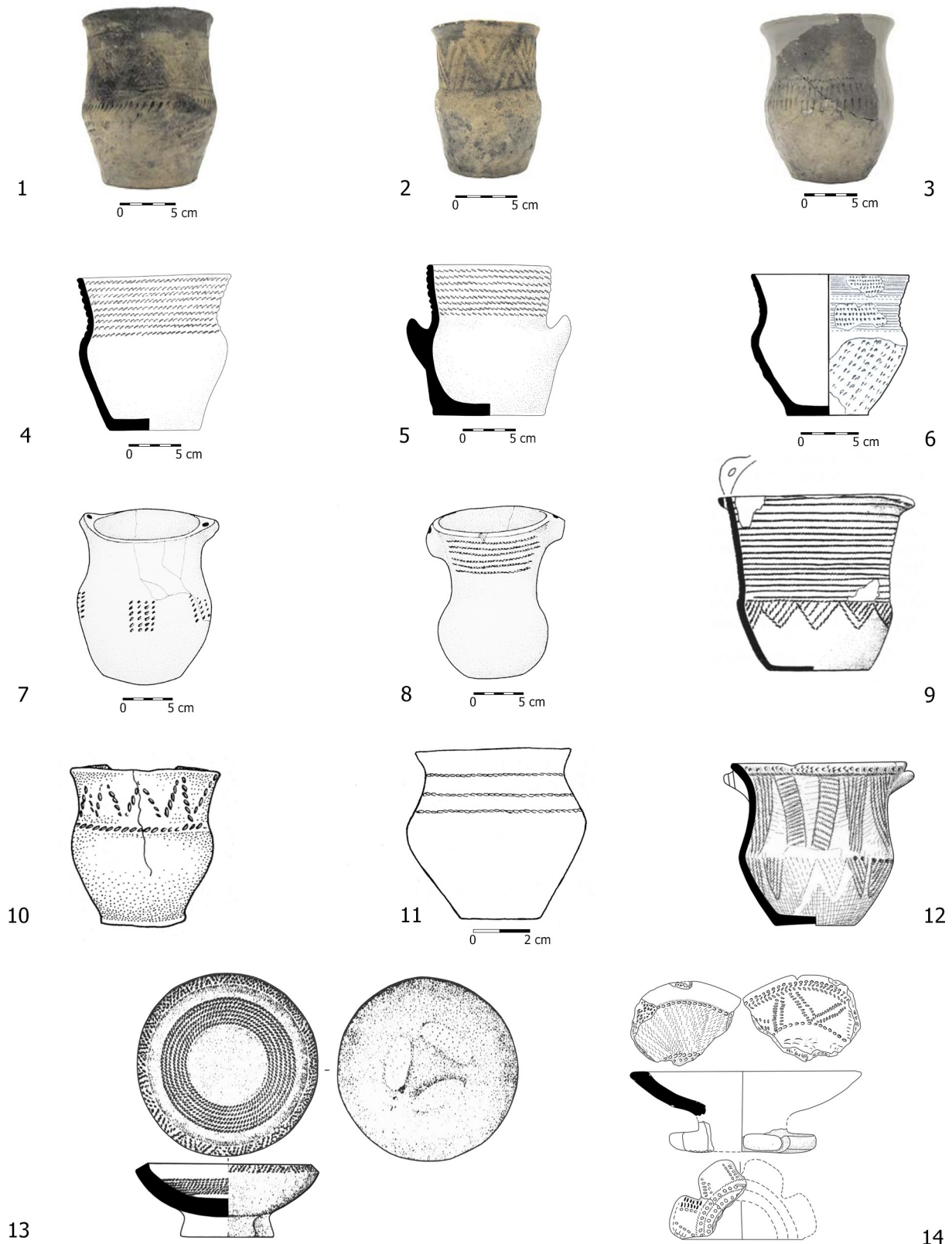


Fig. 3 – Pots with cord decoration from burial mounds north of the Lower Danube (1-11, Frînculeasa et al., 2015a, fig. 13; 12, Popescu, Vulpe, 1966, fig. 7a; 13, Frînculeasa et al., 2017b, Pl. 83/4; 14, Frînculeasa et al., 2017b, Pl. 83/7).

Fig. 3 – Vases à décor cordé provenant de tertres funéraires situés au nord du Danube Inférieur (1-11, Frînculeasa et al., 2015a, fig. 13 ; 12, Popescu, Vulpe, 1966, fig. 7a ; 13, Frînculeasa et al., 2017b, pl. 83/4 ; 14, Frînculeasa et al., 2017b, pl. 83/7).

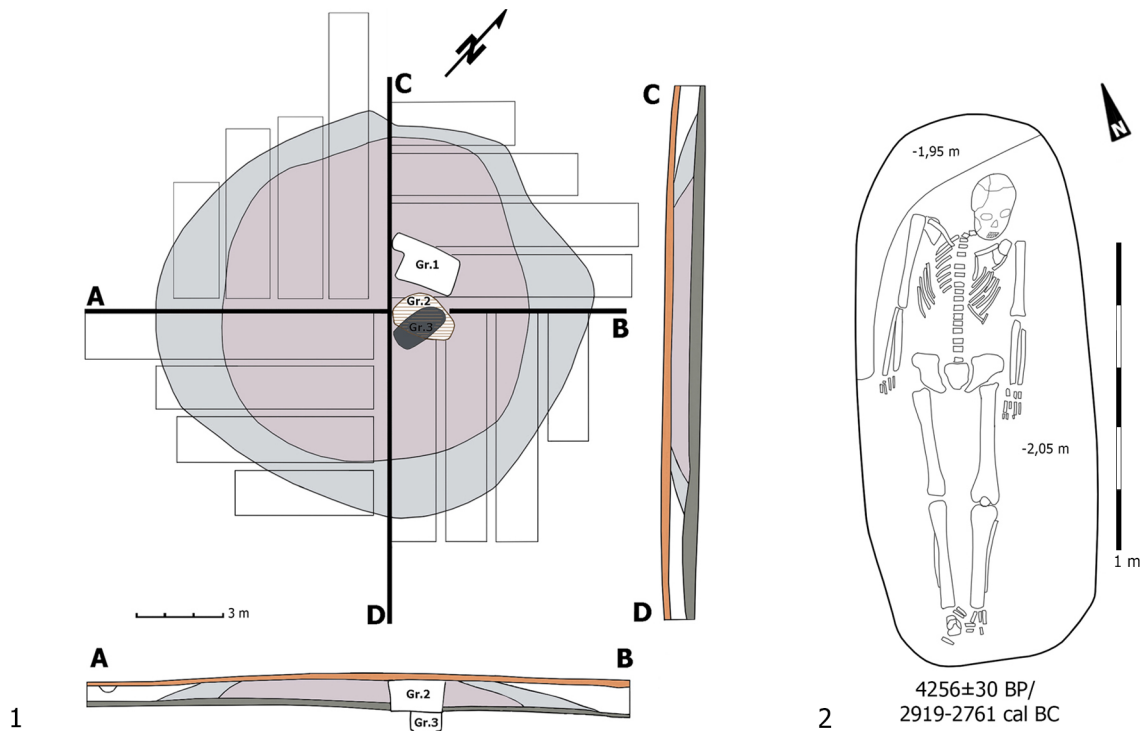


Fig. 4 – The non-standard mound burial from Vitănești, Mound I, plan (1) and grave 3 (2) (Frînculeasa *et al.*, 2017c, Pl. IV/2-4, Pl. V/2) shows a supine-extended body position.

Fig. 4 – L'enterrement non-conventionnel de Vitănești, tertre I, plan (1) et tombe 3 (2) (Frînculeasa *et al.*, 2017c, pl. IV/2-4, pl. V/2) montrant une position du corps étendu sur le dos.

millennium BC with discoveries assigned to the Skelya (Suvorovo-Novodanilovka) complex (Anthony, 2007, p. 249). In Transylvania this process can be seen in the flat cemetery of Decea Mureșului, comprised of 19 richly furnished burials. The graves were of individuals lying supine with the knees initially raised, oriented south-westwards or south-south-westwards, sprinkled with red ochre and accompanied by pottery, ornaments made of copper and Unio shells, flint blades and four-knobbed stone mace-heads (Fig. 7, No. 4) (Govedarica, 2004, p. 62-76). Similar mace-heads come from burials or more often stray finds, as do several zoomorphic sceptres (Govedarica, 2004, p. 76-77; Gogâltan and Ignat, 2011, Fig. 2/10-17). Such a sceptre was discovered in a burial mound in Casimcea, in Dobruja, along with flint items and ochre (Fig. 7, No. 5) (Govedarica, 2004, p. 104). East of the Carpathians, the destroyed burials from Lungoci and Fălciu contained ornaments made of gold, as well as copper, flint and stone axes, and several flint items (Govedarica, 2004, p. 83-84). To the south, close to the Danube, a vessel typical of the north Pontic Skelya culture was found in the tell settlement of Pietrele, Măgura Gorgana, also testifying to the existence of an exchange network between east and west (Fig. 7, No. 1) (Reingruber and Rassamakin, 2016, p. 274).

For most of the first half of the fourth millennium BC, the evidence for contacts is very scarce, becoming more obvious only towards the end of this period, with the appearance of corded ornaments on vessels of Dereivka, Cernavoda I and Cucuteni B pottery (Reingruber and Rassamakin, 2016, p. 274). The much debated Cucuteni C shell-tempered pottery also needs to be mentioned

(Anthony, 2007, p. 231). Discoveries of the Cernavoda I type consist of shallow habitation layers in Muntenia and Dobruja and especially isolated flat burials, Gr.75 from Sultana being such an example, even though their dating was long disputed and is still not supported by radiocarbon data (Fig. 7, No. 2) (Frînculeasa *et al.*, 2017c, p. 86). The last third of the fourth millennium BC saw the emergence of mounds that predated the Yamnaya monuments and displayed a different funerary ritual. West of the Prut, several burials were assigned to this time frame, of which we mention Grave 22 from Liești, Movila Arbănașu, containing a painted vessel of the Horodiștea-Gordinești tradition (Fig. 7, No. 3) (Burtănescu, 2002, p. 392), while in Dobruja these graves contained either crouched or extended individuals (Frînculeasa *et al.*, 2015a, p. 80-82). In northern Muntenia an absolutely unique aspect was recently identified, consisting of burials surrounded by gravel rings, individuals lying crouched and oriented in diverse directions; both men and women burials are common, as well as post-mortem body manipulation (Frînculeasa *et al.*, 2015a, p. 56, p. 83). Ochre is rare, however the burials are richly furnished with ceramics typical of the Baden-Coțofeni tradition, and especially adornments such as silver spiral hair rings, copper torques, or complex strings comprising copper and shell beads, copper spectacle-shaped pendants, as well as with weapons such as copper flanged axes (Frînculeasa *et al.*, 2017b, p. 117). This is also probably the period in which cord decoration appears on Coțofeni III pottery, even though a recent discovery from Transylvania indicates the existence of sherds decorated with “false” cord as early as the IIa phase (Gogâltan, 2013, p. 50-51).

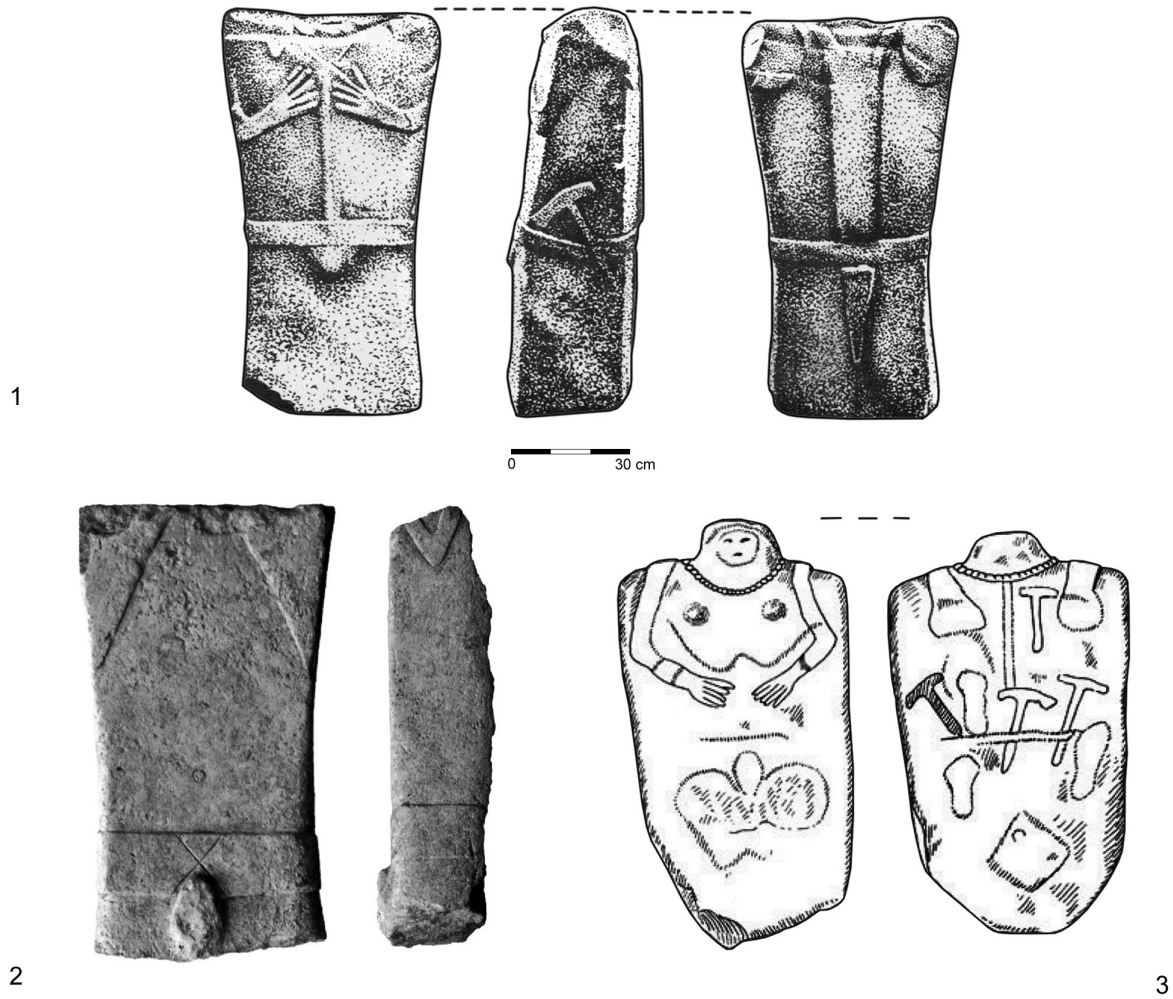


Fig. 5 – Anthropomorphic stelae from Romania: Baia de Criș (1), Florești Polus (2), Hamangia (3)
(1, Rîșcuța, 2001, Fig. 3; 2, Rotea et al., 2014, Pl. X; 3, Diaconu, 2010, Fig. 6/9).

Fig. 5 – Stèles anthropomorphes trouvées en Roumanie : Baia de Criș (1), Florești Polus (2), Hamangia (3)
(1, Rîșcuța, 2001, fig. 3; 2, Rotea et al., 2014, pl. X; 3, Diaconu, 2010, fig. 6/9)

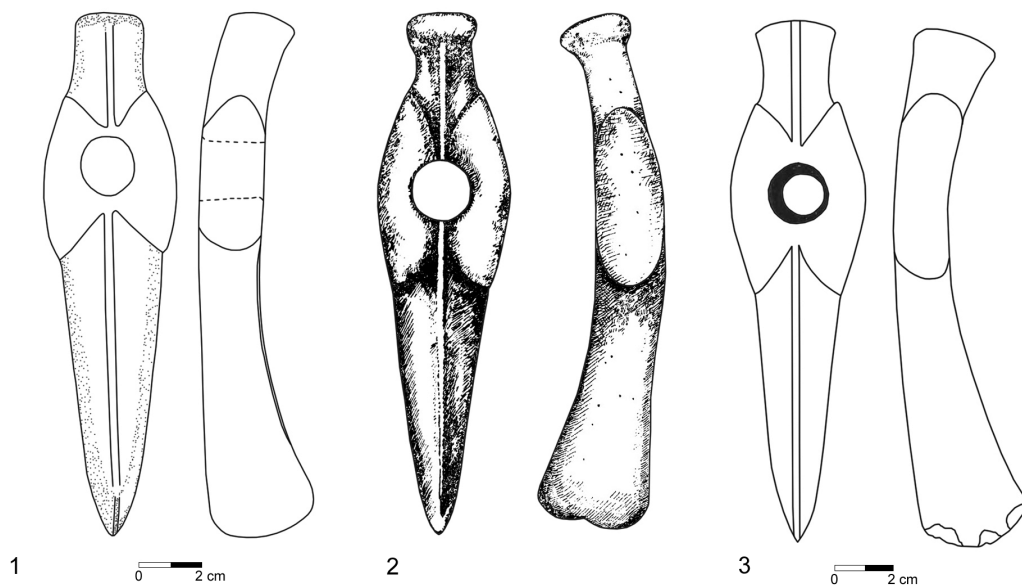


Fig. 6 – Stone battle axes resembling Corded Ware A-type axes from Romania: Băleni-Români (1), Oltenia (2), Făgăraș (3)
(1, Ilie et al., 2010, Pl. 6; 2, Boroneanț and Boroneanț, 1992, Pl. V; 3, Irimia, 1978, Fig. 3).

Fig. 6 – Haches de bataille en pierre ressemblant à des haches du type A de la Culture de la Céramique Cordée trouvées en Roumanie : Băleni-Români (1), Oltenia (2), Făgăraș (3) (1, Ilie et al., 2010, pl. 6; 2, Boroneanț and Boroneanț, 1992, pl. V; 3, Irimia, 1978, fig. 3).

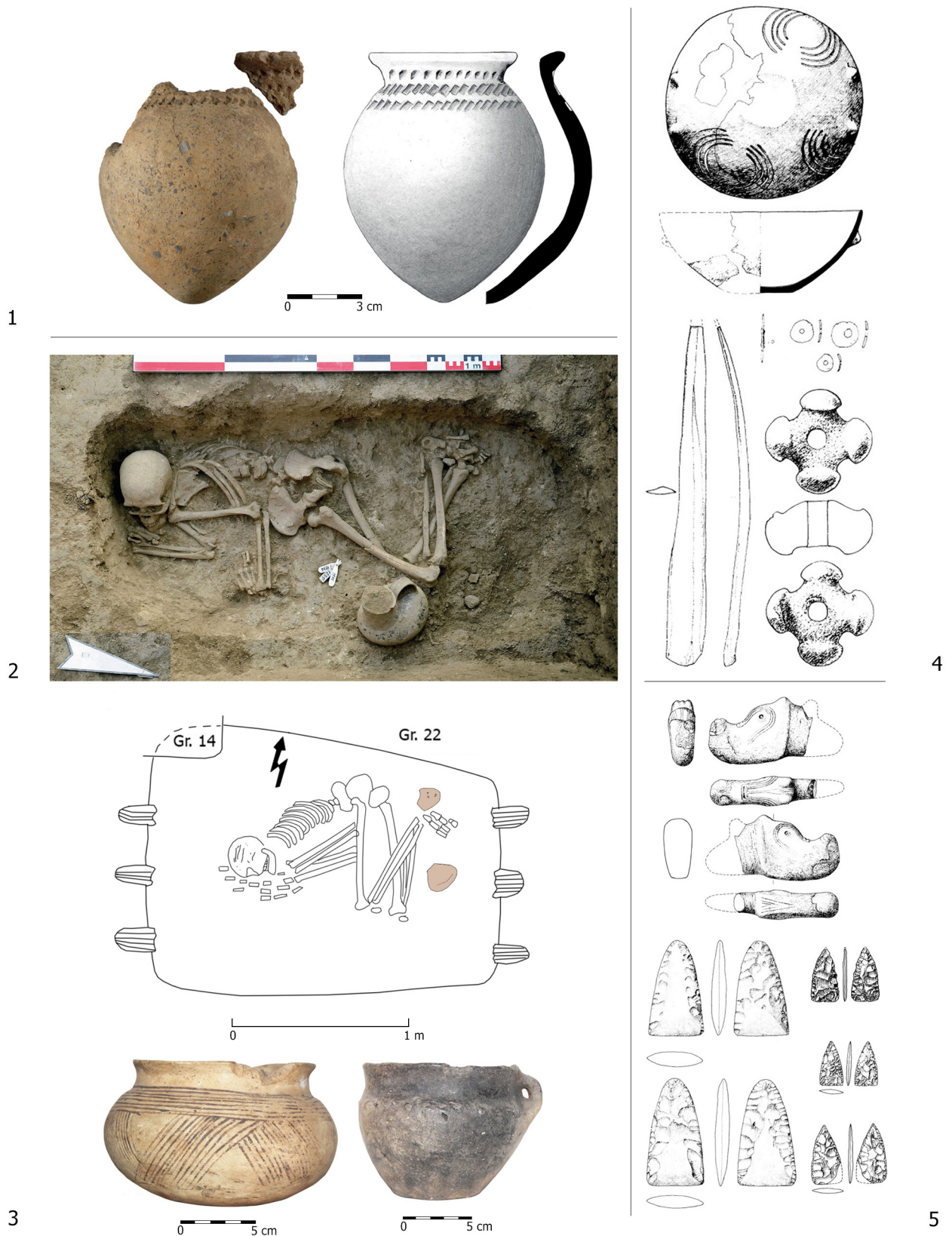


Fig. 7 – Evidence for Vth and IVth millennium BC supposed interactions between locals and foreigners: pot from Pietrele (1), grave 75 from Sultana (2), grave 22 from Liești – Movila Arbănașu (3), grave 12 from Decea Mureșului (4), grave from Casimcea (5) (1, Reingruber and Rassamakin, 2016, Abb. 16; 2, Andreescu et al., 2015, fig. 1; 3, Frînculeasa et al., 2017b, fig. 21/3-5; 4, Govedarica, 2004, Taf. 3; 5, Govedarica, 2004, Taf. 19-20).

Fig. 7 – Preuves d'interactions supposées entre locaux et étrangers au cours des cinquième et quatrième millénaires av. J.-C. : pot de Pietrele (1), tombe 75 de Sultana (2), tombe 22 de Liești – Movila Arbănașu (3), tombe 12 de Decea Mureșului (4), tombe de Casimcea (5) (1, Reingruber and Rassamakin, 2016, Abb. 16; 2, Andreescu et al., 2015, fig. 1; 3, Frînculeasa et al., 2017b, fig. 21/3-5; 4, Govedarica, 2004, Taf. 3; 5, Govedarica, 2004, Taf. 19-20).

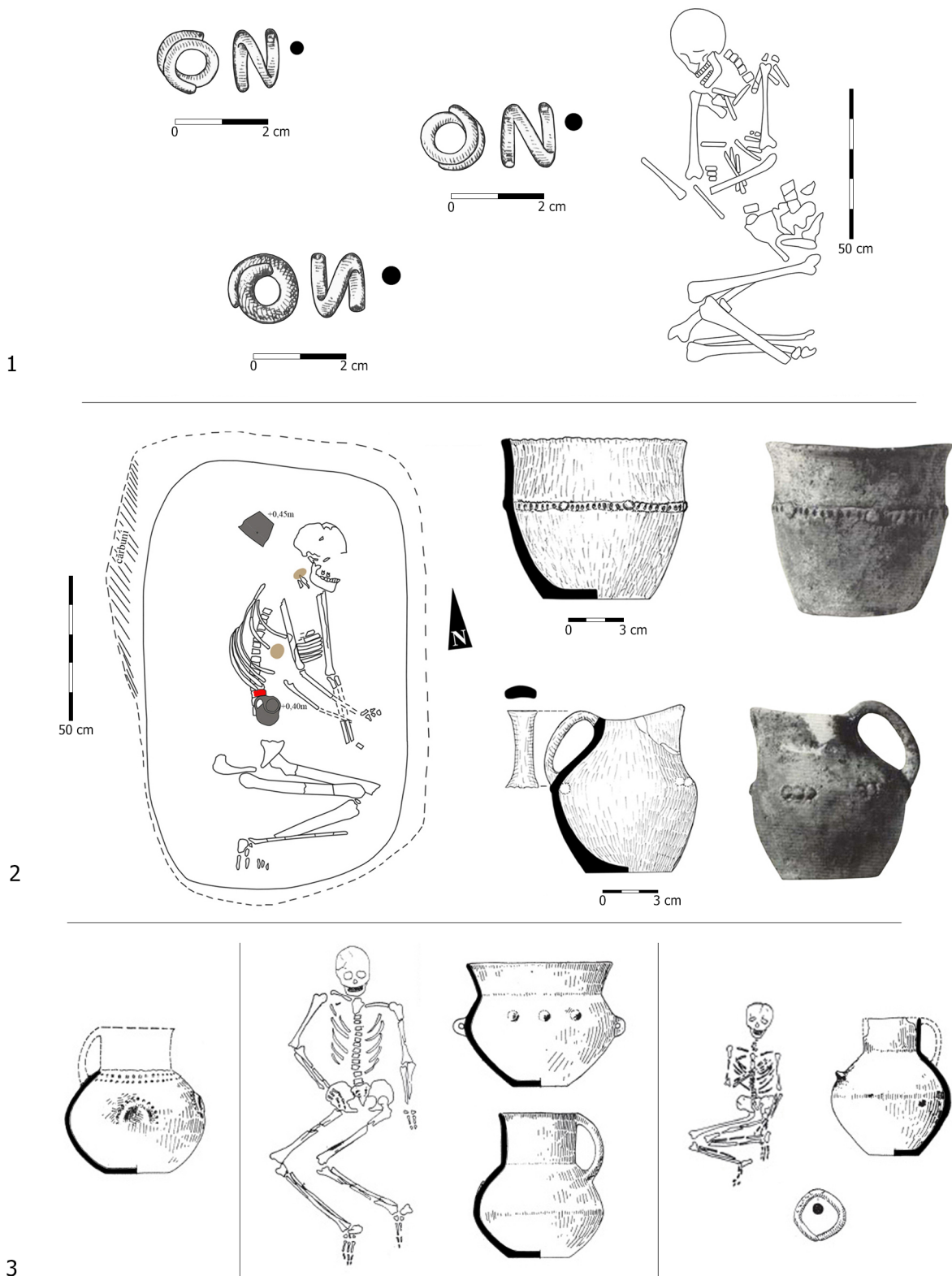


Fig. 8 – Examples of exchange between Yamnaya and supposed local societies: Gr. 20 from Zimnicea (1), grave 13 from Smeeni (2), graves and pots from Verbița (3) (1, Alexandrescu, 1974, Pl. 2, 8/1-3; 2, Frînculeasa et al., 2017b, Pl. 34; 3, Berciu and Roman, 1984, Fig. 1-2).

Fig. 8 – Exemples d'échanges entre Yamnaya et des cultures locales supposées : tombe 20 de Zimnicea (1), tombe 13 de Smeeni (2), tombes et pots de Verbița (3) (1, Alexandrescu, 1974, pl. 2, 8/1-3; 2, Frînculeasa et al., 2017b, pl. 34; 3, Berciu et Roman, 1984, fig. 1-2).

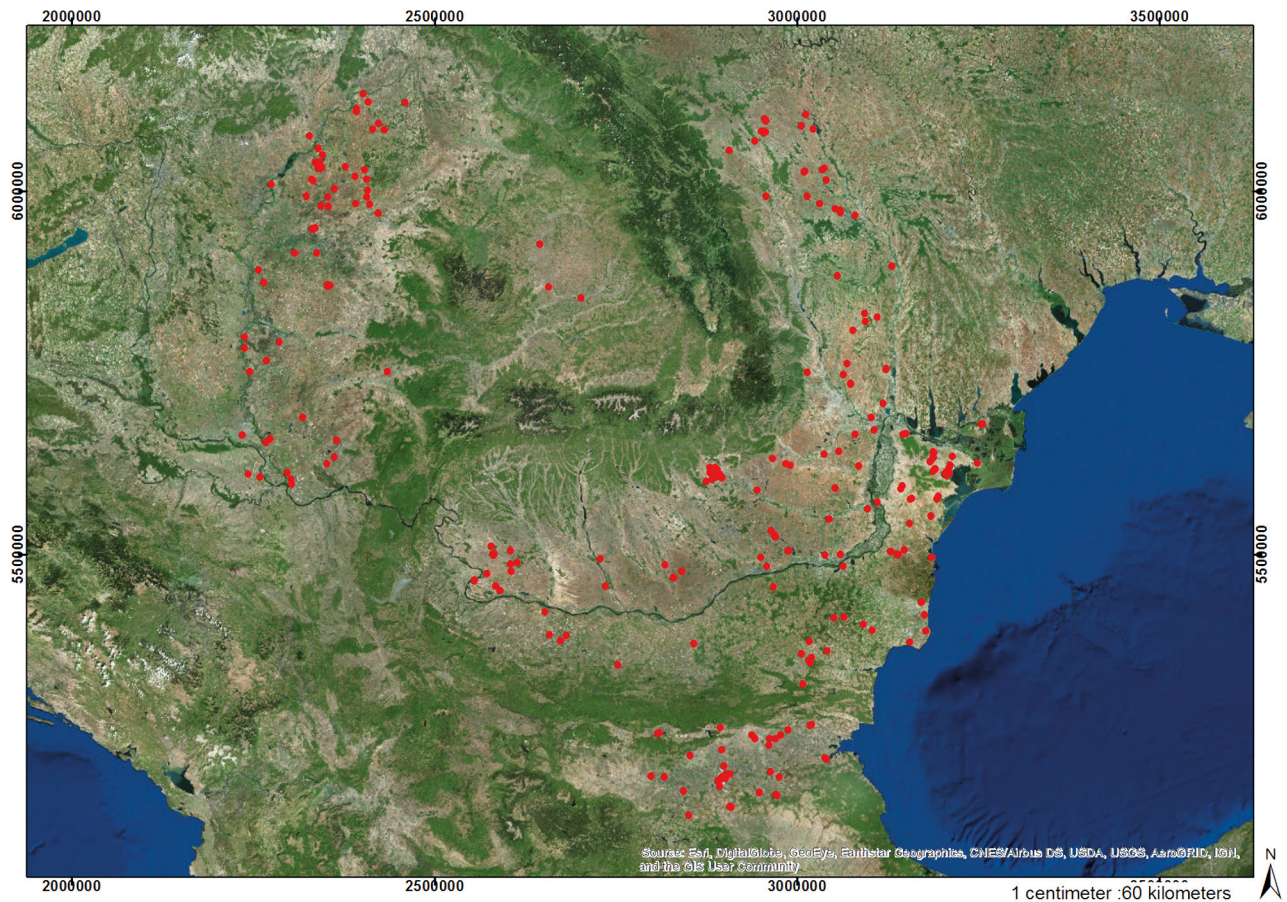


Fig. 9 – Map of all Yamnaya burial mounds excavated on the territory of present-day countries of Romania, Bulgaria, Serbia and Hungary.

Fig. 9 – Carte des tertres funéraires connus sur les territoires actuels de la Roumanie, la Bulgarie, la Serbie et la Hongrie.

KATACOMBNAYA SUCCESSORS

Compared to the massive presence of Yamnaya graves at the Lower Danube, the impact of the succeeding Katakombnaya burials seems significantly diminished (Burtănescu, 2002, p. 278). In fact, the presence of a proper catacomb structure was identified in only four cases in the burial mound from Smeeni, in northern Muntenia, which represents the westernmost findings to date. They show homogenous characteristics, being secondary burials placed in the southern area of the mound, and all have catacombs, even though some of them have been damaged (Simache and Teodorescu, 1962). Again, special attention was paid to constructing the funerary structure, comprising of the entrance shaft and the proper chamber with its typical bean shape. The position of the deceased had also changed. The individuals lie in an extended position, with the head oriented west-south-westwards; ochre or grave-goods are not part of the burial ritual, however animal offerings were found (Simache and Teodorescu, 1962). The three radiocarbon dates obtained for these burials indicate a time frame in the middle of the third millennium BC and suggest a coexistence phase of the Yamnaya and Katakombnaya burials (Frînculeasa *et al.*, 2017b, p. 110, Table 4). In this context, we have to mention the findings from Sudiți, a site not far from Smeeni,

considered as evidence of an interaction process around the middle of the third millennium BC (Frînculeasa *et al.*, 2017b, p. 47). Here, in Grave 7, which was typical of a Yamnaya ritual, an individual in a supine position with flexed legs and oriented westwards was placed in a catacomb-like structure and accompanied by pottery usually found in Katakombnaya burials (Frînculeasa *et al.*, 2017b, p. 47).

The rest of the burials, mainly found in Moldavia, were assigned to the Katakombnaya according to more or less reliable criteria, such as their stratigraphic position inside the kurgans, burial customs or grave-goods (Burtănescu, 2002). Given that catacomb burials are found in kurgans that have already been erected by Yamnaya populations, in many cases the lack of stratigraphic information has made reliable assessment impossible (Burtănescu, 2002, p. 278). Their main characteristic seems to be their lack of homogeneity as regards to their funerary practices. These consist of burials in either niches or just simple pits, the deceased lying either crouched, supine, or in an extended position, the different orientations and the presence of varied grave-goods such as pottery or stone maces (Burtănescu, 2002, p. 290-297; Frînculeasa *et al.*, 2017b, p. 144). Even though this lack of clarity can be due to the state of the research, it is more probably related to the actual scarcity of these burials west of the Prut River.

RELATIONS WITH LOCAL SOCIETIES

It was common practice for the Yamnaya populations to build their mounds in places previously occupied by other communities. Examples come from Moldavia, where several tumuli were erected over settlement remains of the late Cucuteni B phase or Horodiştea-Erbiceni (Burtănescu, 2002, p. 224-225). In Muntenia they overlay Cernavoda III, Cernavoda II-Folteşti II or Horodiştea-Folteşti habitation layers (Frînculeasa *et al.*, 2017b, p. 39), while in Oltenia and Banat, sherds assigned to Coţofeni pottery were found in the filling of burials or on the ancient surface (Frînculeasa *et al.*, 2015a, p. 77). This practice could be related to claiming possession of those territories (Heyd, 2011, p. 542), however, one has to bear in mind that even though the Yamnaya populations occupied and dominated the plain, they were never actually alone. Local communities inhabited the hilly areas, and traces of their interactions with the steppe newcomers are present in the archaeological record.

Various contemporary settlements are known in Moldavia, such as Târpeşti and Dolheştii Mari, or Bogdăneşti and Aldeşti, which were probably more related to the Transylvanian area (Burtănescu, 2002, p. 160-161, p. 182). The graves from Târpeşti and Cătămărăşti-Deal exhibited the typical Yamnaya position of the deceased, lying supine with flexed legs and sprinkled with ochre, but were accompanied rather by local pottery and had no burial mounds (Burtănescu, 2002, p. 223). Interaction between the Yamnaya and Globular Amphora in the wider area is reflected in the presence of typical pottery of the latter or even stone cists in Yamnaya burials (Szymt, 2013). However, this complex interaction needs to be put into the context with the neighbouring regions of Volhynia, Podolia, and the Ukraine.

In Transylvania the scenario is quite complex as there are differences between the eastern and the western regions. In the west, interaction with late Coţofeni communities is attested by the graves uncovered in Silvaşu de Jos, a hilly area outside the regular Yamnaya steppe landscape. Two mounds built over previous Coţofeni features had primary burials displaying a typical Yamnaya ritual, individuals lying supine, oriented westwards; these were interpreted as external influence of the Yamnaya on the local late Coţofeni population (Diaconescu and Tincu, 2016, p. 108, p. 115). Subsequently, a different type of burial mound occupied the highland areas, or mountains, contemporary to the Yamnaya kurgans in the lowlands. The funerary standard of the Livezile group consisted of building stone mounds over the burials of individuals lying in a contracted position directly on the ancient soil surface. Post-mortem manipulation of bodies is quite common; the dead were accompanied with specific pottery and metal ornaments, such as Leukas hair rings made of gold or copper spectacle-shaped pendants (Ciugudean, 2011, p. 23-27). In central and south-eastern Transylvania, stone cist burials of Zimnicea-Mlăjeţ-Sânzieni-Turia type, containing askos pots with origins

south of the Danube, were interpreted as a mixture of Globular Amphora and Ezerovo/Zimnicea elements (Székely, 2009, p. 42; Burtănescu, 2002, p. 384). Some grave-goods found in Yamnaya burials in Muntenia fill the gap between these, such as askos pots and crescent silver hair rings with close analogies in the Zimnicea cemetery (Fig. 8, No. 2) (Frînculeasa *et al.*, 2015a, p. 71; Frînculeasa *et al.*, 2017b, p. 100). In opposition, ochre and typical Yamnaya spiral hair rings were documented in several burials from the flat cemetery in Zimnicea (Fig. 8, No. 1) (Alexandrescu, 1974, p. 83). Several mound burials from Muntenia contained pots bearing cord decoration resembling the typical Corded Ware beakers of central and northern Europe, however, their shapes also find good analogies east of the Prut (Ivanova, 2013; Frînculeasa *et al.*, 2015a, p. 67). Similar vessels come from the supposed flat cemetery from Brăiliţa (Harţuche, 2002) and from a destroyed burial mound at Buj in Hungary (Dani, 2011, p. 34). The pots with cord decoration from Milostea, found in the hilly area of northern Oltenia, are more likely related to Transylvania, as good analogies can be found in the corded ware of the Jigodin type and in findings from Moacă-Eresteghin (Popescu and Vulpe, 1966; Ciugudean, 2011, p. 22).

In the late phase of the Yamnaya burials, maybe because of lower pressure exerted by these populations, settlements of the Glina culture emerged in both the plain and the hilly regions south of the Carpathians. Their areas partially overlap and, even though evidence of interactions is still scarce in the archaeological record, examples from Verbiţa (Fig. 8, No. 3) and Târgşoru Vechi do provide such evidence (Frînculeasa *et al.*, 2017b, p. 138). In Târgşoru Vechi, not far away from the Yamnaya kurgans, a burial containing a pot of the Glina tradition was uncovered (Frînculeasa *et al.*, 2015b). Further to the west, in the burial mound at Verbiţa, individuals lying in a typical Yamnaya position were accompanied by pottery related to the Glina or Belotic-Bela Crkva and Somogyvár traditions (Berciu and Roman, 1984; Kulcsár, 2009, p. 268).

THE YAMNAYA NORTH OF THE LOWER DANUBE IN SOUTH-EASTERN AND EAST-CENTRAL EUROPEAN CONTEXT

The limits of the Yamnaya expansion in south-eastern Europe were traditionally perceived as confined to the steppe-like landscape, marked by the Tisza River in the west, the Serbian Banat to the south-west and the Rhodope Mountains in the south (Dani, 2011, p. 26; Kaiser and Winger, 2015, p. 9; Koledin *et al.*, 2020, in press). Identifying the exact number of excavated burial mounds and especially graves dated to the Early Bronze Age in this extensive area is no easy task (Fig. 9). As mentioned above, we know of approximately 177 mounds containing around 714 burials from Romania. From Hungary there is information about 75 kurgans (Dani, 2011), and

from Serbia we have evidence of around 15 (Koledin *et al.*, 2020, in press), while in Bulgaria the latest publications account for 80 kurgans and 460 burials (Kaiser and Winger, 2015, p. 3). Between the Prut and Dniester rivers the situation is even more difficult to assess, however over 500 hundred mounds have been excavated overall (Dergacev, 1994, p. 123; Ivanova, 2013).

When looking at all these burials, one can see several common features. Mounds often superpose earlier habitation layers; in Serbia they were usually built on top of Baden or Kostolac sites (Koledin *et al.*, 2020, in press) and in Hungary over Cernavoda III or Baden sites (Dani, 2011, p. 26). In Bulgaria, links to the Coțofeni culture can be seen especially in the findings from Târnava (Panayotov, 1989, p. 84-93), while those to the Ezero sequence are seen in Ovchartsi (Alexandrov and Kaiser, 2016). The available radiocarbon dates indicate the emergence of these burials at the very end of the fourth or beginning of the third millennium BC, this being true for Romania (Frînculeasa *et al.*, 2017b), Bulgaria (Kaiser and Winger, 2015, p. 14), Serbia (Koledin *et al.*, 2020, in press) and Hungary (Horváth *et al.*, 2013). No east to west delay can be discerned; the expansion seems to have happened in one episode. East of the Prut, in Moldavia, absolute dates are very scarce and not completely reliable (Rassamakin and Nikolova, 2008, Table 1, nos 188-190). We also have to highlight the widespread occurrence of the typical funerary standard, which was strictly followed most of the time. Rectangular grave pits were dug and carefully arranged with mats, potentially pillows, hides and furs, and wooden covers. The deceased, usually an adult male individual, was placed in a supine position with flexed legs; the orientation is west-east, with the head facing westwards; ochre is present; the grave-goods consist mainly of ornaments or pottery (Dani, 2011, p. 29; Kaiser and Winger, 2015; Koledin *et al.*, 2020, in press). Silver hair rings are the most common findings and the deduced hair fashion is one of the main characteristics associated with the Yamnaya identity in all these regions (Dani, 2011; Kaiser and Winger, 2015, p. 9; Frînculeasa *et al.*, 2019; Koledin *et al.*, 2020, in press). Strings of animal teeth are more often found in Hungarian and Romanian Yamnaya mounds and in child graves (Ecsedy, 1979; Frînculeasa *et al.*, 2017b, p. 94). However, some local nuances in burial custom can also be observed. Deposition of ochre lumps in the grave seems more common in the Carpathian Basin, while in the Lower Danube area ochre is more often sprinkled on the deceased (Heyd, 2011, p. 539; Kaiser and Winger, 2015, p. 11). On average, the mounds also contain far fewer secondary burials in the westernmost distribution area (Koledin *et al.*, 2020, in press). In contrast, in southern Bulgaria, mounds contain a larger number of secondary burials, commonly furnished with local pottery (Alexandrov and Kaiser, 2016, p. 362, p. 365). East of the Prut, the funerary standard is similar, but the presence of additional grave-goods such as wooden carts or wheels, stone and flint artefacts, or copper tanged daggers should be noted (Dergacev, 1994; Ivanova, 2013). We are still far away from understanding

these regional differences in terms of the identity of the various groups involved. Do they represent wider kin-groups within the Yamnaya, or simply differing interactions with various local groups or neighbours?

This burial ritual dominated for centuries, imposing its rules and becoming the norm. Only towards the late phase did changes occur, such as the body being placed in a side crouched position, in some regions, as attested by burials found in the filling of mounds in Moldavia, Dobruja, and Wallachia (Motzoi-Chicideanu, 2011, p. 274; Burtănescu, 2002, p. 262). The same transformation can be seen east of the Prut (Ivanova, 2013). In the entire western area, the most recent Yamnaya burials date to the middle of the third millennium BC (Horváth *et al.*, 2013; Kaiser and Winger, 2015, p. 14; Frînculeasa *et al.*, 2017b; Koledin *et al.*, 2020, in press).

CONCLUSION AND PERSPECTIVES FOR FUTURE RESEARCH

The arrival of the Yamnaya populations in south-eastern and east-central Europe changed the history of this region, and subsequently of the entire continent. Thousands of mounds erected in the flat landscapes are the only source available in order to understand this phenomenon, given that none of their settlements has been identified in the entire western region (Burtănescu, 2002, p. 223; Heyd, 2011, p. 539). They testify to migrations, an approach boldly supported by recent genetic studies (Allentoft *et al.*, 2015; Haak *et al.*, 2015; Mathieson *et al.*, 2017). More doubtful, however, is the claim about mass migrations. We are only at the beginning of the process of understanding the demographics involved. But there is another, more pressing issue. What is local and what is not, in these two millennia of interaction between the northern Pontic-Caspian and the western Pontic steppe lands of south-eastern Europe? Even the 500 years of interaction between the Yamnaya and contemporary societies regarded as local has of course created mixed burial customs and assemblages. Local or non-local is not something permanently frozen in time, but actively changing and transforming. The first Yamnaya groups did not remain “newcomers” forever, but after some time they became “locals”. Thus, if new groups arrived from the steppe in a more or less intense or permanent flux, even though they shared a similar lifestyle and beliefs, they may well have been seen as newcomers or even competition for the already existing “local” Yamnaya. At the same time, for local communities living in settlements and burying their dead in flat cemeteries, who were already used to the presence of the people of the steppe and their way of life, newcomers would not have represented a significant change (Heyd, 2011, p. 545).

As archaeologists, we tend to highlight differences or resemblances that were not necessarily seen in the same way by past communities. Identity can also be negotiated; it can be changed, transformed or blended into something

new; one can also have a mixed or several identities. Everything is a matter of perspective, in the same way if one highlights, as Martin Furholt has just done (Furholt, 2019), the overarching common characteristics of burial customs, or more focusses on the dividing aspects. Neither way is bad or wrong; they just represent two sides of the same story. Therefore a polythetic look at interactions between the Yamnaya and locals is as good as the monothetic, cultural-historical perspective in creating blocks of shared (burial) practice or material culture, ergo *Cultures*. The same is true if one applies a top-to-down and broad-brush approach as Kristiansen *et al.*, 2017, or Furholt's demand for bottom-up, detailed multidisciplinary regional studies. Both ways deliver results and insights, and should be seen as complementary. What is new and exciting, however, is the contribution of ancient DNA studies, which provide a biological population component that supplements the predominant cultural identity agenda. While this completes our picture and offers new perspectives, it also favours differences and highlights the antagonism between presumed locals and non-locals. Then again, the opportunities created by knowledge of the biological component of then contemporary populations and their interactions outweigh what one could call negatively connotated methodological or ideological problems in dealing with ancient DNA data.

In the case of the Yamnaya impact north of the Lower Danube region, even though different scenarios of this event were proposed, as hypotheses ranging between the three cornerstones of violence, exchange, and neutrality (Heyd, 2011, p. 545; Kaiser and Winger, 2015, p. 19), no straightforward answer can account for the complexity of this process in such a large area. It is thus unlikely that a single explanation can fit all the situations and it is more probable that local or regional societies found their own solutions to dealing with outsiders. A careful assessment of local peculiarities of burials and their customs could provide clues about the mechanisms of interaction and transmission. The same applies to material culture. Here, the anthropomorphic stone stelae are probably the finest example of an innovation likely that arrived with the newcomers. Their similarity with the stelae usually placed on top of Yamnaya kurgans in the Ukraine, Moldova, and Bulgaria points to their source of inspiration. However, once the idea reached the intra-Carpathian regions, inclu-

ding Hungary, they started to be produced locally. In this region, only some of the stelae are found in funerary contexts, whereas others seem to be involved in other ceremonial practices, within a process of transformation of the original idea by changing their meaning and value. We could easily continue this list by including the copper shaft-hole axes or the precious metal hair rings. Along similar parameters, the transformation of their meaning may have started as early as the fourth millennium BC.

To conclude, the tale of newcomers and locals north of the Lower Danube provides a complicated history of various interactions, of locals who themselves had previously arrived in the area a few generations back, whose forebears were already dealing with previous generations of locals, of locals who themselves went away to other regions and returned, of outsiders living on itinerant seasonal or annual pathways, and so on. It is thus an epic tale, told both before and thereafter, here and everywhere.

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NOTES

- (1) In March 2019 out of 17,287 archaeological sites in the National Archaeological Record of Romania, about 550 burial mounds were assigned to the Early Bronze Age and almost 1800 were dated to "an unknown time frame". However, some of them could have also been raised during the same period. Source: <http://ran.cimec.ro/>.
- (2) As examples, 342 mounds were identified only in the area of Ploiești (Frînculeasa *et al.*, 2017a, p. 536), while in Teleorman County this number raises to 351 (Frînculeasa *et al.*, 2017c, p. 77).
- (3) Law 422/2001 on the protection of monuments and Law 258/2006 for the modification and completion of Government Ordinance 43/2000 on the protection of archaeological heritage and declaring archaeological sites as national interest areas (Topoleanu *et al.*, 2008, p. 13-20; Frînculeasa *et al.*, 2017a, p. 534).

BIBLIOGRAPHY

AILINCĂI S. C., MIHAIL F., CAROZZA L., CONSTANTINESCU M., SOFICARU A., MICU C. (2014) – Une découverte funéraire du début du l'âge de Bronze en Dobroudja (Sud-Est de Roumanie). Le tumulus de Rahman (com. Casimcea, dep. Tulcea), *Prilozi. Instituta za arheologiju u Zagrebu*, 31, p. 135–149.

AILINCĂI S. C., MIHAIL F., CONSTANTINESCU M., CAROZZA L., MICU C., BURENS A. (2016) – Découverte d'un tumulus de l'Age de Bronze à Rahman, sur la commune de Casimcea, dep. de Tulcea, *Studii și Cercetări de Istorie Veche și Arheologie*, 67, 1-2, p. 29-52.

ALEXANDRESCU A. D. (1974) – La nécropole du Bronze ancien de Zimnicea (dép. de Teleorman), *Dacia (N.S.)*, 18, p. 79-94.

ALEXANDROV ST., KAISER E. (2016) – The Early Barrow Graves in West Pontic Area. Cultures? Migrations? Interactions?, in V. Nikolov and W. Schier (eds.), *Der Schwarzmeerraum vom Neolithikum bis in die Früheisenzeit (6000–600 v. Chr.). Kulturelle Interferenzen in der zirkumpontischen Zone und Kontakte mit ihren Nachbargebieten*, *Prähistorische Archäologie in Südosteuropa*, Band 30, Rahden/Westf., Verlag Marie Leidorf GmbH, p. 359-370.

- ALLENTOFT M. E., SIKORA M., SJÖGREN K.-G., RASMUSSEN S., RASMUSSEN M., WILLERSLEV E. *et al.* (2015) – Population genomics of Bronze Age Eurasia, *Nature*, 522, p. 167-172. <https://doi.org/10.1038/nature14507>.
- ANTHONY D. (2007) – *The Horse, The Wheel and Language. How Bronze Age Riders from the Eurasian Steppes Shaped the Modern World*, Princeton and Oxford, Princeton University Press, 553 p.
- BÁTORA J. (2002) – Contribution to the problem of “craftmen” graves at the End of Aeneolithic and in the Early Bronze Age in Central, Western and Eastern Europe, *Slovenská Archeológia*, 50, 2, p. 179-228.
- BĂJENARU R., POPESCU A. (2012) – Pumnalele de metal cu limbă la mâner din bronzul timpuriu și mijlocii din spațiul carpato-dunărean // Poignards métalliques à languette au manche datant du Bronze ancien et moyen dans l'espace carpato-danubien, in V. Sîrbu and S. Matei (eds.), *Un monument din Carpații Orientali cu reprezentări din Preistorie și Evul Mediu. Nucul- “Fundu Peșterii”, județul Buzău, Brăila-Buzău*, Editura Istros, p. 363-433.
- BERCIU D., ROMAN P. (1984) – Mormintele tumulare de la Verbița (jud. Dolj), *Thraco-Dacica*, V, 1-2, p. 15-21.
- BOGHIAN D., ENEA S.-C., SIMALCSIK A., GROZA V.-M., IGNĂTESCU S. (2016) – Descoperirile funerare de la Costăna-Imaș (com. Todirești, jud. Suceava, România). Probleme privind încadrarea cultural-cronologică și ritul funerar, in L. Sîrbu, N. Telnov, L. Ciobanu, G. Sîrbu and M. Kașuba (eds.), *Culturi, procese și contexte în arheologie, Volum omagial Oleg LEVIȚKI la 60 de ani*, Chișinău, p. 114-140.
- BOLOHAN N., LAZANU C. (2018) – Plant textiles in a grave mound of the Early Bronze Age in Eastern Romania, in M. Siennicka, L. Rahmstorf and A. Ulanowska (eds.), *First textiles. The beginnings of textile manufacture in Europe and the Mediterranean*, Proceedings of the EAA Session Held in Istanbul (2014) and the 'First Textiles' Conference in Copenhagen (2015), Oxbow, p. 143-150.
- BORONEANȚ C., BORONEANȚ V. (1992) – Considerații asupra topoarelor “sceptre” din piatră, epoca bronzului, pe baza descoperirilor de la Butimanu, *Cercetări Arheologice în București*, IV, p. 91-108.
- BURTĂNESCU F. (2002) – *Epoca timpurie a bronzului între Carpați și Prut cu unele contribuții la problemele perioadei premergătoare epocii bronzului în Moldova*, București, (Bibliotheca Thracologica, XXXVII), 591 p.
- BRUDIU M. (1985) – Informații noi privind epoca bronzului în sud-estul Moldovei, *Studii și Cercetări de Istorie Veche și Arheologie*, 36, 3, p. 235-246.
- CIUGUDEAN H. (2011) – Mounds and Mountains: Burial Rituals in Early Bronze Age Transylvania, in S. Berecki, R. E. Németh and B. Rezi (eds.), *Bronze Age Rites and Rituals in the Carpathian Basin*, Proceedings of the international colloquium from Târgu Mureș, 8-10 October 2010, Târgu Mureș, p. 21-58.
- COMȘA E. (1986) – Despre statuia-menhir de la Hamangia, *Studii și Cercetări de Istorie Veche și Arheologie*, 37, 4, p. 285-295.
- DANI J. (2011) – Research of Pit-Grave culture kurgans in Hungary in the last three decades, in Á. Pető and A. Barczy (eds.), *Kurgan studies: An environmental and archaeological multiproxy study of burial mounds of the Eurasian steppe zone*, Oxford (BAR International Series 2238), p. 25-69.
- DERGACEV V. (1994) – Epoca bronzului. Perioada timpurie, *Thraco-Dacica*, 15, 1-2, p. 121-140.
- DIACONU V. (2010) – Considerații privind topoarele de luptă din piatră specific epocii bronzului din regiunile est-carpătice ale României, *Revista Arheologică (S.N.)*, vol. V, no. 1, p. 5-21.
- DIACONESCU D., TINCU S. (2016) – Considerații arheologice privind necropola tumulară de la Silvașu de Jos - Dealul Țapului (oraș Hațeg, jud. Hunedoara), *Analele Banatului, S.N. Arheologie-Istorie*, XXIV, p. 107-135.
- DRAGOMAN A., OANȚĂ-MARGHITU S. (2006) – Archaeology in communist and post-communist Romania, *Dacia (N.S.)*, tom L, p. 57-76.
- DUMITRESCU V.L. (1980) – *The Neolithic Settlement at Rast (South-West Oltenia, Romania)*, Oxford (BAR International Series 72), 224 p.
- ECSÉDY I. (1979) – *The people of the pit-grave kurgan in eastern Hungary*, Akademiai Kiadó, Budapest, 147 p.
- FRÎNCULEASA A., PEDA B., HEYD V. (2015a) – Pit-Graves, Yamnaya and Kurgans along the Lower Danube: Disentangling IVth and IIIrd Millennium BC Burial Customs, Equipment and Chronology, *Praehistorische Zeitschrift*, 90, 1-2, p. 45-113.
- FRÎNCULEASA A., SOFICARU A. D., MĂGUREANU A., PEDA B., CIUPERCĂ B., GARVĂN D., ANTON A., CONSTANTIN C. (2015b) – Un complex funerar preistoric descoperit la Târgșoru Vechi (jud. Prahova), *Buletinul Muzeului Județean Teleorman, Seria Arheologie*, 7, p. 133-156.
- FRÎNCULEASA A., FRÎNCULEASA M., DUMITRU I., BUTEREZ C. (2017a) – The dynamics of prehistoric burial mounds of Ploiești metropolitan area (Romania) as reflected by cartographic documents of the 18th-20th centuries, *Area*, vol. 49, 4, p. 533-544. DOI:10.1111/area.12354.
- FRÎNCULEASA A., SIMALCSIK A., PEDA B., GARVĂN D. (2017b) – *Movila Mare de la Smeeni, județul Buzău - Monografia arheologică a unui sit redescoperit*, Editura Cetatea de Scaun, 517 p.
- FRÎNCULEASA A., MIREA P., TROHANI G. (2017c) – Local cultural settings and transregional phenomena: on the impact of a funerary ritual on the Lower Danube in the 4th millennium B.C., *Buletinul Muzeului Județean Teleorman*, 9, p. 75-116.
- FRÎNCULEASA A., PEDA-BĂLĂNICĂ B., SIMALCSIK A., NEGREA O., CONSTANTINESCU B., STAN D. (2019) – Morminte lamnaia într-un tumul redescoperit și salvat în localitatea Blejoi (jud. Prahova), *Buletinul Muzeului Județean Teleorman*, 11, p. 35-78.
- FRÎNCULEASA A. (2019) – The Children of the steppe : descendance as a key to Yamnaya success, *Studii de preistorie*, 16, p. 129-168.
- FURHOLT M. (2014) – Upending a 'Totality': Re-evaluating Corded Ware Variability in Late Neolithic Europe, *Proceedings of the Prehistoric Society*, 80, December 2014, p. 67-87.

- FURHOLT M. (2019) – Re-integrating Archaeology: A Contribution to aDNA Studies and the Migration Discourse on the 3rd Millennium BC in Europe, *Proceedings of the Prehistoric Society*, p. 1-15. <https://doi.org/10.1017/ppr.2019.4>
- GOGĂLTAN F. (2013) – Transilvania și spațiul nord-pontic. Relații interculturale între sfârșitul epocii cuprului și începutul epocii bronzului (ca. 3500-2500 a.Chr.), *Terra Sebus. Acta Musei Sabesiensis*, 5, p. 31-76.
- GOGĂLTAN F., IGNAT A. (2011) – Transilvania și spațiul nord-pontic. Primele contacte (cca 4500-3500 a. Chr.), *Tyragetia (S. N.)*, 5 [20]/1, p. 7-38.
- GOVEDARICA B. (2004) – *Zepterträger-Herrscher der steppen. Die frühen Ockergräber des älteren Äneolithikums im karpatenbalkanischen Gebiet und im Steppenraum Südost- und Osteuropas*, Mainz am Rhein (Balkankommission der Heidelberger Akademie der Wissenschaften, 6), 426 p.
- HAAK W., LAZARIDIS I., PATTERSON N., ROHLAND N., MALICK S., REICH D. *et al.* (2015) – Massive migration from the steppe was a source for Indo-European languages in Europe, *Nature*, 522, p. 207-211. <https://doi.org/10.1038/nature14317>
- HANSEN S. (2011) – Metal in South-Eastern and Central Europe between 4500 and 2900 BCE, in Ü. Yalçin (ed.), *Anatolian Metal V. Montanhistorische Zeitschrift, Der ANSCHNITT*, Bochum (Beiheft, 24), p. 137-149.
- HARTUCHE N. (2002) – *Complexul arheologic Brălița, București* (Bibliotheca Thracologica, XXXV), 316 p.
- HEYD V. (2011) – Yamnaya groups and tumuli west of the Black Sea, *Ancestral Landscapes. TMO 58, Maison de l'Orient et de la Méditerranée*, Lyon, p. 535-555.
- HORVÁTH T., DANI J., PETŐ Á., POSPIESZNY L., SVINGOR É. (2013) – Multidisciplinary Contributions to the Study of Pit Grave Culture Kurgans of the Great Hungarian Plain, in V. Heyd, G. Kulcsár and V. Szeverényi (ed.), *Transitions to the Bronze Age. Interregional Interaction and Socio-Cultural Change in the Third Millennium BC Carpathian Basin and Neighbouring Regions*, Budapest (Archaeolingua, 30), p. 153-179.
- ILIE A., MECU L., FRÎNCULEASA M. (2010) – Topoare preistorice din cadrul Complexului Național Muzeal “Curtea Domnească” Târgoviște. (I), *Buridava- Studii și materiale*, VIII, p. 29-47.
- IRIMIA M. (1978) – Un topor cu ceafă cilindrică de la Făgăraș (jud. Sibiu), *Pontica*, 11, p. 223-225.
- IVANOVA S. (2013) – Connections between the Budzhak culture and Central European groups of the Corded Ware culture, in A. Koško and V. Kločko (eds.), *The Ingul-Donets Early Bronze Civilization as Springboard for Transmission of Pontic Cultural Patterns to the Baltic Drainage Basin 3200-1750 BC*, Poznań (Baltic-Pontic Studies, 18), p. 86-120.
- KAISER E., WINGER K. (2015) – Pit graves in Bulgaria and the Yamnaya Culture, *Prähistorische Zeitschrift*, 90 (1-2), p. 1-27.
- KOLEDIN J., BUGAJ U., JAROSZ P., NOVAK M., PRZYBYLA M., PODSIAŁO M., SZCZEPANEK A., SPASIC M., WŁODARCZAK P. (2020) – First archaeological investigation of barrows in the Bačka region and the question of the Eneolithic/Early Bronze Age barrows in Vojvodina, *Prähistorische Zeitschrift*, 94, in press.
- KRAUSS R., SCHMID C., CIOBOTARU D., SLAVCHEV V. (2016) – Varna und die Folgen. Überlegungen zu den Ockergräbern zwischen Karpatenbecken und der nördlichen Ägäis, in M. Bartelheim, B. Horejs and R. Krauß (Hrsg.), *Von Baden bis Troia. Ressourcennutzung, Metallurgie und Wissenstransfer. Eine Jubiläumsschrift für Ernst Pernicka*, Rahden (Oriental and European Archaeology, Volume 3), p. 273-315.
- KRISTIANSEN K., ALLENTOF T. M., FREI K., IVERSEN R., JOHANNSEN N., KROONEN G., POSPIESZNY Ł., PRICE T. D., RASMUSSEN S., SJÖGREN K.-G., SIKORA M., WILLERSLEV E. (2017) – Re-theorising mobility and the formation of culture and language among the Corded Ware Culture in Europe, *Antiquity*, 91, 356, p. 334-347.
- KULCSÁR G. (2009) – *The beginnings of the Bronze Age in the Carpathian Basin: the Mako- Caka and the Kosihy-Somogyvár-Vinkovci cultures in Hungary*, Budapest (Varia Archaeologica Hungarica, 23), 529 p.
- MARTA D., FAZECAȘ G. (2018) – Note pe marginea câmpului de movile de la Cheț – Buduslău (jud. Bihor), *Crisia*, XLVIII, p. 57-62.
- MATHIESON I., ROODENBERG S. A., POSTH C., REICH D. *et al.* (2017) – The Genomic History of Southeastern Europe, *Nature*, 555, p. 197-203.
- MOTZOI-CHICIDEANU I. (2011) – *Obiceiuri funerare în epoca bronzului la Dunărea mijlocie și inferioară, vol. I, II*, București, Ed. Academiei Române, 900 p.
- OLTEAN I. (2013) – Burial mounds and settlement patterns: a quantitative approach to their identification from the air and interpretation, *Antiquity*, 87, p. 202-219.
- PANAYOTOV I. (1989) – *Jamnata kultura v bălgariskite zemi*, Sofia (Razkopki i proucvanija, 21), 191 p.
- POPESCU E., VULPE A. (1966) – Necropola tumulară de la Milostea, *Revista Muzeelor*, II, 3, p. 148-155.
- RASSAMAKIN Y., NIKOLOVA A. V. (2008) – Carpathian Imports and Imitations in Context of the Eneolithic and Early Bronze Age of the Black Sea Steppe Area, in P. Biehl and Y. Rassamakin (eds.), *Import and Imitation in Archaeology*, Langenweissbach, p. 51-80.
- REINGRUBER A., RASSAMAKIN Y. (2016) – Zwischen Donau und Kuban: Das nordpontische Steppengebiet im 5. Jt. v. Chr., in V. Nikolov and W. Schier (eds.), *Der Schwarzmeerraum vom Neolithikum bis in die Früheisenzeit (6000-600 V. CHR.) kulturelle interferenzen in der zirkumpontischen zone und kontakte mit ihren nachbargebieten*, Rahden/Westf., Marie Leidorf (Prähistorische Archäologie in Südosteuropa, band 30), p. 367-404.
- RÎȘCUȚĂ N. C. (2001) – O nouă descoperire arheologică la Baia de Criș (jud. Hunedoara), *Thraco-Dacica*, XXII, 1-2, p. 139-172.
- ROTEA M., MIHAI G., NETEA M. G., DE-LA-RUA C., TECAR T., HERVELLA M., ALONSO S., MAXIM Z., RĂCHITĂ M. (2014) – The archaeological contexts of DNA samples collected from prehistoric sites in Transylvania, *Acta Musei Napocensis*, 51/1, p. 21-59.

SIMACHE N., TEODORESCU V. (1962) – Săpăturile arheologice de salvare de la Smeeni (r. Buzău, reg. Ploiești), *Materiale și Cercetări Arheologice*, VIII, p. 273-282.

SZÉKELY Z. (2009) – The Beginnings of Early Bronze Age in South-East Transylvania. Problems of Chronology, in S. Berecki, R. E. Németh and B. Rezi (ed.), *Bronze Age Communities in the Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureș, 24-26 October 2008*, Cluj-Napoca, p. 39-44.

SZMYT M. (2013) – View from the Northwest: Interaction Network in the Dnieper-Carpathian Area and the People of the Globular Amphora Culture in the Third Millennium BC., in V. Heyd, G. Kulcsár and V. Szeverényi (ed.), *Transition to the Bronze Age: Interregional Interaction and Socio-Cultural Change at the Beginning of the Third Millennium BC in the Carpathian Basin and Surrounding Regions*, Budapest (Archaeolingua, 30), p. 93-111.

TOPOLEANU F., JUGĂNARU G., MICU C., AILINCĂI S., MIHAIL F., STĂNICĂ A., COSTEA I. (2008) – *Inventarierea siturilor arheologice din județul Tulcea. Studiu de caz: mormintele tumulare*, Tulcea, ExPonto, 111 p.

TUDOR E. (1973) – Un mormânt de la începutul epocii Bronzului descoperit la Răcăciuni (jud. Bacău), *Studii și Cercetări de Istorie Veche*, 24, 2, p. 285-287.

VASILIU I. (1996) – Topoare de piatră din epoca bronzului aflate în colecțiile Muzeului de Arheologie din Tulcea, *Peuce*, XII, p. 9-26.

VULPE A. (1959) – Depozitul de la Tufa și topoarele cu ceafă cilindrică, *Studii și Cercetări de Istorie Veche*, X, 2, p. 266-276.

Bianca PREDĂ-BĂLĂNICĂ

Department of Cultures

University of Helsinki

P.O. Box 4 (Fabianinkatu 24, 121C)

00014 University of Helsinki

Finland

E-mail: bianca.preda@helsinki.fi

Alin FRÎNCULEASA

Prahova County Museum of History

and Archaeology

Str. Toma Caragiu, no. 10

100042, Ploiești

Romania

E-mail: alinfranculeasa@yahoo.com

Volker HEYD

Department of Cultures

University of Helsinki

P.O. Box 59 (Unioninkatu 38)

00014 University of Helsinki

Finland

E-mail: volker.heyd@helsinki.fi