

AT THE SOUTH-EASTERN EDGE OF THE OTOMANI-FÜZESABONY CULTURAL COMPLEX

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Abstract În acest articol dorim să completăm informațiile deja publicate cu altele care sunt încă inedite cu privire la arealul sud-estic al stilului ceramic Otomani-Füzesabony. Este vorba despre investigațiile noastre din perioada 2013–2016 în cadrul proiectului intitulat „Trăind în tell-urile epocii bronzului. Un studiu de arheologie a așezărilor la frontiera estică a Bazinului Carpatic”.

Referitor la așa zisa „granița” sud-estică a stilului ceramic Otomani-Füzesabony, considerăm că ea poate fi plasată în zona Crișului Alb. De-o parte și de alta a acestui râu există așezări precum Socodor, Vârșand sau Salonta care prezintă în repertoriul ceramic în proporții diferite elemente care se regăsesc atât în stilul ceramic Otomani-Füzesabony cât și în cel Cornești-Crvenka.

Cuvinte-cheie Epoca mijlocie a bronzului, Bazinul Carpatic, stilul ceramic Otomani-Füzesabony, arheologia așezărilor

Keywords Middle Bronze Age, Carpathian Basin, Otomani-Füzesabony ceramic style, settlements archaeology

Introduction

It is well known, that the name Otomani culture was proposed by Ioan Nestor in his synthesis *Der Stand der Vorgeschichtsforschung in Rumänien*, published in 1933 (Nestor 1933, 89–92). Because of the personal relations between Nestor and Márton Roska, but also because of the political situation at the beginning of the Second World War, a different name was used by Roska: he introduced in 1941 the term Gyulavarsánd culture (after the Hungarian name of Vârșand village) (Roska 1941: 56). Since then, Romanian researchers use the name Otomani culture (Popescu 1944: 89–99; Horedt et al. 1962; Ordentlich 1970; Bader 1978; Chidioșan 1980; Roman, Németi 1990; Andrișoiu 1992; Kacsó 1999; Vulpe 2001: 258–260; Molnár 2014; etc.) and some Hungarian archaeologists the term Gyulavarsánd culture (Banner 1955: 140–141; Bóna 1975: 121–144; Máthé 1988; Szabó 1999, 25; Csányi & Tárnoki 2003; Dani et al. 2016; etc.). The small political sabotage of Roska has turned into an archaeological diversion that we prefer to ignore. Like other colleagues who deal with the facts of the Bronze Age in the Carpathian Basin, we will use the more general description: the Otomani-Füzesabony cultural complex or ceramic

style (Gancarski 2002; Bátora 2013; Vladár, Oravkinová 2015; Jaeger 2016; etc.), as it has been referred also in the title of our conference.

In our article we would like to deal with only two issues. In the first part the south-eastern fringe of the Otomani-Füzesabony ceramic style will be discussed. The second part of this study shall present the results of recent research on the Otomani-Füzesabony communities and their habitats in the Criș rivers Basin.

In 1971, Ivan Ordentlich created the first distribution map of the Otomani culture on Romania's territory (Ordentlich 1971: Fig. 1) (Fig. 1/1). Among the sites of this culture a lot of settlements south of Mureș and from western Transylvania and at the middle course of Mureș river were also included. According to István Bóna, the so-called Gyulavarsánd group would have reached the river of Mureș (Bóna 1975: 123, Verbreitungskarte II) (Fig. 1/2), a statement which was resumed in his synthesis *Bronzezeitliche Tell-Kulturen in Hungary* (Bóna 1992: 17, 30–32) (Fig. 1: 3–5). Gruia Fazecaș establishes in 1997 a new repertoire of Otomani settlements, excluding sites dated to Bz A1 and Bz D, and those from Transylvanian “enclave”, but determined southern “border” of this culture still to the South of the river of Mureș (Fazecaș 1997: Pl. II) (Fig. 1/6).



Figure 1. 1) The distribution of Otomani settlements after Ordentlich 1971; 2) the distribution of Middle Bronze Age settlements in the Carpathian Basin after Bóna 1975; 3–5) dynamics of Middle Bronze Cultures in the Carpathian Basin after Bóna 1992; 6) map of the Otomani sites after Fazecaș 1997; 7) map of the Middle Bronze Age sites in southwestern Romania after Gogâltan 1999.

In 1999 Florin Gogâltan published an article titled *The Southern Border of the Otomani Culture* (Gogâltan 1999). The purpose of that article was to cast a light on unpublished materials resulted from the 1930 excavation of M. Roska at Socodor, kept in the Cluj Museum. On the basis of analogies with other sites from the Banat, the tell of Socodor was assigned to the Cornești-Crvenka group of the Vatina culture and not to the Otomani culture as was proposed until then (Fig. 1/7). The tell of Vârșand (Roska 1941; Popescu 1956b; Găvan 2014) is in our opinion a peripheral settlement of the Otomani culture, that came in real cultural contact with the Cornești-Crvenka group of the Vatina culture (Gogâltan 2004). It should be noted that the distance between the two sites is just about 18 km and they were very likely separated during the Bronze Age by a large swamp, as it is shown on the first topographic mapping of the area in the eighteenth century (Fig. 2/1).

In 2010, G. Fazecaș published the results of 1958 control excavation in Salonta conducted by Nicolae Chidioșan (Fazecaș 2010). *Testhalom* settlement is located 33 km northeast of Vârșand. The ceramic fragments discovered here also show strong southern connections with analogies in the Cornești-Crvenka ceramic style.

Regarding the south-eastern area of the Otomani-Füzesabony ceramic style, we would like to complete the information already published with new data provided by our 2013–2016 research project: „*Living in the Bronze Age Tell Settlements. A Study of Settlement Archaeology at the Eastern Frontier of the Carpathian Basin*” endorsed by the Romanian Ministry of National Education. The initial intention of this project was to recover old unpublished information found in the collections of different museums from western Romania, to collect relevant samples for AMS analysis, and to conduct a series of non-invasive investigations, the later consisting of GPS tracing the tell-settlements’ coordinates, new topographic measurements, aerial photographs and magnetic surveys (Gogâltan et al. 2014; Gogâltan 2016).

In the area between Mureș and Crișul Alb, we have identified a large tell settlement at Sântana-

North of the city that can be connected to the Cornești-Crvenka ceramic style (Sava 2014) (Fig. 2/3–4). About 5 km to the southeast from Sântana another Cornești-Crvenka settlement was discovered, which overlaps partial a Copper Age tell (Sava 2015: 178, with old references) (Fig. 2/2). Hard enough, but we identified the tell settlement at Socodor at the field (Petric 2014: 249–250, Fig. 2–6), quite vaguely indicated both by M. Roska (Roska 1942: 271) and by Dorin Popescu (Popescu 1956a: 43). It is a small settlement and in the Bronze Age it was probably an island. On the other hand, the Vârșand tell is a very large settlement. The processing of the archaeological material from the 1930 excavations of M. Roska at Socodor, which are in the Arad Museum collection, proves once again that this settlement does not belong to the Otomani-Füzesabony ceramic style, but to the nordic group of Vatina ceramic style (Petric 2014: Pl. VI–VII; Sava et al. 2019). However, once again, the decorative elements that are so specific to Otomani communities such as spirals have to be remarked at this site.

Former opinions about the presence of Otomani communities in Transylvania can no longer be supported (Andrițoiu 1992: 54–61; Rotea 1994). Today we know, that at the beginning of the Late Bronze Age, somewhere between 1600 and 1500 BC (Gogâltan 2015: 72–79), pottery shapes and ornaments, common to a larger space that covers a large part of the old Otomani and Wietenberg areas appear. A suggestive example is the site at Vlaha near Cluj with typical late Wietenberg and Cehăluț-Hajdúbagos/Pișcolt type ceramic material (Gogâltan et al. 2011; Németh 2015).

Regarding the so-called south-eastern „border” of the Otomani-Füzesabony ceramic style, we believe that it can be localised in the Crișul Alb area. On both sides of this river there are settlements such as Socodor, Vârșand or Salonta, that have in their ceramics repertoire—even if in different proportions—elements that are found both in the Otomani-Füzesabony and in Cornești-Crvenka ceramic styles.

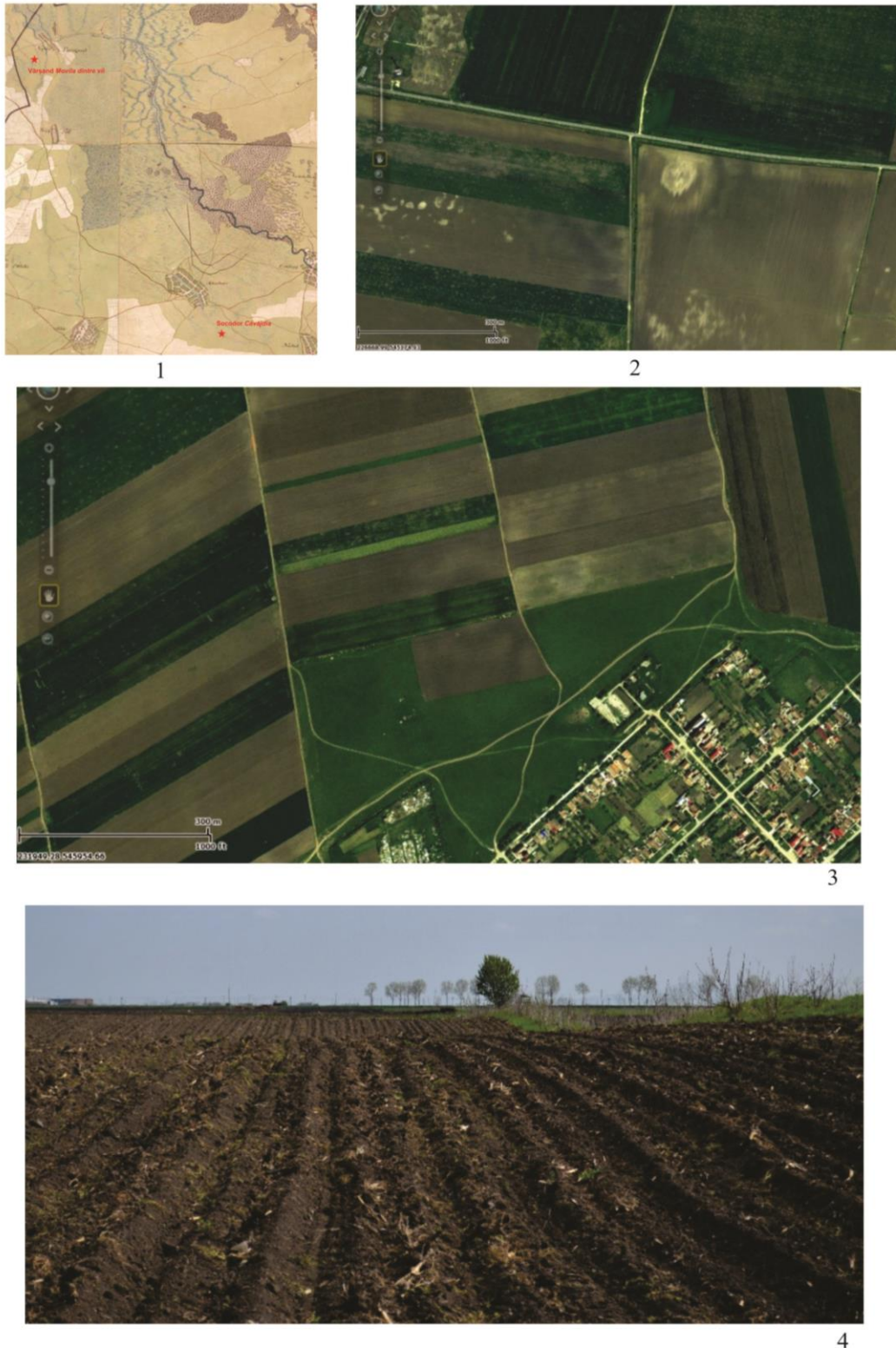


Figure 2. 1) Position of the Socodor and Vârșand tells in the context of the relief captured on the first lozefine map; 2) Tell of Sântana "Holumb"; 3) location of the Sântana tell "La nord de oraș = North of town"; 4) View of the Sântana tell "La nord de oraș".

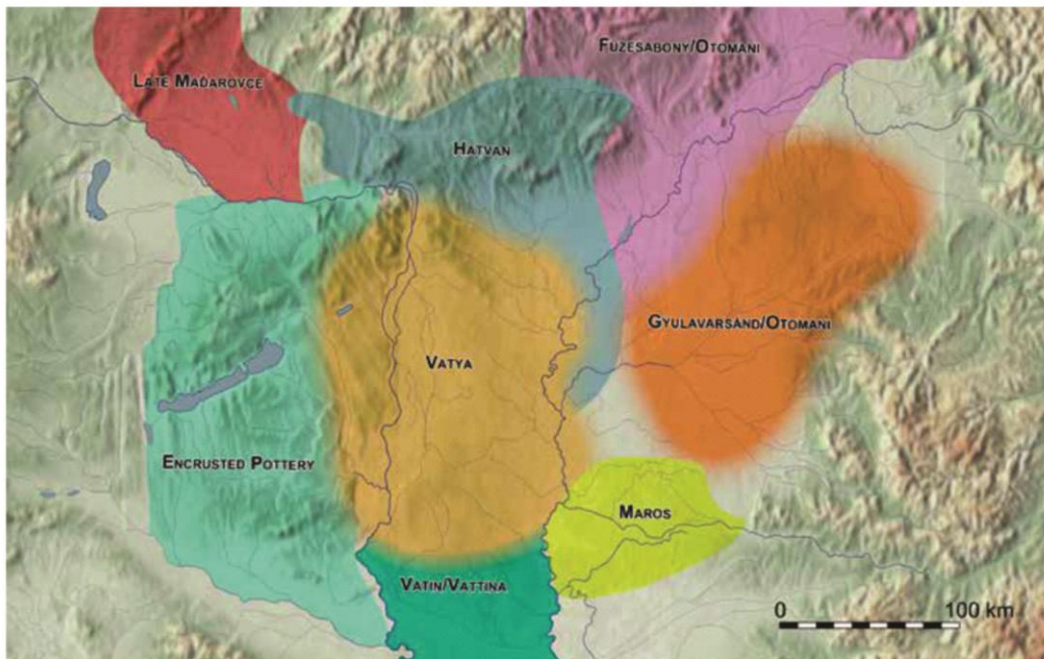
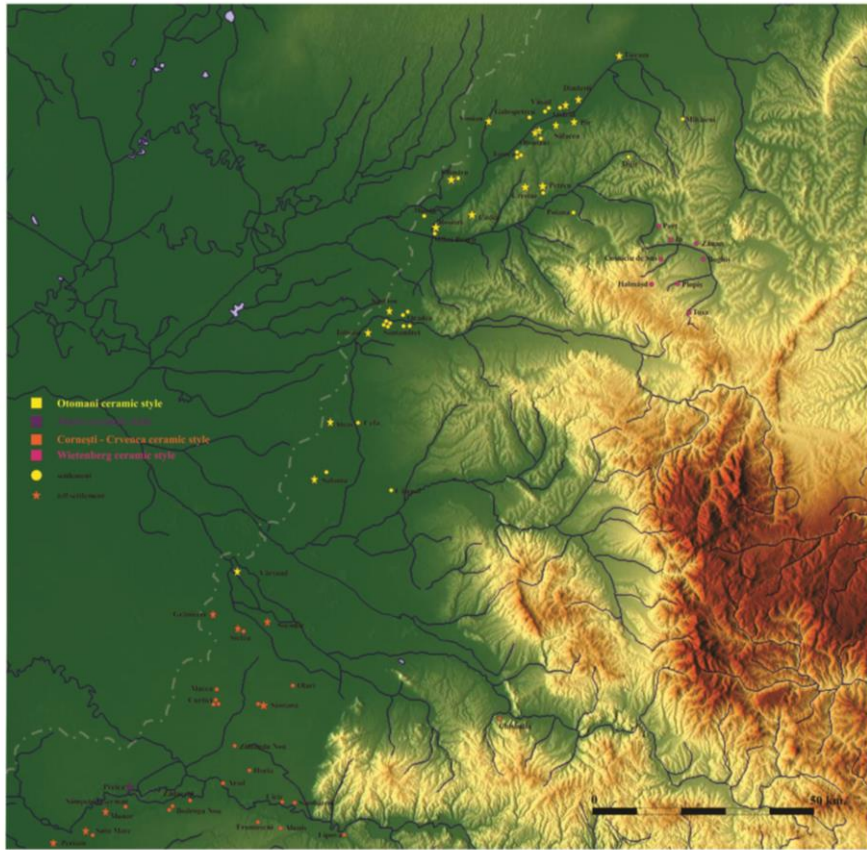


Figure 3. 1) Distribution of the Middle Bronze Age settlements in the Criş Rivers basin; 2) the area of Middle Bronze Age ceramic styles in the Carpathian Basin after Dani et al. 2016.

It is quite possible, that we deal with a southern variant of the Otomani-Füzesabony ceramic style, which could be defined as a separate ceramic group and called Gyulavarsánd or Vârşand, as it has been proposed (Molnár 2014). But first of all, it has to be defined typologically as such. This can be done only after the publication of the results of the new excavations from Toboliu-*Dâmbul Zănăcanului* (Fazecaş & Lie 2018; Lie et al. 2018, with the old literature) and Sântion-*Dealul Mănăstirii = Klastrom domb* (Fazecaş et al. 2016; Fazecaş et al. 2017). In addition, the ceramic finds must be compared to that of Békés-*Várdomb = Városerdő* (Banner & Bóna 1974), Vârşand-*Movila dintre vii = Laposhalom* (Popescu 1956b; Bóna 1975; Găvan 2014), Socodor-*Căvăjdia* (Popescu 1956a; Gogâltan 1999; Petric 2014; Sava et al. 2019), Carei-*Bobald* (Molnár 2014), etc. The area of the Mureş ceramic style is at least in the Middle Bronze Age, limited only to some sites (Soroceanu 1991; Fischl 2003), of which the most representative tell is that of Pecica-*Şanţul Mare* (Găvan & Ignat 2014, with the old references; Nicodemus and O’Shea 2015; Nicodemus et al. 2015). According to these circumstances, we believe that some additions are needed on maps recently published by colleagues in Hungary (Dani et al. 2016: Fig. 6a).

In the second part of this study we would like to review our knowledge about the Middle Bronze Age inhabitation of the Criş rivers Basin (about 2000/1900–1600/1500 BC). Nowadays 66 settlements are known (Fig. 3/1). Under these, in 2013, 31 sites – out of a total of 46 settlements in western Romania (Gogâltan 2014a: 14) – were identified as multi-layered settlements, the rest being settlements with only one layer of inhabitation. No settlements on hills or in caves are known. The first result of our fieldwork project and that of the project coordinated by Tobias L. Kienlin and Liviu Marta in the Carei Plain and Ier Valley (Kienlin & Marta 2014; Kienlin et al. 2017) show, that among the 31 sites only 18 are tells or tell-like settlements, to which we can add two more, on field newly discovered tell like sites (Salonta-*Bogd* and Petreu-*Zongora*). The statistical data is summoned up on Fig. 9: on these 20 multi-layered settlements different investigations were

carried out, on 13 sites geophysical prospections were made, on 7 sites coring samples were taken, aerial photographs were obtained in 11 cases and from 2 settlements AMS data were gained (Fig. 9).

Some Middle Bronze Age sites from the Criş rivers Basin revisited

In the following we would like to discuss some new data on our research in the Criş rivers Basin. At Tulca-*Holomb* (Fazecaş 2014b) we identified a natural landform instead of a multilayered settlement (Fig. 4/1). At Diosig-*Colonie* (Gogâltan 2014c, with old references) rescue excavations were conducted and as a result no multilayered settlement could be identified (Fazecaş & Gogâltan 2018). In case of Cadea-*Dealul chel = Koposzdomb* - that was formerly listed as a fortified settlement belonging to Otomani I–II ceramic style (Gogâltan 2014b, with old references), at the field only a modest Otomani II settlement (Fig. 4/5–6) was found. The same situation was observed in Vâşad-*Cartierul țiganilor = Cigány tanya = Cigánynegyed = Groapa de lut = La nord de sat* (Gogâltan & Fazecaş 2014, with old references) (Fig. 4/2–4).

Studying the land survey maps of the Habsburg empire or Google Earth images and verifying the informations on the ground, new multi-layered settlements could be identified. This was the case at the site of Salonta-*Bogd*, close to the border to Hungary (Fig. 5). Another multilayer site was recently discovered at Petreu with ceramic materials belonging to the beginning phase of the Otomani ceramic style (Fig. 6/1–2).

As said, in case of 13 multi-layered settlements, aerial photography was taken to obtain digital terrain model (Table 1). One of the most interesting tell is the Ateaş-*Holombul Voghiului*, which was not previously researched either, because its close location to the border to Hungary (Ghemiş 2014, with old references). Even today, this tell is surrounded most of the time by water, thus making it accessible only in dry summers.

In autumn 2016, our project came to its ending. The research of the Crişuri Basin tells continued through the collaboration with T.L. Kienlin and the University of Cologne.

Table 1. Synoptic table with the Bronze Age multilayer settlements from the Crișuri Basin.

Multilayered settlements	Multilayered settlements known until 2013	Multilayered settlements excavated until 2013	Multilayered settlements excavated 2014-2018	Multilayered settlements in 2018	Geophysically investigated	Investigated by drilling	Aerial photography	C 14 data
Andrid	Andrid			Andrid	Andrid	Andrid	Andrid	
Ateaș	Ateaș			Ateaș		Ateaș	Ateaș	
Cardea	Cardea							
Căluș	Căluș							
Crestur	Crestur			Crestur	Crestur	Crestur		
Dindești	Dindești			Dindești	Dindești	Dindești	Dindești	
Diosig	Diosig		Diosig					
Grânceri	Grânceri							
Otomani "Cetatea de pământ"	Otomani "Cetatea de pământ"	Otomani "Cetatea de pământ"		Otomani "Cetatea de pământ"	Otomani "Cetatea de pământ"		Otomani "Cetatea de pământ"	
Otomani "Cetățuie"	Otomani "Cetățuie"	Otomani "Cetățuie"		Otomani "Cetățuie"	Otomani "Cetățuie"		Otomani "Cetățuie"	
Pir	Pir	Pir		Pir	Pir	Pir	Pir	
Pișcolt	Pișcolt			Pișcolt	Pișcolt	Pișcolt	Pișcolt	
Roșiori	Roșiori	Roșiori		Roșiori	Roșiori			
Salonta "Testhalom"	Salonta "Testhalom"	Salonta "Testhalom"						
Salonta "Bogd"	Salonta "Bogd"			Salonta "Bogd"				
Săcuieni	Săcuieni	Săcuieni		Săcuieni	Săcuieni		Săcuieni	
Sălacea	Sălacea	Sălacea		Sălacea	Sălacea		Sălacea	
Sântana	Sântana			Sântana				
Sântandrei	Sântandrei							
Sântion	Sântion	Sântion	Sântion	Sântion	Sântion	Sântion	Sântion	Sântion (1)
Socodor	Socodor	Socodor		Socodor				
Șiclău	Șiclău							
Șilindru	Șilindru							
Șimian	Șimian							
Petreu	Petreu							
Tarcea "Dealul de mijloc"	Tarcea "Dealul de mijloc"							
Tarcea "Dealul mare"	Tarcea "Dealul mare"							
Tarcea "Holmul mare"	Tarcea "Holmul mare"							
Tobollu	Tobollu	Tobollu	Tobollu	Tobollu	Tobollu	Tobollu	Tobollu	Tobollu (3)
Tulca	Tulca							
Vârșand	Vârșand	Vârșand	Vârșand					
Vâșad "Cartierul Igișilor"	Vâșad "Cartierul Igișilor"							
Vâșad "Dealul vîilor"	Vâșad "Dealul vîilor"							
Total	31 (from 46 in vest Romania)	11	3	20	12	7	11	2



1



2



3



4



5



6

Figure 4. 1) View of Tulca pseudo site; 2) view of an eroded profile at the Diosig "*Colonie = Colony*" site; 3) view of the "*Cartierul țiganilor = Gypsy quarter*" site in Vășad; 4) view of an eroded profile at the "*Gypsies quarter*" site in Vășad; 5) view of the Cadea "*Koposz domb*" site; view from the site of Cadea "*Koposz domb*".



1



2



3



4

Figure 5. 1) The location of Salonta "Bogd" and "Testhalom" site; 2) Salonta "Bogd" tell marking on the second military map; 3) location of the "Bogd" Salonta tell on Google Earth; 4) view of the Salonta "Bogd" tell

Some of the multilayered settlements were photographed again, magnetic surveys were carried out, and the excavations at Toboliu tell were continuing through new findings (Lie et al. 2018).

It is well known, that there is a fairly controversial debate about the territory of a tell (Kienlin 2015; Gogâltan 2016; Kienlin et al. 2018; Jaeger et. al. 2018). That is why our project proposed excavations at two, geographically close tells seeking answers about their connections and chronology. The tells of Toboliu and Sântion were pointed out, which are at about 7 km in straight line from each other. About the results at the tell of Toboliu new informations are presented in this volume (Lie et al. 2018) therefore we shall give here the results of the Sântion investigations.

The Sântion site is located on the bank of the Crişul Repede river, between Oradea and the border to Hungary (Fig. 7/1). In 1954, some archaeological surveys were made and a report was published in the following year (Fig. 7/2). Unfortunately, the site was 1932 partially destroyed at its southern part by the river, further devastations followed in the 70's of the last century, when a road was cut through the core of the tell (Fazecaş 2014a, with old references). The situation is illustrated on topographic survey maps from that time and can even be seen on recent aerial images (Fig. 7/3–7).

Despite to all these destructions that have happened over time, the site is well preserved and protected as a historical monument. The mound itself is owned by the local municipality, thus making long-term archaeological investigations possible (Fig. 7/5). At first, aerial photographs were taken and a digital terrain model (Fig. 7/4, 6–7) was created.

The magnetic survey on the tell did not offer the expected results due to the strong anomalies, that were caused by the industrial constructions erected in the communist years. Apart from the tell, no archaeological traces were identified, probably because a watercourse was nearby. Also, other non-invasive methods were tested. By ground-penetrating radar measurements an Early Medieval church with a size of 10x5 m was identified (Fig. 8/1). The graves discovered in 1954 date back to the end of the 11th century AD (Fig. 8/2–3).

The archaeological field work on the Sântion site started in August 2015 (Fazecaş et al. 2016) by opening two units. Trench S I (6x3 m) was opened – due to methodological considerations – in the central area of the mound. Here, traces of the medieval monastery mentioned by historical documents from 1215 AD were revealed, as well as a brick cist containing two graves (Fig. 8/2). The excavations in SI were stopped just above the Bronze Age layer (Fig. 8/3).

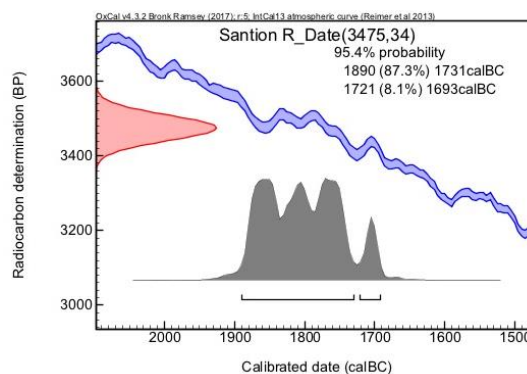


Figure 9. AMS date from Sântion.

In S II (6x3 m), located south of S I, on the southern side of the tell towards the Crişul Repede river, a medieval feature (very probably a ditch) disturbed the Bronze Age layers (Fig. 8/4). The layers were preserved only partially. The first Bronze Age layer was reached at a depth of ca. 1 m (Fig. 8/5). A bone sample for AMS dating yielded a result around 1889–1693 (cal BC 2 σ) and was associated with ceramic material specific to the Otomani II style (Fig. 9). The most interesting structure investigated during this campaign was Cx 12, which can be described as a surface with imprints of wide wooden boards (Fig. 8/6). A similar discovery was made in the tell settlement in Békés (Banner & Bóna 1974: 20–29, Abb. 8a–d, 31–41, Abb. 12–15), Bakonszeg-Kádárdomb (Máthé 1988: 29, Fig. 7), Gáborján-Csapszékpart (Máthé 1988: 38, Fig. 19), Vráble (Bátora & Tóth 2015: 19–20) or Toboliu (Lie et al. 2018).

In the 2016 campaign, the investigations were continued only in trench S II. As in the previous year (Cx 12), a wooden floor was uncovered, as part of an dwelling erected at the surface (Cx 16).



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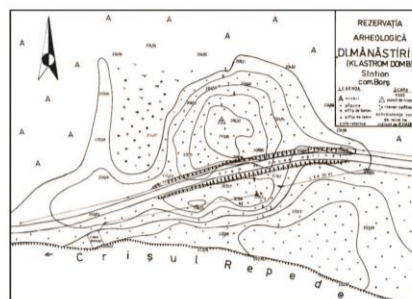
Figure 6. 1) Location of Petreu "Zongora" site; 2) view of Petreu "Zongora" site; 3–4) aerial view of the Ateaș tell; 5) View over Ateaș tell area.



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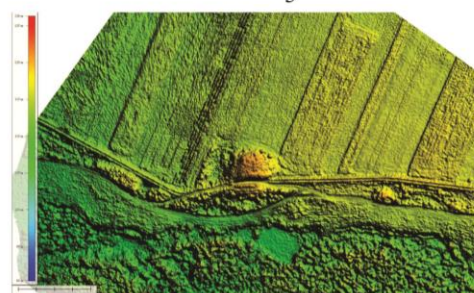
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Figure 7. 1) Location of Sântion "Dealul Mănăstirii = Monastery Hill" site; 2) Picture from 1954 campaign of research conducted by Alexandrina Alexandrescu at Sântion "Dealul Mănăstirii"; 3) ordnance survey of Sântion "Dealul Mănăstirii" site done by Hadnagy A. in the late 70's of the last century; 4) picture of the wider road crossing the site from Sântion "Dealul Mănăstirii"; 5) view from the northeast to the Sântion "Dealul Mănăstirii" tell; 6) aerial view of the Sântion "Dealul Mănăstirii" tell; 7) digital surface model in the area of Sântion "Dealul Mănăstirii" site.

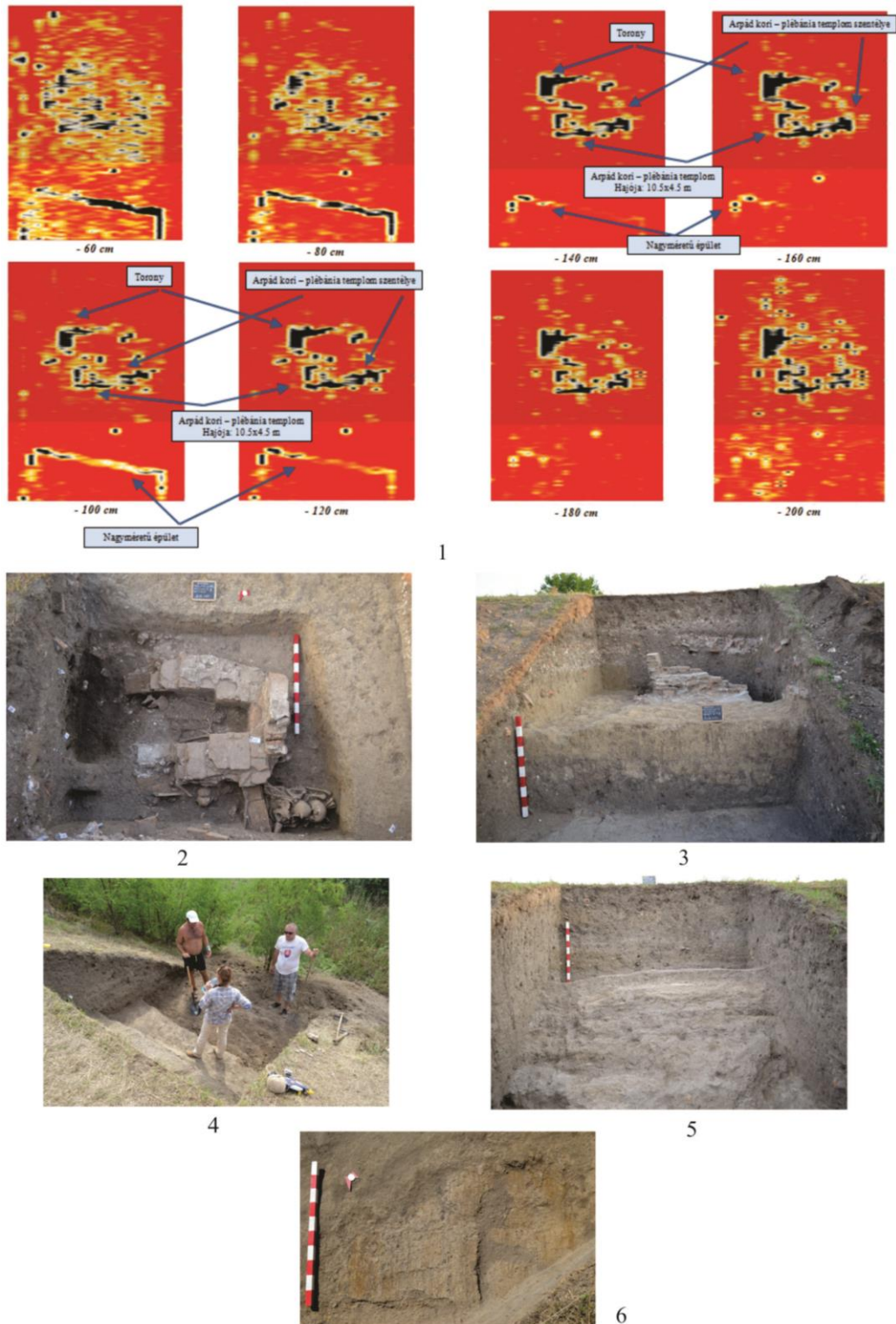


Figure 8. 1) The results of geo-radar measurements indicating the existence of the early medieval church at Sântion "Dealul Mănăstirii" site; 2–3) view of SI/2015 unit in the Sântion "Dealul Mănăstirii" site; 4–5) view of SII/2015 unit in the Sântion "Dealul Mănăstirii" site; 6) detail with the imprint of a wooden plank unearthed in SII/2015 unit, in the Sântion "Dealul Mănăstirii" site.

The floor was made of wooden boards up to 30 cm thick, which had the same orientation as the boards revealed in Cx 12. This fact suggests a potential development of the same structure (Fazecaș et al. 2017). 2017 campaign led to the discovery of other floors made of timber floor.

As stated above, the research of the Bronze Age tells in the Crișuri Basin will continue and the discoveries so far are subject of two doctoral theses. One on the Bronze Age Habitat in Crișuri Basin that will be presented next year by Grăia Fazecaș at Timișoara University and another by Marian Lie on Toboliu's tell under the supervision of T. L. Kienlin at the University of Cologne.

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References

- Andrișoiu, I. 1992. *Civilizația tracilor din sud-vestul Transilvaniei în epoca bronzului*. București.
- Bader, T. 1978. *Epoca bronzului în nord-vestul Transilvaniei. Cultura pretracică și tracică*. București, 1978.
- Banner J. 1955. Research on the Hungarian Bronze Age since 1936 and the Bronze-Age Settlement at Békés-Várdomb. *Proceedings of the Prehistoric Society*, XXI, 1955, 123–143.
- Banner J., Bóna I. 1974. *Mittelbronzezeitliche Tell-Siedlung bei Békés*. Budapest.
- Bátora, J. 2013. The Settlement Structure Problem and the end of Fortified Settlements from the Final Period of Early Bronze Age in Slovakia. In: Meller, H., Bertemes, F., Bork, H.-R., Risch, R. (eds.), *1600 – Kultureller Umbruch im Schatten des Thera-Ausbruchs?* 4. Mitteldeutscher Archäologentag vom 14. bis 16. Oktober 2011 in Halle (Saale). Halle (Saale), 373–386.
- Bátora, J., Tóth, P. 2015. Vráble “Fidvár” – arheologické nálezisko európskeho významu. In: Valach, J. (ed.), *Vráble príspevky k histórii mesta*. Vráble, 2015, 4–33.
- Bóna I. 1975. *Die mittlere Bronzezeit Ungarns und ihre südöstlichen Beziehungen*. Budapest.
- Bóna I. 1992. Bronzezeitliche Tell-Kulturen in Ungarn. In: W. Meier-Arendt (Hrsg.), *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt am Main, 9–39.
- Chidioșan, N. 1980. *Contribuții la istoria tracilor din nord-vestul României. Așezarea Wietenberg de la Derșida*. Oradea.
- Csányi M., Tárnoki J. 2003 The Middle Bronze Age Population of the Berettyó-Körös Region: The Gyulavarsánd Culture. In: Visy Zs., Nagy M. (eds.), *Hungarian archaeology at the turn of the millennium*, Budapest, 158–160.
- Dani J., P. Fischl K., Kulcsár G., Szeverényi V., Kiss V. 2016 Visible and invisible inequality: changing patterns of wealth consumption in Early and Middle Bronze Age Hungary. In: Meller, H., Hahn, H. P., Jung, R., Risch, R. (Hrsg.), *Arm und Reich – Zur Ressourcenverteilung in prähistorischen Gesellschaften. Rich and Poor - Competing for resources in prehistoric societies*. 8. Mitteldeutscher Archäologentag vom 22. bis 24. Oktober 2015 in Halle (Saale). Halle, 219–241.
- Fazecaș, G. 1997 Aspecte privind așezările culturii Otomani de pe teritoriul României. *Crisia*, XXVI–XXVII, 1996–1997, 51–65.
- Fazecaș, G. 2010 Așezarea aparținând epocii bronzului de la Salonta - Testhalom. Sondajul arheologic din anul 1958. In: H. Pop, H., Bejinariu, I., Băcuc, S., Băcuc, D. (coord.), *Identități culturale și regionale în context european. Studii de arheologie și antropologie. In memoriam Alexandri V. Matei*, Zalău, 111–121.
- Fazecaș, G. 2014a. Sântion “Dealul Mănăstirii = Klastrom domb”, Bihor County. In: Gogâltan et al. 2014, 235–241.
- Fazecaș, G. 2014b. Tulca “Holomb”, Bihor County. In: Gogâltan et al. 2014, 272–273.
- Fazecaș, G., Lie, M. A. 2018. Determinarea suprafeței sitului de epoca bronzului de la Toboliu-Dâmbu Zănăcanului. In: *Crisia*, XLVIII, in press.
- Fazecaș, G., Gogâltan, Fl. 2018. Situl aparținând epocii bronzului de la Diosig “Colonie”. O reevaluare. In: *Crisia*, XLVIII, in press.
- Fazecaș, G., Ignat, A., Demjén A., Gogâltan, Fl. 2016. Sat Sântion, com. Borș, jud. Bihor, Punct: Dealul Mănăstirii = Klastrom domb. In: *Cronica cercetărilor arheologice. Campania 2015*. A L-a sesiune națională de rapoarte arheologice Târgu-Jiu, 26 – 28 mai 2016.

- București, 183–184.
- Fazecaș, G., Ignat, A., Gogâltan, Fl. 2017. Sântion, com. Borș, jud. Bihor, Punct: Dealul Mănăstirii = Klastrom domb. In: *Cronica cercetărilor arheologice. Campania 2016. A LI-a sesiune națională de rapoarte arheologice Muzeul Național de Istorie al României, București 24 – 27 mai 2017.* București, 118–119.
- P. Fischl, K. 2003. A Perjámos-kultúra települései. *A Móra Ferenc Múzeum Évkönyvei. Studia Archaeologica*, IX, 111–120.
- Gancarski, J. 2002. Kultura Otomani-Füzesabony po połnocnej stronie Karpat. The Otomani-Füzesabony Culture on the Northern Side of the Carpathians. In: Gancarski, J. (red.), *Między Mykenami a Bałtykiem. Kultura Otomani-Füzesabony. Between Mycenae and the Baltic Sea. The Otomani-Füzesabony Culture*, Krosno, Warszawa, 103–124.
- Găvan, Al. 2014. Vârșand “Movila dintre vii = Lapóshalom”, Arad County. In: Gogâltan et al. 2014, 274–285.
- Găvan, Al., Ignat, A. 2014. Pecica “Șanțul Mare = Nagysánc”, Arad County. In: Gogâltan et al. 2014, 148–167.
- Ghemiș, C. 2014. Ateaș “Holumbul Voghiului”, Bihor County. In: Gogâltan et al. 2014, 31–34.
- Gogâltan, Fl. 1999. The Southern Border of the Otomani Culture. *A Móra Ferenc Múzeum Évkönyvei. Studia Archaeologica*, V, 51–76.
- Gogâltan, Fl. 2004. Bronzul mijlociu în Banat. Opinii privind grupul Cornești-Crvenka. In: Rogozea, P., Cedric, V.ă (red.), *Festschrift für Florin Medeleț. Zum 60. Geburtstag.* Timișoara, 79–153.
- Gogâltan, Fl. 2014a. Bronze Age tell, tell-like and mound-like settlements on the eastern frontier of the Carpathian Basin. History of research. In: Gogâltan et al. 2014, 13–24.
- Gogâltan, Fl. 2014b. Cadea “Dealul chel = Kopszdomb”, Bihor County. In: Gogâltan et al. 2014, 41–42.
- Gogâltan, Fl. 2014c. Diosig “Colonie = Lângă colonie”, Bihor County. In: Gogâltan et al. 2014, 95–97.
- Gogâltan, Fl. 2015. The Early and Middle Bronze Age Chronology on the Eastern Frontier of the Carpathian Basin: Revisited after 15 Years. In: R.E. Németh R. E., Rezi B. (eds), *Bronze Age Chronology in the Carpathian Basin.* Proceedings of the International Colloquium from Târgu Mureș 2–4 October 2014. Cluj-Napoca, 2015, 53–95.
- Gogâltan, Fl. 2016. Building power without power? Bronze Age fortified settlements on the Lower Mureș Basin. In: Gogâltan, Fl., Cordoș, C. (eds.), *Prehistoric settlements: social, economic and cultural aspects. Seven studies in the Carpathian area.* Cluj Napoca, 87–113.
- Gogâltan, Fl., Fazecaș, G. 2014. Vășad “Cartierul țiganilor = Cigány tanya = Cigánynegyed = Groapa de lut = La nord de sat”, Bihor County. In: Gogâltan et al. 2014, 286–288.
- Gogâltan, Fl., Németh R. E., Apai E. 2011. Eine rituelle Grube bei Vlaha, Gemeinde Săvădisla (Kreis Cluj). In: Berecki S, Németh R. E., Rezi B. (ed.), *Bronze Age Rites and Rituals in the Carpathian Basin.* Proceedings of the International Colloquium from Târgu Mureș 8–10 October 2010. Târgu Mureș, 163–183.
- Gogâltan, Fl., Cordoș, C., Ignat, A. (ed.), 2014. *Bronze Age tell, tell-like and mound-like settlements at the eastern frontier of the Carpathian Basin. History of research.* Cluj-Napoca.
- Horedt, K., Rusu, M., Ordentlich I. 1962. Săpăturile de la Otomani. *Materiale și Cercetări Arheologice*, VIII, 317–324.
- Jaeger, M. 2016. *Bronze Age Fortified Settlements in Central Europe.* Poznań.
- Jaeger, M., Kulcsár G., Taylor, N., Staniuk, R. (eds.), 2018. *Kakucs-Turján a Middle Bronze Age multi-layered fortified settlement in Central Hungary.* Bonn.
- Kacsó, C. 1999. Die Endphase der Otomani-Kultur und die darauffolgende kulturelle Entwicklung im Nordwesten Rumäniens. In: Gancarski J. (red.), *Kultura Otomani-Füzesabony – rozwój, chronologia, gospodarka.* Materiały z konferencji archeologicznej Dukla, 27–28.11.1997. *Die Otomani- Füzesabony-Kultur – Entwicklung, Chronologie, Wirtschaft.* Materialien der archäologischen Konferenz Dukla, 27.–28. 11.1997. Krosno, 85–112.
- Kienlin, T. L. 2015. *Bronze Age Tell Communities in Context. An Exploration Into Culture, Society and the Study of European Prehistory. Part 1: Critique. Europe and the Mediterranean.* Oxford.
- Kienlin, T. L., Marta, L. 2014. New Geophysical Data on the Internal Structure of the Gáva Sites of Andrid-Corlat and Căuaș-Sighetiu in North-Western Romania. In: Kienlin, T. L., Valde-Nowak, P., Korczyńska, M., Cappenberg, K., Ociepa, J. (eds.), *Settlement, Communication and Exchange around the Western*

- Carpathians. International Workshop held at the Institute of Archaeology, Jagiellonian University, Kraków, October 27–28, 2012.* Oxford, 381–403.
- Kienlin, T. L., P. Fischl K., Marta, L. 2017. Exploring Divergent Trajectories in Bronze Age Landscapes: Tell Settlement in the Hungarian Borsod Plain and the Romanian Ier Valley. In: *Ziridava. Studia Archaeologica*, 31, 93–128.
- Kienlin, T. L., P. Fischl K., Pusztai T. 2018. *Borsod Region Bronze Age Settlement (BORBAS). Catalogue of the Early to Middle Bronze Age Tell Sites Covered by Magnetometry and Surface Survey.* Bonn.
- Lie, M. A., Cordoș, C., Găvan, Al., Fazecaș, G., Kienlin, T. L., Gogâltan, Fl. 2018 An overview of the Bronze Age tell-settlement in Toboliu (Bihar County). *Gesta XVII/2*, 63–76.
- Sz. Máthé M. 1988. Bronze Age tells in the Berettyó valley: In: Kovács T., Stanczik I. (ed.), *Bronze Age Tell Settlements on the Great Hungarian Plain, I.* Budapest, 27–122.
- Molnár Zs. 2014. *Contribuții la cunoașterea culturii Otomani din nord-vestul Transilvaniei. Ceramică și metal.* Cluj-Napoca.
- Németh R. E. 2015 Contribuții privind perioada târzie a epocii bronzului în podișul Transilvaniei. Așezarea de la Vlahă-Pad. Iași, (unpublished PhD).
- Nestor, J. 1933. Der Stand der Vorgeschichtsforschung in Rumänien. *Bericht der Römisch-Germanischen Kommission des Deutschen Archäologischen Instituts*, 22, 1932, 11–181.
- Nicodemus, A., O’Shea, J. M. 2015. From relative to absolute: the radiometric dating of Mureș Culture ceramics at Pecica-Șanțul Mare. In: Forțiu, S., Stăvilă, A. (ed.), *ArheoVest, Nr. III: [Simpozion ArheoVest, Ediția a III-a:] In Memoriam Florin Medeleț, Interdisciplinaritate în Arheologie și Istorie*, Timișoara, 28 noiembrie 2015, Szeged, 691–702.
- Nicodemus, A., Motta, L., O’Shea, J. M. 2015. Archaeological Investigations at Pecica “Șanțul Mare” 2013–2014. In: *Ziridava. Studia Arheologica*, 29, 105–118.
- Ordentlich, I. 1970. Die chronologische Gliederung der Otomani-Kultur auf dem rumänischen Gebiet und ihre wichtigsten Merkmale. *Dacia N.S.*, XIV, 83–97.
- I. Ordentlich, Aria de răspândire a culturii Otomani de pe teritoriul României. *Marmația*, II, 1971, 19–35.
- Petric, P. I. 1944. Socodor “Căvăjdia”, Arad County. In: Gogâltan et al. 2014, 247–257.
- Popescu, D. 1944. Die frühe und mittlere Bronzezeit in Siebenbürgen. București.
- Popescu, D. 1956a. Cercetări arheologice în Transilvania. I. Sondajele de la Socodor –1948 – *Materiale și Cercetări Arheologice*, II, 43–88.
- Popescu, D. 1956b Cercetări arheologice în Transilvania. II. Săpăturile de la Vârșand – 1949 – *Materiale și Cercetări Arheologice*, II, 89–152.
- Roman, P., Némethi, I. 1990. Date preliminare asupra cercetărilor arheologice de la Carei-„Bobald”. *Thraco-Dacica*, XI, 39–47.
- Roska M. 1941. A gyulavarsándi (Arad M.) laposhalom rétegtani viszonyai. *Folia Archaeologica*, 3–4, 1941, 45–61.
- Roska M. 1942. *Erdély régészeti repertórium I. Őskor.* Kolozsvár.
- Rotea, M. 1994. Penetrația culturii Otomani în Transilvania. Între realitate și himeră. *Apulum*, XXXI, 39–57.
- Sava, V. 2014. Sântana “La nord de oraș”, Arad County. In: Gogâltan et al. 2014, 231–232.
- Sava, V. 2015. *Neolithic and Eneolithic in the Lower Mureș Basin.* Cluj Napoca.
- Sava, V., Petric, P., Gogâltan, Fl. 2019 *Tell-ul din epoca bronzului de la Socodor „Căvăjdia”. The Bronze Age tell from Socodor „Căvăjdia”.* Cluj Napoca, 2019, in press.
- Soroceanu, T. 1991. *Studien zur Mureș-Kultur.* Buch am Erlbach, 1991.
- Szabó J. J. 1999. *Früh- und mittelbronzezeitliche Gräberfelder von Battonya.* Budapest.
- Vladár, J., Oravkinová, D. 2015. Tezaurăcia bronzových a zlatých predmetov na opevnenom sídlisku v Spišskom Štvrtku. In: Batora, J., Tóth P. (ed.), *Keď bronz vystriedal med’. Zborník príspevkov z XXIII. medzinárodného symposia „Staršia doba bronzová v Čechách, na Morave a na Slovensku“* Levice 8.–11. októbra 2013. Bratislava, Nitra, 433–452.
- Vulpe, Al. 2001 Perioada mijlocie a epocii bronzului. In: Petrescu-Dîmbovița, M, Vulpe, Al. (coord.), *Istoria românilor. Vol. I. Moștenirea timpurilor îndepărtate*, București, 247–272.