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Contacts between south-eastern Transylvania and the Upper Tisza Basin during the Middle and the Late Bronze Age

József Puskás[1]*, Zoltán-József Botha[2]

Abstract. The present study deals with a few older discoveries that have been unpublished until now or have been wrongly interpreted. These objects contribute to a better understanding of contacts between southeastern Transylvania and the Upper Tisza Basin during the Middle Bronze Age (MBA) and Late Bronze Age (LBA). Two pottery fragments were discovered at the site Reci-*Telek* and belong to the Suciu de Sus culture. Most probably these can be linked to the MBA settlement of the local Wietenberg culture, to its C/III phase of evolution. For the third sherd from Reci we have not yet found a good analogy, but we believe it belongs to the cultural milieu of the Upper Tisza Basin or the eastern part of the Great Hungarian Plain. Another sherd from the LBA site at Peteni-*Alsóhatár* can probably be linked to the early Noua settlement. Based on the decoration this pottery fragment very likely comes somewhere from the Upper Tisza Basin, probably from the late Otomani, Suciu de Sus or Cehăluț milieu. An axe with disc and spike was very likely to have been discovered in the area of the Odorheiu Secuiesc town and represents another argument for contacts between the two areas. The main distribution area of this axe type was the region of the Suciu de Sus and the Lăpuș cultures. The distribution of the imported objects in the neighbouring territories cover a much larger area, they also appear east of the Carpathians. Another similar axe in south-eastern Transylvania is known from Zagon. Both were goods imported by the Noua communities from north-western Transylvania or the Upper Tisza Basin, an area rich in raw materials like gold, copper and salt.
Keywords: Wietenberg culture, Suciu de Sus culture, *Nackenscheibenaxt*, cultural connections, imports.

Contacte între sud-estul Transilvaniei și bazinul superior al Tisei în perioadele mijlocie și târzie ale epocii bronzului. Studiul de față discută câteva descoperiri mai vechi nepublicate sau interpretate greșit, care contribuie la o înțelegere mai bună a zonei sud-estice a Transilvaniei și bazinul Tisei superioare. Este vorba de câteva fragmente de vase care după decor și modul de executare a decorului pot fi interpretate ca importuri. Două fragmente de vase ce au fost descoperite în situl de la Reci-*Telek* pot fi atribuite culturii Suciu de Sus și aduse în relație cu așezarea din bronzul mijlociu aparținând culturii Wietenberg C/III. Un al treilea fragment din situl respectiv este greu de atribuit vreunei culturi, dar după părerea noastră provine tot din zona

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Tisei superioare sau estul Câmpiei Maghiare. Un alt fragment provine din situl de la Peteni-*Alsóhatár*, cel mai probabil din nivelul de locuire a culturii Noua timpuriu (Noua I), nivel de asemenea reprezentat și prin fragmente de vase cu decor specific. Fragmentul de vas considerat import nu a putut fi atribuit cu certitudine vreunei culturi, dar după decor provine din vestul Transilvaniei sau din bazinul superior al Tisei, undeva din mediul culturiilor Otomani târziu, Suciu de Sus sau a grupului Cehăluț. Tot în categoria pieselor de import poate fi inclus un topor cu disc și spin descoperit probabil în zona orașului Odorheiu Secuiesc. Obiectul este un alt argument în favoarea contactelor între cele două regiuni ale Transilvaniei. Acest tip de topor este răspândit mai ales pe teritoriul culturilor Suciu de Sus și Lăpuș, dar ca importuri apare pe o arie mult mai mare, ajungând și pe teritoriile situate la est de Carpații Răsăriteni. În sud-estul Transilvaniei un topor de acest tip mai este cunoscut la Zagon, ambele piese pot fi considerate ca importuri în mediul culturii Noua. Cel mai probabil aceste contacte pot fi legate de resursele naturale bogate precum aurul, cuprul și sarea, situate în vestul și nord-vestul Transilvaniei, respectiv în bazinul superior al râului Tisa.
Cuvinte cheie: cultura Wietenberg, cultura Suciu de Sus, *Nackenscheibenaxt*, legături culturale, importuri.

.....

Introduction

South-eastern Transylvania has a specific situation in the Carpathian Basin. Being situated on the western fringe of the Eastern Carpathians, the current of human historical influences from the west (inner Transylvania and the Great Hungarian Plain) and east (Moldavia and the north-Pontic area) can be traced. The mountains were never an unpenetrable border between the two areas. At different times of history various cultural influences prevailed: during some of the Neolithic period, it was the Boian Culture; during the Copper Age, it was the Ariușd-Cucuteni Culture, later the Globular Amphorae Culture. In the Early Bronze Age, the Jigodin culture was present on both sides of the Carpathians) and in the first part of the Late Bronze Age, the Noua Culture, populations from the eastern steppe were present. During the Late Copper Age (Coțofeni culture), the Middle Bronze Age (Wietenberg Culture) and the second part of the Late Bronze Age (Gáva Culture) the prevailing cultures came mainly from the western parts of the region (Ursulescu *et al.* 2010, p. 103-205, Vulpe *et al.* 2010, p. 207-395). South-eastern Transylvania could be seen as a "contact zone" between East and West, where the above-mentioned influences were sometimes weaker, but never ceased: the continuous contacts and links were always present between the two sides of the Carpathians, proved by the numerous archaeological discoveries (Puskás 2015, p. 97-129). Probably these contacts were more intense in the area under study, the Târgu Secuiesc Basin, than in the rest of Transylvania. This was possible because the area was located on the border with present-day Moldavia. The high mountains here are less wide than, for example, in the Ciuc Basin. Also, the two areas are linked with many mountain passes, so that meeting each other on either side of the Carpathians did not take much effort.

The situation is less clear regarding contacts between the north-western parts of Transylvania and the Upper Tisza Basin. Data indicating contacts exists, but is less numerous than in the previous case. In the last few years the processing of the archaeological materials that resulted from the excavations in the 19th-20th centuries, mostly from the Târgu Secuiesc Basin, has shed new light on these contacts. The authors of the paper present some newly identified material, but some elements from earlier archaeological literature are also included.

Middle and Late Bronze Age imports in a local context

Reci (Hungarian Réty)-*Telek*, Covasna County

The site at Reci-*Telek* is mostly known for its Late Bronze Age Gáva culture discoveries, published in short reports and a small book (Székely Z. 1959, p. 196-199; Székely Z. 1960, p. 179-181; Székely Z. 1962, p. 325-328; Székely Z. 1966). During the excavations a few sherds belonging to the Wietenberg culture were also discovered, but these were only partially presented (Székely Z. 1965, p. 30-31). In 1966 Z. Székely published a nonspecific ceramic fragment from the area, considered to belong to the Gáva culture (Székely Z. 1966, p. 12, 53, Pl. V/5). The object has an excised spiral decoration (**Pl. II/1**). After a detailed analysis of the pottery recovered from the site we consider that the sherd in question does not belong to the Gáva culture, but to the Suciu de Sus culture, since it is a fragment of a small cup, most likely imported ware in the Wietenberg milieu. Two other fragments were also identified, which are not common in the area. One probably belongs to the Suciu de Sus culture as well (**Pl. II/2**), while the other has similarities with other MBA/LBA ceramics (**Pl. II/3**). Unfortunately, there is no stratigraphic context for the objects nor for the Wietenberg pottery. It was all found in one occupation layer with archaeological material belonging to different periods and cultures from the Neolithic to the Migration Period. However, the two Suciu de Sus type pottery fragments can be linked only by elimination to the Wietenberg culture[3]. For a better understanding of the MBA context we consider that it is necessary to make a complete presentation of the Wietenberg pottery discovered at the Reci-*Telek* site. Here, a total of 26 pottery fragments could be identified. From these sherds a particularly high number of vessel types could be reconstructed, many of them with two or more subvariants. The pots are represented by two main

[3] In 1965, when discussing the Noua culture of southeastern Transylvania, Z. Székely considered some of the Wietenberg pottery as "Hallstattian" (Székely Z. 1965, p. 30-31). In the Archaeological Repertory of Covasna County at the Reci-*Telek* site Noua pottery is mentioned (RepCov 1998, p. 121, nr. 455). After a complete review of the excavation material from the site it was not possible to identify a single Noua type sherd.

forms. The first has the upper part curved inwards, with a rounded body (TA2a type).[4] Three vessels were identified belonging to this type, two without decoration (**Pl. V/4**, **Pl. VII/2**), while the third has impressions on the rim, a finger-impressed rib under the rim and on the shoulder (VE2), and probably more knobs on the neck (VE10) (**Pl. III/1**). The second type is represented by pots with an S-profile. Two fragments of the type cannot be included with any variation because of their fragmentary state. One has a salient edge (**Pl. III/2**) and one is decorated with finger-impressed rib (VE2) (**Pl. VII/3**). Two other sherds belong very likely to the TA4c type, without a sharp limit between the neck and the shoulder (**Pl.V/5**, **Pl.VI/4**). The second variant (TA4e) of the S-profile vessels has the neck and shoulder delimited by small circular impressions (VD5 – **Pl. IV/3**), or by a sharp edge (**Pl. V/2**). The latter example also has a finger-impressed rib (VE2) under the neck. In the category of mugs a single fragment can be included, namely a TC2a type fragment, decorated with impressions on the shoulder and oblique grooves on the body (VA10) (**Pl. VII/4**). The bowls are represented by several forms. The two funnelled bowls identified (TD1a) are of fine paste with smoothed surface. One is decorated with impressed triangles on the rim (VD47) (**Pl. IV/4**), while the other with crosshatched triangles on the rim (VD51) and a crosshatched band on the outer part of the lip (VD4) (**Pl. VI/3**). The second bowl type also has a funnel-like shape similar to those mentioned above, but the body is slightly curved (TD1b). Both fragments from this variant had smoothed surfaces, one without decoration (**Pl. III/3**) and the second with incised meandering motifs in two rows, filled with *Zahnstempelung* technique (VC22) (**Pl. VII/1**). One fragment belonging to the type with cylindrical neck and thickened rim (TD2c) was decorated with narrow, oblique, separated grooves (VA10). Three small cups were also identified. One is a TD2a type vessel with heightened handle, without decoration (**Pl. V/3**). Two others belong to the S-profiled TD3e type. One is without decoration, with a small part of the handle visible on the body (**Pl. V/1**), while the other has wide, almost vertical grooves on the body (VA 6 – **Pl. IV/2**). Probably the fragment decorated with crosshatched bands (VD4) and rhombuses filled with oblique lines also belongs to this type (VD20) (**Pl. VI/2**). The bowls with four lobes are a characteristic form of the Wietenberg culture. N. Boroffka distinguished seven variants (Boroffka 1994, p. 154-158). The two most common forms are the TE1a and the TE1c variants, which were documented at Reci-*Telek* (**Pl. III/4**, **Pl. VI/1**), both without decorations. Two fragments cannot be assigned to any vessel form, but their specific decoration can give some clue for the dating of the site. One sherd has a grooved S-hooked

[4] For the vessel forms and decoration motifs the typology created by N. Boroffka has been used: Boroffka 1994, p. 119-194, Typentafel 1-29.

motif (VA18 – **Pl. IV/5**), while the other is a grooved spiral motif, bordered by triangular impressions (VA19 – **Pl. VII/5**). Probably the two stone sickels or knives (*Krummesser*) (**Pl. II/4-5**) can also be linked to the MBA.

2. Odorheiu Secuiesc (Hungarian Székelyudvarhely)-*Unknown finding place*, Harghita County.

In the collection of the Haáz Rezső Museum from Odorheiu Secuiesc an axe with disc and spike is present. We don't have any information about the precise context of discovery, but it was probably discovered somewhere in the administrative area of the city. The axe was casted in a bivalve mould, having a slightly curved body, with a porous structure (**Pl. VIII/2-6**). The round disc has a medium-sized spike in the middle, being surrounded by six, symmetrically-placed small knobs (**Pl. VIII/1e**). The section of the bar between the disc and the shaft has an asymmetrical hexagonal section. The shaft is wide and thickened at the ends. The cheek of the object is slightly curved "inwards", having a rectangular cross-section, but lengthwise the edge of the blade is thickened. The cheek widens slightly downwards to the blade. The blade is chipped, with small fragments missing (**Pl. VIII/4**). The casting lines were more or less removed, being visible only at the bottom of the disc and on the bar between the disc and the shaft-tube (**Pl. VIII/6**). The whole surface of the axe is covered by narrow lines, resulted very likely from a recent mechanical removal of the patina (**Pl. VIII/2-3**). Its dimensions are as follows: length: 25.8 cm; width of the blade: 3.15 cm; height of the disc with the spike: 1.83 cm; diameter of the disc: 5.5 × 5.14 cm; length of the shaft-tube: 5.65 cm; diameter of the shaft: 2.9 × 2.76 cm; diameter of the shaft-hole: 2.2 cm. Inventory number: 43 (**Pl. VIII/1-6**).

3. Peteni (Hungarian Székelypetőfalva)-*Alsóhatár*, Covasna County

The first excavations at Peteni-*Alsóhatár* were carried out in 1960, and then continued in 1978-1980. The area was used as cemetery during the 12th-13thcenturies AD, overlapping a LBA settlement with an "ash mound" (Székely Z. 1965, p. 21-32; Székely Z. 1970, p. 305, nr. 10; Székely Z., Székely Zs. 1979, p. 71-72; Székely Zs. 1980, p. 129-133; Székely Zs. 1983, p. 143; Székely Z. 2000, p. 179). During the excavations part of the "ash mound" was investigated, resulting a large quantity of pottery fragments, clay objects, animal bones and stone tools, etc. In the archaeological documentation there is also a reference to a few pits and houses, but the archaeological material was not selected by features.

Many of the pottery fragments can be attributed to the first stage of the Noua culture, but the majority belong to its classical phase (Noua II). Among the pottery fragments one potsherd was identified which is not paralleled in the local material,

but more likely came from the Upper Tisza Basin. It is a bowl made of sandy clay, with a smoothed, burnt light-brown-greyish surface. The neck and the shoulder were decorated with grain-like impressions, while the body with oblique double-incised lines. On the upper part of the neck a similar decoration technique is also present, but the fragmentary state of pottery does not allow the reconstruction of the decorative motif. Dimensions: maximum diameter: 26 cm (**Pl. IX/1**).

Discussion

For dating the MBA Wietenberg settlement (and in parallel those objects considered to have been imported) from the Reci-*Telek* site we can rely only on the pottery. Most of the vessel types presented above cover a wider time period, and cannot be attributed only to a single phase of the culture (Bălan, Quinn, Hodgings 2016, p. 71). The TA2a-type pots, the TD1a-type bowls and the TC2a-type mugs are common vessel forms of the culture from the beginning until the end (Boroffka 1994, p. 249)[5]. The decoration motifs present on these vessel forms at Reci are made of impressed (VD47) or crosshatched (VD51) triangles, belonging to the A2-C/II-III phases (Andriţoiu 1992, p. 40 (Ia10), 52; Boroffka 1994, p. 249-250; Dietrich 2014, p. 106-107; Bălan, Quinn, Hodgings 2016, p. 80). The oblique grooved motif on the mug is also a common element of the culture, without chronological value (Boroffka 1994, p. 248).[6] N. Boroffka considered that the TA4c and TA4e type S-profiled pots belong to the early phase of the culture (Wietenberg A), even though they are present in the four lower layers at Derşida (Boroffka 1994, p. 247, 249). At Rotbav these types of vessels appear in the two lower layers, representing forms of the early phase of the Wietenberg settlement (Dietrich 2014, p. 158-169). The vessels are undecorated or with simple motifs, like circular impressions (VD5) or finger-impressed ribs (VE2), which are present in all the layers at Derşida, with a higher (percentage) occurrence in the lowest level (Boroffka 1994, p. 247, 248-249; Dietrich 2014, p. 95 (AI1), 112-113 (PA3)). The TD1b-type bowls are also a common form, mostly for the A2-C (II-III) phases of the Wietenberg culture (Andriţoiu 1992, p. 36 (tip VIIa); Boroffka 1994, p. 247, 249). The fragments discovered at Reci are without decoration, or with incised meandering motif, filled with *Zahnstempelung* technique. This is considered to be a characteristic motif and decoration technique for the Wietenberg C/III type pottery (Andriţoiu 1992, p. 42, 52). Another form that also belongs to the A2-C (II-III) phase is the TD2a-type

[5] See also the typology of L. Dietrich: TA2a compared to B29bc, TD1a compared to B7d and TC2a compared to B21c. The last form appears at Rotbav only in the layers of Phase 4-5 (Noua culture): Dietrich 2014, p. 54-56, 69-70, 76, 168.

[6] I. Andriţoiu considered that the oblique grooves are common in south-western Transylvania for the end of the IIIrd and beginning of the IVth phases of evolution (Andriţoiu 1992, p. 43, Ic2).

bowl with cylindrical neck, decorated with separated, oblique grooves (VA10 – Andriţoiu 1992, p. 36 (VIIc); Boroffka 1994, p. 249). The TD2c cups are present at Derşida in the first and third layers, being included in the early phases of the Wietenberg culture (Boroffka 1994, p. 249). At the site at Rotbav-*La pârâuţ* similar cups do not appear in the Wietenberg layers (Dietrich 2014, p. 70: "*Bauform 21, variante c*"). The TD3e-type bowls are present in all the layers at Derşida, with a higher concentration in the middle layer, belonging to the Wietenberg B/II phase (Andriţoiu 1992, p. 38 (IX); Boroffka 1994, p. 247, 247-250; Dietrich 2014, p. 69). The VD 20 type decorative motif (**Pl. VI/2**), associated with one of the vessels, is present in the middle layers at Derşida, being dated to the Wietenberg A2-B phases (Boroffka 1994, p. 249). Another motif is made of almost vertical, wide grooves. The VA6 type decoration was documented only in the uppermost layer at Derşida, which was included in the Wietenberg C/III phase of evolution (Boroffka 1994, p. 247, 251). At Rotbav they appear in all three Wietenberg layers (Dietrich 2014, p. 101: AI26). The TE1a-type lobed bowls are present in the middle layers (2-4) at Derşida, with a higher number in the second and third layers (Boroffka 1994, p. 247, 249-250). At Rotbav (B5c type) they appear in the first and second phases (Dietrich 2014, p. 54). Another common form of lobed bowl is TE1c type, which at Derşida first occurs in the third layer, and remains present until the end of the settlement (Wietenberg B-C – Boroffka 1994, p. 250). Some of them are richly decorated, but examples without decoration also occur. This type of lobed bowl was not documented at Rotbav. The spiral ornamentations on the two decorated fragments (**Pl. IV/5**, **Pl. VII/5**) are present in the three upper layers from Derşida. The VA18 was included in the Wietenberg B-C periods, while the VA19 to the Wietenberg C period (Boroffka 1994, p. 250). At Rotbav a similar decoration was documented only in the second layer, associated with Wietenberg phase A2-B/II (Dietrich 2014, p. 99: AI20). The so-called *Krummessers* don't really have any chronological value. They are distributed over a wide area, from the settlements of the Monteoru (Florescu M. 1964, p. 115; Florescu M., Buzdugan 1972, p. 152, Fig. 39), Costişa (Vulpe, Zamoşteanu 1962, p. 313; Dumitroaia 2001, p. 20), Wietenberg (Boroffka 1994, 218) and Otomani (Libera *et al.* 2015, p. 77) cultures. The earliest examples are known from the Copper Age, being used during the entire Bronze Age (Florescu A. C. 1964, p. 158-160; Kopacz 2011, p. 77-81).

The small quantity and the uncertain context of the MBA material discovered at Reci allow us to draw only cautious conclusions. The Wietenberg pottery discovered here probably belongs to a settlement whose remains were disturbed by the later settlements. Some of the pottery belongs to the Wietenberg C/III period (considered also the classical phase of the culture), but much of it also can be associated with an earlier period, namely the Wietenberg A2-B/II phase

(referred by some as the early Wietenberg phase). Probably the beginning of the MBA settlement can be put in this phase, and it continued thereafter as well.

Three pottery fragments from the site at Reci-*Telek* are considered to have been imported. Two belong to the Suciu de Sus culture. The first fragment is part of a small cup (**Pl. II/1a-b**). The rim is missing, so a proper reconstruction of the form is not possible, but it was probably similar to small cups from Oarța de Sus (Kacsó 2004, p. 332, Abb. 3/5-7, 9), Petea (Marta 2009, p. 337, Pl. 60/2, 4), for example. It was decorated with the excised technique, where the spiral motif was kept in relief and the clay from the surroundings was extracted with a sharp tool. Decorating pottery with this technique is common for the second phase of the Suciu de Sus culture (Kacsó 1999, p. 98; Kacsó 2003a, p. 126; Kacsó 2004, p. 333; Kacsó 2007, p. 52),[7] but the form of the spiral is somewhat different from those examples visible on the mentioned Suciu de Sus pottery. It resembles more the spiral ornamentations on Wietenberg ceramic (**Pl. II/1b**).

The second fragment is a bag-shaped vessel, with a slightly everted rim (Pl. II/2). The form frequently appears in the Transylvanian Bronze Age pottery repertoire. The decorative motif is also common: finger impressions on the rim, and finger impressed ribs interrupted by a knob, placed under the rim. What drew our attention is the third rib on the neck of the fragment. This was not the previously known, like the common finger impressed ribs encountered on the Wietenberg vessels from the area. It looks more like a wavy rib, mentioned by L. Marta as "notched appliqué belt" (Marta 2009, p. 36). Similar ribs appear frequently on the vessels of the Suciu de Sus culture (Kacsó 1987, p. 55, Abb. 7/6; Kacsó 2003a, p. 149, Pl. VI/11; Kacsó 2004, p. 337, Abb. 6/5; Kacsó 2011, p. 201, Fig. 171/5, 233, Fig. 217/1-2), but without chronological value.

For the time being the third fragment is hard to link to any of the cultures in the Carpathian Basin (**Pl. II/3**). In the literature accessible to us until now we have not found any close analogies for the fragment. The grooved technique and motifs on the Wietenberg pottery is different, with much more shallow execution. Deep grooves (but less deep than the ones in this paper) often occur on the Otomani (Molnár 2014, p. 242, Pl. 70/5, 255, Pl. 95/1), Füzesabony (V. Szabó 2015, p. 135, III.68-69), Hatvan (V. Szabó 2015, p. 137, III.73) and even on the Suciu de Sus (Bader 1972, Pl. 9/2) type pottery. Similar deep grooves are also present on LBA pottery of the Lăpuș group (Kacsó 2001, p. 262-267, Abb. 12-17; Kacsó 2011, p. 181, Fig. 141; 182, Fig. 143). In western Transylvania these types appear in the "early Hallstatt period"[8]. It seems that the vessel (or the decoration motif) was not a local

[7] We used the chronology proposed by C. Kacsó.

[8] We would like to thank Corina Borș for kindly sharing this information.

innovation, but more likely it has its origins in the Upper Tisza Basin or beyond, on the Hungarian Plain.

The two vessel fragments discovered at Peteni-*Alsóhatár* belong to the same S-profiled bowl (**Pl. IX/1**). This type of bowl is a common form of the MBA, being present in a high number in the pottery repertoire of the Carpathian Basin cultures. On the other hand the decoration is more specific to the cultures of the Great Hungarian Plain. The double-parallel incised lines often occur on the vessels of the Otomani II-III (Németi, Molnár 2007, p. 419, 24. tábla/3, 7, 130. tábla/3; Molnár 2014, p. 200-202, 275, Pl. 135/2, 289, Pl. 164/3-6), Suciu de Sus (Bader 1978, p. 197, Pl. XLVII/7, 16, 25, Pl. XLVIII/15-16, Pl. LIV/6; Pop 2009, 122, Pl. 35/7) and Cehăluț (Bejinariu, Lakó 2000, p. 197, Fig. 13/B/2, 216, Fig. 32/B/2) cultures. Many of the decorative motifs made of double-lines form spirals or arches on the surface of the vessels, but none of them have impressed decorations. The motif on the sherd from Peteni is difficult to reconstruct because of the fragmentary state of the pottery, but it does not look like a spiral or curved ornamentation. It resembles the decoration on a cup discovered in a Wietenberg C/III pit from Șimleul Silvaniei, considered to have been Otomani-influenced (Rotea, Tecar, Tamba 2007, p. 72, 76, Fig. 1/2). A biconical pot decorated with double-line incisions is known from a pit at Geoagiu de Sus, it is considered to be a Suciu de Sus I vessel (Ciugudean 2010, p. 162, Pl. I/1). At Stolna a few fragments with similar decorations are known, two of the sherds also having impressions above the incisions, situated on the shoulder of the bowl (Daróczi-Ursuțiu 2015, Pl. 132/2403, Pl. 136/2486a-d). The complex (Cx 062) was dated to the LBA I, some of the ceramic material "indicates strong, local continuity of MBA traditions" (Daróczi-Ursuțiu 2015, p. 132), like the one pictured on Plate 136/2486a-b, which was dated to the MBA II-III (Daróczi-Ursuțiu 2015, p. 137). Another bowl fragment decorated with impressions and double-line incisions was discovered in Cx 061, dated to the LBA I-IIa (Daróczi-Ursuțiu 2015, p. 131). From the area of Suciu de Sus a similar fragment is known from Petea-*Határátkelő* (Pop 2009, p. 98, Pl. 11/8).

From the information available at present it is difficult to make any certain cultural attribution for the two fragments discovered at Peteni-*Alsóhatár*, but it seems very likely that they were made (or their technique brought) from the Upper Tisza Basin, i.e. from the environment of Otomani, Suciu de Sus or Cehăluț. The question provoked by these pieces is what was the local cultural background which brought this vessel to south-eastern Transylvania? First we should mention that no local MBA (Wietenberg) pottery was identified at the site. Most of the archaeological material belongs to the Noua culture. A few sherds were found from cups decorated with horizontal grooves on the neck and vertical grooves on the body (**Pl. IX/3-4**), or with widened handles (**Pl. IX/2**). It is hard to say

if they belong to the latest phase of the Monteoru culture, or to the first phase of the Noua culture, but the closest analogies are known from the settlements considered to belong to the Noua I phase at Gârbovăț (Florescu A. C. 1991, p. 237, Fig. 65/20, 238, Fig. 66/28), Lăteşti (Florescu A. C. 1991, p. 221, Fig. 49/3), Lichitişeni (Florescu A. C. 1991, p. 224, Fig. 52/13, 225, Fig. 53/17), Cavadineşti (Florescu A. C. 1991, p. 245, Fig. 73/9) and Ţichindeal (Popa, Boroffka 1996, p. 56, Fig. 1/4). Taking into consideration the above-mentioned information we tend to attribute the "imported" fragment to the Noua I phase. Also radiocarbon data from a crenated scapula in the site has given a result between the last quarter of the 17th century and the last decade of the 16th century BC (1616-1508 cal BC).[9] Most of the ceramic material from the site has good analogies in the classical Noua (Noua II) pottery: the cups with two handles and knobs are frequent, bag-like vessels also occur in a high number. The decorations are similar to those already known from other settlements, for example like those at Rotbav (Dietrich 2014, Tafel 119, 1-25, Tafel 125, 1-9), Albiş (Puskás 2020, 138-146, Pl. 1-9), Zoltan (Székely Z. 1978, 36, Fig. 4/1, Cavruc 2003, 110, nr. 248-249), Tăvădăreşti (Florescu A. C. 1991, 234-235, Fig. 62-63), Lechinţa de Mureş, Teaca, Brandu, Iernut (Florescu A. C. 1991, 183-184, Fig. 13-14), some of them having also radiocarbon dating, placing the settlements (at least partially) in the 15th-13th centuries BC.

The axe discovered at Odorheiu Secuiesc was first mentioned by A. Vulpe in his monograph on axes in Romania (Vulpe 1970). In Vulpe's typology it belongs to the Târguşor variant of the B3-type axes, with disc and spike (*Symmetrische Nackenscheibenäxte mit Lange Schaftröhre und Kegelförmigem Scheibendorn*) and the Nadiş subvariant with six knobs on the disc (Vulpe 1970, p. 86, 88, nr. 481). The type was discussed in detail in 1970 by A. Vulpe (Vulpe 1970, p. 66-99), later studies focusing on specific regions, types or newly discovered hoards (for examples, see: László 2013, p. 251-264; Kacsó 2015a, p. 543-558; Bejinariu, Sana 2016, p. 171-182; Puskás 2016, p. 151-165). The monography of A. Mozsolics (1973) also discusses the axes with disc and spike decorated with knobs. This type of axe was included in Type E with several variants (Mozsolics 1973, p. 18-21). The axe from Odorheiu Secuiesc fits well the characteristics of the Type Ea axes[10].

The distribution area of the B3-type axes can be particularly well defined. Axes belonging to the B3 Târguşor type, Nadiş subvariant, similar to the one discovered at Odorheiu Secuiesc, are known from the bronze hoard at Domăneşti (Vulpe 1970, Taf. 34/478-479; Mozsolics 1973, p. 278, Taf. 26/4; Petrescu-Dîmboviţa 1977, p. 191, Pl. 43/16, 192, Pl. 45/1) in north-western Romania, at Rétközberencs

[9] Details of the radiocarbon data regarding the EBA, MBA and LBA in southeastern Transylvania will be made available in a separate study.

[10] All the analogies listed below were included by Mozsolics to the Type E or Ea.

(Mozsolics 1973, p. 282, Taf. 30/1-3, 5-6), Ajak (Mozsolics 1973, p. 289, Taf. 37/2a-b, 290, Taf. 38/1-8), Pap (Mozsolics 1973, p. 296, Taf. 44/1-2), Géberjén (Mozsolics 1973, p. 310, Taf. 58/A/4-13), Csegöld (Mozsolics 1973, p. 287, Taf. 35/1), Rozsály (Mozsolics 1973, p. 342, Taf. 90/12), Tiszabecs (Mozsolics 1973, p. 304, Taf. 52/4, 6, 305, Taf. 53/1), Magosliget (Mozsolics 1973, p. 281, Taf. 29/4), Kispalád (Mozsolics 1973, p. 291, Taf. 39/7, 9) in north-eastern Hungary and at Kriva (Mozsolics 1973, p. 183; Kobal 2000, Taf. 5/5, Taf. 6/7-10; Kacsó 2018, p. 319, Abb. 5/5-10), Kvasovo II (Kobal 2000, Taf. 14/B/1-4, Taf. 15/11-13), Chudlovo (Kobal 2000, Taf. 100/9-10) in the Zakarpatska Oblast in Ukraine (**Pl.I/2**). Somehow on the periphery but still close to this agglomeration are the finds from Crăciuneşti (Nistor-Vulpe 1974, p. 6, nr. 11; Kacsó 2011, p. 146, Fig. 93/1), Nadiş (Vulpe 1970, Tafel 34/482), Chişirid (Vulpe 1970, Tafel 34/480) from Romania, Hajdúhadház (Mozsolics 1973, p. 294, Taf. 42/A/5), from Hungary, Vyšná Hutka (Novotna 1970, Taf. 22/370, Taf. 50/A/1; Mozsolics 1973, p. 135) from Slovakia. From a more distant place, outside of the main distribution area, four axes were discovered in the hoard at Kisternye, Hungary (Mozsolics 1973, p. 292, Taf. 40/1-4). The most distant objects in the Carpathian Basin, located almost at the same distance from the main distribution area, are the two axes at Horná Štubňa from Slovakia (Novotna 1970, Taf. 22/371-372; Mozsolics 1973, p. 135-136) and the stray find from Odorheiu Secuiesc (**Pl.I/2**). The easternmost objects of this type were found in the Zhuravlynka treasure in Ukraine, considered to have been traded goods or ["trophies" collected in fights] linked to the Noua-Sabatinovka communities (Klochko 2001, p. 211, 213, Fig. 84/5-6). The number of the knobs on the disc varies from 4 to 6, 7 or 8, but the most common are those with 6 knobs. Most of the knobs appear on the axes of the B3-type, but a few examples of the B4-type (Rohod and Uioara variants) are also decorated in a similar manner (Bătarci – Vulpe 1970, Tafel 39/535; Kacsó 2017, p. 31, Fig. 8/; Horoatu Cehului – Vulpe 1970, Tafel 37/516; Mozsolics 1973, p. 163; Petrescu-Dîmboviţa 1977, p. 195, Pl. 49/9; Suciu de Sus – Vulpe 1970, Tafel 38/531; Rohod – Kemenczei 1984, p. 426, Taf. CCXVI/21 and Ópályi – Vulpe 1970, Tafel 87/4; Mozsolics 1973, p. 268, Taf.16/1, 269, Taf.17/1, 8-9, 13).

Chronologically the axes with disc and spike belong to the LBA. All the axes with knob decoration on the disc were dated by Mozsolics to the Ópályi (B IVb) horizon (Mozsolics 1973, p. 21-22, 106, 116-214), corresponding to the Br D of the Romanian chronological system. Vulpe considered the Târguşor variant as the earliest of the B3-type axes (Vulpe 1970, p. 88-89). C. Kacsó sustains a similar dating, including this variant of the Uriu-Ópályi-type hoards, and considering it possible that these hoards began even earlier, in the Br C period (Kacsó 1990, p. 248; Kacsó 2015a, p. 547-548; Kacsó 2015b, p. 255; Kacsó 2018, p. 323). Both Romanian authors mention that the axes with disc and spike are still present in

smaller numbers in the Ha A1 period too (Vulpe 1970, p. 89; Kacsó 2015a, p. 548; Kacsó 2015b, p. 255; Kacsó 2018, p. 323). Discussing the Kriva-type discoveries in the Zakarpatska Oblast in Ukraine (contemporary with the Uriu-Domăneşti and Ópályi horizons) Josip Kobal dated the objects from the eponymous hoard to the Br C-D period (Kobal 2000, p. 18-19).

Conclusions

The MBA connections between the two sides of the Eastern Carpathians were obvious, since many Wietenberg pottery fragments are known from the Monteoru culture area and vice versa: Monteoru pottery fragments in the Wietenberg area (Florescu M. 1971, p. 37-73; Zaharia 1990, p. 33-37; Popescu, 2008, p. 194-201; Puskás 2015, p. 97-129; Puskás 2018, p. 217-278). As mentioned at the outset, contacts between south-eastern Transylvania and the Upper Tisza Basin are less well documented. MBA western contact must include the golden hoard discovered at Ţufalău (located in SE Transylvania), from which at least one axe made of gold very likely came from the Transylvanian Metaliferi Mountains (Hartmann 1968, p. 71-72; Hartmann 1970, p. 40-41). The hoard was dated to the Br A2 period (Gogâltan 1999, p. 207; David 2013, p. 98-99). At Racoş-*Piatra Detunată* a Suciu de Sus II sherd was found in a Wietenberg C/III context, supporting the parallel evolution of the two ceramic styles (Kacsó 2003b, p. 88, footnote 14; Kacsó 2007, p. 52). Until now this was the eastern- and southernmost point where Suciu de Sus type pottery had been discovered, now the easternmost point being at Reci-*Telek*. The pottery fragments of the Reci-*Telek* also support the previous assumptions, in particular the chronological similarities between Wietenberg III and Suciu de Sus II-type pottery.

During the first part of the LBA the Noua-type pottery became widespread in Transylvania. Here contact with the neighbouring areas is clearer at the western border, where Noua elements have been documented in the area of the Lăpuş culture (Kacsó 2020, p. 138). A synthesis between the latest phase of Wietenberg and Noua cultures is assumed to have taken place, resulting the formation of the Gligoreşti group (Gogâltan 2019, p. 51). The relevant vessel from Peteni was most likely imported from the area of the late Otomani, Cehăluţ or the Suciu de Sus cultures. From which phase of the Suciu culture is hard to answer, but more likely from its second phase (Reinecke Br B2-C). The parallels between the Cehăluţ-Hajdúbagos group and the Noua culture can be assumed (Ciugudean 2010, Fig. 4), and has recently been proven by new radiocarbon dating[11]. Later contacts from the period Br D-Ha A1 between the two areas are supported by the metal discoveries, namely by the axes with disc

[11] Kindly information by Zsolt Molnár-Kovács and Orsolya Gyurka.

and spike, such as those discovered at Odorheiu Secuiesc and Zagon (Puskás 2016, p. 153) in south-eastern Transylvania. The hoards of the Uriu-Ópályi type, which often contain axes with disc and spike, cover the area of Suciu de Sus culture, notably the succeeding Lăpuş and proto-Gáva cultures. The objects brought to south-eastern Transylvania were very likely from this area, where Noua-type pottery was present. Axes with disc and spike even appear east of the Carpathian Mountains (László 2013, p. 251-264). At Bazga-*Cetățuie* an axe was found in a layer probably belonging to Noua culture (László 2013, p. 252; Kacsó 2015a, p. 549).

Based on the scarce distribution of imported objects it looks as if these connections were made along the western margin of the Eastern Carpathian Mountains, where rich salt deposits appear on the surface. Also on this route the communities of the Late Bronze Age living in the Târgu Secuiesc Basin could procure finished products or raw material for making bronze objects from the lower Someş and the upper Tisa rivers region, where an important metallurgical center flourished.

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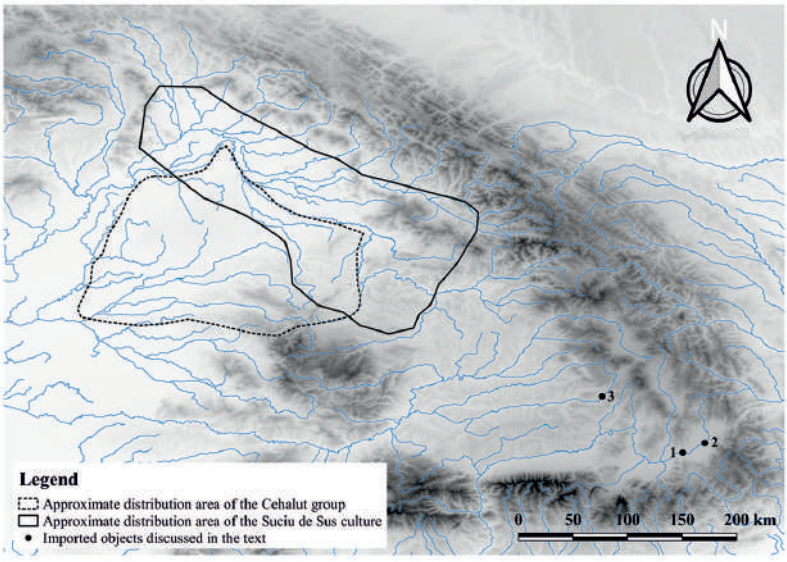
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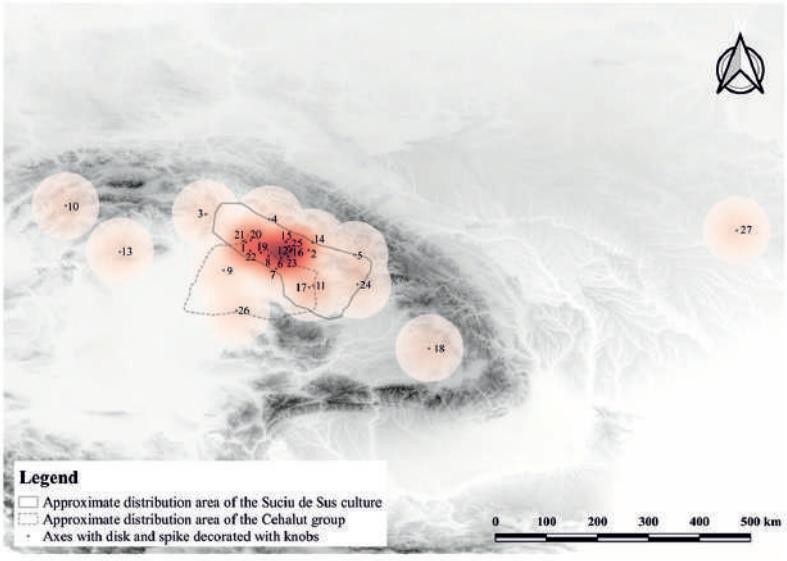
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Annexe 1: List of axes with disc and spike decorated with knobs on the disc mentioned in the text

Anexa 1: Lista topoarelor cu disc și spin decorate cu butoane menționate în text

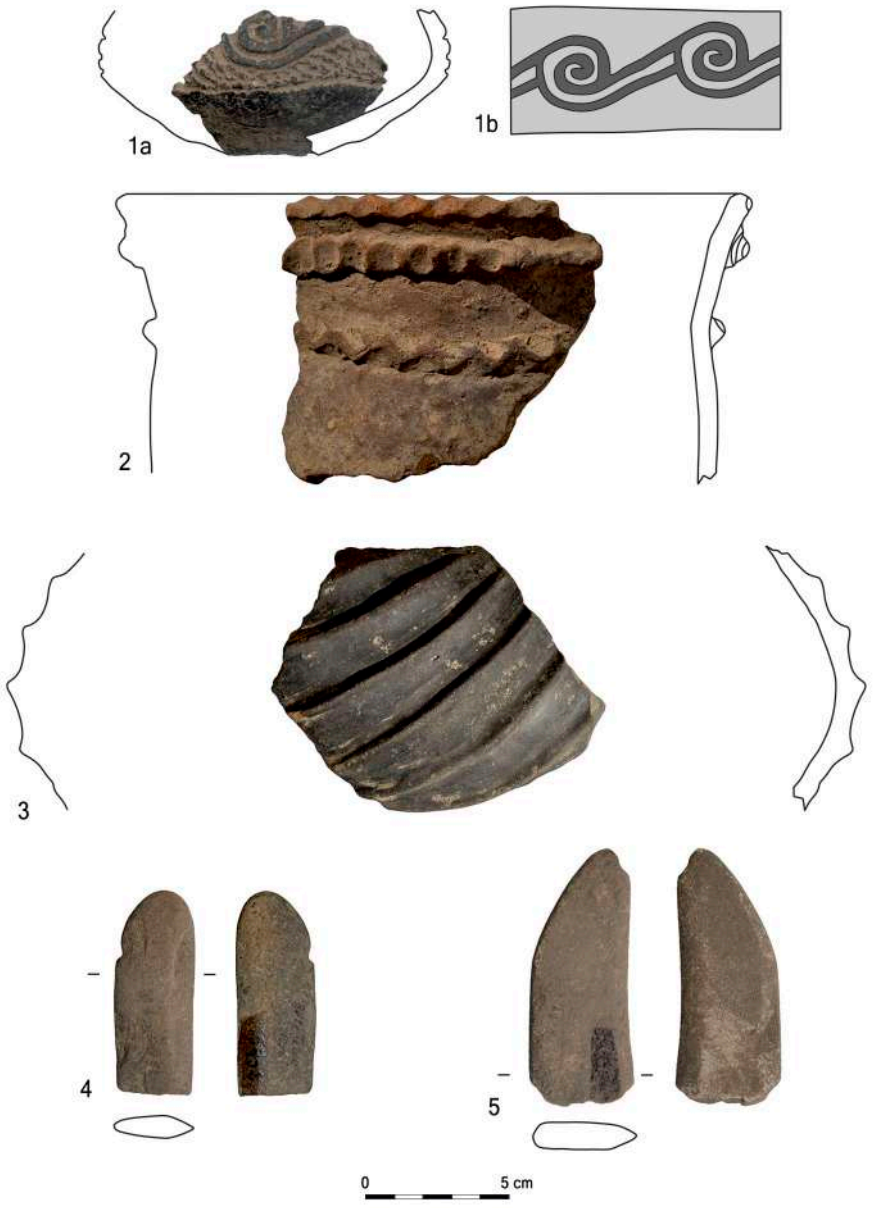
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Pl. I. 1. The imported objects discussed in the text and the distribution area of the cultures from where they could have originated. Numbering after the descriptions in the text; 2. The distribution area and the main concentration (heatmap) of the axes with disc and spike decorated with knobs. Numbering after Annexe 1

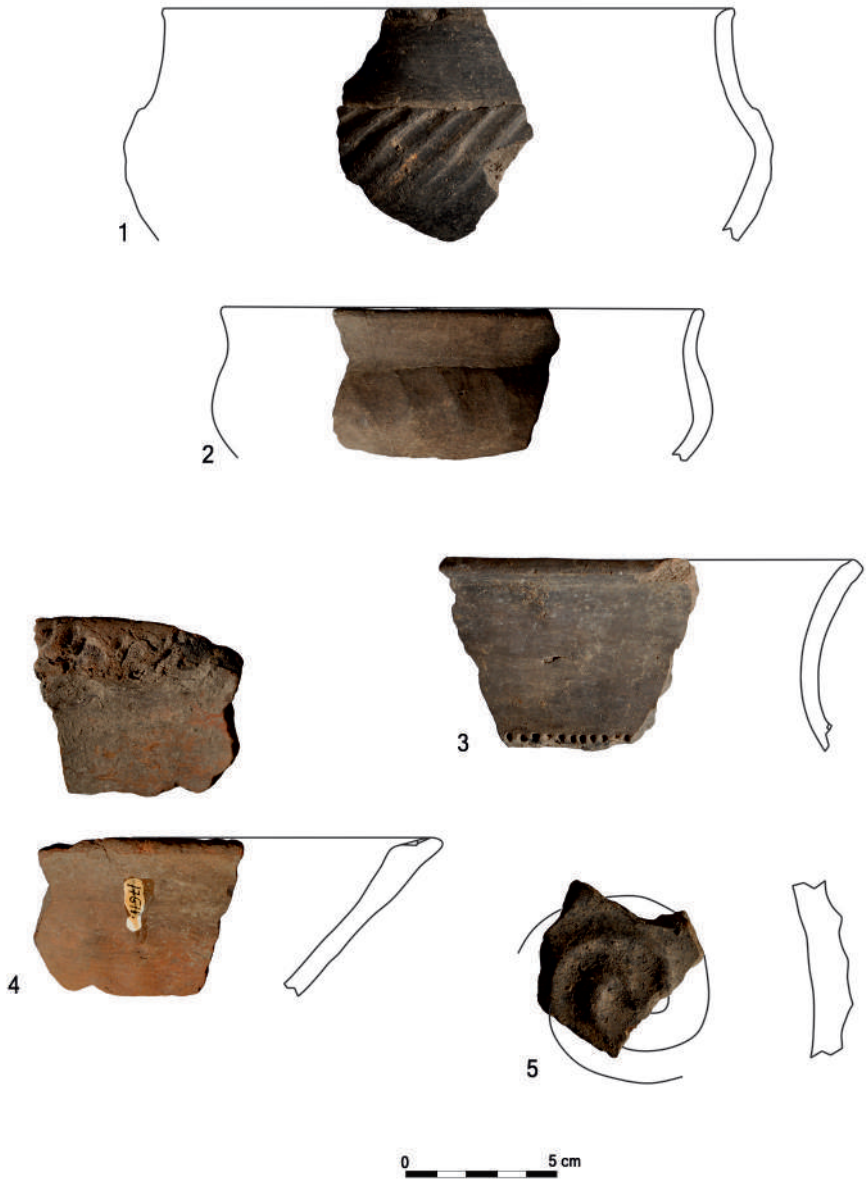
Pl. I. 1. Obiectele importate discutate în text și aria de distribuție a culturilor de unde ar putea proveni. Numerotare conform descrierilor din text; 2. Zona de distribuție și concentrarea principală (heatmap) a topoarelor cu disc și spin decorate cu butoane. Numerotare după Anexa 1



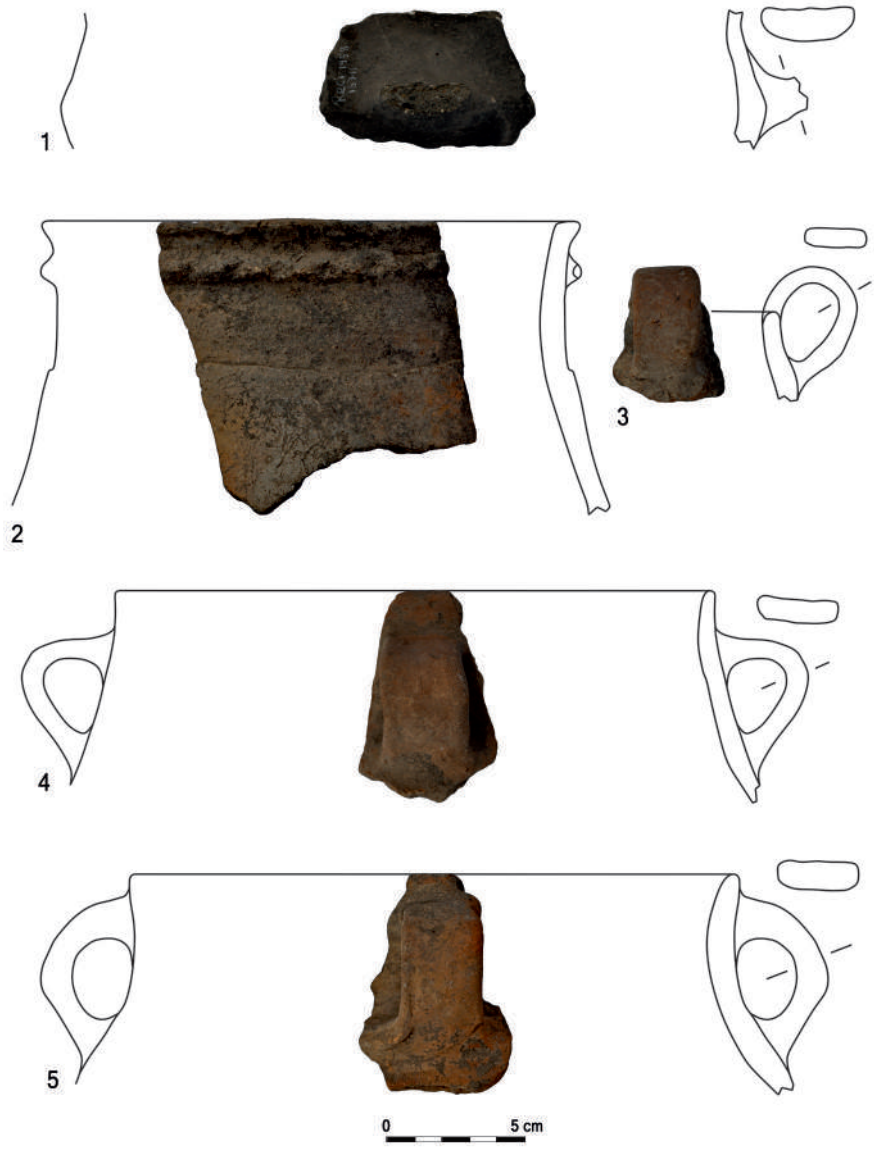
Pl. II. 1-3. Imported pottery fragments from the site at Reci-*Telek*;
4-5. Krummessers belonging to the MBA
Pl. II. 1-3. Fragmente de ceramică importate de la Reci-*Telek*;
4-5. Krummessere aparținând bronzului mijlociu



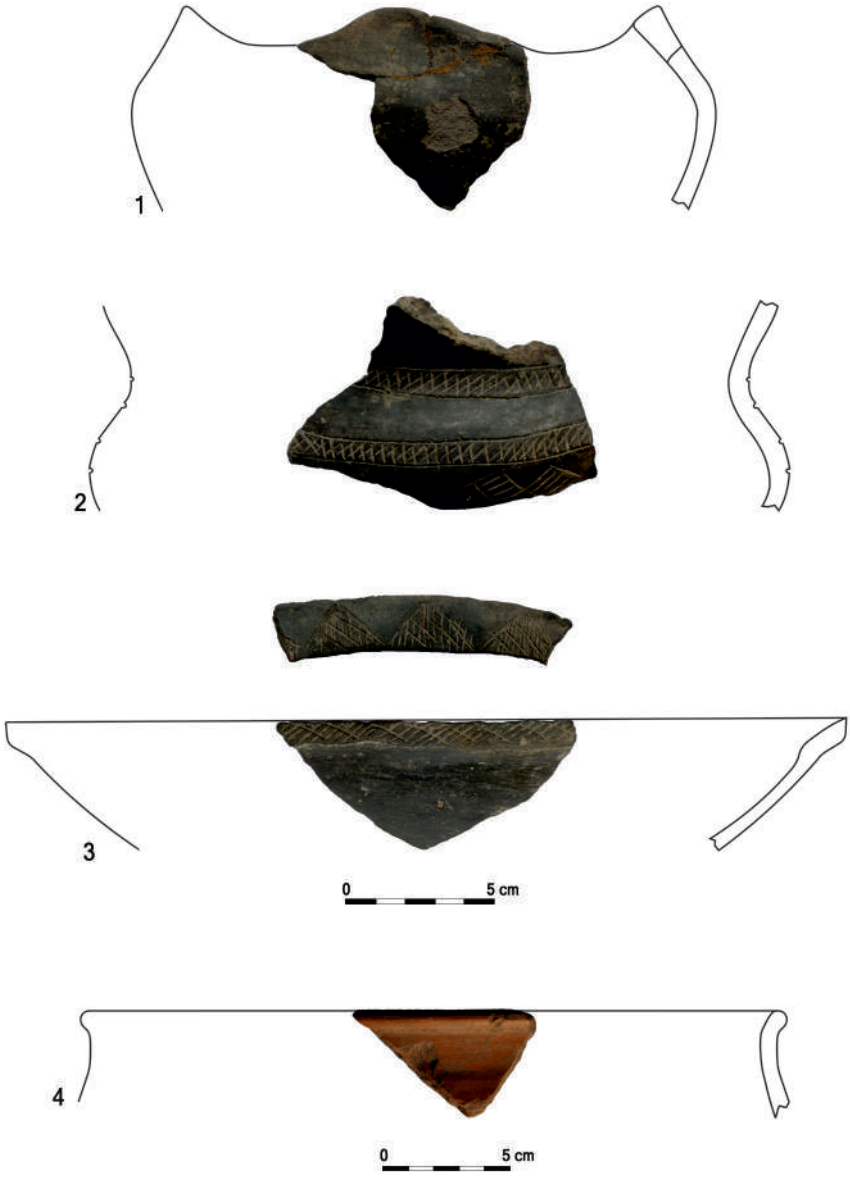
Pl. III. 1-4. MBA Wietenberg-type ceramic fragments discovered at Reci-*Telek*
Pl. III. 1-4. Fragmente ceramice de tip Wietenberg descoperite la Reci-*Telek*



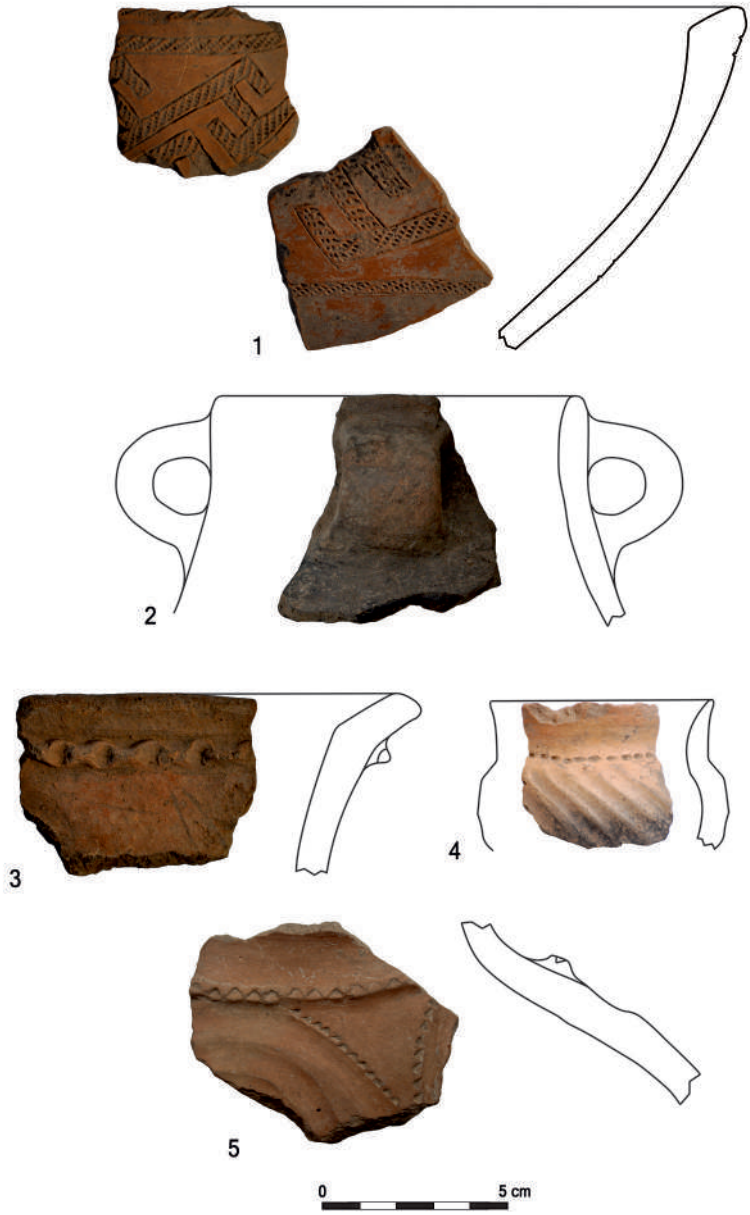
Pl. IV. 1-5. MBA Wietenberg-type ceramic fragments discovered at Reci-*Telek*
Pl. IV. 1-5. Fragmente ceramice de tip Wietenberg descoperite la Reci-*Telek*



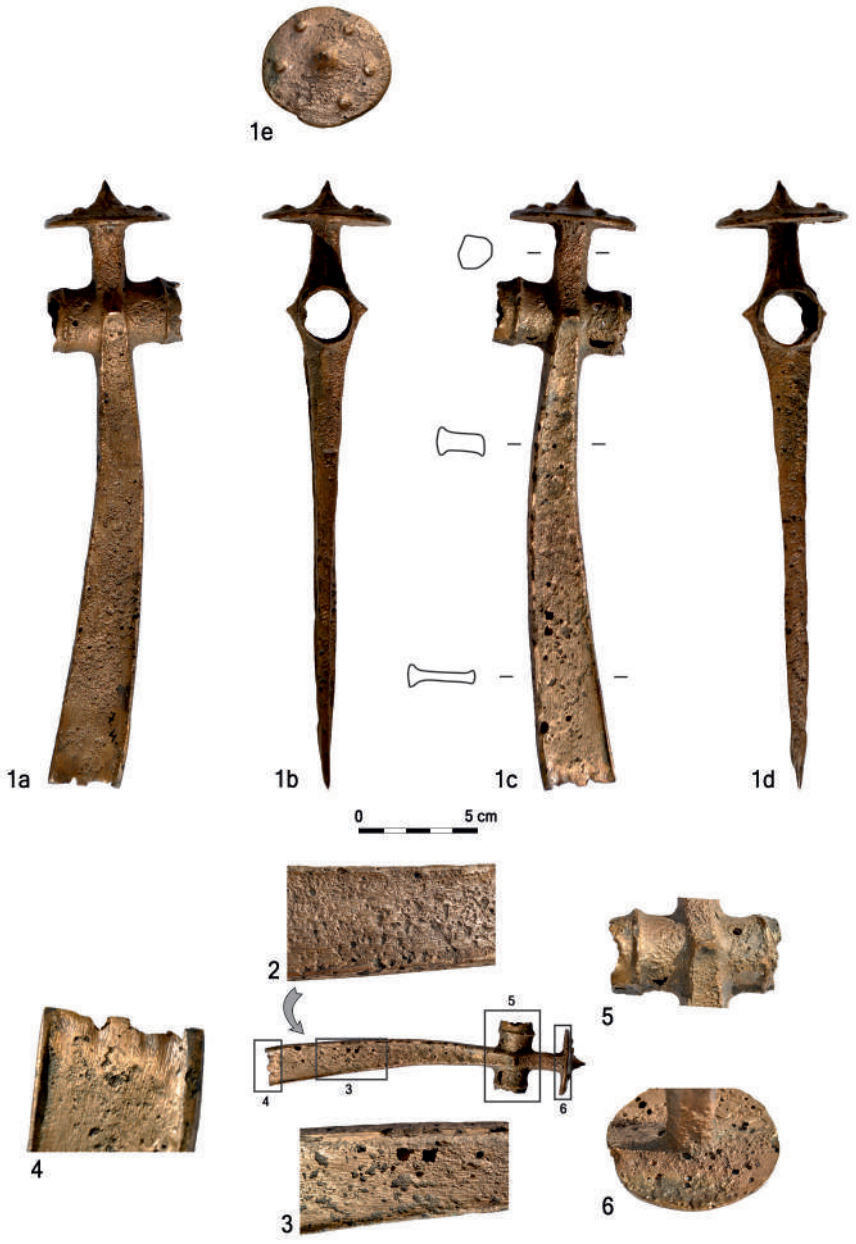
Pl. V. 1-5. MBA Wietenberg-type ceramic fragments discovered at Reci-*Telek*
Pl. V. 1-5. Fragmente ceramice de tip Wietenberg descoperite la Reci-*Telek*



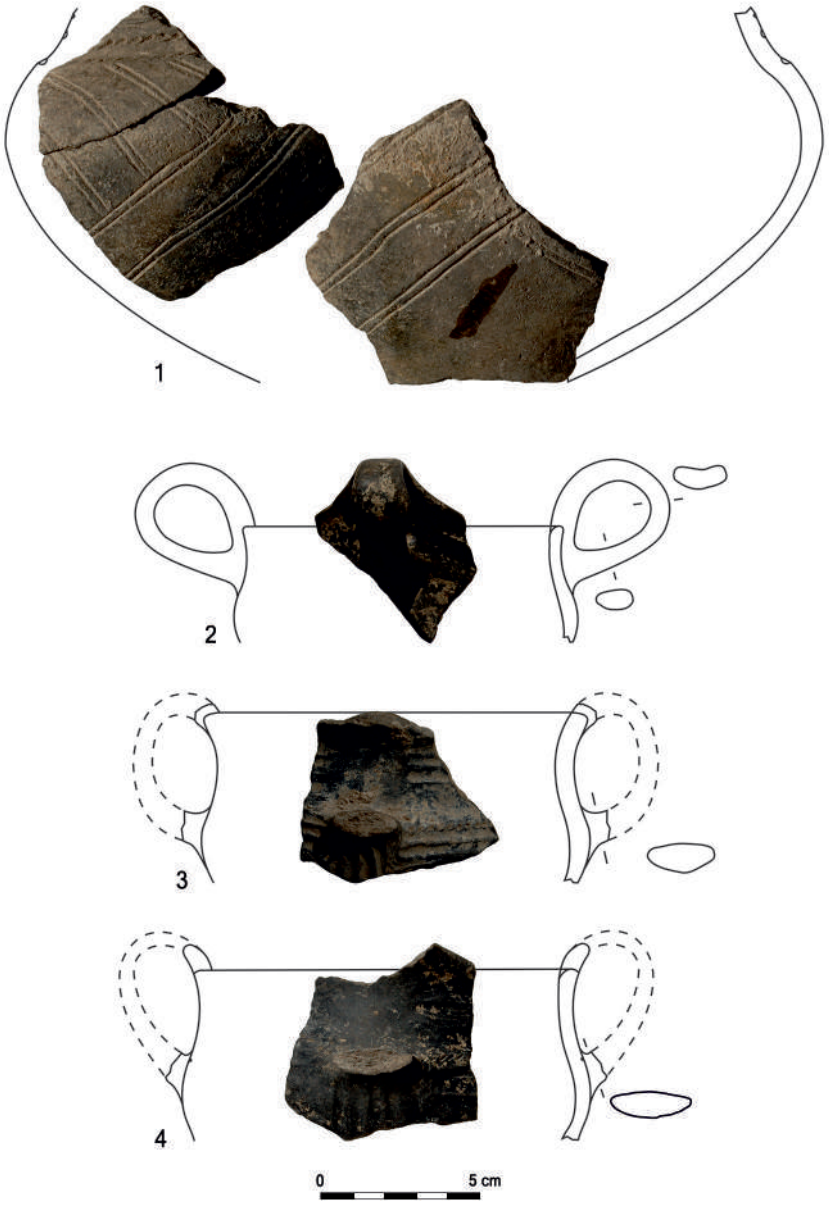
Pl. VI. 1-4. MBA Wietenberg-type ceramic fragments discovered at Reci-*Telek*
Pl. VI. 1-4. Fragmente ceramice de tip Wietenberg descoperite la Reci-*Telek*



Pl. VII. 1-5. MBA Wietenberg-type ceramic fragments discovered at Reci-*Telek*
Pl. VII. 1-5. Fragmente ceramice de tip Wietenberg descoperite la Reci-*Telek*



Pl. VIII. 1-6. The axe with disc and spike discovered at Odorheiu Secuiesc
Pl. VIII. 1-6. Toporul cu disc și spin descoperit la Odorheiu Secuiesc



Pl. IX. Imported (1) and local (2-4) pottery fragments from the site Peteni-*Alsóhatár* belonging to the LBA
Pl. IX. Fragmente de ceramică de import (1) și locale (2-4) de la Peteni-*Alsóhatár* aparținând bronzului târziu