Neolithic and Eneolithic copper artifacts in the area of the Lower Mureş and Crişul Alb Valleys[1]

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Like most of the regions, the lower Mureș and Crișul Alb Valleys fallow the same pattern like anywhere else in the Carpathian Basin regarding the emergence and development of metal artifacts. The first artifacts made of copper were identified in our study area, at the height of Tisa culture. The number of artifacts discovered follows a path upward until the appearance of Cernavodă III-Boleráz pottery. This chronological horizon is characterized by the disappearance of almost all of the artifacts made of metal. It may be noted, however, that at the end of Coțofeni culture metallurgy begin to revive. This study is an overview of the first artifacts made of copper at the lower Mures and Crișul Alb Valleys.

Keywords: Lower Mureş, Crişul Alb, copper, neolithic, eneolithic

The use of metal represents one of the significant technological innovations in the human society. The success of this material largely depended on two of its properties: the fact that it could be reused and the fact that it could be transformed[2]. We must also mention the fact that the spread of artifacts made of metal, superior to those made of stone or perishable materials, has started major social changes in the prehistoric communities.

In the second half of the nineteenth century massive copper axes draw the attention of F. Pulszky who writes about Copper Age in the Carpathian Basin[3]. Since then, the emergence and development of metallurgy was a very attractive subject for scholars, numerous studies testify this.

Although copper artifacts have been used since the 11th millennium BC in Asia Minor[4], in the Balkan peninsula and the Carpathian Basin they spread only in the 6th and 5th millennia cal BC[5]. The chronological horizon of the Tisa pottery on the Lower Mureş and Crişul Alb starts with the first use of copper-made artifacts (Fig. 1). Regarding this I will mention the fact that F. Móra's 1908 excavation in the tell from Čoka "Kremenyák" has led to the discovery of such artifacts. In the pit no. 2 (measuring 2 m in diameter and 0.80 m in depth) Móra has uncovered a two-handle vessel that contained 14 malachite beads and 2 hematite bars[6]. Besides these artifacts, the same vessel contained other adornments, made of other materials. According to P. D. Gulmac, one fragment of a copper bracelet was also found besides the hematite bars and the beads mentioned above[7].

Another discovery that I. Bognár-Kutzián attributes to the Tisa culture consists of a copper bracelet discovered inside the tell from Hódmezővásárhely "Kopáncs-Kökénydomb"[8].

In another Tisa tell, i.e. the one from Hódmezővásárhely "Gorzsa"[9], F. Horváth identified copper beads in some male tombs (that probably belong to phase B)[10]. Horváth points out that the beads were worn as a necklace. Other artifacts have also been found there: a copper bracelet was discovered in the grave of a woman, placed on the humerus, while a necklace and a bracelet have been deposited

in a small girl's grave. Metallographic analyses have been performed and they have proven the fact that all the copper artifacts were cold hammered. Before Horváth's ample research, three copper bracelets have been identified in G. Gazdapusztai's excavation. Two of the bracelets were found in the grave no. 2 (one in the shape of a spiral and the other with closed ends), while the third, with overlapping ends, was discovered in the habitation layers of the tell[11].

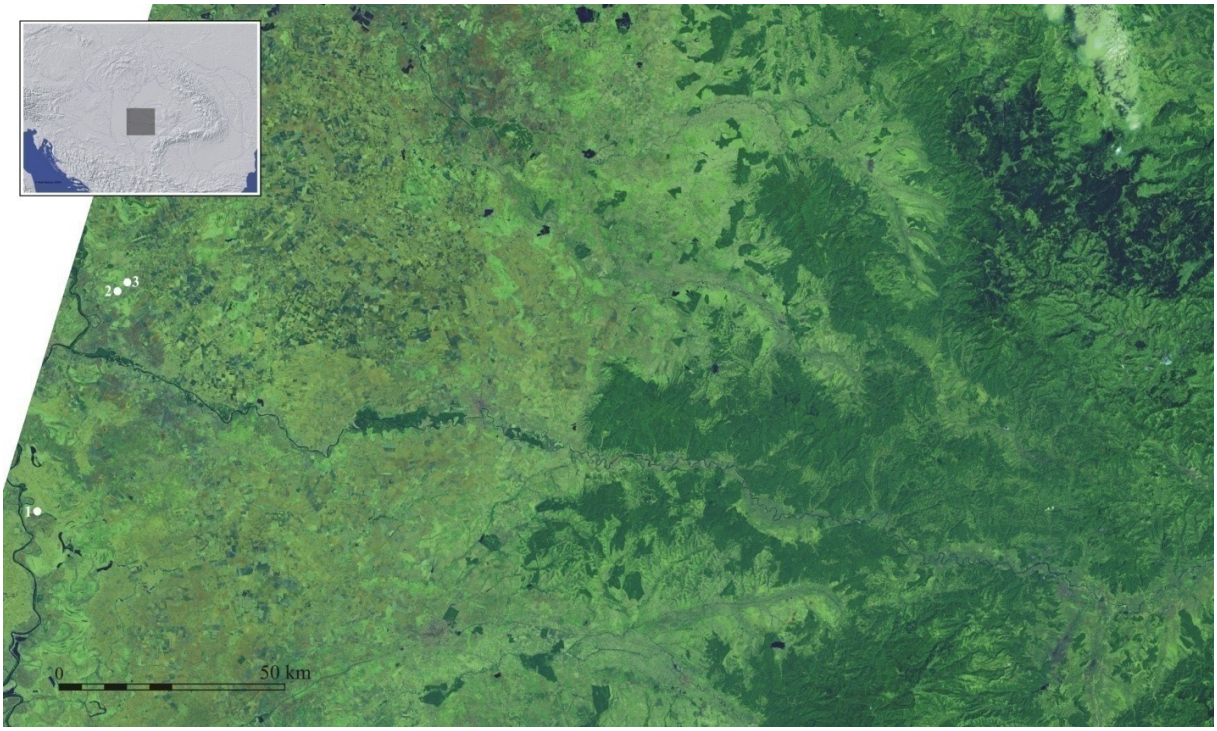


Fig. 1. Distribution of copper artifacts at the Tisa chronological horizon. 1. Čoka „Kremenyák"; 2. Hódmezővásárhely „Gorzsa"; 3. Hódmezővásárhely „Kopáncs-Kökénydomb".

The beginning of the Tiszapolgár-type manifestations can be equated with a widespread of the copper artifacts, and this phenomenon can easily be noted in the area under discussion also (Fig. 2). The cemetery from Deszk[12], excavated by F. Móra between 1930 and 1931, contains numerous such artifacts. Four rings and 21 beads were discovered in the cemetery A, distributed as follows: grave no. 4 contained three rings and 20 beads, grave no. 8 contained one bead, while grave no. 9 contained one ring. Five bracelets and one ring were found in cemetery B: one ring in the grave no. 2, two bracelets in the grave no. 4, two bracelets in the grave no. 8, and one bracelet in the grave no. 11. We should mention the fact that 31 copper objects were identified also in the above mentioned graves.

Another cemetery where artifacts made of copper have been discovered is the one from Hódmezővásárhely "Népkert". Various urbanism works have disturbed 17 graves from there. I. Bognár-Kutzián managed to reconstruct the funerary inventory of just six of these graves[13]. Copper artifacts were discovered in four of them: two beads in the grave no. 1, two beads in the grave no. 2, one multi-spiral bracelet in the grave no. 3, while one bracelet has been noted in the grave no. 4. Also from Hódmezővásárhely, but on the place called "Szakálhát - Bakay tanya", J. Banner uncovered a grave (no. 1) that contained two copper rings placed on a necklace[14] .

To the Tiszapolgár chronological horizon we can attribute the Pločnik-type hammer-axe from Lipova[15] and the Čoka-type axe discovered on the eponym site of Čoka "Kremenyák"[16]. Regarding the axe from Lipova, its conditions of discovery remain unknown. The axe from Čoka was found in the Tisa tell, but the stratigraphic observations are unclear and so it is not possible to make further clarification[17]. In the same tell from Čoka, specialists have discovered, besides the axe, a knife blade, a cylindrical tube, and a bracelet that, according to J. Banner, belong to the

Copper Age[18], but due to the lack of contexts of these discoveries I chose not to include them in the present analysis.

Besides these discoveries belonging to the Tiszapolgár horizon, one can also mention beads made of copper discovered in Szeged "Tápé-Lebő"[19]. Unfortunately, there is no mention concerning their number.



Fig. 2. Distribution of copper artifacts at the Tiszapolgár chronological horizon. 1. Čoka „Kremenyák"; 2. Deszk „Kovács tanya"; 3. Hódmezővásárhely „Népkert"; 4. Hódmezővásárhely „Szakálhát - Bakay tanya"; 5. Lipova.

The Bodrogkeresztúr horizon is remarkable, compared to the previous chronological stages, through the wide distribution of massive copper artifacts, such as Mezőkeresztes-type hammer-axes and Jászladány-type axe-adzes (Fig. 3-4). This assertion can also be tested on the basis of the discoveries made on the Lower Mureş and on Crişul Alb area.

This chronological horizon also includes the deposit of copper artifacts from Szeged "Szillér"[20], discovered during the second half of the nineteenth century. The deposit consists of six, possibly seven objects: one chisel, one piercer, one copper ingot, one flat axe of Szakálhat-type, Sălacea version, and three axe-adzes of the Jászladány-type. Initially, one of these axes was not considered part of the deposit[21], but the analysis of the inventory registry from the Magyar Nemzeti Múzeum from Budapest has revealed that the axe-adze was discovered together with the rest of the artifacts[22].

Numerous other axes, most of them without a clear contexts, have also been discovered, in addition to the above mentioned deposition. Out of the 49 axes identified in this area, 45 belong to the Bodrogkeresztúr chronological horizon. Two of the four remaining artifacts, those from Lipova and the one from Čoka, belong to the Tiszapolgár horizon, while the other two represent artifacts that cannot be attributed to any certain chronological horizon. We can easily observe that the great majority of axes belong to the Jászladány type. For the area taken into consideration, I have catalogued 28 axes of the Jászladány-type, six hammer-axes of the Mezőkeresztes type, two axes each of the hammer-axes type Agnita and Şiria, two flat axes of the Szakálhat type, and one axe-adze of the Târgu Ocna type. Among the Jászladány-type axes, we encounters the variants of Târnăvița, Orşova, Şincai, Petreşti, Brad, and the special variant of the axe from Sânpetru German "La Islaz"[23]. Among the Jászladány-type axe-adzes, those part of the Brad and Petreşti variants are predominant.

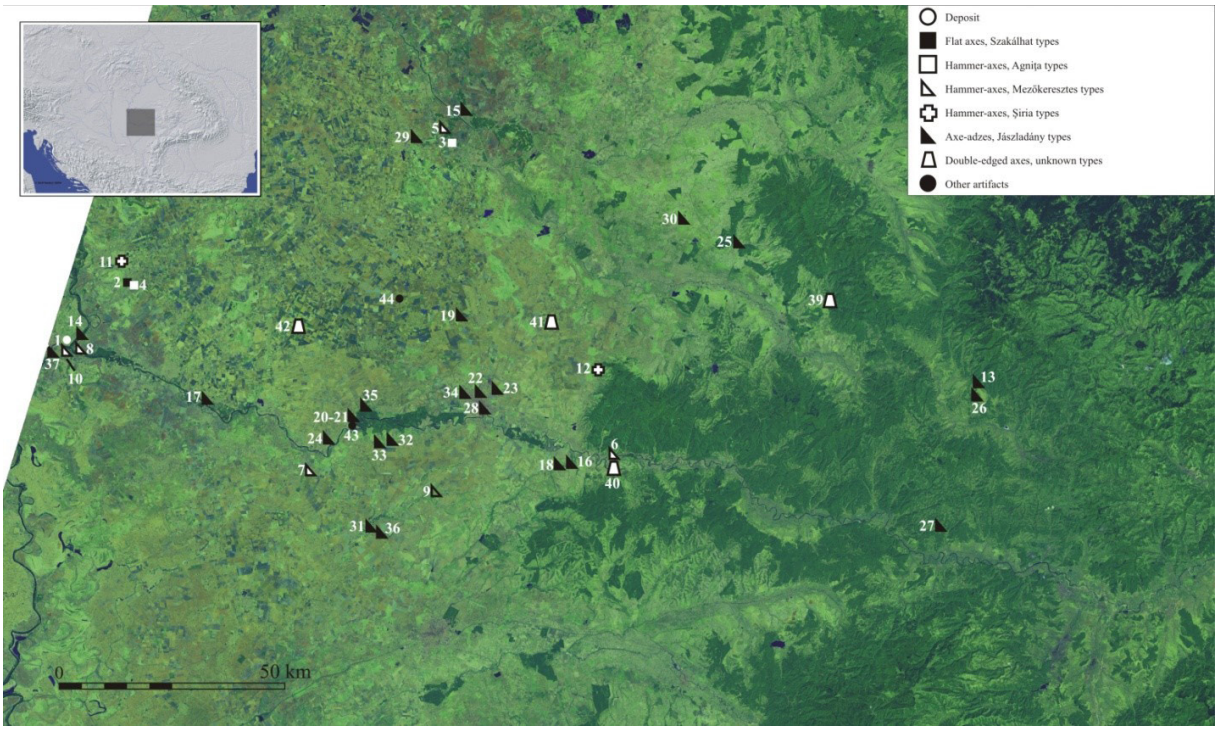


Fig. 3. Distribution of copper artifacts at the Bodrogkeresztúr - "Scheibenhenkel" pottery chronological horizon. Deposits: 1. Szeged „Szillér". Stray finds. Flat axes, Szakálhat types, special variant: 2. Hódmezővásárhely „Szakálhát-Bakay tanya". Hammer-axes, Agniţa types. 3. „Békés"; 4. Hódmezővásárhely „Kopáncs". Hammer-axes, Mezőkeresztes types. 5. Gerla; 6. Lipova; 7. Periam; 8. Szeged „Tápé-Káposztás"; 9. Vinga; 10. Zona Szeged. Hammer-axes, Şiria types. 11. Hodmezővásárhely „Nagyfai Tiszakanyar"; 12. Şiria. Axe-adzes, Jászladány type, Târnăviţa variant. 13. Tîrnăviţa; 14. Zona Szeged. Axe-adzes, Jászladány type, Orşova variant. 15. Doboz; 16. Gutenbrun; 17. Magyercsanád; 18. Zăbrani. Axe-adzes, Jászladány type, Şincai variant. 19. Dorobanţi; 20-21. Pecica „Şanţul Mare". Axe-adzes, Jászladány type, Petreşti variant. 22. Judeţul Arad; 23. Sânleani; 24. Semlac „La Hada"; 25. Tăgădău; 26. Tîrnăviţa; 27. Vica „Dealul Feru". Axe-adzes, Jászladány type, Brad variant. 28. Arad; 29. Békés „Povad"; 30. Cermei; 31. Satchinez; 32. Sânpetru German „Hotarul Reck". Axe-adzes, Jászladány type, specială variant. 33. Sânpetru German „La Islaz". Axe-adzes, Jászladány type, unknown variant. 34. Judeţul Arad; 35. Pecica „Bojhos szöllö"; 36. Satchinez; 37. Zona Szeged. Axe-adzes, Târgu Ocna type. 38. Crăciuneşti. Double-edged axes, unknown types. 39. Dezna; 40. Lipova; 41. Sântana; 42. Mezőhegyes „Drumul Aradului". Other artifacts. 43. Pecica „Şanţul Mare"; 44. Magyardombegyház „casa Szabadi Mihály".

On the basis of the distribution map of copper axes in the area which is under analysis here, one can note that the majority of the axes are concentrated in the Mureş Valley. The wide distribution of axes in the Mureş Valley matches the distribution of Bodrogkeresztúr sites. Another observation is that the axes were mainly identified in the plain area, except for a few discoveries.

The distribution of the copper axes of this chronological horizon indicates four major concentration areas. The first concentration of such artifacts consists of the nine axes identified in the area of the present-day city of Lipova[24], the axe from Guttenbrun[25] and the axe from Zăbrani[26]. The second concentration can be observed around the settlements of Pecica-Periam and consists of the discoveries from Pecica "Şanţul Mare"[27], Pecica „Bojhos szöllö", Periam[28], Sânpetru German „La Islaz"[29], Sânpetru German „Hotarul Reck"[30] and Semlac[31]. Another micro-region where several axes have been found is that of River Crişul Alb, consisting of the discoveries from Békés[32], Doboz[33], Gerla[34], Gyula[35] şi Sarkad[36]. A higher number of artifacts is also noted in the area where the Mureş flows into the Tisa; one can mention the deposit from Szeged "Szillér"[37], an axe discovered in Szeged, "Tápé-Káposztás"[38] and three axes discovered in the area of the city of Szeged, without topographic specifications[39].

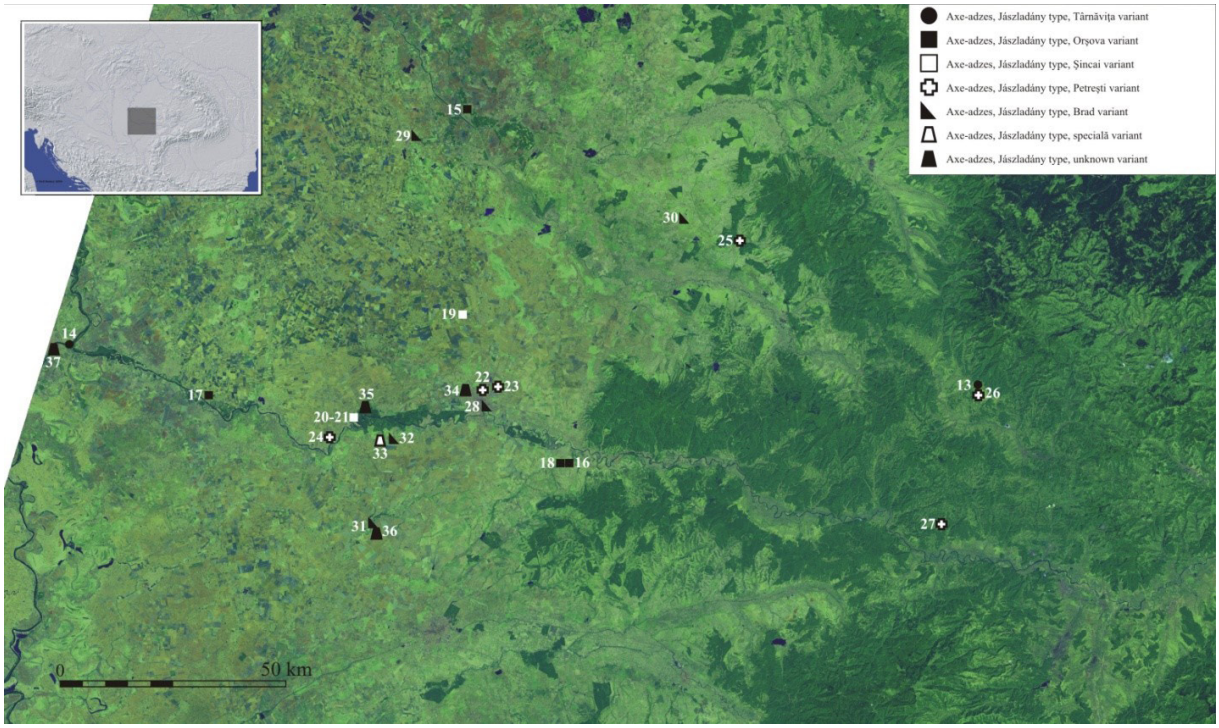


Fig. 4. Distribution of Jászladány-type axe-adzes according to type
(the numbers on the map coincide with those from Fig. 3)

We can only say that the concentration of axes around the settlements of Pecica-Periam is also doubled by that of sites belonging to this chronological horizon. Thus, a number of Bodrogkeresztúr sites have been discovered in this area – in Sânpetru German "Fântâna Vacilor"[40], Sânpetru German „Malul Înalt"[41] and Pecica „Forgaci"[42]; but there are also sites characteristic to the "Scheibenhenkel" pottery horizon, such as those from Pecica "Şanțul Mare"[43] and Pecica „Cărămidăria Ogorul"[44].

Besides the massive copper objects mentioned above, one undetermined piece of copper was identified in Magyardombegyház "The Szabadi Mihály House"[45]. Besides the six vessels the undetermined copper artifact was part of the funerary inventory of a deceased found by chance.

The copper artifacts from Pecica "Şanțul Mare" are attributed to the chronological horizon of the disk-handles. M. Roska's 1910 and 1911 excavations have revealed, in the lower level of the tell, attributed to the "Scheibenhenkel" pottery, the following artifacts: one dagger blade, one ring, two bracelets, two blades, and four piercers[46]. Besides them, the inventory registry of the Archaeology Department of the Museum Complex from Arad records the discovery of two Jászladány axes on that place.

The onset of the Cernavodă III-Boleráz chronological horizon marks the lack of the copper discoveries. I can mention a single find, the one from Crăciunești "Peștera cu trei intrări" (Fig. 5). One Bădești-type dagger blade that has been attributed to the Coțofeni-type manifestations was identified inside this cave[47].

As I said above the first copper artifacts from the Lower Mureș and Crișul Alb area can be associated to Tisa-type pottery. The number of discoveries increases constantly until the onset of the Bodrogkeresztúr pottery and of the "Scheibenhenkel" pottery. From the end of this horizon and until the Early Bronze Age, no metal items have been discovered in the area under research, except for the dagger from Crăciunești "Peștera cu trei intrări".

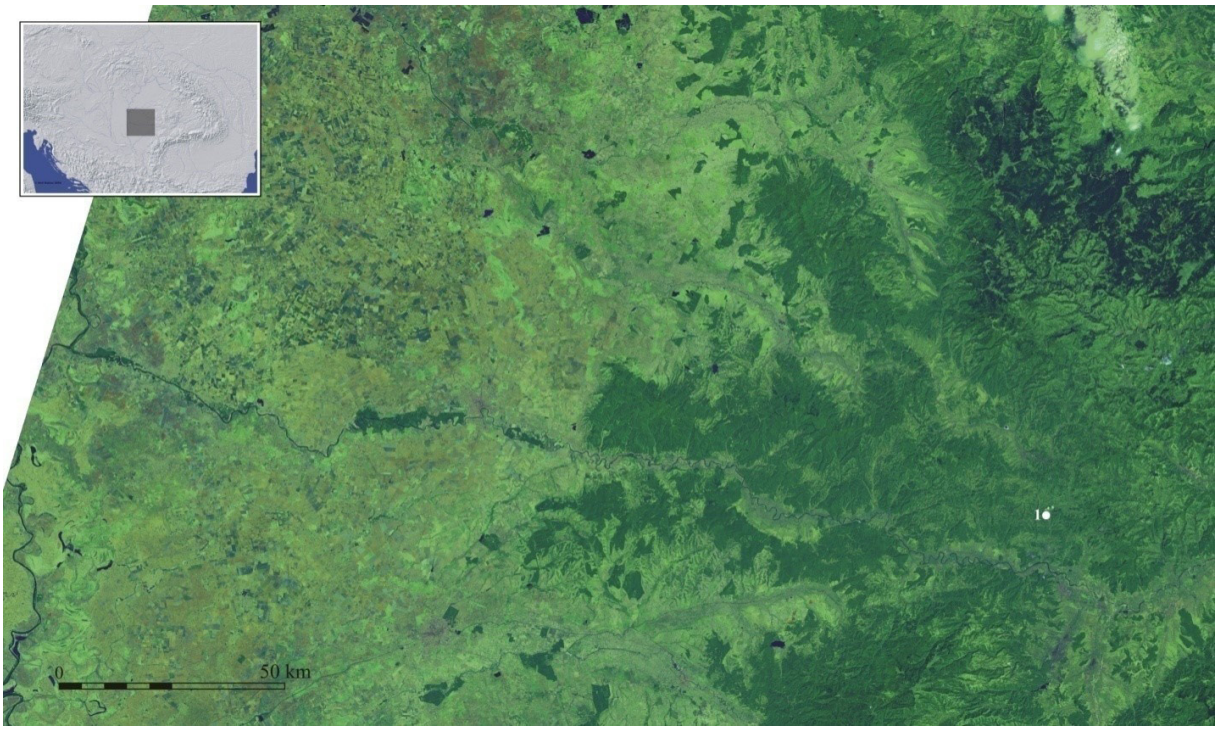


Fig. 5. Distribution of copper artifacts at the Baden-Coțofeni chronological horizon. 1. Crăciunești „Peștera cu trei intrări".

All the discoveries part of the Tisa manifestations are adornments. The onset of the Tiszapolgár pottery leads to a diversification of the metal artifacts. The axes of the Čoka and Pločnik type are appearing now but the adornments remain the most numerous by far. For the Bodrogkeresztúr-"Scheibenhenkel" horizon, the number of adornments decreases, while the number of axes increases significantly. By far, the most spread are the axe-adzes of the Jászladány-type.

From the perspective of the types of discoveries, part of the Tisa-type manifestations, the majority of artifacts are found in settlements. With the debut of the Tiszapolgár pottery, the majority of artifacts are found in graves. A special situation is encountered in the chronological horizon of the Bodrogkeresztúr-"Scheibenhenkel" pottery. Then, a large part of the artifacts, massive axes with socketing hole, has no clear context of discovery; a good part of them are singular finds.

The majority of the artifacts which are part of chronological horizons with Tisa and Tiszapolgár pottery were discovered through systematic archaeological excavation. The situation changes with the onset of the Bodrogkeresztúr pottery, the majority of the artifacts being discovered as stray finds.

Notes:

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