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**AXES FROM TRANSYLVANIA
DURING THE 7TH–8TH CENTURIES AD**

ABSTRACT

C. Călin 2017. *Axes from Transylvania during the 7th–8th centuries AD*, AAC 52:133–168.

On the Transylvanian territory 19 axes have been recorded that date to different times during the 7th and 8th c. AD, and which create a chronological sequence that will be shown in the text below. These 19 artefacts were retrieved from: 6 cemeteries — 10 finds; 1 military guard post/observation post for the surveillance of the area — 1 find; a settlement/house — 1 find; and discovered as stray finds: at 3 specified sites — 4 finds, within the territory of the county — 3 finds. The shape of the artefacts is the main criterion used to develop the typological groups of axes found in the Transylvanian plateau. Accordingly, five main types have been defined: 1st type — Axe with a poll, hammer type; 2nd type — Axe with a long poll in the shape of a rectangular bar; 3rd type — Axe with a fan-shaped blade and a long poll in the shape of a rectangular bar; 4th type — Axe with a round poll; 5th type — pole-axe.

Taking into consideration the contexts of the discoveries and known analogies, these axes can be dated to different points in time creating a chronological sequence spanning over the 7th and 8th centuries.

Most of the axes dated from the 7th and 8th centuries in Transylvania were found in warrior graves or funerary contexts, or together with other weapons, thus providing grounds for their inclusion within the category of weapons. This fact, combined with the series of typological features, allows to include these artifacts in the category of battle axes.

Key words: Early Middle Ages; Avar Period; Transylvania; axes; weapons: typology; cemeteries

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I. INTRODUCTION

Along with a sword, spear, and bow, an axe was an important element of the military gear in the warlike societies all throughout the 1st millennium of the Christian era¹. A series of professional European studies have been preoccupied with the axes found on sites dating from the 4th to the 11th centuries (I mention only some of them here: Kirpichnikov 1966; Ruttkay 1976; Koli- as 1988, 162–182; Heindel 1992, 25–47; Kokowski 1993; Urlacher,

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Passaard, Manfredi-Gizard 1998; Kazanski 1999; Malonaitis 2001; Teodor 2003; Urduzia 2003; Yotov 2004; Legoux 2005, 86–87, Pl. 8–9; Stadler 2005, 135, Pl. 145; Szücsi 2012; 2013–2014; Bugarski 2015; Dragotă 2015). Their authors have developed several typological classifications, as well as theories about the role the axes played in the communities in which they were used. Summarizing the various interpretations, it is generally agreed that the axes were primarily used as a weapon by the Germanic, Slavic, Avar and Magyar tribes (Pohl 1998, 17–34). Notably, the role assigned to the axe within the weaponry set of different warlike populations was not the same. Its inclusion or absence, as well as its primordial or lesser importance within the military gear was determined by the fighting strategy of each people that lived in Europe during the Early Middle Ages. Depending on the shape and size the axe was used both by cavalry and infantry. At the same time, the deposition of axes in graves was considered, amongst other interpretations, to indicate the social status of the deceased or as an apotropaic item. Lastly, although the axe was foremost seen as a weapon, it also had a domestic use.

When compared to the interest manifested for the subject in Western and even Eastern Europe, the iron axes discovered in contexts dating from the 6th to 11th centuries are underrepresented in the professional papers concerning Transylvanian finds. More precisely, there is not a single special study that focuses on the Transylvanian axes dated from the second half of the 1st millennium AD. This was a reason important enough for me to improve the situation by presenting here a detailed analysis of all published and unpublished axes found in Transylvania that are dated to the 7th–8th centuries.

The inclusive and detailed study of the older finds, together with the newer (some of them completely new) discoveries of axes from the Transylvanian Plateau that are dated to the Early Middle Ages should provide new interpretation perspective, mainly regarding their military, social, economic, etc. importance that was previously ignored by the Romanian archaeological papers.

The current paper wishes not only to gather and typologically classify the finds, but also to discuss the role played by the axes within the society of the Transylvanian Early Middle Ages. Equally, the aim is to introduce to the European scientific circuit the entire current set of axes found at the archaeological sites in the Transylvanian Plateau dated to the 7th–8th centuries. The Transylvanian Depression, surrounded by the Carpathian Mountains, markedly stands out when compared to the rest of the territories in western Romania (Cosma 2015, 251–254, Fig. 1; see Fig. 1).

There are 19 axes identified in Transylvania, which are organized according to the shape in five main types, detailed below, which were used during different chronological phases of the 7th–8th centuries. The 19 artefacts were retrieved from: 6 cemeteries — 10 finds; 1 military guard post/observation post for the surveillance of the area — 1 find; settlement/house — 1 find; and discovered as stray finds: within 3 specified sites — 4 finds, within the territory of the county — 3 finds (Tab. 1; Graph 1).

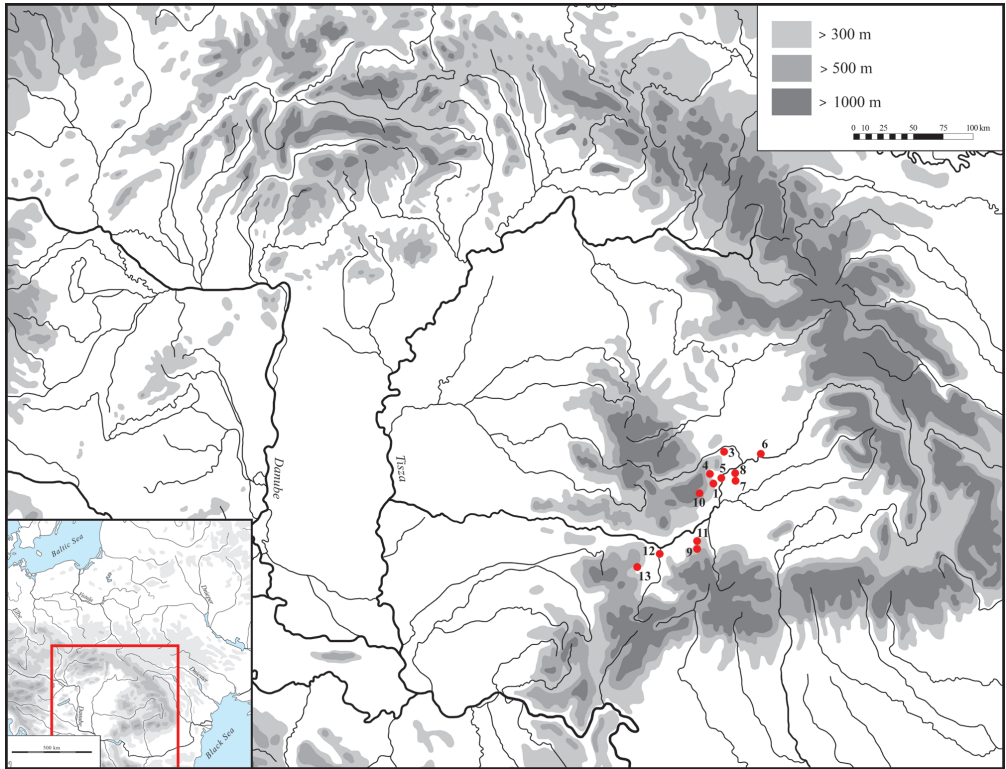
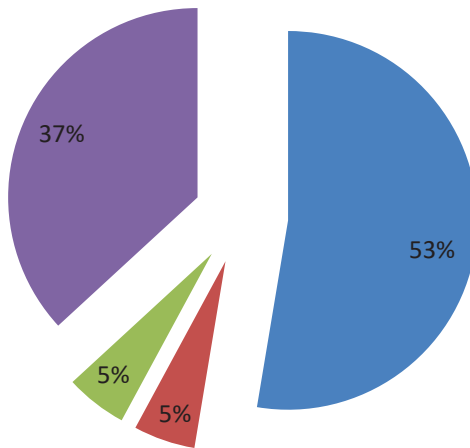


Fig. 1. Distribution of the axes from the 7th-8th century period in Transylvania; drawn by C. Călin and I. Jordan.

- 1 — Aiud, Alba county; 2 — Alba (county area; not mapped); 3 — Câmpia Turzii, Cluj county; 4 — Cicău, Alba county; 5 — Gâmbaş, Alba county; 6 — Sfântu Gherghe, Mureş county; 7 — Lopadea Nouă, Alba county; 8 — Noşlac, Alba county; 9 — Pleşi, Alba county; 10 — Râmeţi, Alba county; 11 — Sebeş, Alba county; 12 — Simeria Veche, Hunedoara county; 13 — mountain Stănuletele Mare

■ Cemeteries ■ Guard posts ■ Settlements ■ Stray finds



Graph 1. Axes distributed according to the place of the discovery; prepared by C. Călin

II. TYPOLOGICAL CLASSIFICATION

The main criterion that I used to develop the typological groups of the axes found in the Transylvanian plateau is the shape of the artefacts. Accordingly, I have defined five main types: 1st type — Axe with a poll, hammer type; 2nd type — Axe with a long poll in the shape of a rectangular bar; 3rd type — Axe with a fan-shaped blade and a long poll in the shape of a rectangular bar; 4th type — Axe with a round poll; 5th type — pole-axe.

Within the five types of axes several variants of the main types have been distinguished based on the dimensions of the finds and the shape of the blade, axe-eye and poll. The weight of the finds is also important, yet not extremely relevant to the typological classification, for the simple reason that it is directly proportional to the dimensions of the object and not to its shape. In other words, axes that are of the same type, and respectively shape, have different weights as a result of their smaller or larger dimensions. This fact will be exemplified later on in the paper.

1st type — Axe with a short poll, hammer type

This type groups those finds that have a more or less long poll in the back side behind the axe-eye. The axes included in this type have blades with a rectangular cross-section which are arched, thinned and more or less flared towards the cutting edge. The axe-eyes are oval or round (Fig. 2).

Depending on the full-length of the finds two variants are distinguished:

- 1.A. The length of the axe-head is between 11 and 12 cm. The maximum width of the blade is 3.5 cm. The poll is rectangular and short, with a maximum length of 1 cm. The axe-eye, which is marked by two axe-lugs, is oval. Its diameter is 2.2×2.4 cm. Câmpia Turzii (List of finds No. 3.1; *cf.* Fig. 4:4).
- 1.B. The length of the axe-head is between 15 and 21 cm. The maximum width of the blade varies between 4.2 and 6.2 cm depending on the length of the axe-head. The poll is rectangular and has the length between 1 and 3 cm. The axe-eyes are oval, rhomboidal or hexagonal with dimensions varying between 1.8 and 3.2 cm. In some cases they are marked by two pointed or round axe-lugs. There are five sub-variants of the main variant. Alba county (List of finds No. 2.2; *cf.* Fig. 4:3); Câmpia Turzii (List of finds No. 3. 2; *cf.* Fig. 4:5); Cicău (List of finds No. 4.2; *cf.* Fig. 5:2); Noslac (List of finds No. 8.1; *cf.* Fig. 6:1); Râmet (List of finds No. 10.1–2; *cf.* Fig. 7:1–2); Stănuletele Mare (List of finds No. 13; *cf.* Fig. 6:4).

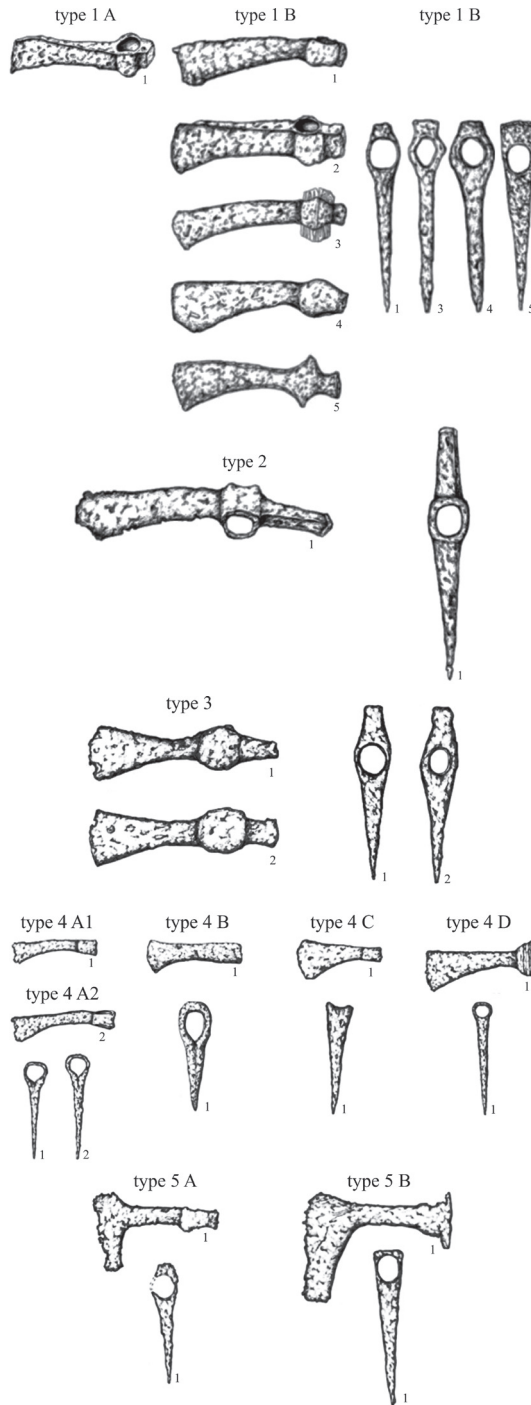


Fig. 2. Typology of the axes from the 7th-8th century period in Transylvania; drawn by C. Călin

2nd type — Axe with a long poll in the shape of a rectangular bar

This type of axes is characterized by an arched blade that is thinned and flared towards the cutting edge. The full length of the axe-head is 23 cm. The maximum width of the blade is 5.5 cm. The poll, with a maximum length of 7 cm, is square and has a pyramidal end. The axe-eye is circular with widened ends, which are broken, but probably had the shape of pointed axe-lugs. The diameter of the axe-eye is 3×2.2 cm. Gâmbaş (List of finds No. 5; *cf.* Fig. 4:6).

3rd type — Axe with a fan-shaped blade and a long poll in the shape of a rectangular bar

These axes have a fan-shaped arched blade. The maximum length of the axe-head is 13.2–13.4 cm. The maximum width of the blade is between 3.8 and 4.2 cm. The poll is 2–3 cm long and it is rectangular. The axe-eye is oval and marked by two round or pointed axe-lugs. The diameter of the axe-eye is 2×2.5 and 1.6×2.1 cm. Aiud (List of finds No. 1; *cf.* Fig. 4:1); Sebeş (List of finds No. 11; *cf.* Fig. 7:1).

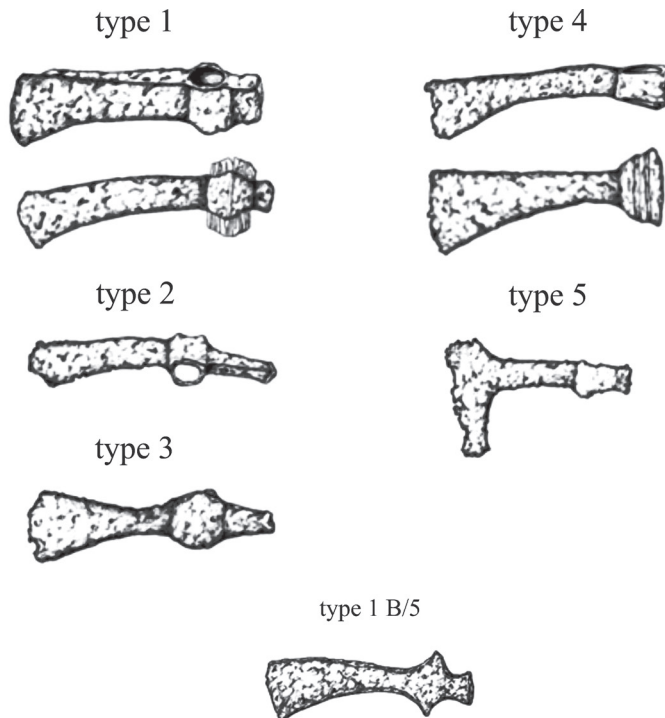


Fig. 3. Types of battle axes and axes used as tools dated from the 7th–8th centuries in Transylvania; drawn by C. Călin

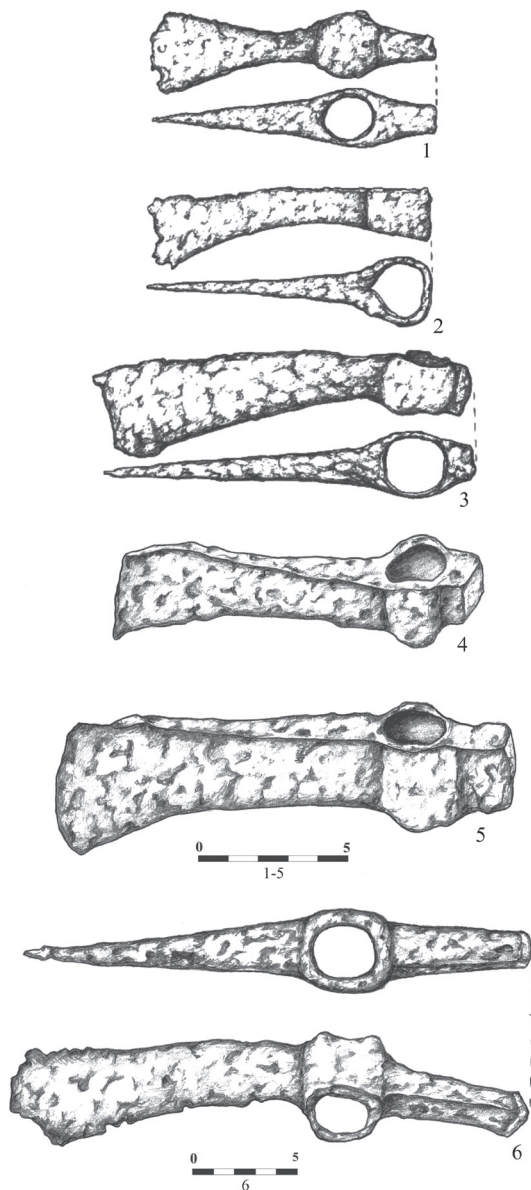


Fig. 4. Axes from the 7th-8th century period in Transylvania; drawn by C. Călin.
1 — Aiud, Alba county; 2-3 — județul (county) Alba; 4-5 — Câmpia Turzii, Cluj county; 6 — Gâmbaș,
Alba county

4th type — Axe with a round poll

This type is characterised by a blade with a rectangular cross-section. The blade is (more or less) arched and (more or less) thinned and flared towards the cutting edge. The maximum width of the cutting edge varies depending on the length of the axe-head, and is between 3 and 7 cm respectively. The axe-eye is circular or trapezoidal and has a diameter of 2.2×4.2 cm. According to certain construction details that are noticed in the case of some finds, it could be determined that this type of axes was produced by forging a single iron bar, and respectively bending, hammering and moulding of the blade (Fig. 4:2, 5:1, 6:3).

Depending on the curve of the blade four variants are distinguished:

- 4.A. Arched blade that is thinned and flared towards the cutting edge.
 - 4.A.1. The length of the axe-head is 13.5 cm. The maximum width of the blade is 3 cm. The axe-eye is circular and has a diameter of 2.2×2.5 cm. Alba county (List of finds No. 2.1; Fig. 4:2).
 - 4.A.2. The length of the axe-head is 18.5 cm. The maximum width of the blade is 3.2 cm. The axe-eye is circular and has a diameter of 2.2×2.9 cm. Cicău (List of finds No. 4.1; Fig. 5:1).
- 4.B. The length of the axe-head is 15 cm. The blade has flaring sides that are diverging towards the cutting edge, where the lower arch is more pronounced. The maximum width of the blade is 5.5 cm. The axe-eye is oval and has a diameter of 4.2×2.2 cm. Pleși (List of finds No. 9; Fig. 6:3).
- 4.C. The length of the axe-head is over 15 cm. The blade has pronouncedly flaring sides that are diverging towards the cutting edge, where the lower arch is more visible. The maximum width of the blade is 7 cm. Iernut/Sf. Gheorghe (List of finds No. 6; Fig. 5:4)
- 4.D. The length of the axe-head is 25.8 cm. The blade has flaring sides that are diverging towards the cutting edge, where the lower arch is more pronounced. The maximum width of the blade is 5.6 cm. The back side of the axe-head, where also the axe-eye (which is circular) is placed, has a trapezoidal shape and displays two horizontal grooves. The diameter of the back side is 4.1×8.5 cm and that of the axe-eye is 3.1×3.3 cm. Simeria Veche (List of finds No. 12; Fig. 7:4).

5th type — iron pole-axe with an L-shaped head

The head of this type of axes is built from a straight bar with a rectangular cross-section. At one end of the bar there is a wide blade with a more lengthened lower side (towards the axe-heel). The upper end (axe-toe) of the blade is short and rounded. The axe-eye is oval and its size varies depending on the length of the axe-head. Its diameter is between 2.5 and 3.7 cm. The poll is short and rectangular or short and widened.

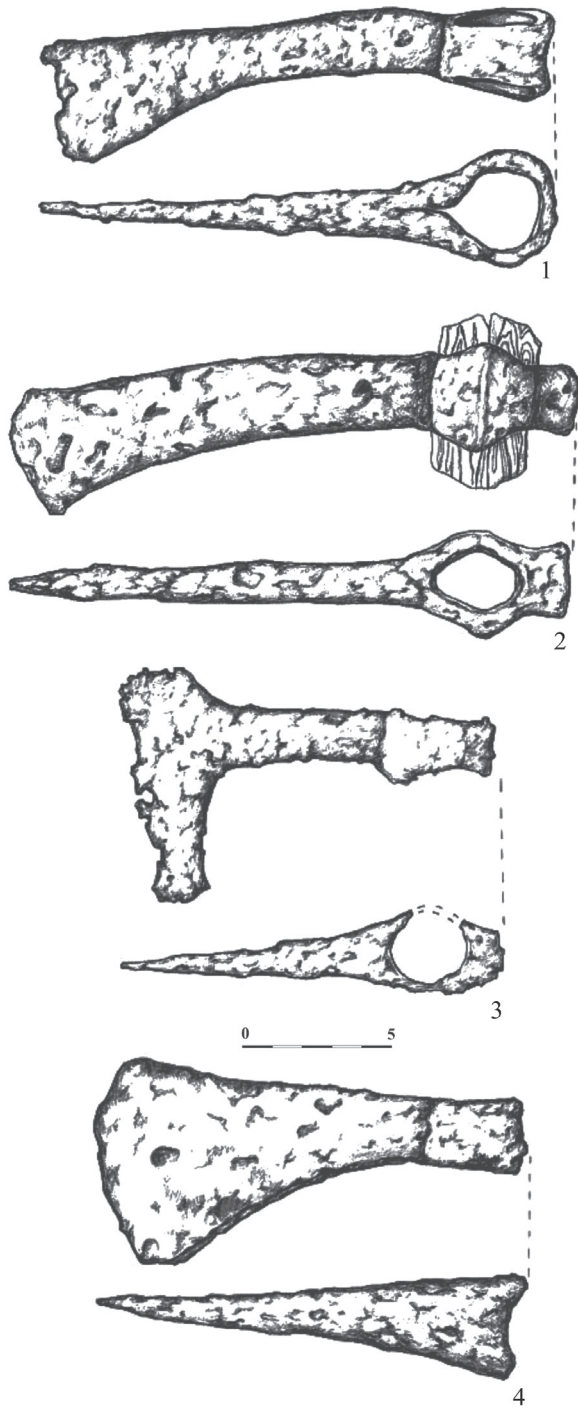


Fig. 5. Axes from the 7th-8th century period in Transylvania; drawn by C. Călin.
 1-2. Cicău, Alba county; 3 — Lopadea Nouă, Alba county; 4 — Sfântu Gherghe, Mureș county

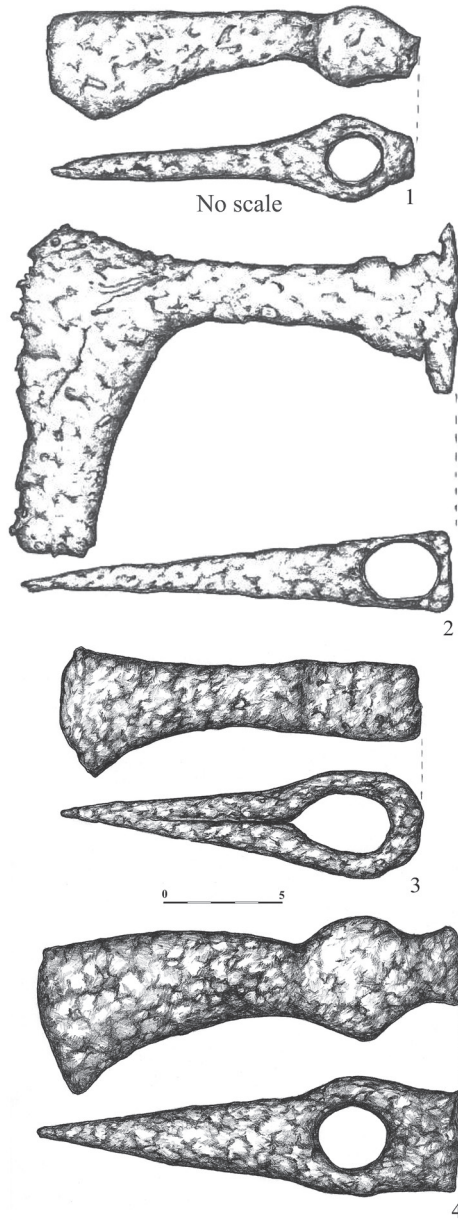


Fig. 6. Axes from the 7th–8th century period in Transylvania; drawn by C. Călin.
1–2. Noșlac, Alba county; 3 – Pleși, Alba county; 4 — Stănuletele Mare



Fig. 7. Axes from the 7th-8th century period in Transylvania; drawn by C. Călin.
1-2. Râmeți, Alba county; 3 — Sebeș, Alba county; 4 — Simeria Veche, Hunedoara county

Depending on the dimension of the axe-head and the shape of the poll end two variants are distinguished:

- 5.A. Axe-head with the length of 12.5 cm. The poll is short and rectangular. The dimensions of the blade are 8×2.8 cm. The length of the poll is 1.5 cm and the diameter of the axe-eye is 2.5×2.2 cm. Lopadea Nouă (List of finds No. 7; Fig. 5:3).
- 5.B. The length of the axe-head is 18.5 cm. The poll is short and pronouncedly widened in a rectangular shape. The dimensions of the blade are 13×5.5 cm. The length of the poll is 1.5 cm and the diameter of the axe-eye is 3.7×2.5 cm. Noșlac (List of finds No. 8. 2–3; Fig. 6:2).

Table 1

List of sites in Transylvania where the axes have been found; prepared by C. Călin

Type of location of the discovery	Archaeological sites/Places where axes have been found	Number of finds	Total
Cemetery	Aiud (Cat. No. 1)	1	10
	Câmpia Turzii (Cat. No. 3)	2	
	Cicău (Cat. No. 4)	2	
	Gâmbaș (Cat. No. 5)	1	
	Lopadea Nouă (Cat. No. 7)	1	
	Noșlac (Cat. No. 8)	3	
Military guard post	Pleși (Cat. No. 9)	1	1
Settlements	Iernut (Cat. No. 6)	1	1
Stray finds	Alba county (Cat. No. 2)	2	7
	Râmeț (Cat. No. 10)	2	
	Sebeș (Cat. No. 11)	1	
	Simeria Veche (Cat. No. 12)	1	
	Stănuletele Mare (Cat. No. 13)	1	

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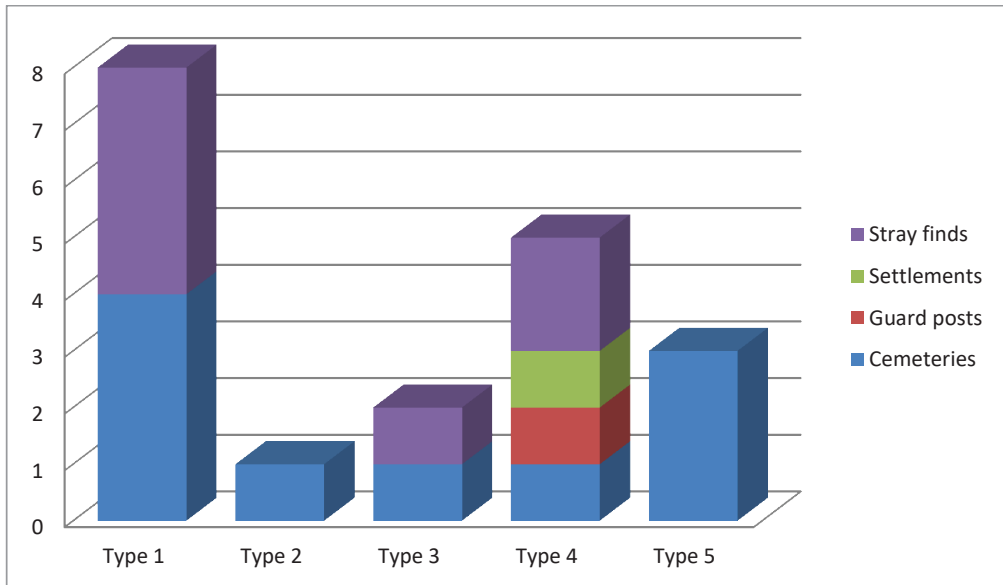
Based on the distinct shapes of the axe-head that characterize the artefacts, there are five main types, along with their many variants, of the axes dated to the 7th–8th centuries that are distinguished in Transylvania.

The 1st type of axes is the most numerous. The 1B variant clearly outnumbers the 1A variant. The 1st type is well represented in cemeteries, but there are also stray finds. The 1A and 1B variants are associated only with the cemetery at Câmpia Turzii, yet also here the two variants were found in different graves (Tab. 2; Graph 2).

Table 2

Typological classification of axes from the 7th-8th century period in Transylvania; prepared by C. Călin

Type of location of the discovery	Archaeological sites/ Places where axes have been found	Type 1		Type 2	Type 3	Type 4			Type 5		Total No. of finds	
		1A	1B			4A	4B	4C	4D	5A		5B
Cemeteries	Aiud (Cat. No.)				1							
	Câmpia Turzii (Cat. No. 3)	1	1									
	Cicău (Cat. No. 4)		1				1					10
	Gâmbaş (Cat. No. 5)			1								
	Lopadea Nouă (Cat. No. 7)									1		
Military guard posts	Noşlac (Cat. No. 8)		1								2	
	Pleş (Cat. No. 9)						1					1
Settlement	Iernut (Cat. No. 6)							1				1
Stray finds	Alba county (Cat. No. 2)		1			1						
	Râmeţ (Cat. No. 10)		2									
	Sebeş (Cat. No. 11)				1							7
	Simeria Veche (Cat. No. 12)								1			
Total No. of finds	StănuleteleMare (Cat. No. 13)		1									
		1	7			1	1	1	1	1	2	19
		8		1	2	5	3					



Graph 2. Types of axes distributed according to the place of the discovery; prepared by C. Călin

The following most numerous axes are those of the 4th type. Only one find is 13.5 cm long, whereas the rest are over 15 cm long. The artefacts were discovered in cemeteries/graves, in one settlement/house, or they are military finds (Tab. 2; Graph 2).

The 3rd type of axes consists of two finds and within the 5th type of axes there are three finds. Both the types occurred in funerary contexts (Tab. 2; Graph 2).

The 2nd type is limited to one axe retrieved from a grave (Tab. 2; Graph 2).

III. CHRONOLOGY AND ANALOGIES

The main ground for the ordering of the Transylvanian axes within certain chronological phases of the 7th–8th centuries was the context of the discovery, particularly when it included artefacts that could be more accurately dated. Evidently, analogies were also a useful instrument to confirm the date suggested by the archaeological context. Given that the axes alone are not artefacts which could be very specific chronological indicators, these two approaches used together provided the best possible chronological information.

The cemetery at Noşlac is the earliest archaeological site of the Transylvanian Early Middle Ages where axes were found (Rusu 1962; 1964). The necropolis was used during the 6th and 7th centuries. Two pole-axes of larger dimensions (5B type) were retrieved from two graves that were dated to the end of the 6th and the beginning of the 7th century (Dobos 2015, 70; *cf.* Tab. 3A–B). One axe of the 1B/4 type was placed in a grave of the same cemetery at Noşlac together

with grave goods (a stirrup) that is dated to the end of the 7th and the beginning of the 8th century (Dobos 2015, 70–71, Fig. 7; *cf.* Tab. 3A–B).

Next, the cemeteries of the Middle Avar time (650/670–710/720) follow in the chronological order (Cosma 2015, 254–262). They comprise the cemeteries at Aiud (3rd type), Cicău (1B/1 and 3A/2 type), and Gâmbaş (2nd type; *cf.* Tab. 3A–B).

A series of artefacts discovered in the Avar cemetery at Câmpia Turzii correlates the necropolis with the Late Avar time (Téglás 2005, vol. I, 31–38, vol. II, 987–988, Pl. 26–28; Cosma 2013b, 34; 2015, 254–262), hence also the axes from the necropolis (1A and 1B/2 types) can be dated to the 8th century (Tab. 3A–B). According to the grave goods associated with it, the axe from Lopadea Nouă is also from the same century (5A type; *cf.* Cosma *et al.* 2013, 72–74; *cf.* Tab. 3A–B).

The axe from Iernut/Sfântu Gheorghe (3C type) was found in a house, together with other metal objects (buckles, a horse bit, a cheek bit, a phalera, a spearhead) that date the structure to the 8th century (Cosma 2013a, 100, Fig. 68; *cf.* Tab. 3A–B).

The axes found in the Alba county, at Râmeț, Pleși, Sebeș, Simeria Veche and Stănuletele Mare, are stray finds. In their case the analogies played the essential role in their dating.

The axe from Sebeș (3/2 type) is almost identical to the find from Aiud (3/1 type), which was dated to the Middle Avar time, thus providing grounds for a similar determination of the time of use for the axe from Sebeș (Tab. 3A–B).

The axes discovered in the Alba county (1B/1 and 4A/1 types) very closely resemble the finds from the cemetery at Cicău (2B/3 and 4A/2 types) of the Middle Avar time, a chronological determination that I consider also valid for the two finds from the Alba county (Tab. 3A–B).








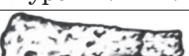
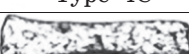
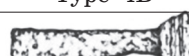
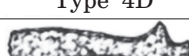
In the case of the axes found at Râmeț and Stănuletele Mare (type 1B/5) the analogy to the finds of the same type that were discovered in the area adjacent to the Transylvanian Plateau suggests the Middle and Late Avar age (Tab. 3A–B; *cf.* Yotov 2004, 89, Fig. 16:7B; Szücsi 2012; 2013–2014, 114–121).

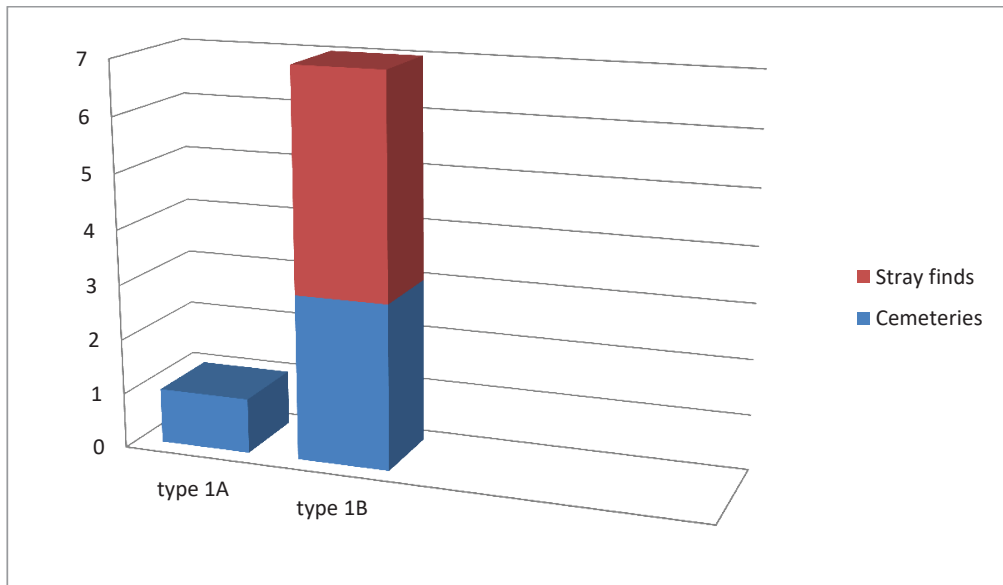
The axe discovered at Pleși (type 4B) was found next to a spearhead with a narrow blade that has the shape of a reed leaf characteristic of the Avar milieu (for example: Horedt 1958, 68, Fig. 9a:12, 71, Fig. 10:1, 13–15, 77, Fig. 14:1–2, 14, 82, Fig. 17:12; Kovács 1971, 89, Fig. 2:3; Sós, Salamon 1995, Pl. LXXXI:2; Csiky 2007, 309, Fig. 2. I:2.a). Two almost identical axes were found in Vojvodina, one in grave No. 3 of the cemetery at Aradac and another one in a grave from Sapaja (Bugarski 2015, 131–132, Fig. 2, 4). The archaeological complex from Aradac is dated to the first half or the first third of the 7th century and the grave from Sapaja is correlated with the second half of the 7th century (Bugarski 2015, 131–132, Fig. 2, 4).

C.-D. Țuțuianu determined the age of the axe from Simeria Veche (3D type) to the 7th–8th centuries (Țuțuianu 2000, 451; Milošević 1987, 107–126) based on the similarities of the shape to the finds from Keszthely or Zagreb/Kruga, Velika Gorica and Morpolaca near Benkovac in Dalmatia/Croatia.

Table 3B

Chronological sequence of the axes from the 7th-8th century period in Transylvania;
prepared by C. Călin

Chronological sequence Types	580-625/630/650	650/670-710/720	710/720-810/830
 Type 5	XXXXXXXXXX	XXXXXXXXXXXXX	
 Type 1B/4		XXXXXXXXXXXXX	
 Type 1B/1-2		XXXXXXXXXXXXX	
 Tip 2		XXXXXXXXXXXXX	
 Type 3		XXXXXXXXXXXXX	
 Type 4A/1-2		XXXXXXXXXXXXX	
 Type 1A/1-1B/2			XXXXXXXXXXXXX
 Type 4C			XXXXXXXXXXXXX
 Type 4B		XXXXXXXXXXXXX	XXXXXXXXXXXXX
 Type 4D		XXXXXXXXXXXXX	XXXXXXXXXXXXX
 Type 1B/5		XXXXXXXXXXXXX	XXXXXXXXXXXXX



Graph 3. Axes of the 1st type distributed according to the place of the discovery; prepared by C. Călin

The 1st Transylvanian type of axes correlates with the “Hammer axe” type defined in the typology developed by F. Szücsi and regarding the Avar time axes in the Carpathian Basin (Szücsi 2012, 122–124, 136–137; 2013–2014, 122–123, 169). He identified the prototypes of this type already at the beginning of the Iron Age. He also described the axes with a poll as common finds of the Avar milieu. Moreover, these were used also during the following time periods (Szücsi 2012, 122–124; 136–137; 2013–2014, 122–123, 141, 169). Axes identical to those of type 1 from Transylvania were also discovered in Wallachia (Muntenia) in Eastern Romania (Ciupercă, Mirea 2015, 168–169, Pl. II:2, IV:1).

Amongst the Transylvanian 1st type the 1A and 1B types/variants from Câmpia Turzii are noteworthy. In Vojvodina, one axe with a short poll was retrieved from the warrior grave No. 108 in Aradac (Bugarski 2015, 131, Fig. 3), which has the same shape as the two axes from the cemetery at Câmpia Turzii. The grave from Aradac is dated to the 7th century, whereas the graves from Câmpia Turzii are of Late Avar time. The three finds (the axe from Aradac and the two axes from Câmpia Turzii) distinguish themselves amongst the axes with a short poll of the 7th–8th centuries from the Carpathian Basin particularly by the end of the cutting edge.

The 2nd Transylvanian type of axes (defined as “axe with a long poll in the shape of a bar”) requires some clarifications. Even though F. Szücsi observed that a long bar is characteristic of a large number of axes dated to the 7th–8th centuries from the Carpathian Basin (Szücsi 2012, 122–124, Fig. 2:1; Szücsi 2013–2014, 122, Fig. 7), he included them together with the hammer-type axes

with a short poll in the “Hammer axe” type (Szücsi 2013–2014, 122–123). For example, the axe from Gâmbaş was counted in the “Hammer axe” type (Szücsi 2013–2014, 157).

It is notable that there are significant differences between the shape of the hammer-type poll and that of the long poll in the form of a rectangular bar (*cf.* Fig. 2–3). Accordingly, the latter should be described within a type distinctive from that of the axes with a short poll. Similarly, the axes with a long bar of the 2nd Transylvanian type of axes are grouped separately (3A type) in the typology of the axes discovered on the Bulgarian territory developed by V. Yotov (2004, 89, Fig. 16, 3/A). The axes with a bar are known also on the Dalmatian territory, where they were defined as a separate type and further ascribed to the Avar milieu (Milošević 1987, 113, Fig. 3:1–2). The axes with a long bar from the Carpathian-Dniester regions that are identical to the axe from Gâmbaş are considered to be a separate type within the group of artefacts of this nature (Teodor 2003, 188, Fig. 5).

Both the fan-shaped blade and the rectangular bar at the back side of the axe-head differentiate the 3rd Transylvanian type of axes from the hammer-type axes with a short poll. The two axes from Aiud and Sebeş that form the 3rd Transylvanian type of axes are similar to those of the Yotov 7A type from Bulgaria (Yotov 2004, 89, Fig. 16, 7/A).

The 4th Transylvanian type of axes is characterized by a round poll at the back side of the axe-head. The axe-eye is round or oval, and round in the upper part. The type distinguishes itself from the rest by the shape of the poll, which is distinct from the (longer or shorter) square or rectangular polls of the other types (*cf.* Fig. 4–7). The 4th Transylvanian type of axes can be correlated with one variant of the “Axe” types identified amongst the axe finds from the Carpathian Basin (Szücsi 2012, 122–124, 136–137; 2013–2014, 121–122, 140–141, 168–169). This type is considered to originate from the Iron Age. Moreover, at the time of the Avar Khaganate in the Carpathian Basin it was used on its entire territory and during its whole existence, thus it is not a particularly accurate chronological and ethnical indicator (Szücsi 2012, 122–124, 136–137; 2013–2014, 121–122, 140–141, 168–169).

The 4B Transylvanian type of axes is known in cemeteries of the Avar time from Vojvodina (Bugarski 2015, 131–132, Fig. 2, 4). Another variant of the type (4D) is analogous to the finds from Dalmatia/Croatia (Milošević 1987, 114, Fig. 3:3–4). Concerning the latter area, A. Milošević described the axes with a round poll from Zagreb/Kruga, Velika Gorica, and Morpolaća near Benkovac as part of a separate type of the battle axes from the 7th–8th centuries (Milošević 1987, 114, Fig. 3:3–4).

All variants of the 4th Transylvanian type of axes have corresponding forms from the 7th–8th centuries recorded in the area of Lithuania (Malonaitis 2001) and Russia (Akmedov, Vorontsov 2012).

The 5th Transylvanian type of axes comprises by the “L-shaped cleaver” defined in the typology developed by F. Szücsi for the axes dated to the 7th–8th

centuries from the Carpathian Basin (Szücsi 2010, 124, 136–137; 2013–2014, 123–125, 141, 169). The scholar traces the pole-axe with an L-shaped body back to the Late Antiquity, and more precisely to the Roman-Germanic milieu. At that time the pole-axes were of large dimensions. The Avars began to use them more intensely during the Middle Avar time and afterwards, yet when compared to the Romano-Germanic milieu the pole-axes of the Middle and Late Avar time were smaller (Szücs 2010, 124, 136–137; 2013–2014, 123–125, 141, 169). The conclusions of F. Szücsi are confirmed by the characteristics of the Transylvanian finds. The two pole-axes from Noșlac are of large dimensions (List of finds No. 8/2–3). The necropolis had a Germanic-Avar component (Dobos 2015, 59–82). The pole-axe with an L-shaped body from the Avar cemetery at Lopadea Nouă is small (List of finds No. 7) as compared to the two finds from Noșlac. The former site dates from the Late Avar time (Cosma *et al.* 2013, 72–74; *cf.* Tab. 3A–B).

The pole-axe with an L-shaped body is not characteristic only of the Avar milieu, but it was known during the 7th–10th centuries in other geographical areas as well, such as on the Bulgarian territory (Yotov 2004, 87, Fig. 14, 89, Fig. 16). In fact, pole-axes, as weapons, are found in the cemeteries of the 10th–11th century in the whole Carpathian Basin (Dragotă 2015, 331–341, Pl. I:1–6; Urduzia 2003), or in Western Europe (Heindel 1992, 38–47).

IV. FINAL CONSIDERATIONS. FUNCTION

Most of the axes dated to the 7th–8th centuries in Transylvania were found either in warrior graves or funerary contexts, or together with other weapons, thus providing ground for their inclusion within the category of battle axes (Tab. 1–2, 4–8; Graphs 1–7).

Nonetheless, the function of the axes is still subject to debate in the professional papers. An important criterion, if not the main one, which has been suggested when attributing the axe types to the category of weapons or tools is the dimensions of the axe-head. Therefore, the small axe-heads, which are less than 15 cm long and lighter, should be thought of as battle axes (see for example: Kirpichnikov 1966, 27–28; Yotov 2004, 206; Szücsi 2013–2014, 140–141, 168–169). It is considered that larger axe-heads could have been used also as tools (see for example: Kirpichnikov 1966, 27–28; Yotov 2004, 206; Szücsi 2013–2014, 140–141, 168–169). The “very” small and lightweight axe-heads were interpreted as battle axes used by cavalry (Yotov 2004, 206). The axes with a narrow blade (up to 3–4 cm long/in width), as well as those provided with a long bar, were attributed to the weapons category (Milošević 1987, 107–127; Yotov 2004, 206; Szücsi 2013–2014, 140–141, 168). Concerning the occurrence of axes in graves, there are several theories about the apotropaic/religious role that these artefacts played for the deceased (Szücsi 2013–2014, 138–139; see also Kotowicz 2011, 105–132).

Table 4

Distribution of axes of the 1st type according to the place of discovery; prepared by C. Călin

Type of location of the discovery	Typology Sites	Type 1A		Type 1B		No. of cemeteries	No. of sites	Total No. of finds
Cemeteries	Câmpia Turzii (Cat. No. 3.1)	1		1		3		4
	Cicău (Cat. No. 4.2)	0	1	1	3			
	Noșlac (Cat. No. 8.1)	0		1				
Stray finds	Alba county (Cat. No. 2.2)	0		1	4		3	4
	Râmeț (Cat. No. 10.1-2)			2				
	Stănuletele Mare (Cat. No. 13)			1				

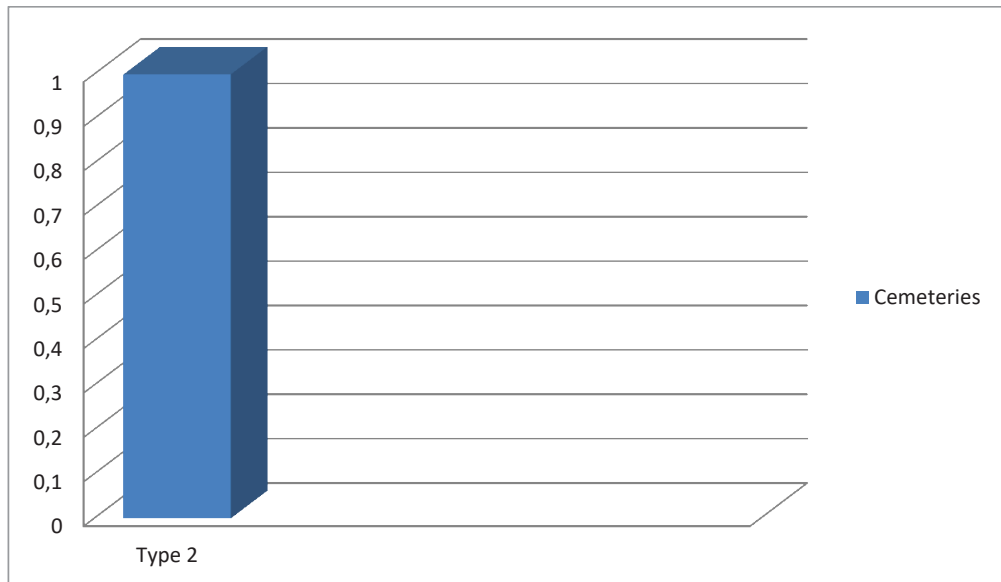
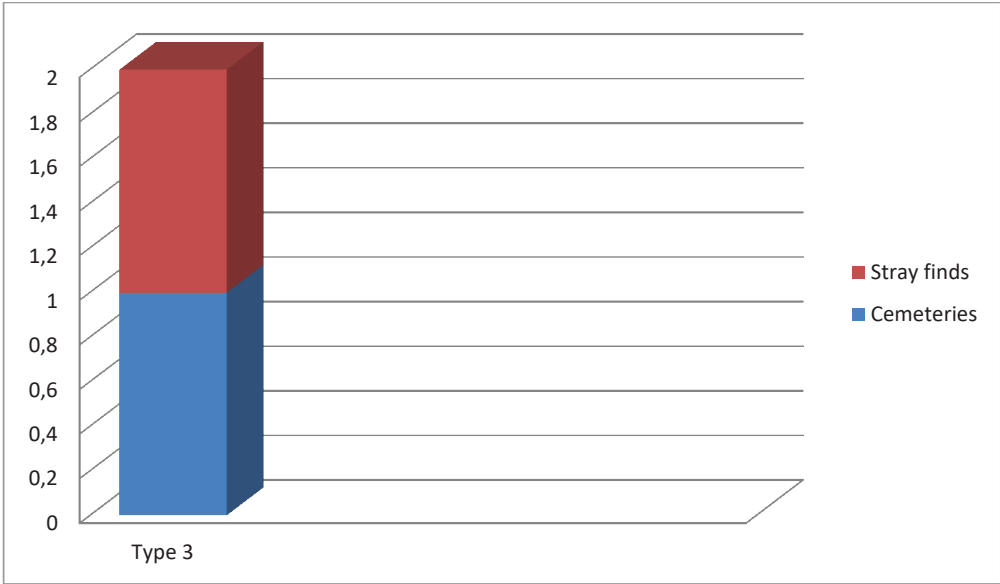
Graph 4. Axes of the 2nd type distributed according to the place of the discovery; prepared by C. Călin

Table 5

Distribution of axes of the 2nd type according to the place of discovery; prepared by C. Călin

Cemeteries	Type 2	No. of cemeteries	Total No. of finds
Gâmbaş (Cat. No. 5)	1	1	1

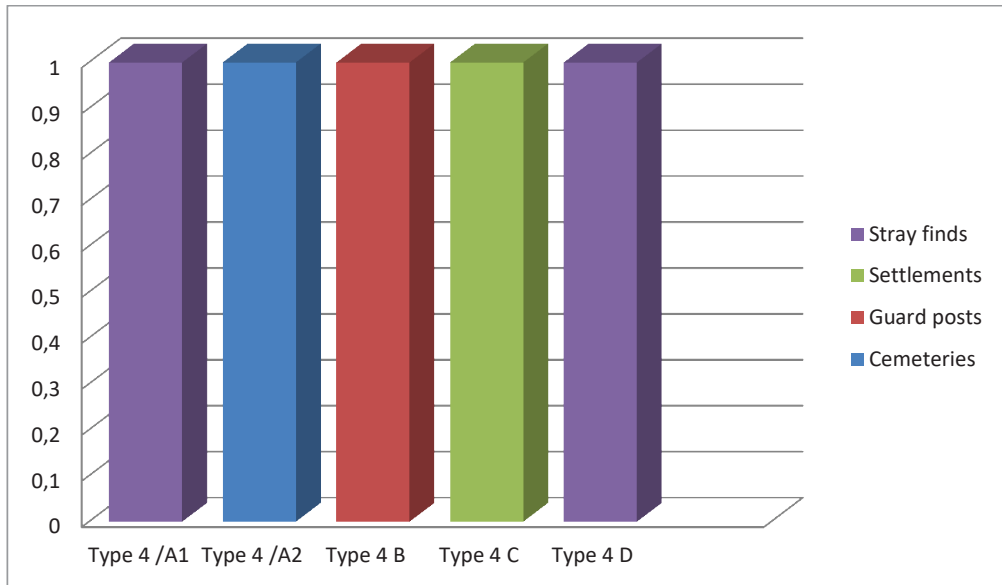


Graph 5. Axes of the 3rd type distributed according to the place of the discovery; prepared by C. Călin

Table 6

Distribution of axes of the 3rd type according to the place of discovery; prepared by C. Călin

Type of location of the discovery	Typology		No. of cemeteries	No. of stray finds	Total No. of finds
	Sites	Type 3			
Cemeteries	Aiud (Cat. No. 1)	1	1	0	2
Stray finds	Sebeş (Cat. No. 11)	1	0	1	



Graph 6. Axes of the 4th type distributed according to the place of the discovery; prepared by C. Călin

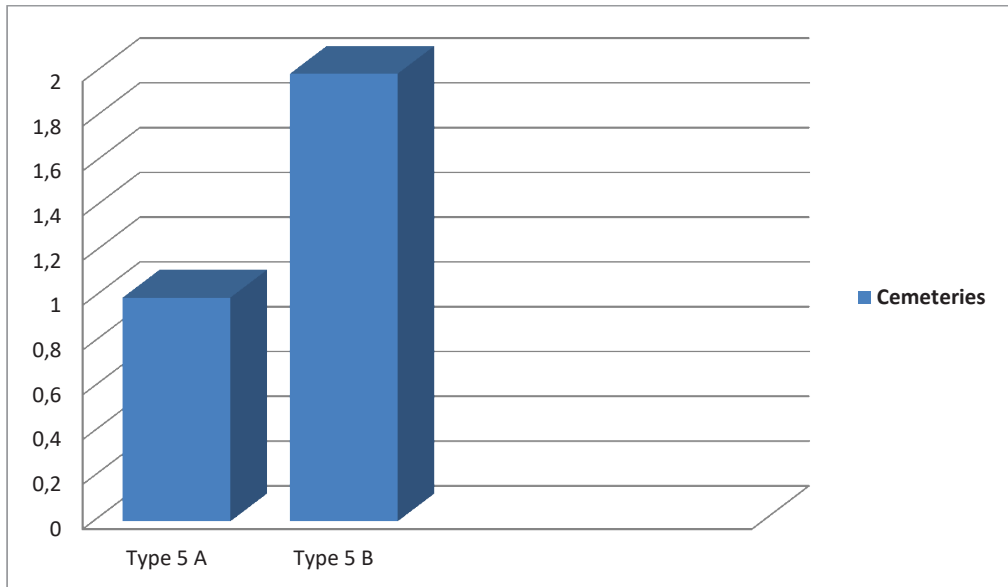
I consider that from the analysis of the Transylvanian axes presented here it can be concluded that the dimensions of the axe-head are not a defining and reliable ground for attributing particular axe to the category of weapons or tools. I believe that the shape played an important role in the function of a certain axe. In Transylvania there are axe-heads of different dimensions, yet of the same body shape (1A and 1B1–4 type, 4A1 and 4A2 type). Both large and small axe-heads were retrieved from warrior graves, thus concurring with the conclusion stated above, that the dimension of the axe-heads was not necessarily a criterion considered by the Avar warriors when they chose to use particular axe as their weapon. It was rather the shape of the axe which would provide the highest efficiency needed in battle which mattered and, depending on the part that the warrior played in the battle, the weight of the axe was also important. The fact is well illustrated by the 2nd and 3rd Transylvanian types (axes with a bar), whose both ends are fitted for battle (the blade for cutting and the bar for hitting and breaking the armour). Furthermore, they can be linked with cavalry.

The axes with a round poll can also be considered as weapons — 4th Transylvanian type. Their dimensions are both large and small. The blade is narrow with a cutting edge up to 4 cm wide/long. The absence of a butt end raised above/protruding beyond the axe-eye disproves the use of this type of axes as household tools (for example, as hammers or for hitting with the poll: for this type of activities there were special tools, such as the 'sledge hammers', with both ends flattened, especially modeled for hammering/hitting: see for example:

Table 7

Distribution of axes of the 4th type according to the place of discovery; prepared by C. Călin

Type of location of the discovery	Typology	Type 4A		Type 4B	Type 4C	Type 4D	No. of cemeteries	No. of military sites	No. of settlements	No. of stray finds	Total No. of finds
		4A1	4A2								
Cemeteries	Sites Cicău (Cat. No. 4.1)	0	1	0	0	0	1	0	0	0	1
Military guard posts	Pleși (Cat. No. 9)	0	0	1	0	0	0	1	0	0	1
Settlements	Iernut (Cat. No. 6)	0	0	0	1	0	0	0	1	0	1
Stray finds	Alba county (Cat. No. 2.1)	1	0	0	0	0	0	0	0		
	Simeria Veche (Cat. No. 12)	0	0	0	0	1	0	0	0	2	2



Graph 7. Axes of the 5th type distributed according to the place of the discovery; prepared by C. Călin

Table 8

Distribution of axes of the 5th type according to the place of discovery; prepared by C. Călin

Cemeteries	Type 5A	Type 5B	No. of cemeteries	Total No. of finds
Lopadea Nouă (see Cat. No. 7)	1	0	2	3
Noșlac (see Cat. No. 8.2–3)	0	2		

Nania 1969, 122, 3/2–2a). Conversely, the arched shape of the axe-heads in this group is well suited for hitting and cutting/slashing the enemy during a battle. The shape could be regarded as the most representative prototype of the battle axes used during the 7th and 8th centuries in Europe. The small axes (4A/1 and 4A/2 type) could have been weapons used by cavalry, whereas those of larger dimensions, such as the one from Simeria Veche (4D type), could have been used by infantry squads.

The shape of the blade characteristic of the 4th Transylvanian type of axes is analogous to the blades of the Transylvanian axe variants 1B/1, 3–4. The analogy, as well as the fact that the Transylvanian axe variants 1B/1, 3–4 were found in graves, supports the inclusion of the 4th type to the battle axes. The latter group also includes the 1A and 1B/2 types of axes from the graves from Câmpia Turzii. Likewise, the pole-axe of small dimensions from Lopadea Nouă was used as a weapon by the Avar warriors.

Conversely, the axes of the 1B/5 type could rather have been tools and were only secondarily used as weapons. They are massive axes, with flared blades and long polls, which are suitable for various household activities. The two large pole-axes from Noşlac meet both the requirements for a tool and a weapon (see for example: Heindel 1992, 39–47).

Except for the two graves from Noşlac, which can be associated with Gepidic deceased, all the other Transylvanian funerary finds that include axes belonged to the Avars. The presence of the axes in the Transylvanian Avar graves signifies firstly the warrior status of the deceased. In the third grave from Noşlac, the one from Gâmbaş and the two from Cicău, all of which included axes, the warriors were buried with horses. So far, the only examples where axes were placed in warrior graves together with horse skeletons are known from Transylvania. In the cemetery at Câmpia Turzii one of the two axes discovered was found in a grave which contained weapons and horse gear, a combination that identifies burials of Avar warriors.

According to the current state of research, one may thus argue that in Transylvania the axes emerge only in warrior graves. Therefore, their presence in the graves dated to the 7th–8th century from Transylvania may be interpreted as a symbol of the social standing of the dead within the community, in our case, that of a warrior (for the interpretation of the presence of weapons in Avar graves see for instance: Csiky 2009; 2011).

A more detailed discussion on the existence of axes also in other grave types based on gender, like for instance, children graves, and their significance in such graves in Transylvania during the Avar period is untimely considering the current state of research (see for such issues for instance: Zábajník 2015).

Additionally, it is worth mentioning that the axes found in cemeteries are uncommon when compared with the number of funerary finds from Transylvania (Cosma 2015, 254–262). The number of axes is very small when compared to the number of cemeteries or graves recorded on the Transylvanian territory both in its entirety and within each of the necropolises. The funerary finds associated with the Avars are not very numerous in the Transylvanian plateau either. There are Avar cemeteries with more than a few warrior graves, such as one in Gâmbaş (15 graves), from where only one axe is known. At Teiuş none of the 60 graves was equipped with an axe. Faced with these results, the question of the importance of the axe within the weapon panoply of the Transylvanian Avar warrior follows naturally. Unfortunately, at this state of the research, which is still unsatisfactory when it comes to the 7th–8th centuries in Transylvania, an unequivocal answer to this question is impossible to give.

The debate about the function of the axes should not exclude the deposits of iron objects that are contemporaneous with the axes placed in graves. The comparison between the axes found in graves and the axes included in the deposits of tools could provide important information about the dependency between certain shapes of axes and a specific social group (army or craftsmen of various specializations).

Unfortunately, until now there are no deposits with both tools and weapons which would provide the necessary grounds for such comparison. It is equally notable that there is not a single axe that has been identified within settlements of the 7th–8th centuries that had been archaeologically investigated on the Transylvanian territory. The only exception is Iernut/Sfântu Gheorghe, and probably Hărman (for verification see a series of settlements discovered in Transylvania dated in the 6th–9th centuries: Alexandru, Pop, Marcu 1973, 246; see esp. Székely 1962; 1969; 1974; 1974–1975a; 1974–1975b; 1975; 1976; 1988; 1992).

Series of deposits with tools and weapons have been discovered in the Romanian extra-Carpathians areas (Canache, Curta 1994, 179–221). Axes are known only in three out of 9 deposits of metal artefacts: Bârlogu-Argeş county; Curcani-Călăraşi county; Dragosloveni-Vrancea county (Canache, Curta 1994, 199–203). The above-listed archaeological complexes are dated from the 9th or 10th century (Canache, Curta 1994, 199–203), and hence unfit for a comparison with the earlier Transylvanian axes of the 7th–8th centuries. Nonetheless, even though the extra-Carpathians axes are later than those in Transylvania, there are still several observations that can be made regarding the subject of this study. When referring to the types described above, there are only three artefacts within the extra-Carpathians deposits that are represented amongst the types of the Transylvanian axes of the 7th–8th centuries. Two are known from Bârlogu, one of which has a narrow arched blade with a flaring cutting edge that is similar to the 1B Transylvanian type, and the second one is of the pole-axe type that is similar to the 5th Transylvanian type (Nania 1969, 122, Fig. 3:1–1a, 3:3a). The third specimen found in the deposit in Dragosloveni resembles the 3rd Transylvanian type when it comes to its dimensions and shape (Comşa, Constantinescu 1969, 432, No. 3, Fig. 5:9). The extra-Carpathians deposits contained a series of objects, ranging from agricultural and smithery tools to various types of weapons. The inclusion of axes in these deposits does not necessarily imply that they were owned, for example, by a carpenter or a house builder, the same as the presence of agricultural tools within deposits does not prove that they belonged to a farmer. The deposits discussed above have been interpreted as socially significant metal accretions/accumulations, whose owners were acknowledged as very important persons by the Early Middle Ages society east and south of the Carpathians (Canache, Curta 1994, 193–198; Curta 2011). The axes included in the deposits of metal artefacts from the Romanian extra-Carpathians areas should in no way be thought of as tools. In fact, those who published the finds from the deposits of metal artefacts that are listed above, as well as those who studied the general deposition phenomenon behind them, described the axes as the “battle axes” (Nania 1969, 122, Fig. 3:1–1a; Comşa, Constantinescu 1969, 432; Canache, Curta 1994, 190–192; Curta 2011). The inclusion of the “battle axes” within the metal accumulations, and especially of weapons in general, increased the social importance of the person who owned the iron “hoard/treasure” (Canache, Curta 1994,

194–198). I mention also the fact that the axes found in the Carpathian-Dniester area (Teodor 2003, 191), or in Muntenia/South Romania (Ciupercă, Mirea 2015, 167–178), originating from various archaeological contexts, which are similar to the finds from Transylvania, yet dated to the 8th–9th centuries, have been identified also as weapons that were used by warriors of military units active in that territory.

Strictly referring to the subject of this study, it can be stated that in terms of chronological sequence the two axes from Bârlogu and the one from Dragosloveni, which resemble those from Transylvania (1B type, 3rd type, 5th type), solely evidence to the fact that their construction proved efficient enough for this type of items to continue to be in use also during the 10th century, a phenomenon that already has been stated above.

To conclude these succinct observations about the presence of the axes within the deposits of iron objects, I will mention that in his book dedicated to the tools of the 1st Christian millennium in Eastern Europe J. Henning does not include axe of any shape as an item that could have been used as a tool either (Henning 1987).

There is also no data that would qualify for a comparative analysis between the axes found in graves and various shapes of axes presumed to have been used solely as tools by carpenters or woodhouse builders of the Early Middle Ages, the conclusion which could provide more clarity and certainty regarding the exclusive association of particular axes with the category of weapons or with that of tools.

Evidently, it is very difficult to state an exact shape of an axe used solely in battle, as opposed to the shape of an axe used only as a tool. Nevertheless, the axe with a narrow arched blade flaring towards the cutting edge can be considered to be the prototype of the battle axes from the Early Middle Ages in Europe. This shape of axe, of both small and large dimensions, that was used by the warriors of the 7th–8th centuries in Central-South-Eastern Europe was borrowed from the earlier periods and, moreover, continued to be in use during the 9th–14th centuries and even later (Heindel 1992, 17–47; *cf.* Fig. 3).

The entire discussion about the Transylvanian axes dated to the 7th–8th centuries that I have developed along these lines is based on the archaeological information about the Transylvanian plateau that has been published in various professional journals. I am certain that future archaeological research, which could even lead to the discovery of new axes, together with the finds that are stored “on the shelf” in the deposits of history museums in Transylvania, and which should be published as soon as possible, will play an important role in the continuation of the debate on the axes dated to the Early Middle Ages on the Transylvanian territory.

LIST OF FINDS

1. Aiud (Alba county) — Viticulture school

1. Iron axe with a long poll that has the shape of a bar (Fig. 4:1). The blade has rectangular cross section and is thinned and flared towards the cutting edge in a fan shape. The axe-eye is oval, with widened ends in the shape of arched lugs. The poll is long and has the shape of a square bar. $L = 13.4$ cm; $l_{\text{maximum of the blade}} = 3.8$ cm; $D_{\text{of the axe-eye}} = 2.5 \times 2$ cm; $H_{\text{poll/bar}} = 2.6$ cm; Wt. = 190 g. **A.** Dating: 650/670–710/720. **B.** Stray find/Funerary find: it is highly probable that it was laid in one of the destroyed graves of the Avar cemetery at the site Aiud — Viticulture school. **C.** Bibliographical references: H o r e d t 1958, 92, Fig. 17:7. **D.** MIA, inv. No. 5453.

2. Alba (county area)

1. Iron axe with a round poll (Fig. 4:2). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye is circular. $L = 13.5$ cm; $l_{\text{maximum of the blade}} = 3$ cm; $D_{\text{of the axe-eye}} = 2.2 \times 2.5$ cm. **A.** Dating: 650/670–710/720. **B.** Stray find. **C.** Unpublished. **D.** MNUAI, inv. No. F. 847.

2. Iron axe with a rectangular edge (Fig. 4:3). The blade has a rectangular cross section and is arched, thinned and gradually flared towards the cutting edge. The axe-eye is ovoid. The poll is short and rectangular. $L = 17.5$ cm; $l_{\text{maximum of the blade}} = 4.2$ cm; $D_{\text{of the axe-eye}} = 2.5 \times 2.8$ cm; $H_{\text{poll}} = 1.4$ cm. **A.** Dating: 650/670–710/720. **B.** Stray find. **C.** Unpublished. **D.** MNUAI, inv. No. F. 864.

3. Câmpia Turzii (Cluj county) — Land of dr. Miklós Betegh

1. Iron axe with a rectangular poll (Fig. 4:4). The blade has a rectangular cross section and is straight. It is thinned and flared only towards the cutting edge. The axe-eye is circular. The poll is short and rectangular. $L = 11.5$ cm; $l_{\text{maximum of the blade}} = 3.5$ cm; $D_{\text{of the axe-eye}} = 2.2 \times 2.4$ cm; $H_{\text{poll}} = 1$ cm. Description and drawing after: T é g l á s 2005. **A.** Dating: 710/720–810/830. **B.** Cemetery/Grave No. 1 (M./1912). **C.** Bibliographical references: T é g l á s 2005, vol. I, 33, P. 48/51c/1, vol. II 988, Pl. 28. **D.** Hungarian National Museum, Budapest.

2. Iron axe with a rectangular poll (Fig. 4:5). The blade has a rectangular cross section and is straight. It is thinned and flared only towards the cutting edge. The axe-eye is circular. The poll is short and rectangular. $L = 17$ cm; $l_{\text{maximum of the blade}} = 4.5$ cm; $D_{\text{of the axe-eye}} = 1.8 \times 2.2$ cm; $H_{\text{poll}} = 2$ cm. Description and drawing after: T é g l á s 2005. **A.** Dating: 710/720–810/830. **B.** Cemetery/Grave No. 2 (M./1912). **C.** Bibliographical references: H o r e d t 1958, 94, Fig. 11:6; T é g l á s 2005, vol. I, 33, Pl. 48/51c/2, vol. II, 988, Pl. 28. **D.** Hungarian National Museum, Budapest.

4. Cicău (Alba county)

1. Iron axe with a round poll (Fig. 5:1). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye

is circular: $L = 18.5$ cm; $l_{\text{maximum of the blade}} = 4.2$ cm; $D_{\text{of the axe-eye}} = 2.2 \times 2.9$ cm. **A.** Dating: 650/670–710/720. **B.** Cemetery/Grave No. 1/Warrior. Found next to the right hand. **C.** Bibliographical references: Winkler, Takacs, Păiuș 1977, 270, Fig. 3/7. **D.** MNITCN.

2. Iron axe with a rectangular poll (Fig. 5:2). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye is hexagonal, with widened ends in the shape of pointed lugs. A fragment of the wooden haft was still preserved inside the axe-eye at the time of its discovery. The poll is short and rectangular. $L = 20.8$ cm; $l_{\text{maximum of the blade}} = 4.2$ cm; $D_{\text{of the axe-eye}} = 3.2 \times 2.4$ cm; $H_{\text{poll}} = 1.5$ cm. **A.** Dating: 650/670–710/720. **B.** Cemetery/Grave No. 3/Warrior. It was found to the left of the human skeleton, next to the head of the horse. **C.** Bibliographical references: Winkler, Takacs, Păiuș 1977, 270, Fig. 4/2, Pl. I:2. **D.** MNITCN V. 32 832.

5. Gâmbaș (town Aiud, Alba county) — Măguricea

1. Iron axe with a long poll in the shape of a bar (Fig. 4:6). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye is circular, with widened ends, which, although broken-off, were probably in the shape of pointed lugs. The poll is long and has the shape of a square bar with a pyramidal end. $L = 23$ cm; $l_{\text{maximum of the blade}} = 5.5$ cm; $D_{\text{of the axe-eye}} = 3 \times 2.2$ cm; $H_{\text{poll/ba}} = 7$ cm. **A.** Dating: 650/670–710/720. **B.** Cemetery/Grave no. 1–1911/Warrior. **C.** Bibliographical references: Bodrogi 1913, 22–24, 2 ábra./2; Horedt 1958, 96, fig. 9a/3. **D.** MIA, inv. no. 5160.

6. Iernut/Sfântu Gheorghe (Mureș county)

1. Iron axe, fragmentary (Fig. 5:4). Only the blade is preserved, which has a rectangular cross section and is thinned and noticeably flared towards the cutting edge, with a more pronounced lower arch. $L_{\text{of the preserved blade}} = 14,5$ cm; $l_{\text{maximum of the blade}} = 7$ cm. **A.** Dating: 8th century **B.** Settlement/House. **C.** Bibliographical references: Cosma 2013a, 100, IV.B.1.2.1, Fig. 8:4. **D.** IAIACN.

7. Lopadea Nouă (com. Lopadea Nouă, Alba county) — Árok/Șanțuri/Ditches

1. Iron pole-axe with a rectangular poll. (Fig. 5:3). Straight bar that has a rectangular cross section. At one end the bar has a wide blade which is more elongated at one end. The other end of the blade is short and damaged. The axe-eye is oval and in the middle has cheeks extensions with rounded ends, highly damaged. The poll is short and rectangular. $L = 12.5$ cm; $L_{\text{of the preserved blade}} = 8$ cm; $l_{\text{of the preserved blade}} = 2.8$ cm; $l_{\text{maximum of the bar}} = 2$ cm; $D_{\text{of the axe-eye}} = 2,5 \times 2,2$ cm; $H_{\text{poll}} = 1.5$ cm; $Wt. = 140$ g. **A.** Dating: 710/720–810/830. **B.** Cemetery/Archaeological excavations. **C.** Bibliographical references: Bodrogi 1913, 25–27, Pl. 6:4; Horedt 1958, 101, Fig. 18:4. **D.** MIA, inv. No. 4964.

8. Noşlac

1. Iron axe with a rectangular poll (Fig. 6:1). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye is hexagonal, with widened ends in the shape of pointed lugs. The poll is short and rectangular. Dimensions are not available. **A.** Dating: 650/670–710/720. **B.** Cemetery/Grave No. 11 renamed M 12 (horse grave). **C.** Bibliographical references: Rusu 1962, 274, 277, Fig. 4:8; Rusu 1964, 37, Fig. 3:8; Dobos 2015, 70–71, Fig. 7:1. **D.** MIA, unidentified.

2. Iron pole-axe with a rectangular poll (Fig. 6:2). Straight bar that has a rectangular cross section. At one end the bar has a wide blade which is more elongated at one end. The other end of the blade is short and rounded. The axe-eye is oval and in the middle has cheeks extensions with rounded ends, highly damaged. The poll is short. The upper part of the poll is pronouncedly widened and has a rectangular shape. $L = 18.50$ cm; $L_{\text{of the cut/edge}} = 13.2$ cm; $L_{\text{of the bar}} = 7$ cm; $l_{\text{maximum of the blade}} = 5.5$ cm; $D_{\text{of the axe-eye}} = 3.7 \times 2.5$ cm; $H_{\text{poll}} = 1.5$ cm; $Wt. = 650$ g. **A.** Dating: 580–630/650. **B.** Cemetery/Grave No. 87/Male. **C.** Unpublished: the archive of M. Rusu IAIACN; References: Dobos 2015, 70. **D.** MNITCN, inv. No. V 1428.

3. Iron pole-axe. It is most probable similar to the find described as No. 2. **A.** Dating: 580–630/650. **B.** Cemetery/Grave No. 101/Double burial: two (2) males. **C.** Unpublished: the archive of M. Rusu IAIACN; References: Dobos 2015, 70. **D.** Unknown storage place.

9. Pleşi (com Săsciori, Alba county) — Vârful crucilor/Crosses' peak

1. Iron axe with a round poll (Fig. 6:3). The blade has a rectangular cross section and is thinned and flared towards the cutting edge, with a more pronounced lower arch. The axe-eye is large and oval. $L = 15.2$ cm; $l_{\text{maximum of the blade}} = 5.5$ cm; $D_{\text{of the axe-eye}} = 4.2 \times 2.2$ cm; $Wt. = 505$ g. **A.** Dating: 650/670–810/830. **B.** Military guard post, observation post for the surveillance of the area/Surface survey: discovered 0.20 m under the grass layer. **C.** Unpublished (I would like to express my gratitude towards Mr. Radu Totoianu, curator at the Municipal Museum “Ioan Raica” Sebeş, the author of the discovery, who provided me with information and allowed the access to the find for the publication. **D.** MMIRS, inv. no. 6505.

10. Râmeţ (Alba county) — La Cruce/At the Cross

1. Iron axe with a rectangular poll (Fig. 7:1). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye is ovoid, with widened ends in the shape of pointed lugs, one of which is broken off. The poll is long and rectangular. $L = 18.2$ cm; $l_{\text{maximum of the blade}} = 5$ cm; $D_{\text{of the axe-eye}} = 2.9 \times 2.3$ cm; $H_{\text{poll}} = 3$ cm; $Wt. = 426$ g. **A.** Dating: 650/670–810/830. **B.** Stray find. **C.** Bibliographical references: Horedt 1958, 102, Fig. 18:10. **D.** MIA, Inv. No. 861.

2. Iron axe with a rectangular poll (Fig. 7:2). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The

axe-eye is ovoid, with widened ends in the shape of pointed lugs. The poll is long, arched and its upper part has a rectangular shape with arched sides. $L = 18.5$ cm; $l_{\text{maximum of the blade}} = 5.5$ cm; $D_{\text{of the axe-eye}} = 3 \times 2.5$ cm; $H_{\text{poll}} = 2.8$ cm; Wt. = 592g. **A.** Dating: 650/670–810/830. **B.** Stray find. **C.** Bibliographical references: H o r e d t 1958, 102, Fig. 17:5. **D.** MIA, inv. No. 859.

11. Sebeș (Alba county) — unknown find location

1. Iron axe with a long poll in the shape of a bar (Fig. 7:3). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge in the shape of a fan. The axe-eye is oval, with the ends very wide and rounded. The poll is long and has the shape of a bar. The poll is arched and terminates with a rectangular end with very well delimited sides. $L = 13.2$ cm; $l_{\text{maximum of the blade}} = 4.2$ cm; $D_{\text{of the axe-eye}} = 1.6 \times 2.1$ cm; $H_{\text{poll/bar}} = 2.8$ cm; Wt. ??? **A.** Dating: 650/670–710/720. **B.** Stray find. **C.** Bibliographical references: H o r e d t 1958, 103, Fig. 17:8. **D.** MOS, Inv. No. A 259/90.

12. Simeria Veche (Hunedoara county) — gravel plant on the river Strei near Simeria Veche

1. Iron axe with a round poll (Fig. 7:4). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge, more pronouncedly at the bottom end of the blade. The back side, with the axe-eye, is trapezoidal and displays two horizontal grooves. The axe-eye is circular. $L = 25.8$ cm; $l_{\text{maximum of the blade}} = 5.6$ cm; $D_{\text{of the back side}} = 4.1 \times 8.5$ cm; $D_{\text{of the axe-eye}} = 3.1 \times 3.3$ cm; Wt. = 1260 g. **B.** Dating: 650/670–810/830. **A.** Stray find. **C.** Bibliographical references: Țuțuianu 2000, 449–452. **D.** Private collection Simeria Veche.

13. Mountain Stănuletele Mare (Retezat Mountains) — Custuri

1. Iron axe with a rectangular poll (Fig. 6:4). The blade has a rectangular cross section and is arched, thinned and flared towards the cutting edge. The axe-eye is circular, with widened ends in the shape of pointed lugs. The poll is short, arched and its upper part has a rectangular shape with arched sides. $L = 18.2$ cm; $l_{\text{maximum of the blade}} = 6.2$ cm; $D_{\text{of the axe-eye}} = 2.4 \times 2.7$ cm; $H_{\text{poll/bar}} = 1.9$ cm; Wt. = 1260 g. **A.** Dating: 650/670–810/830. **B.** Stray find. **C.** Bibliographical references: References: B e r c i u, P o p a 1963, 155, No. 3, Fig. 2:9, 3:19. **D.** MMIRS, inv. No. M. 1924/IST. 1376.

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