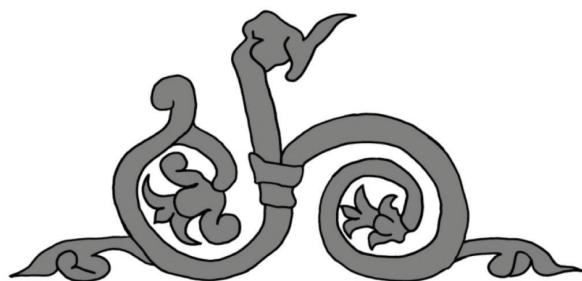


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This volume is dedicated to the memory of George Pascu Hurezan (1949–2016)

Bronze Age stone *battle-axes* of Poiana Type

Marian Adrian Lie

Abstract: The current contribution aims to review several stone battle-axes discovered in Romania, as well as to present some new discoveries or previously unpublished artefacts. Although the current Romanian literature on this subject is quite vast, specific and narrow typologies on stone battle-axes are rare. Therefore, a new type of battle-axe is proposed, seeking an improved morphology, chronology and distribution for the artefacts included in this category. The archetype is represented by an axe discovered in a Middle Bronze Age context, in a Monteoru grave at Poiana. Some remarks regarding the potential functionality are also presented.

Keywords: stone axe, battle-axe, Bronze Age, Eastern Carpathians, typology.

Introduction

More than 90 years ago Radu Vulpe and Ecaterina Dunăreanu-Vulpe were initiating the first archaeological research in the prehistoric and Dacian-Roman site from Poiana¹ (Galați County). Several years later Ecaterina Dunăreanu-Vulpe published the Middle Bronze Age cemetery from Poiana, containing 28 inhumation graves with rich inventories characteristic to the Monteoru culture². The site was studied and presented in an exemplary way, especially for the first half of the 20th century. The interest in the current paper was generated by the inventory of Grave No. 17 within this necropolis, which among others contained a diorite axe³. This particular find presented a lot of interest within the archaeological literature over the years, generating discussions especially about the functionality and chronology of this type of axes. However, intentional or not, most specialist ignored in their discussions grave No. 18⁴, which contained a similar stone axe. This may be due to the fact that the conclusions regarding its functionality are antagonistic to the ones resulting from Grave No. 17. This type of axes was already known in the archaeological literature in Romania (see below), but the site in Poiana yielded the first discovery that places the artefact within a certain context. For this reason, I decided, as the title of the current article suggests, to name this kind of stone axes *Poiana Type*. Besides this small rectification, that in my opinion is justified, I will try to comprise in the following lines similar artefacts already presented in the Romanian literature, as well as some novelties from the western and north-western part of the country.

A few observations regarding the term *battle-axe*

The term battle-axe is often used in the archaeological literature to imply the special character of this artefact. Even though this labelling indicates a specific kind of functionality, the interpretations regarding their use are much more diverse. Passing over the improper use of the term, it remains in the archaeological literature as a convention to differentiate between common axes and this type of artefact⁵. Milan Zápotocký considered the stone battle-axe present main characteristics that are similar to hammer-axe, but highlights the features of the former ones that differentiates the two, mostly as an indicative regarding their functionality. Neither the cutting edge, nor the neck suggest a form that can be used as a work tool; they are often decorated and present a thorough way of smoothing and fur-

¹ Vulpe, Vulpe 1927–1932, 253; Vulpe 1931, 237.

² Vulpe, 1935–1936, 151–167.

³ Within the grave, the deceased was laid crouched on his left side facing North-West. The full inventory of the grave is comprised of a small bronze ring, two flint arrow heads, the diorite axe, a bronze pin, a decorated cylindrical bone piece, and four ceramic potts. Vulpe, 1935–1936, 154, No.17, Fig.3.

⁴ Vulpe, 1935–1936, 154, No.18.

⁵ Diaconu 2010, 5–10.

bishing the surface⁶. A similar approach within the Romanian archaeological literature is presented by Eugen Comşa. He differentiates between common axes and battle axes also based on the volcanic rocks that were used as raw material in the manufacturing process, suggesting that the hardness of the materials implied a more specialised maker and/or workshop⁷. Also, the imitation of copper and bronze prototypes is often reflected within stone battle-axes, with suggestive features that could be seen not only in the general form but also within decorations that imitate casting seams and other processes related with mould casting⁸. As a general guideline, the characteristics mentioned above (shape and aspect, raw material) suffice to differentiate between stone battle-axes and common axes that were used as working tools for everyday activities. However, these features may not always apply when it comes to single samples. This distinction between battle axes and common axes is visible starting from the Copper Age⁹ and continues throughout the entire Bronze Age, encompassing an area from France to Ukraine and from south-west Finland to the Alps¹⁰. Furthermore, the so-called *battle-axe culture*, as seen by Milan Zápotocký, is a notion that comprises similar traits within different archaeological cultures¹¹. Thus being said, the notion *battle-axe* is not a typology in its true sense, with a certain morphological, chronological, functional and geographical span. This discussion, no matter how redundant may sound, is still significant, as some references in the Romanian archaeological literature tend to present analogies for this kind of axes in a very indistinguishable manner. Taking into consideration solely the *battle-axe* label creates a very confusing research environment.

Some previous observations concerning typology and chronology

Márton Roska published in 1958 a stone battle-axe with a mushroom-shaped neck from the collection of the Gherla (Szamosújvar) Gymnasium. With this occasion he brought into discussion similar discoveries, mostly from Transylvania¹². Although Roska did mentioned before several stone battle-axes found in Transylvania¹³, with the article from 1958 he went deeper in the problematic, sketching some basic characteristics. He assigned the axes with round/ oval shaped necks and the mushroom shaped ones together to the Copper Age and saw the former ones as a form that endured until the Middle Bronze Age in the Carpathian Basin, highlighting the example from Poaiana¹⁴. Although Roska's logic is not necessarily wrong regarding the chronological interpretation of stone axes with mushroom-shaped knobs, the main issue was that he did not differentiate within different groups that presented this particular morphological characteristic¹⁵, thus expanding his analogies on a very width geographical area and a very long time-span. A year later, in 1959, he dated the bronze axe from Larga, which has striking similarities with some of the stone battle-axes, within the Middle Bronze Age of the Carpathian Basin¹⁶. As Pal Patay mentions, copper axes have observable influences upon the morphological characteristics of the stone axes within the Copper Age¹⁷. However, in my opinion, within the Bronze Age it is far more difficult to see a unidirectional influence, for instance between disk butted bronze axes (*Nackenscheibenäxte ohne Schafttröhre*) and Poiana type stone axes. Indeed, there are clear evidence that some stone axes replicate in ornaments elements that recall bronze casting; nevertheless, there are clear examples of stone hammer-axes with well-developed cylindrical necks and mushroom-shaped knobs that predate any disk butted bronze axe (for example see Brandt's *Knaufhammeräxte*¹⁸). Another typological observation based on the morphological criteria of the stone *battle-axes* was presented by Alexandru Vulpe in the discussion of the hoard from

⁶ Zápotocký 1966, 174.

⁷ Comşa 1972, 260.

⁸ Patay 1968, 14–16.

⁹ Klimscha 2011, 372–373.

¹⁰ Zápotocký 1966, 173.

¹¹ Zápotocký, 173–176.

¹² Roska 1958, 127–140.

¹³ Roska 1929, fig.29/1–2; Roska 1941, Taf.LIX/3–4; Roska 1942, 37, 74–75, 101.

¹⁴ Roska 1958, 136–140.

¹⁵ Roska 1958, Abb 1–15.

¹⁶ Roska 1959, 63–66.

¹⁷ Patay 1968, 14–16.

¹⁸ Brandt 1967, 27–32, Taf.4.

Tufa, where he differentiated two types within the axes with cylindrical neck: the ones with straight long axis (which he dates within the Copper Age) and the ones with a bent axis which were subsequent to the former ones¹⁹. Here he also mentioned the axes with mushroom-shaped knobs that were developing in parallel with the ones with cylindrical neck, starting with the beginning of the Bronze Age²⁰. Within the publication of the stone axe from Dad, Amália Mozsolics made the observation that this form cannot be attributed to any of the Hungarian Hoard Groups²¹, yet some similarities can be seen within the Hoard from Borodino, the axe from Tufa and Grave 17 from Poiana, with an inventory which can be dated at the Hajdúsámson horizon, respectively Reinecke A2²². Elke Kaiser contradicts the comparison made before by Amália Mozsolics between the axe from Dad and the one from Poiana. Instead, a better analogy is suggested between the axe from Dad and the axe from Porcești, which can be dated within the Early Bronze Age, fact that would indicate a synchronisation with similar forms found in the Nord Pontic Area²³. Regarding the axe from Poiana, E. Kaiser mentions a similar find represented by the stone axe from Berezka in the Republic of Moldova, implying that the two artefacts represent the same type. At the same time, she considers that their shape is not entirely similar with the axes from Borodino²⁴. Based mostly on Vulpe's typo-chronological observations made in his 1959 article, Mircea Munteanu is trying to present a chronological approach towards stone battle-axes, but his endeavour is limited to the moment of their appearance, considered to be within the Glina III – Schneckenberg – Coțofeni III medium²⁵. Bogdan Niculică presents a series of stone axes discovered in the Suceava Plateau, among which he differentiates *category I*, which is based mostly on mushroom-shaped knobs and the curved profile²⁶. This category is attributed to the Middle Bronze Age, respectively to the Komariv culture²⁷. However, as the author concludes himself, the axes presented in *category I* may as well represent a typology for each individual²⁸. Another approach towards the typological characteristics of the stone battle-axe from Poiana, similar with the one that will be presented below, is proposed by Vasile Diaconu. He includes similar finds within the *Type C*²⁹ battle-axes found East of the Carpathians³⁰.

Morphological criteria of the Poiana Type axes

Compared to other types of battle-axes, the most obvious characteristic of the Poiana Type axe is the way the neck was built. This part is cylindrical and ends up in a fully formed round knob that is well distinguishable and highlighted from the rest of the neck. The knob itself is mushroom-shaped, with a strong curvature or sometimes with a rounded conical shape. The cylindrical or slightly conical shaft hole is usually placed at about 1/3 from the knob. On its lateral sides it is thickened in a vaulted manner. At the upper part of the shaft hole, the body of the axe is elevated, usually in a rounded conical manner that breaks the general curvature of the axe. In some cases, this elevation is represented with a well-defined round collar that suggests a similarity with the shaft-tubes (*Schafttröhre*) of disk butted bronze axes. The blade is usually oval in section and gradually thins towards the edge. The edge is arched and generally widened, resulting in a cutting edge that is than the body. The general form is elongated, with its long axis curved and/or bent at the shaft hole. The part that has the most variation within this type is the edge, although following the general guidelines mentioned above, it presents

¹⁹ Vulpe 1959, 270–271.

²⁰ Vulpe 1959, 272.

²¹ Mozsolics 1964, 218.

²² Mozsolics 1964, 221–225; Worth mentioning, Amália Mozsolics made some interesting parallels between the bronze disk nail found in Grave 17 from Poiana and the closing disk of the *Schaftrohrenaxt* from Apa (Popescu 1944, Taf.XIV/6), as well as between the bone pommel from the same grave with the one from Tószeg (Mozsolics 1964, p.221, Abb.5).

²³ Kaiser 1997, 109.

²⁴ Kaiser, 109–110.

²⁵ Munteanu 1991, 417.

²⁶ Niculică et al. 2004, 286, fig.1/1; 1/3; 2/1–2/3; 2/5; 4/2; Niculică 2015, 290, PL.LXXVI/1–8.

²⁷ Niculică 2015, 296.

²⁸ Niculică 2015, 290.

²⁹ „*Topor cu corpul alungit sau scund, profilul arcuit, umerii ușor reliefați și muchia scundă, terminată printr-un buton conic sau semisferic; tășul este arcuit, de cele mai multe ori, lățit, iar perforația este situată central sau în partea superioară a artefactului*” (Diaconu 2010, 8).

³⁰ Diaconu 2010, 8,11; fig.3/1–6.

distinctive features for each individual. The overall aspect of this axes suggests a very accurate and careful made build, with thorough polish and smooth regular surface. A special representation of this type can be found in grave no.18 from Poiana, which was chosen as archetype. Another stone axe was also found in grave no.17, but it differs from the previous one mostly because of its unfinished state. The surface seems rough, the shaft hole is incomplete and overall it only suggests some of the general morphologic characteristics of the above-mentioned type.

In search of Poiana Type axes. List of discoveries

1. Adjud (Vrancea County) (**Plate III/2**): An axe made out of sandstone, with curved profile, cylindrical neck, mushroom-shaped knob and arched edge, is published as a stray find. The authors are presenting it as related to the Bronze Age – Monteoru Culture. However, no description is available. Although in the publication only one axe is described, apparently four more axes were found here. Within the illustrations, there is one picture and one drawing presenting the find, both of very poor quality and not really resembling each other. (after Bobi, Apostu 1997, 36, Pl. 6/5; Pl. 7/11, Tab. 1/no.19). It is possible that the location of the discovery was near the road to Urechești in the point *Movila*, where Monteoru ceramic fragments were identified among other finds. (No scale and no dimensions available) (Paragină, Agache 1981, 79–80).

2. Anghelești, com. Ruginești (Vrancea County) (**Plate III/1**): An axe made of sandstone with the above mentioned characteristics is presented as a stray find. The authors present it within a picture and a drawing, with some visible difference between the two although only one discovery is presented in this point. No other information available. (No scale and no dimensions available) (after Bobi, Apostu 1997, 36, Pl. 6/9; Pl. 7/12, Tab.1/no.4).

3. Arbore (Suceava County) (**Plate IV/2**): The former collection of the Museum from Arbore contained an axe in an unfinished state. Some of its elements suggest similarities with the one from grave 18 in Poiana. (Dimensions: L = 10.7; W = 3.8cm; W-edge = 3.5cm; ϕ -knob = 3.2) (after Niculică et al 2004, 271–272, Fig. 4/2; Niculică 2015, 286, No.63, Pl. LXXVI/1).

4. Bărcănești Village, com. Căndești (Neamț County) (**Plate I/3**): Within the village boundaries an axe similar with the one found at Chintici was discovered, with elongated shape and curved profile, a cylindrical neck that ends in a mushroom shaped knob. The axe does not present a shaft hole. The petrographic analysis indicates the same source material as the one from Chintici. (Dimensions: L = 17.3cm, W-edge = 7.2) (after Dumitroaia 1997, 433, Fig.3.2; Munteanu 2001, 51, Pl.60/4)

5. Beriozchi³¹ (now Anenii Noi) (Rep.Moldova) (**Plate I/4**): The axe from Beriozchi, has a high resemblance with the one from Poiana grave no.17, as Elke Kaiser mentioned before. The axe is made of nephrite and comes from a Kurgan, together with a ceramic bowl and a spearhead. (Dimensions: L = 19,5cm; ϕ shaft hole 2,8cm) (after Kaiser 1997, 110, Taf. 27/8; Sergeev 1955, 114–115).

6. Botoșana (Suceava County) ³² (**Plate V/7**): Within the collection of the local professor Vasile Boca there is a fragmentary axe with a bent long axis and an arched edge that is evidenced from the rest of the body. It was made of a grey-greenish hard rock. (Dimensions: L = 7.5cm; W = 3.3cm; W-edge = 4.5cm) (after Niculică et al 2004, 273, Fig.5/5; Niculică 2015, 286–287, Pl. LXXXI/7)

7. Brețcu (Bereck) com. Brețcu (Covasna County) (**Plate III/5**): The axe from Brețcu is following the general morphological characteristics stated above within the proposed Poiana type axes. The long axis is curved at the shaft hole, it has a cylindrical neck and mushroom shaped-knob, as well as arched edge. In the illustration provided by Roska, seems that the cutting edge is chipped. Around the shaft hole, the body of the axe is thickened. (after Roska 1958, 127, abb.3)

8. Chintinici Village, com. Roznov (Neamț County) (**Plate II/1**): On the property of Ion Albet, a stone axe with mushroom shaped knob and arched edge was discovered. The author believes that this is the product of the bronze age communities in this area, respectively of the Costișa culture, and that

³¹ The name of the village in which the axe was found is Beriozchi, but it was initially misspelled by Sergeev 1955 as Berezka. The error was subsequently taken accordingly by Elke Kaiser 1997 and other authors. There is no village called Berezka in the Republic of Moldavia and the initial mistake probably came from a fonetical translation. Beriozchi was a village that today is incorporated within the city of Anenii Noi.

³² At the point Botoșana *Dealul Crucii* other Bronze Age discoveries are mentioned as belonging to the Komariv and Noua cultures. (Niculică 2015, 286, ref. 52).

the artefact does not necessarily represent a tool or a weapon, but a distinctive sign/sceptre of a tribal chief. Petrographic analysis made by geologist Sorin Baciú from Natural Science Museum in Piatra-Neamţ revealed that the axe was made of andesite, indicating a possible raw material source in the blocks found on the Bistriţa and Bistricioara rivers. (Dimensions: L = 14.4cm, W-edge = 6.8cm) (after Dumitroaia 1997, 433, No.4, Fig.3.1; Munteanu 2001, 51–52, Pl.60/3)

9. Cipău-Iernut (Marocsapó) (Mureş County) (**Plate II/5**): The axe from Cipău fits very well in the morphological characteristics mentioned above for the proposed Poiana type. It presents a bent long axis, arched edge that overpasses the width of the axes body, a mushroom-shape knob finishing the cylindrical neck. Although the overall aspect of the axe has a fine polished aspect, it does not present a shaft hole, very similar with the axe from Bărcăneşti (Neamţ County). The axe from Cipău is presented by Nagy 2009 as coming from Ozd-Teleac (Magyarózd-Telek), com.Bichiş (Mureş County) and regarded by the author³³ as belonging to the *eneolithic*, citing the Archaeological Repertory of Lazăr 1995, 78/XIV 4.c where a *calapod* type axe is mentioned among other lithic discoveries and ceramics specific to the Coţofeni culture. This type of axes has nothing to do with the axe presented by Nagy. Furthermore, at the point where Lazăr mentions the point *Teleac* (*Telek*) no entry of this type is mentioned. Within the inventory registry of the Mureş County Museum under the inventory number 7031, as cited and drawn by Nagy, this axe was registered as coming from Cipău (Marocsapó) (Mureş County), donated to the Museum in 1982 and dated within the Bronze Age. That is why I chose to change the name of the point of discovery here. (Dimensions: L = 13cm, H = 5cm, Width = 4cm) (after Nagy 2009, 161–162, Fig.9/2; Lazăr 1995, 78–80).

10. Floreşti-Poligon (Cluj County) (**Plate V/5**): Fragment of a grey marble³⁴ axe preserving a mushroom-shaped knob and part of the shaft hole was found at Floreşti – *Poligon* and related with Wietenberg style pottery attributed by the author within Boroffka's Wietenberg C-D. (Dimensions: L = 5.55cm, ϕ shaft hole = 2.2 and 1.97cm) (after Nagy 2009, 161–162, Fig. 9/1).

11. Gherla (Szamosújvár) (Cluj County) (**Plate I/6**): The axe was donated to the Gimnasium in Gherla by Cristoph Papp, found while the digging a garbage pit. It is made of a dark andesite rock, with a length of 10.8cm, its long axis is bent at the shaft hole and has a cylindrical neck ending in a mushroom shaped knob, as well as a curved edge. As Roska Marton states, this is not a weapon that it is unknown in Transylvania, following a remarkable list of similar artefacts, some of which I will also mention here. (Dimensions: L = 10.8) (after Roska 1958, 127, abb.1)

12. Gurbăneşti, com.Gurbăneşti (Călăraşi County) (**Plate V/6**): A stone fragment that presents a mushroom-shaped knob, thickened and curved on the sides of the shaft hole, an bent longitudinal profile is published. In section, it has a triangular shape towards the broken edge. (Munteanu 1991, 411, Fig.17; Simon, Munteanu 1990, 105–106).

13. Lechinţa – Iernut *Podei* (Maroslekenca) (Mureş County) (**Plate IV/6**): During the 1951 excavations at the site in Lechinţa de Mureş -*Podei*, a fragment belonging to a battle-axe presenting an arched edge made of amphibolite was found together with ceramic fragments specific to the Wietenberg style. The author presents as a close analogy the axe from Breţcu. Caution is advised in this case as the most representative characteristic of this type of axes, which are its neck and knob, are missing. (after Crişan 1965, 50, Fig.8/10).

14. Liteni-Găinărie (Suceava County) (**Plate I/2**): Within the personal collection of Florin Roman (Liteni) there is an axe made of greywacke found on the high terrace of the Siret river. No other information concerning the circumstances in which it was found are mentioned. Based on similarities with other artefacts, the author fits the axe from Liteni within the Middle Bronze Age. (Dimensions: L = 13.8cm; W-max = 5.4cm; W-edge = 5.2cm; ϕ -knob = 3.9cm; ϕ -shaft hole = 2.2cm) (after Niculică et al 2004, 277, Fig.1/1; Niculică 2015, 285, 295–296, Pl. LXXVI/6).

15. Lisnău (Lisznýó) com. Ozun (Covasna County) (**Plate II/2**): The diorite axe from Lisnău represents a stray find made during agricultural works. Its overall shape respects the morphological characteristics of the proposed Poiana type battle-axes, with the sole mention that it is in an incomplete state, with its shaft hole only initiated. The author also makes a parallel between this discovery and the axe from Poiana grave no.17. After a field survey at the point where the axe was found, the author states

³³ Nagy 2009.

³⁴ The author is mentioning Valea Ierii as a possible raw material source. The petrographical determination was made by Dr. Dana Pop from the Mineralogy Museum of the Babeş-Bolyai University in Cluj-Napoca (Nagy 2009, reference 19).

that ceramic materials specific to the Bronze Age have been found, but no specific cultural assignment could be made. However, near the place of the discovery a bi-ritual cemetery that is dated at the end of the MBA (Middle Bronze Age) beginning of LBA (Late Bronze Age) is mentioned, as well as a settlement from the Bronze Age. (Dimensions: L = 15.4 cm) (after Méder 2007, 211, table 2/1).

16. Lopadea Nouă (Magyarlapád), com. Lopadea Nouă (Alba County) (**Plate IV/7**): A fragment that consists of a cylindrical neck and mushroom-shaped knob, together with some Wietenberg shards are kept at the Museum in Aiud. The context of discovery is unknown. (after Boroffka 1994, 54, entry 255, Taf.84/2).

17. Mitrești (Nyárádszentmárton), com. Vărgata, (Mureș County) (**Plate I/5**): A diorite axe found at Mitrești is also following the general aspects of the type defined above. (Meder 2007, 207, table 2/2).

18. Mogyoróská, Gönc (Borsod-Abaúj-Zemplén County, Hungary) (**Plate III/4**): A well preserved basalt axe is presented by Rómer Flóris in his article from 1868, which, to my knowledge, makes this the oldest mention. From the representation provided by Rómer, the only unknown aspect regarding the shape of the axe is whether it has a bent long axis or not. The other morphological characteristics of the axe from Mogyoróská fit very well within the Poiana type. (Rómer 1868, 191, entry no.1033, ábra 13).

19. Movilița (Vrancea County) (**Plate III/3**): Two axes made of limestone representing stray finds are mentioned for this point as belonging to the Monteoru Culture. One of them presents characteristics specific to the Poiana type, with the observation that its edge is following the body of the axe and not exceeding it, as in most of the cases. (No scale and no dimensions available) (after Bobi, Apostu 1997, 36, Pl.6/8, Tab.1/no.22).

20. Ormeniș (Marosörményes), com. Mirăslău (Alba County) (**Plate IV/8**): Fragment coming from a stone axe representing part of the neck, knob and a part of the shaft hole, found in unknown circumstances. (after Boroffka 1994, 63, entry 311, Taf.108/4).

21. Pădureni (Erdőcsinád) com. Gornești (Mureș County) (**Plate IV/5**): A stone axe was brought to the Transylvanian National Museum by Domokos Teleki. The axe is incompletely perforated and presents a more or less defined mushroom shaped knob. From the illustration provided by Roska Marton, both in the article from 1958 and in the *Repertoriuma*, no information regarding the profile is available. However, noting that the axe is in an unfinished state, it can be a case similar with the axe from Poiana grave 18, where the shape was only suggested, and does not fully confirm the above stated characteristics. (Roska 1958, 128, abb. 4; Roska 1942, 74–75. abb.89).

22. Palota (Ujpalota), com. Sântandrei (Bihar County) (**Plate II/7**): A stone battle-axe was donated to Emanuil Gojdu Highschool in 1958. The long axis of the axe is bent downwards and presents a well-defined arched edge. The cylindrical neck ends in a mushroom-shaped knob and the body, above the shaft hole, resembles very much of a collar that is usually seen at the disk-butted bronze axes. The authors mention that the edge and the knob present traces of usage. What differentiates this axe from the above-mentioned ones is the two knobs present on the sides of the shaft hole. Within the initial publication of some artefacts from the collection of the high school, the professor Titus Roșu does not mention the stone axe. Later on, while re-examining the collection, Sever Dumitrașcu mentions some stone weapons and gives a photo of the above discussed artefact. More recently, Sabin Luca and Constantin Ilieș publish a drawing of the axe, mentioned as coming from Palota (*Ujpalota*)³⁵. The issue is that between Dumitrașcu's image and the one published by Luca and Ilieș some slightly differences can be seen regarding the artefact (however this problem can be attributed to the angle and the quality of the photo used by Sever Dumitrașcu). Direct information coming from Călin Ghemiș (Museum of Oradea), who has seen the axe, suggests that there was some intervention on the artefact or that the axe is merely a replica. Whatever the case, prudence is advised regarding this axe. (Dimensions: L = 14.3cm, Width = 5.1, width edge = 3.8cm, ϕ knob = 4cm) (Luca, Ilieș 2000, 324, Abb. 2/1a-b; Roșu 1967, 354–355; Dumitrașcu 1979, 811, Pl.2/10)

23. Pecica Șanțul Mare (Arad County): (**A**) (**Plate V/1**) In the collection of the County Museum of Arad under the inventory number 1370, there is a blade coming from an axe with a curved profile and an

³⁵ Luca, Ilieș 2000, 326; The authors also state that the entire group of artefacts mentioned as coming from Palota is possible to have been bought by professor T. L. Roșu as a whole.

arched edge similar with entry 30 D, but considerably shorter. Also, the edge is highly chipped. Within the museum registry, it is marked as an entry from the archaeological excavations in 1899 at Pecica *Șanțul Mare* and labelled as a chisel. (Dimensions: L = 6.6 cm; width = 3.6 cm; width edge = 3.7 cm) (first publication). **(B) (Plate IV/3)** From the same site and excavations, under inventory number 1369, there is a small unfinished axe that was marked within the registry as a hammer. The overall shape of it suggests a mushroom shaped knob that clearly differentiates itself from the cylindrical neck. The incomplete perforation is located between the thickened sides of the axe. The profile of the axe is straight and the surface is not polished. The overall shape reminds merely of a sketch of the archetype, situation similar with find from grave 18 in Poiana. From the aspect of it, it was never meant to perform any kind of work role (Dimensions: L = 7.6cm; ϕ knob = 3.3 cm; ϕ shaft hole 1.3cm) (first publication).

24. Piatra-Neamț (Neamț County) **(Plate II/4)**: The andezit stone axe from Piatra-Neamț is also a stray find. It was discovered in 1945 in *Gara Veche* neighbourhood, at a depth of 1 m, without any other information regarding its whereabouts being available. The general aspect indicates the same characteristics as the ones mentioned above, with the observation that the sides of the shaft hole are thicker. (Dimensions: L = 13cm, h = 3cm) (after Munteanu 2001, 53, Pl.60/2; Mătasă 1959, 731, Fig.9/2)

25. Poiana-Tecuci (Galați Conty): Within the cemetery from Poiana two stone axes have been found. **(A) (Plate I/1)** The one from grave No.17 is a diorite battle-axe laid on the chest of the deceased. Traces of the wooden handle were identified, including inside the shaft hole, which allowed the author of the article to approximate the length of the handle at about 35–40cm. The upper part of the shaft hole was fixed within the handle with a bronze disk nail. The grip area of the handle was provided with a bone collar decorated with incisions in *wolf teeth* manner. Other grave inventory is represented by two flint arrowheads, a bronze ring, and 4 ceramic bowls (Monteoru Ia). **(B) (Plate IV/1)** The second diorite axe, that was deposited in an unfinished state, was found in grave No.18 from Poiana, together with a ceramic bowl. (after Vulpe 1935–1936, 154–155, Fig. 3; Fig. 9–12). Chronologically the cemetery from Poiana is placed by Ion Motzoi-Chicideanu within Phases Monteoru Ic3 and Ib³⁶.

26. Poieniști, com. Poieniști (Vaslui County): A fragment that presents a fully developed mushroom-shaped knob, a slightly bent profile, and which thickens in a curved manner on the sides of the shaft hole is presented by Radu Vulpe as a stray find. The fragment is put by the author together with Monteoru style ceramic discoveries. He also mentions that it was made of a black-ashy andezit rock. (Dimensions: height = 4cm, ϕ shaft hole = 1.9cm) (after Vulpe 1953, 277, Fig. 57/1)

27. Pufești, com. Pufești (Vrancea County): On the floor of House no. 3 studied within the excavations from 1969, an axe fragment was found, displaying a developing mushroom-shaped knob (the knob itself is also broken). It was discovered together with another axe fragment and an unfinished axe. The former ones do not show any features characteristic to the type defined above. Considering the fragmentary state, caution is also necessary for the first fragment. Based on the ceramic style, the house is attributed by the authors to the Monteoru IIa phase. (Florescu et al. 1971, 160, Fig.5/1).

28. Tăvădărăști Village, com. Dealul Morii (Bacău County) **(Plate II/3)**: The archaeological site from Tăvădărăști *Banca* was researched by Marilena Florescu and Viorel Căpitanu between 1963 and 1964. Within the archaeological excavations 3 ash-mounds have been researched, each containing two habitation levels that correspond to phase Noua I, respectively Noua II. From the lower levels, 2 whole stone axes and a fragment have emerged, of which one presents a form that has similarities with the Poiana type. The authors of the archaeological research and later on Adrian C. Florescu highlight the domestic character of this archaeological levels, which represent households. For the Noua I phase in Tăvădărăști, they also present ceramic materials that can be associated with the Monteoru, Costișa and Wietenberg tradition of ceramic styles, materials that cannot be found within the Noua II phase. However, there is a lack of agreement between the information provided by Adrian C. Florescu and M. Florescu/V. Căpitanu. A. C. Florescu mentioned that the axe was found within the lower levels of the ash-mounds that correspond to the Noua I phase³⁷, while the information provided by Marilena Florescu is rather confusing. In her 1969 article she mentioned the discovery of a stone axe with mushroom-shaped knob within the Monteoru Ic3 -Ic2 levels³⁸, although a year before she defined

³⁶ Chicideanu 2011, p.138, cat.743; Teodor et al. 1994, 201–212.

³⁷ Florescu 1991, 129.

³⁸ Florescu, Căpitanu 1969, 57.

this discovery as Noua I (?)³⁹. Furthermore, in the 1969 article the axe is not illustrated. The actual representation of the axe was made available later, within A. C. Florescu's research. Leaving aside the fact that this artefact does not have a precise context within the archaeological site, in addition to the confusion mentioned above between (mostly a terminological misunderstanding), the axe from Tăvădărăști can be placed chronologically at the end of the MBA and the beginning of the LBA. (after Florescu, Căpitanu 1968, 35–46; Florescu, Căpitanu 1969, 49–74; Florescu 1991, 127–129, No.539, Pl.159/6).

29. Terchești, com.Popești (Vrancea County) (**Plate IV/4**): Within the intrusive archaeological research at Terchești, two stone axes were found. One of them, in an unfinished state (incompletely perforated), presents some of the characteristic of the Poiana Type axes, especially similar with the archetype from grave no.18. Both discoveries from Terchești are attributed by the authors to the Bronze Age, Monteoru Culture. (No scale and no dimensions available) (after Bobi, Apostu 1997, 36, Pl. 5/8, Pl.4/8, Tab.1/No.5). During the excavations at Terchești, conducted by Marilena Florescu between 1960–1964, 8 habitation levels were identified; however, the stone axes mentioned by Victor Bobi and Aurora Emilia Apostu are not mentioned in Florescu's publication, which does presents some stone artefacts but none of them are of interest in the current topic (after Florescu, Constantinescu 1967, 285–306).

30. Toboliu, com.Toboliu (Bihor County): (**A**) (**Plate II/6**) The axe from Toboliu is published initially by Călin Ghemiș as coming from Girișu de Criș, mentioning as a possible origin the point *Alceu*. For pertinent reasons, the name of the site was changed to Toboliu *Dâmbu Zănăcanulu*⁴⁰. The granodiorite axe discovered in 1977 follows mostly the type described above, with a bent long axis, cylindrical neck that ends in a mushroom-shaped knob and an arched edge. However, the blade itself has a slightly polygonal section and two facets that start from the shaft hole and end at the edge of the axe. From this perspective, the axe can be regarded as unique, no other axe presented above having this kind of decoration. Microscopically analysis of the edge has shown that the axe does not present any traces of usage. (Dimensions: L = 17,1 cm; width = 5.8 cm; ϕ shaft hole = 2 cm; ϕ knob = 5.3 cm; weight = 586 g) (Ghemiș 2001, 663–664, Pl.1). (**B**) (**Plate V/3**) Fragment of an axe presenting part of the shaft hole, the neck and the knob was found during the geomagnetic survey in the outer settlement of the Toboliu *Dâmbu Zănăcanului* site in 2016, in the area north-west of the tell. The raw material that was used for this artefact is an andesite rock with pyroxene and hornblend of dark grey colour. The fragment is very well polished and has a metal-like lustre. Some traces of usage can be seen on the active part of the knob. Considering the verticality of the shaft hole, the long axis of the stone axe is arched (Dimensions: L = 5.36 cm; ϕ shaft hole = 2 cm; ϕ knob = 4.45 cm) (new discovery). (**C**) (**Plate V/4**) Fragment of a stone axe presenting part of the shaft hole, the neck and the knob was found during the geomagnetic survey in the outer settlement of the Toboliu *Dâmbu Zănăcanului* site in 2019 west of the tell by students from the University of Cologne. It is made of basalt presenting a grey-greenish colour and a mosaic like pattern. It is also very well polished. As in the case of entry 30 B, it also presents an arched long axis (Dimensions: L = 5.58 cm; ϕ shaft hole = 2 cm; ϕ knob = 3.98 cm) (new discovery). (**D**) (**Plate V/2**) Fragment of an axe presenting part of the shaft hole the blade and the edge of a battle-axe. Considering the verticality of the shaft hole, the profile of the axe on its long axis is curved. The edge is highly arched and well defined from the rest of the body, having almost a semi discoid shape. At the upper part of the shaft hole, it has a sleeve of a very well-defined shape that resembles with the ones found on disk butted bronze axes. The rock seems to be a quartzitic sandstone of a grey colour, that has permitted a very fine polish and a good lustre. Some traces of usage can be seen on the edge. It was also found during the geomagnetic campaign of 2016, together with entry 30 B at Toboliu (Dimensions: L = 10.35, ϕ shaft hole = 1.9 cm; width edge = 5.28) (new discovery)⁴¹.

31. Vârteșcoiu, com. Vârteșcoiu (Vrancea County): In a pit that was interpreted by the author as ritual, two stone axes were found among other lithics (stone grinders) and ceramics characteristic to the Monteoru IIb style. One of the axes resemble some of the morphological characteristics of the Poiana type axes, but without a full developed knob at the neck. (after Bobi 1994, 44, Fig.12/1)

³⁹ Florescu, Căpitanu 1968, 35–46.

⁴⁰ Fazecaș, Lie 2018, 29–38.

⁴¹ Within the outer settlement of Toboliu *Dâmbu Zănăcanului*, where the three axe fragments were found, only Middle Bronze Age Ceramics were identified (Fazecaș, Lie 2018, 29–38).

Discussion

The list presented above follows a general pattern regarding the basic characteristics of Poiana type battle-axes. However, considering the support on which they were created, it would be hard – if not impossible – to find two identical axes. The proposed Type should be regarded as a working hypothesis, with the sole purpose of differentiating among different types of the so-called *battle-axes*, with the aim of offering a narrower view upon the chronological span and functionality of this type of axes. The initial sole intention of this study was to present the discoveries from Toboliu and fit them within a certain typo-chronological frame and area of distribution. However, this was rather impossible, as most of the publications presenting this type of discoveries were offering a very confusing environment, generalising the entire discussion to the *battle-axes*, thus offering a very long period of time and a very wide area of distribution. Although the list is not meant to be exhaustive, I tried to bring in discussion most of the similar discoveries found within the Romanian archaeological literature. Another aspect of the publications dealing with *battle-axes* is an *eternal return* to the Borodino Horde⁴² in Moldavia and Schliemanns Troy Treasure „L”⁴³. Not to break the tradition, I will also make a few remarks here regarding these axes. Neither the four axes from Troy, nor the four from Borodino are accurate analogies for the type presented here. Undoubtedly, there are some similarities between them. For example, the curved profile of the axe or the arched edge are characteristics that are found on multiple types of *battle-axes* with high differences in chronological or regional distribution, and perfect example in this sense are some axes attributed to Yamnaya culture⁴⁴. Such an example can be given also for the analogies based on mushroom-shaped knobs, where we find striking similarities with the *knob hammer axes* (*Knaufhammeräxte*) of the Single Grave Culture⁴⁵, with the sole difference within the morphological characteristics standing within the curved profile of the Poiana type axes. To conclude, the analogies with the axes from Borodino or Troy Treasure „L” would only generalize, not only the time frame and spatial distribution in this particular case, but also possible conclusions regarding the functionality.

Some good parallels can be seen within the disk butted bronze axes (*Nackenscheibenäxte*) with which they share similar forms. Such an example can be seen between the axe from Toboliu⁴⁶ (30A) and the one from Larga⁴⁷ or one found in Western Volhynia⁴⁸. The resemblance is not only in its general morphological characteristics, but also in the way the sides of the blade were decorated. Another example can be noticed between the axe from Palota and the one from Nehoi⁴⁹, where, beyond the similar shape, the two knobs on the lateral sides of the shaft hole are also present. The general morphological characteristics can be seen within Type A of disk butted axes (*Nackenscheibenäxte*) without shaft sleeve (*Schafttröhre*)⁵⁰. However, there are also examples of stone axes that clearly imitate the shaft sleeve, such as the fragment from Toboliu (30D). All this should raise the question of imitation. For example, as stated before, the stone axes seem to have been inspired initially by Copper Age metal hammer axes. Furthermore, stone axes copy other elements, such as shaft sleeves or decorations typical to the bronze ones. Nevertheless, in many instances, the general shape seems to be more natural for the stone ones, which, in my opinion, suggests a potential continuous imitation between this type of rock axes and the bronze ones.

As seen from the 35 artefacts listed above, they were rarely found within reliable contexts, with just a few exceptions. Even for those coming from archaeologically researched sites, accurate context dating is missing. However, based on the ceramic styles⁵¹ that were found together with some of the

⁴² Kaiser 1997

⁴³ Tolstikow, Trejster 1996, p. 148–153, no. 166–169.

⁴⁴ Kločko 2001, Fig.26/6.

⁴⁵ Brandt 1967, 27–32, Taf.4/1–6.

⁴⁶ The analogy was first pointed out by Ghemiş 2001, 664.

⁴⁷ Roska 1959, 63–66, abb.12.

⁴⁸ Kločko 2001, Fig.62/17.

⁴⁹ Vulpe 1970, Taf.56/C2.

⁵⁰ Mozsolics 1967, 34, Abb. 6.

⁵¹ Costișă, Monteoru, Wietenberg, Otomani and Mureș.

axes or analogies with bronze axes, a rather large chronological frame such as the Middle Bronze Age⁵² would not be far from the truth. However, they don't seem to be specific to a single cultural horizon, but represent a reality that concentrates on both sides of the Eastern Carpathians, with the finds from Beriozchi, Gurbănești and Pecica as potential exceptions. Comparing Amalia Mozsolics 1967 map⁵³ of the horde finds that contain disk butted bronze axes with the one presented here, it is visible that the Poiana type axes overlap the finds of disk butted axes from Transylvania, especially in the Mureș Basin, but continue to define also the area with less disk butted bronze axe discoveries in south-eastern Transylvania and over the Eastern Carpathians⁵⁴, on the Siret (**Fig. 1**). At this moment, it would be premature to invoke a single direction of trade for these artefacts, although they seem to suggest possible trade routes between both sides of the Eastern Carpathians. Furthermore, the discoveries within the Otomani world, such as the ones from Toboliu, practically stop at its Eastern border, where we still have a lot of influences from the Wietenberg Culture. For now, the question still stands whether the products/influences come from the Moldavian Plateau towards the intra Carpathian regions.

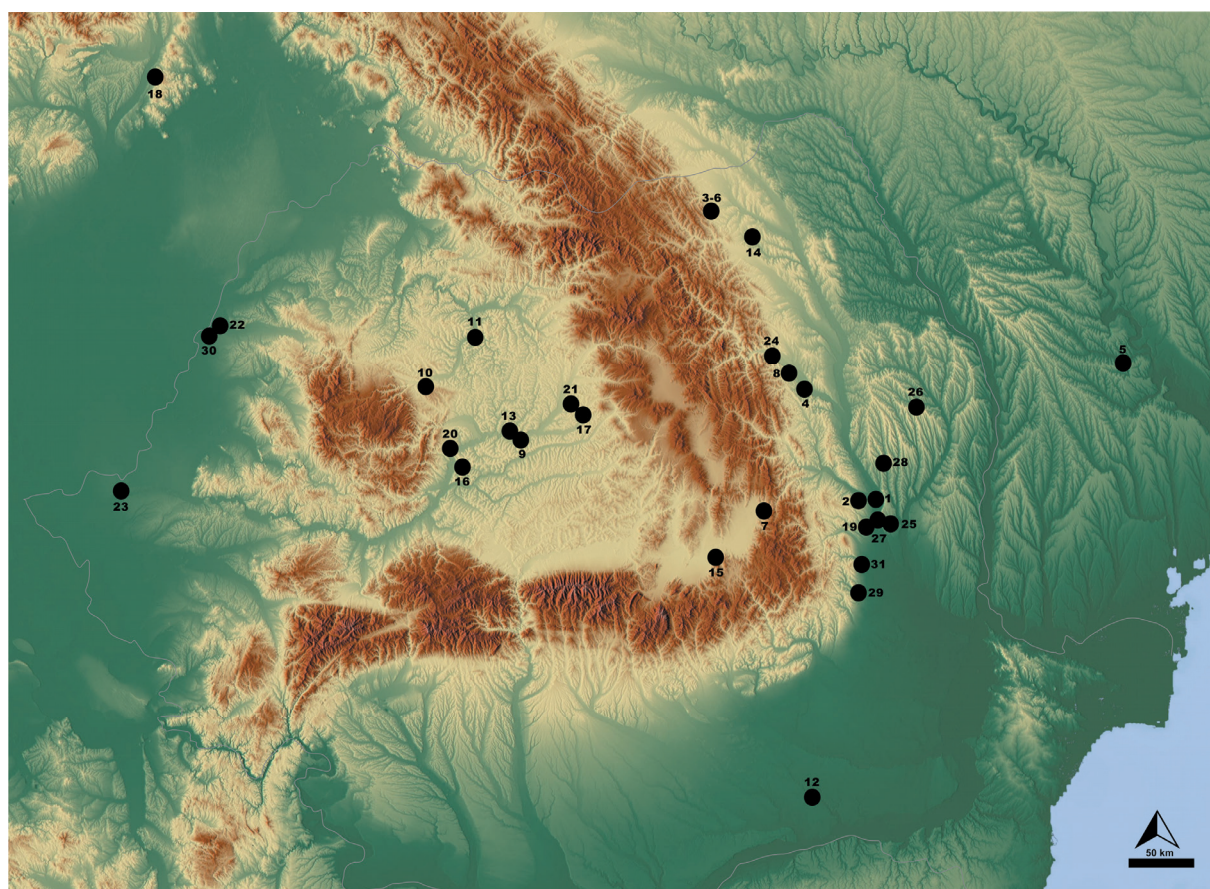


Fig. 1. Distribution of Poiana type battle-axes: 1. Adjud; 2. Anghelești; 3. Arbore; 4. Bărcănești; 5. Beriozchi; 6. Botoșana; 7. Brețcu; 8. Chintinici; 9. Cipău; 10. Florești; 11. Gherla; 12. Gurbănești; 13. Lechința; 14. Liteni; 15. Lisnău; 16. Lopadea Nouă; 17. Mitrești; 18. Mogyoroska; 19. Movilița; 20. Ormeniș; 21. Pădureni; 22. Palota; 23. Pecica; 24. Piatra-Neamț; 25. Poiana; 26. Poienesti; 27. Pufești; 28. Tăvădărăști; 29. Terchești; 30. Toboliu; 31. Vârteșcoiu.

Regarding the functionality, the problematic deepens. The entire generalisation of the *battle axes* typo-chronological aspect also had some repercussions within the interpretation of their functionality. For example, within the volume *Istoria românilor 2001*, mainly basing its analogies with the Borodino Horde, the author concludes that before serving as weapons most of such axes are first insignias of social prestige⁵⁵. I don't necessarily want to contradict the possible functionality of some artefacts that were found in contexts that suggest such a claim, as the Borodino Horde, Treasure L

⁵² Hungarian Chronological System.

⁵³ Mozsolics 1967, Abb.11.

⁵⁴ With few exceptions, such as the axe from Izvoare, Neamț County (Dâmbovița 1977, 50, Pl.20/4.

⁵⁵ Vulpe et al 2001, 355.

Troy or the recently discovered axe from Năeni (Buzău)⁵⁶ – that beyond context are also exceptionally crafted. Regarding the axe from Năeni⁵⁷, the lack of a cutting edge further suggests that it was never meant to fulfil a practical role. A counter example would be the axe from Grave No.17 (Pl. I/1) from Poiana-Tecuci, that was found together with two flint arrowheads and the axe itself presents direct proof (wood handle) that it was a functional weapon. Indeed, the axe itself can be regarded as a social insignia, but that would arguably be the case of any weapon. A generalisation of functionality cannot be narrowed even for axes which fit the same typology, as the ones presented above. An example in this regard can be found in Poiana. Although sharing some basic morphological features, the two axes are clearly distinctive in terms of function. The unfinished state of the axe found in Grave No. 18 does not necessarily represent, in my opinion, an abandoned work in progress that found its way within a grave, but a representation of an item that has a symbolic spiritual meaning within the local communities' beliefs. Also, the axe from Terchești (Pl. IV/4) can be seen within a similar way. Other axes in an incipient state can be seen at Arbore (Pl. IV/2), Pecica (Pl. IV/3), Pădureni (Pl. IV/5) but the lack of context makes it impossible to make further claims for such a hypothesis in their case. However, the idea is not new and Marilena Florescu also made such observations, regarding the miniature clay axes, some of which even imitate the form of the mushroom shaped knob⁵⁸. The case from Bogdănești⁵⁹ is not singular, similar discoveries of clay axes presenting the general morphological characteristics of Poiana type axes are presented by Victor Bobi and Emilia Apostu within dwelling contexts from Vârteșcoiu *Cariera de Argilă* and Mănăstioara⁶⁰. For the Early Bronze, miniature clay axes can be seen in S-E Transylvania⁶¹ within the Zăbala group. A distant example, that in my opinion is worth mentioning here, is the miniature amber axe imitating a stone battle axe from the Scandinavian middle Neolithic⁶². Following a different perspective, it is hard to see a weapon or an insignia of prestige within the axe from Pecica (Pl. IV/3), that is potentially the work of an unskilled novice⁶³. To conclude this discussion, whatever functionality is proposed for these artefacts, the generalisation even within the above-mentioned typology would be, most likely, a misconception. This should be interpreted for each individual, considering its aspect and especially the context in which it was found.

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⁵⁶ Motzoi-Chicideanu, Șandor-Chicideanu 2017, 69–71, Pl.V/1–2.

⁵⁷ Motzoi-Chicideanu, Șandor-Chicideanu 2017, Pl.V/1–2.

⁵⁸ Florescu 1979, 112, Fig.26/1,2,5.

⁵⁹ Florescu 1979, 112.

⁶⁰ Bobi, Apostu 1997, 35, Pl.10/17, Pl.9/7. The interpretation for the clay axe from Vârteșcoiu as a model/mold is beyond my understanding.

⁶¹ Székely 1998, Fig.9–10

⁶² Larson 2017, 48–49, Fig.2–3.

⁶³ Such alternative interpretations for artefacts displaying lower quality of raw materials and reduced size were suggested in several instances (for references see Cordoș 2019).

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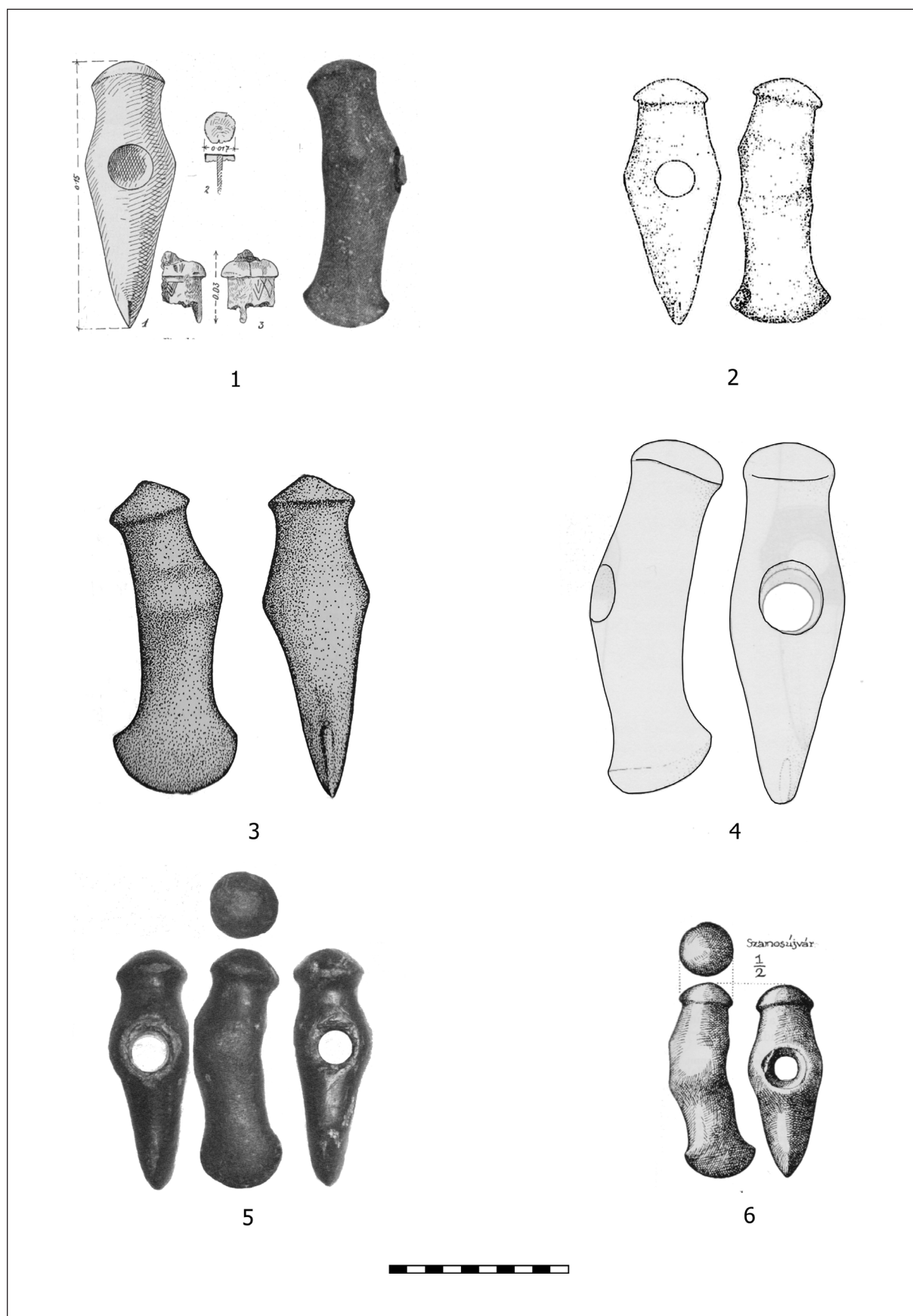


Plate I. 1. Poiana-Tecuci (after Vulpe 1935–1936); 2. Liteni-Găinărie (after Niculică *et al.* 2004; 3. Bărcănești (after Dumitroaia 1997); 4. Beriozchi-Rep. Moldova (after Kaiser 1997); 5. Mitrești (after Meder 2007); 6. Gherla (after Roska 1958).

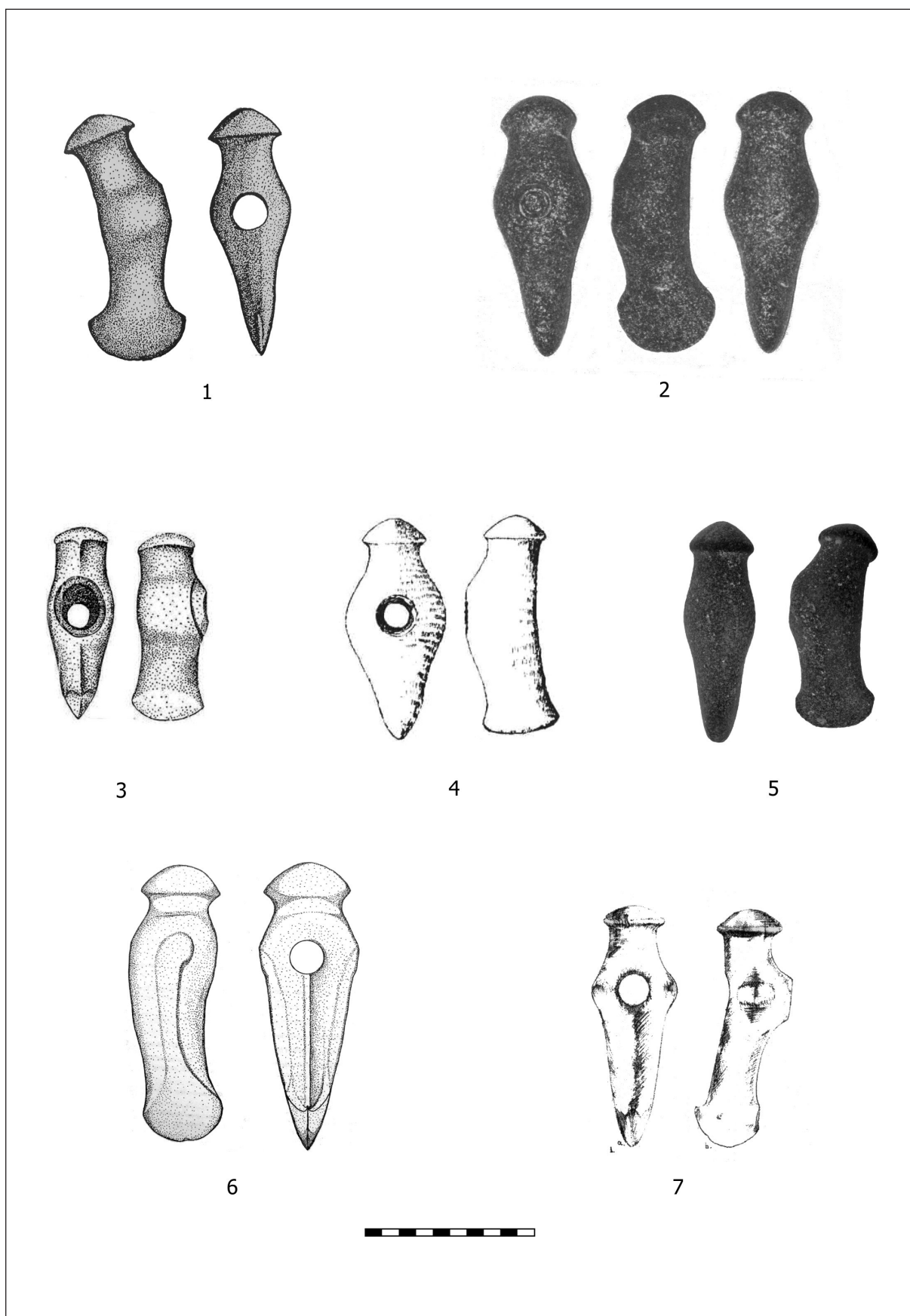


Plate II. 1. Chintici (after Dumitroaia 1997); 2. Liznău (after after Meder 2007); 3. Tăvădărăști (after Florescu 1991); 4. Piatra-Neamț (after Mătasă 1959); 5. Cipău (after Nagy 2009); 6. Toboliu (after Ghemiș 2001); 7. Palota (after Luca, Ilieș 2000).

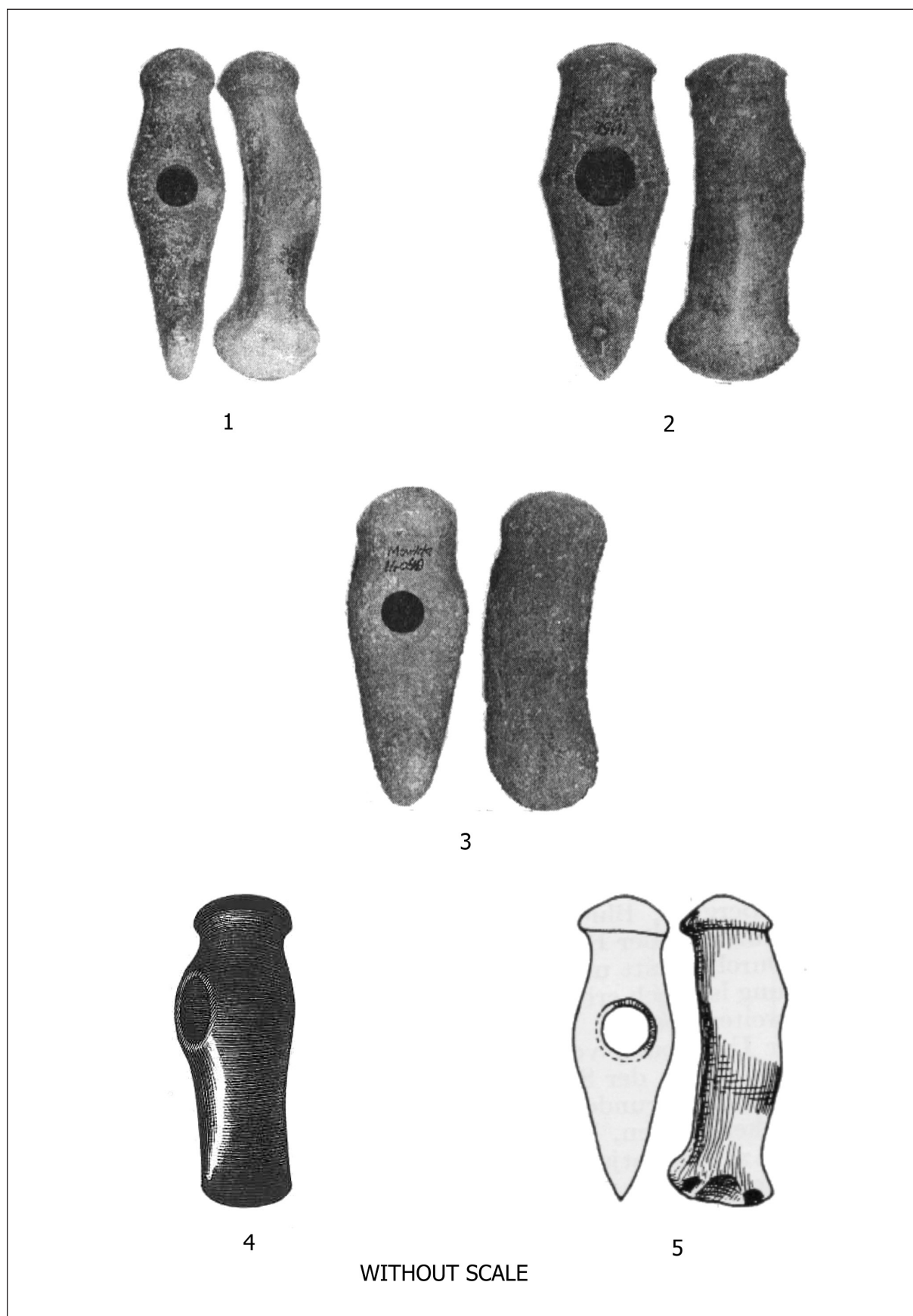


Plate III. 1. Anghelești (Bobi, Apostu 1997); 2. Adjud (after Bobi, Apostu 1997); 3. Movilița (after Bobi, Apostu 1997); 4. Mogyoroská (Rómer 1868); 5. Brețcu (after Roska 1958).

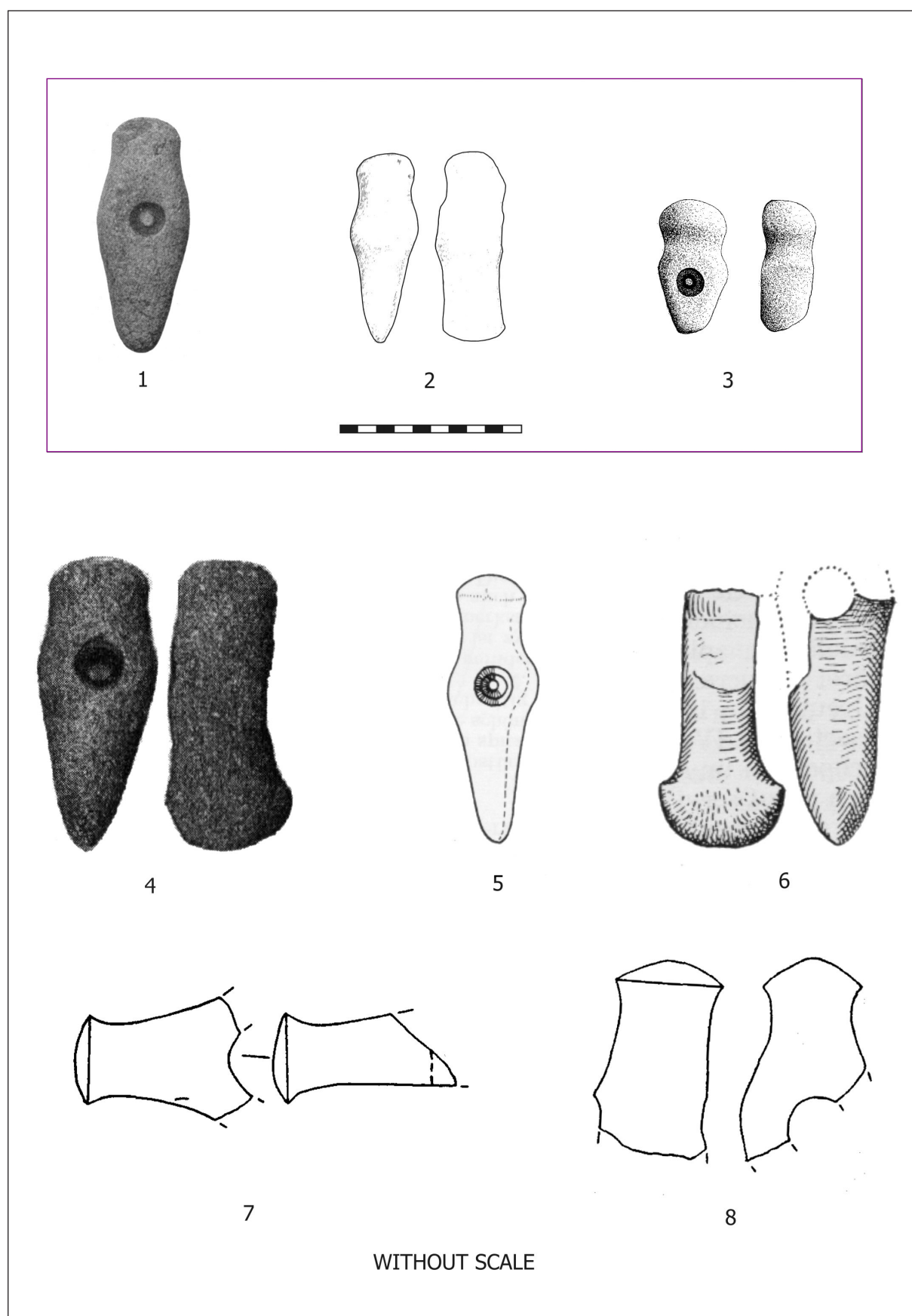


Plate IV. 1. Poiana-Tecuci (after Vulpe 1935–1936); 2. Arbore (after Niculică et al 2004); 3. Pecica-Șanțul Mare; 4. Terchești (after Bobi, Apostu 1997); 5. Pădureni (after Roska 1958); 6. Lechința (after Crișan 1965); 7. Lopadea-Nouă (Boroffka 1994); 8. Ormeniș (after Boroffka 1994).

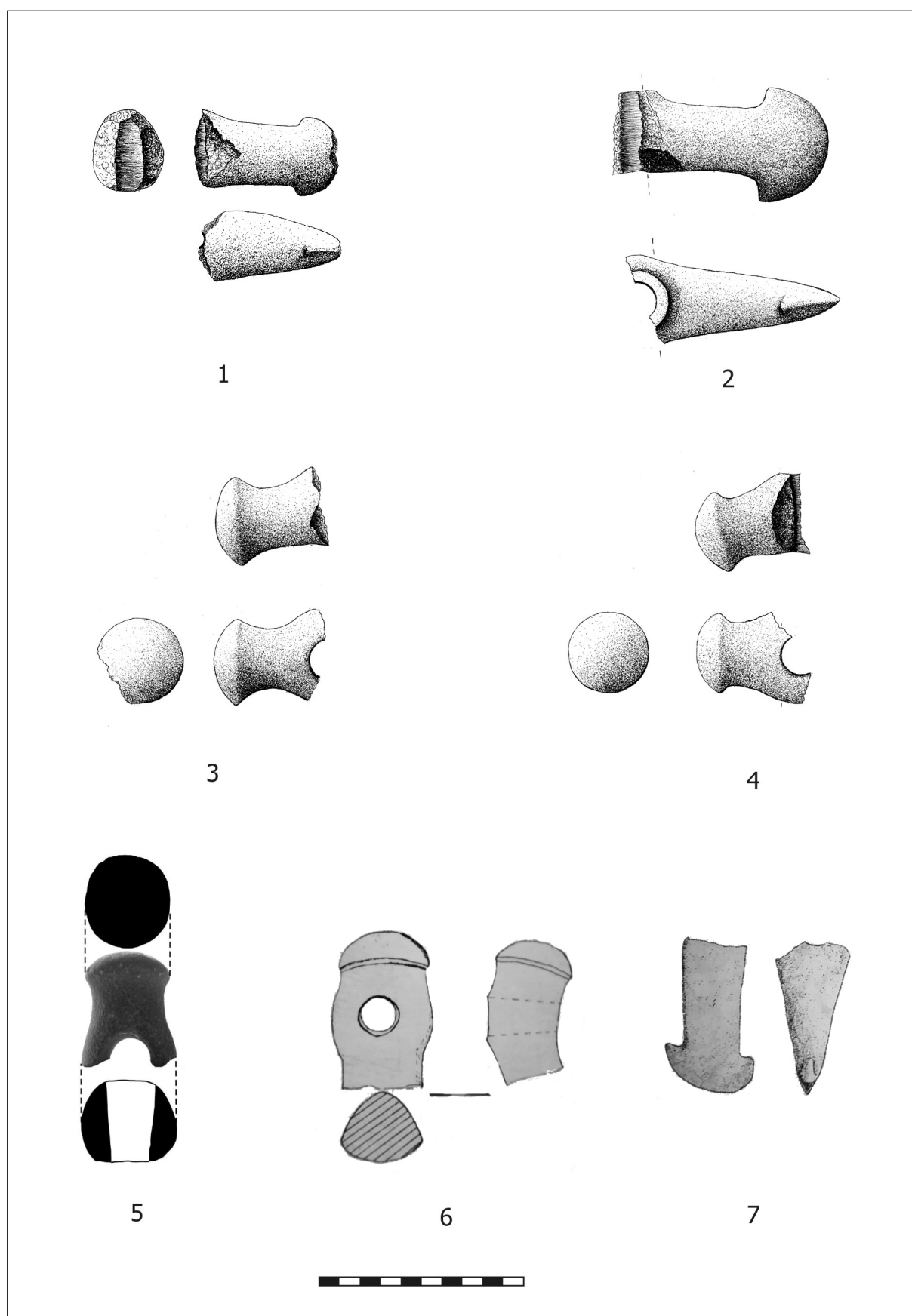


Plate V. 1. Pecica-Șanțul Mare; 2-4. Toboliu-Dâmbu Zănăcanului; 5. Florești-Poligon (după Nagy 2009); 6. Gurbănești (după Munteanu 1991); 7. Botoșana (after Niculică *et al.* 2004).

Abbreviations

AAASH	Acta Archaeologica Academiae Scientiarum Hungaricae, Budapesta.
AAC	Acta Archaeologica Carpathica, Cracovia.
Alba Regia	Alba Regia. Annales Musei Stephani regis, Székesferhérvár.
Angvstia	Angvstia. Sfântu Gheorghe.
Arabona	Győri Xántus János Múzeum, Győr.
ArchÉrt	Archaeologiai Értesítő, Budapesta.
ArchHung	Archaeologia Hungarica, Series Nova, Budapest.
ArhMold	ArheologiaMoldovei. Iași.
Arheologija/Archeologiya	Arheologija/ Archeologiya. Sofia.
Apulum	Acta MuseiApulensis – Apulum. Alba-Iulia.
AMN	Acta Musei Napocensis, Cluj-Napoca.
AMP	Acta Musei Porolissensis, Zalău.
BAM	Brvkenthal Acta Mvsei. Sibiu.
BHAB	(Museum Banaticum Temesiense) Bibliotheca Historica et Archaeologica Banatica.
BMMK	A Békés Megyei Múzeumok Közleményei. Békéscsaba.
BMA	Bibliotheca Memoriae Antiquitatis, Piatra Neamț.
BMN	Bibliotheca Musei Napocensis.
BudRég	Budapest Régiségei. Budapest.
CCA	Cronica Cercetărilor Arheologice din România, București.
CRSCRCR	Coins from Roman sites and collections of Roman coins from Romania.
Dacia N.S.	Dacia. Revue d'archéologie et d'histoire ancienne. Nouvelle serie. București.
EphNap	Ephemeris Napocensis. Cluj-Napoca.
Ethnographia	Ethnographia. A Magyar Néprajzi Társaság Folyóirata. Budapest.
FADDP/GMADP	Führer zu archäologischen Denkmälern in Dacia Porolissensis/Ghid al monumentelor arheologice din Dacia Porolissensis
FolArch	Folia Archaeologica. Budapest.
Hesperia	Hesperia: The Journal of the American School of Classical Studies at Athens. Athens.
MCA	Materiale și Cercetări Arheologice. Bucharest.
MFME	A Móra Ferenc Múz. Évkönyve. Szeged.
MFME SE	Móra Ferenc Múzeum Évkönyve: Studia Ethnographica. Szeged.
MFME-StudArch	A Móra Ferenc Múzeum Évkönyve, Studia Archaeologica. Szeged.
MGTSZ	Magyar Gazdaságtörténeti Szemle. Budapest.
MMA	Monumenta Avarorum Archaeologica, Budapest.
Mousaios	Mousaios. Buletin Științific al Muzeului Județean Buzău, Buzău.
NyJAMÉ	Jósa András Múzeum Évkönyve. Nyiregyháza.
OM	Orbis Mediaevalis, Arad.
PAT	Patrimonium Archaeologicum Transylvanicum. Cluj Napoca.
PBF	Praehistorische Bronzefunde. Berlin.
PeuceS.N	PEUCE. Studii și cercetări de istorie și arheologie. Serie nouă. Tulcea.
RI, SN	Revista Istorică, Serie Nouă. București.
RMM-MIA	Revista Muzeelor și Monumentelor. seria Monumente istorice și de artă. București.
SA	Sovietskaia Arheologija. Moscova.
SCIV(A)	Studii și Cercetări de Istorie Veche. București.
SlovArch	Slovenská Archeológia. Nitra.
SPMA	Studies in Post-Medieval Archaeology. Prague.

StudArchMed	Studia Archaeologica et Medievalia, Bratislava
TRÉT	TRÉT – Történelmi és Régészeti Értesítő, Temesvár (Timișoara).
WMMM	Wosinsky Mór Megyei Múzeum, Szekszárd
ZSA	Ziridava. Studia Archaeologica. Arad.