The authors of the article deal with three axe heads and one complete axe from the National Museum of Romanian History in Romania, which can be dated from the end of the High Middle Ages to the Early Modern Period. The museum received these objects to its depositories between the year 1975 and 2015. Their mutual feature is that they were decorated and have not been assessed yet in regard to their shape or decoration. This decoration concerns mostly form in the case of axe with inv. no. 37793. Its head has got the openwork cheek and blade (9 holes), where 6 concave cuts are present as well. Moreover, there are 10 probable nails made of yellow non-ferrous metal in its handle and one maker’s mark on its neck that probably comprises a lime tree leaf and branch. Other three axe heads have got punched decoration. The decoration of the exemplar from Balta Neagră (donation no. 1555) mainly consist of lines, circles, coggled curves and their combinations. Then the specimen from Fântâna Mare (inv. no. 178595) was lavishly embellished by patterns made of coggled lines and on the axe head from Suceava (inv. no. 72492) a punched quatrefoil was only applied.

INTRODUCTION

The article is focused on three decorated axe heads and one axe from the National Museum of Romanian History in Bucharest, Romania/Muzeul Național de Istorie a României, București, România (MNIR), which can be dated at the turn of the Middle Ages and Modern Period (Table 1). We exactly mean a period of time between the end of High Middle Ages and the Early Modern Period. The examined objects are indexed in the MNIR by the following inv. no. – 37793, 72492, 178595 – and one donation no. – 1555. Two of them were discovered in the Suceava County within Romanian Bukovina and Moldova – axe heads from Fântâna Mare (inv. no. 178595) and Suceava (inv. no. 72492), one in the Ilfov County within Wallachia – axe head from Balta Neagră (donation no. 1555), and the last is housed at the MNIR without the specification of its archaeological/find context under inv. no. 37793 (Fig. 1). Each above mentioned exemplar has got the particular shape and decoration. Except from the axe head from Fântâna Mare (Bătrîna/Monoranu/Bătrîna 1984, 172, fig. 5: 1), the rest of the examined assemblage have not been published yet. However, the exemplar from Fântâna Mare has not been evaluated in relation to its decoration and form too.

LINES, CIRCLES, AND COGGED CURVES

In January 2015 one stray find of an axe head (Fig. 2: 1) was unearthed from an unknown forest near the village Balta Neagră in the Nuci commune. Then it was transferred to the MNIR and registered there under donation no. 1555.

The iron broad axe head has got the prolonged beard, which is projected downwards in profile. The blade is fitted with a distinct spike projecting upwards. The most of the eye is missing there and just the shapeless part of it remained. The beard has probably been bevelled at its end. One side of the axe head is decorated by punched ornaments. First, there are lines and circles that stand alone or are connected
| No. | Site Description | Site | Donation or Find Information | Literature | Total length of the axe handle (cm) | Total length of the axe heads (cm) | Total length | Length of the blade | Measurements of the neck | Inner measurements of the eye | Height of the eye | Width of the eye | Height of the butt | Width of the butt | Weight in kg | Suggested Dating According to Authors of the Article |
|-----|-----------------|------|------------------------------|------------|-----------------------------------|-----------------------------------|---------------|-------------------|------------------------|--------------------------|----------------|---------------|----------------|----------------|-----------|-----------------------------------------------|
| 1   | Baia Neagră, Ilfov County, Romania | Donation no. 1555 | stray find | unpublished | – – – – | 13.5 | 22.3 | 2.65 x 1.7 | – | – | – | – | 0.51782 | 13th–17th c./Early Modern Period |
| 2   | Fântâna Mare, Suceava County, Romania | 178595 | find from a chapel | 6:1 Bătrîna/ Monoranu/ Bătrîna 1984, 165, 171, 172, 174, fig. 5:1. | – – – – | 20.55 | 7 | 2.35–2.4 x 2.95 | 4.3 x 3 (upper part), 4 x 2.8 (lower part) | – | 4.05 – 4.05 | 4.85 (lower part) – 5.1 (upper part) | 1.24615 | 15th c. |
| 3   | Suceava, Suceava County, Romania | 72492 | unknown, allegedly from an archaeological excavation | 8:1 unpublished | – – – – | 19.8 | 12.5 | 2.8 x 2.5 | 3.15 x 4.6 (upper part), 2.9 x 4.35 (lower part) | – | 3.95 | 4 | 3.2 (lower part) – 3.1 (upper part) | 0.89206 | end of 13th/15th–16th c. |
| 4   | Unknown | 37793 | unknown | unpublished | 61.9 | 42.7 | 4.6 x 2.95 | 3.95 x 2.7 | 19.3 | 18 | 5.9 x 0.6 – 1.25 | 1.4 x 2.9 (upper part) | 11.5 | – | 6.5 – 6.5 | 2.55 (lower part) – 2.15 (upper part) | 1.031 | 15th/16th–17th c. |

Table 1. Measurements and weights of the examined medieval and early modern axes from the National Museum of Romanian History in Bucharest (RO).
together and form various patterns, which resemble the letter X (made of four punched lines), rhomboid, sun-like motif, branchlet (three radially converging lines with circles at their ends), and curves. Then there are also punched relatively short bent curves/sickles that are cogged (15 or 16 pieces). In this case punched curves with small semicircles are concerned that project to their one side. They are mainly punched on the edges of the blade, first at foremost, on the edges of the beard, although two of them are between the cheek and blade. The neck of the axe head is rectangular in cross-section. Finally, the referred axe head is asymmetric in cross-section from above or below and the cutting edge of the blade tapers asymmetrically as well.

As far as analogies in relation to the form of the blade, cheek and neck of the referred axe head in profile are concerned, we might also reckon its early or high medieval origin. Some of these parallels are decorated, but they and other contemporary axe heads do not match the decoration of the referred axe head.

It seems that the punched ornaments from Northern, Central, and Eastern Europe and partially from Southeastern Europe between the 9th and 12th/13th centuries did not resemble the decoration of the discussed axe head from Balta Neagră. The decoration of the 9th—13th century axe heads from Poland contains punched lines and curves that form various quite simple patterns, including crosses and branchlets. Branchlets on the axe head from the fortified settlement of Barkowice Mokre (the middle of the 9th century) were made of one quite long line and many converging lines into this main one. Also there were not circles within these branchlets (Kotowicz 2011, 107, fig 2: 1). Then we know that the letter X pattern, which is present (in the form of lines) upon the referred axe head from Balta Neagră, can be seen on the blade of the axe head from Alm Østre (Norway; the 10th century) in the different form. The pattern comprises punched dots or dots in the form of pointillé decoration (Kotowicz 2013, 43, fig. 2: 2). Also the punched ornaments of the axe head from Balta Neagră are not present on the surfaces of the miniature axe heads from Northern, Central, Eastern Europe as well as parts of Southeastern Europe from the second quarter of the 11th century to the end of the 12th century (Kucypera/Pranke/Wadyl 2010, 121, 122), although there are various combinations of lines, circles, dots, and curves (Kucypera/Pranke/Wadyl 2010, 103–176; Kucypera/Wadyl 2011, 122–130). Zig-zag patterns were also popular there.
Fig. 2. Examined axe head from Balta Neagră (Ilfov County, RO, stray find, donation no. 1555, the 13th century–the 17th century/Early Modern Period) deposited in the National Museum of Romanian History in Bucharest (RO). a–d – drawings by G. Ducman; e – photograph by T. A. Martin; f – photograph by M. Husár. All iron. Scale: a – a–c, e–f; b – d.
because of its damaged eye. However, if it had these three features, it would be named the Lunow type of axe heads, which is well known in scientific literature since 1991 thanks to Polish archaeologist M. Kara (more in Michalak/Kotowicz 2014, 110, 111). In 2014 A. Michalak and P. Kotowicz (2014, 107, 110–112, fig. 5–7) listed 22 exemplars (e.g. Fig. 3: 1–2) found in Denmark, Germany, Poland, Russia (just in the Kalinin-grad Region/Калининградская область), and Sweden, which are mostly dated to the second half of the 10th century and the first half of the 11th century. P. Kotowicz (2014, 62, 104, 184, 185, 190, 194, 206, 212, nr. kat. 213, 400, 732, 735, 763, 776, 837, 868; tab. XXXIV: 2; LXV: 2; CXXIX: 2, 5; CLXIII: 2; CLXV: 1; CLIX: 3; CLXVII: 4), A. Nadolski (1954, 43, tab. XV), and A. Pedersen (2002, 30, 31, fig. II–6; 2014a; 2014b, 28, 33, cat. no. 61, 118, 229; pl. 4: 1; 11: 3; 33: 2) more or less support this time span in their monographs and studies concerning Poland and Denmark as well. Two Lunow type exemplars from Eastern Germany were published by I. Heindel (1992, 41, fig. 21: f–g), who suggested to date them since the 10th century or the middle of the 11th century with the possibility of continuation of this form up to the 13th century. There is also one similar exemplar from present-day Bulgaria and other one from the same country, which has a quite longer butt in comparison with the aforementioned specimens. Both of them (Jotov 2004, каталог no. 584, 588, табл О: 584; Л: 588) are from settlement sites (Борован and Люти брод) identically dated to the 9th–11th centuries.

There is little doubt that the asymmetric shape of the examined axe head from above or below and its punched decoration point to the High/Late Middle Ages and Early Modern Period in Europe. Many European axe heads as well as heads of other weapons and tools of various forms from the end of the

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2 These exemplars are dated to the second half of the 10th century and the 11th century.

3 These specimens are within A. Nadolski's type III that belongs to the 11th century.

4 The axe heads can be dated circa between 10th century and first half of the 11th century. A. Pedersen (2002, 31) assumed that the provenance of this form of axe heads is in the southeastern and southern Baltic region.
Middle Ages and the beginning of the Modern Period have got varied punched decoration. These objects are of different forms from the referred axe head, but their decoration also consists of combined lines and dots/circles/half-moons that are mostly in the shape of a branchlet or three radially converging lines with dots/circles/half-moons at their ends. In several cases, makers’ marks were punched there too.

When it comes to the aforementioned punched branchlets, they can be observed on several specimens found or deposited in today’s Romania, Poland, and the Czech Republic. The axe head from Valea Mărului (Fig. 4: 1; stray find) looks roughly similar to the axe head from Balta Neagră (Croitoru 2016, 337, fig. 4), though it misses a distinct spike projecting upwards. C. Croitoru (2016, 337, fig. 4) broadly dated this specimen to the time after the middle of the second millennium AD. It has got, inter alia, the punched decoration of one side of its head that comprises lines and circles. Their combinations create three or four branchlets and other patterns. Two other axe heads housed in two Romanian museums were also embellished by branchlets, which consist of three radially converging lines with circles at their ends. To begin with, the pickaxe/axe head from house L 11 (section 5 III) in the settlement of Curtea Domnească de la Vaslui (Fig. 5: 1; Dejan/Ilie 2017, 113, figure on page 113; Ilie/Dejan 2018, 197, figure on page 197).

The punched decoration of pole and hitting weapons from present-day Poland and the Czech Republic, which includes various lines, curves, circles, dots, rosettes, and their combinations (even in the form of branchlets), was dated by L. Marek (2008, 357, fig. 184: b, d–f) already to the 15th century and it is obvious that this decoration continued to be applied at least next two centuries (Marek 2008, 128–130). Z. Měchurová claimed that punched decoration (dots, rosettes/flowers, arches, and lines) was not a precise time-sensitive element in relation to medieval and modern period axes. She stated that such decoration has endured from the second half of the 13th century to the present (Měchurová 2013, 627, 628).
197) belongs to this group. There are combinations of lines and circles on its blade and cheek, from which one complete branchlet grows. The neck of the head is decorated by punched decoration on its two sides, which contain lines and the letter X patterns. The settlement of the above mentioned site, which is located in Romanian Moldova, can be dated to the second half of the 15th century (Andronic/Popescu 1980, 127, 128). Secondly, the accidentally found axe head, which is deposited in the County Museum Botoșani (Dejan/Ilie 2017, 112, figure on page 112; Ilie/Dejan 2018, 196, figure on page 196), was punched on its both sides by lines, relatively small and larger dots/circles, and their combinations that create branchlet patterns too. This head was dated between the 15th and 17th (?) centuries and S. Eduard deduced the beginning of its usage, i.e. in the 15th century, from one spur discovered in the earthen fortress of Bârlad. This spur has got engraved or punched patterns in the form of the letter X and the given fortress was in operation during the second half of the 15th century (Matei/Chiţescu 2002, 13, 148, fig. 53). Then we can also count on Czech and Moravian finds in regard to the referred branchlet decorations. Combinations of punched lines and circles, which create branchlet patterns, are on exemplars (found out of context) from Praha-Podskali, Praha and Poděbrady that are dated between the end of the 14th century and the beginning of the 16th century (Novotný 1956, 346, fig. 2; 8: 3, 4). The last two above mentioned axe heads from Praha and Poděbrady are fitted with branchlets in the serial order. The specimen from Praha-Podskali was also stamped by a maker’s mark (Novotný 1956, 346, fig. 2). The axe head from Hradišťko u Davle-Sekance has got one punched branchlet, which consists of three radially converging lines and four half-moons

Fig. 5. Analogies for features of the examined medieval and early modern axe head from Balta Neagră (donation no. 1555) deposited in the National Museum of Romanian History in Bucharest (RO). 1 – Curtea Domnească de la Vaslui, settlement – house L 11 (section S III), the second half of the 15th century, RO (after Dejan/Ilie 2017, 113, fig. on page 113; Ilie/Dejan 2018, 197, fig. on page 197); 2 – unknown site, not clear find context, the 13th–16th centuries? (after Glosek 1996, 94, tab. XVI: C); 3 – Toszek, not clear find context, the 15th–16th centuries, possibly the 17th century (PL; after Zdanie-wicz 2016, 269, fig. 2–3). All iron. Scale: a – 1, 3; b – 3.
instead of circles, on one side of its blade. This axe head was dated to the second half of the 13th century at latest (Měchurová 2013, 626, fig. 4). On the matter of the discussed decoration we can mention the hoe head from the northern basement of the small fortress within the medieval village of Konůvky (Fig. 4: 2) as well. This fortress ceased to exist in the first half of the 15th century. The inner cheek of the given hoe head is decorated with two branchlets in serial order that contain punched lines and dots (Měchurová 2013, 627, fig. 5). Within the Polish collections M. Głosek (1996, 94, tab. XVI: C) also found one axe head
from an unknown site (Fig. 5: 2), which has got two branchlets in the place of its neck and cheek. These branchlets consist of punched lines and dots/circles. He suggested to date this exemplar to the 13th–16th centuries.

Rosettes (Čepička/Dolíněk 1991, 18, fig. 14; Głosek 1996, 84, 93, tab. XIV: E; XXXI: A), crosses (Enandi 1981a, 169, fig. 4: 1; 1981b, 56, fig. 21: 1; Głosek 1996, 93, XXXI: A), and other formations (Głosek 1996, 91, 94, tab. XXIII: A, D), which comprise punched lines, dots/circles or little rosettes/flowers, can be observed on other five axe heads from Romania, Poland, and the Czech Republic. They, of course, are not a part of the decoration of the axe head from Balta Neagră, but are just similar to its decoration. Despite they were dated by researchers within the time span of the 15th–16th centuries, we do not know much about their find context.

In late medieval and early modern Western and Central Europe several exemplars of the weapon called doloir/wagoner’s axe (in English), doloire (in French) or topór taborowy/berdysz (in Polish) were embellished with punched ornaments that we have dealt above with. Various branchlets compositions, quite simple or complex, which consist of dots, lines, and sickles, used to appear, often along with makers’ marks, on the given weapon kind (Machurová 2013, 622, footnote 3). This weapon and tool in one is typical for its blade that is quite large heavy triangle, whose back is blunt and cutting edge is sharp (Waldman 2005, 199–201, fig. 160). We can identify the aforementioned punched decoration within L. Marek’s type 2 and 3 of the European doloir that might be dated to the 16th–17th centuries (Marek 2008, 129, 130, 169, 348, fig. 175: e–f). All things considered, doloirs punched with makers’ marks and branchlets, which consist of lines, dots, and even quite short bent curves (e.g. Fig. 5: 3), can be dated on the basis of the recent studies to the 15th–16th centuries or possibly even to the 17th century (Marek 2008, 128–130, fig. 175: e–f; Zdaniewicz 2016, 269, fig. 2–5).

Concerning the decoration of relatively short bent and cogged curves on the axe head from Balta Neagră it should be noted the following. Various cogged patterns that consist of punched/engraved lines of triangles projecting to one side (in the form of pointillé decoration) might be observed on the axe head from Fântâna Mare (Fig. 6: 1; inv. no. 178595 in the MNIR). This axe head is dated to the 15th century according to its find context (Bătrîna/Monoranu/Bătrîna 1984, 165, 172, 174, fig. 5: 1). Other relevant features were punched on the double-edged weapon or prop from the Slovak National Museum in Martin (Fig. 7; inv. no. KH9595). There are at least five cogged curves (with semicircles projecting to their one side) connected to flowers/rosettes on its blade (Pivková 2016, 60–62, fig. 41; 42). Even though this weapon/prop was on the basis of its blade6 dated between the end of the 14th century and the beginning of the 16th century (Pivková 2016, 62), the recent unpublished research indicates that the object as a whole (along with its loop guard) points to the later stages of the Modern Period, i.e. the 18th–19th centuries (Zákovský 2014a, 176, 177).

We reckon that the examined axe head from Balta Neagră most likely belongs to the end of the High Middle Ages, Late Middle Ages or Early Modern Period and we estimate its production sometime between the 13th and 17th century. In addition, its shape indicates that could be employed in wood processing. This shape of axe head, the broad axe, might be used especially for the hacking of trunks and beams (Jánokta/Linhart 1984, 100, 101; Štajnochr 1978, 159–157, tab. X: 1, 2; Žákovský/Schenk 2017, 32, 33).

**Cogged lines**

During the archaeological excavation of the private feudal chapel in Fântâna Mare in 1982, where 12 tombs were discovered as well, an axe head (Fig. 6: 1) was unearthed. It was most likely not related to the given tombs and we can recognise it as a (stray) find from the first phase of this edifice that was founded in the 15th century (Bătrîna/Monoranu/Bătrîna 1984, 165, 172, 174, fig. 5: 1). Following the Museum register of the MNIR, it was received by this museum in 1986 (inv. no. 178595), probably after its restoration.

About shapes of the examined head we can claim the following: the well preserved iron axe head of a beard axe is angular in shape. The edge of a blade contains a visually recognisable dark strip of steel, which is 1.25–1.8 cm wide. The butt of the aforementioned head is flat and rectangular at its end. The given axe head is symmetric in cross-section from above or below and from these angles it is triangular in shape. The cutting edge of the blade was sharpened symmetrically as well. The eye has

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6 The shape of the object’s blade (but not its lenticular cross-section) might correspond with P. Žákovský type B1b (Žákovský 2014a, 226, tab. 26, fig. 175) of dussack blades from Moravia and Silesia within the Czech Republic as well as with dussacks of L. Marek’s type I (Marek 2008, 46–49).
got its upper part slightly wider than its lower part and is distinct in profile or forms a relatively short socket. The axe head was decorated by punched lines with small triangles (triangles were punched in the sense of pointillé decoration) that project to their one side and thus make up cogged lines. The punched decoration forms zig zag, cross (also in the shape of St. Andrew’s cross), branchlet, and radial patterns.

As we stated before, the axe head can be dated to the 15th century. Also, it is possible to find its analogies from Central Europe that are almost solely connected with its form in profile. However, they lack its symmetric triangular shape from above and below. From these angles, their eyes and butts are wider than thinner sections of their necks, cheeks and blades, although they are symmetrically arranged. M. Głosek (1996, 39, 40, 80, 99, tab. IV; XV–XVI) identified specimens of sub-type VIIIa (e.g. Fig. 6: 2) among late medieval axe heads from the territory of present-day Poland. Their shapes are similar to the examined axe head and he dated them from the second half of the 13th century to the 16th century. Furthermore, the recently found axe head from Michałowice in Poland belongs to this sub-type and should be dated alike (Szmaniewski/Tunia 2016, 686, fig. 2).

In spite of the fact that on Viking Age and high medieval axe heads from Northern and Eastern Europe we can find incised/punched lines a triangles, they do not match the decoration of the axe head from Fântâna Mare (Paulsen 1939, 55–79, fig. 23–35). However, concerning the decoration of the referred axe head two weapons from the later time periods should be presented and we should also repeat what we have already stated before. The first one is the stray find of the axe head from Valea Mărului (Fig. 4: 1; Galați County) that comes from Romanian Moldova, as the axe head from Fântâna Mare. This stray find was broadly dated to the time after the middle of the second millennium AD by C. Croitoru (2016, 337, fig. 4). The head is embellished by complex punched decoration. The relevant part, which concerns the axe head from Fântâna Mare, comprises a branchlet that was applied between the upper part of the neck and eye in the form of pointillé deco-

Fig. 7. Double-edged weapon or prop from an unknown site that is deposited in the Slovak National Museum in Martin (not clear find context, inv. no. KH5955, the 18th–19th centuries (?); photograph and figure after Pivková 2016, 62, fig. 41; 42). All iron. Scale: a – a; b – b.
This axe head is asymmetric in cross-section from above or below. In the end, the aforementioned blade of the double-edged weapon or prop from the Slovak National Museum in Martin (Fig. 7; Slovakia; inv. no. KHS955) was decorated by at least five cogged curves, which have got semicircles projecting to their one side and are linked to flowers/rosettes. As I have stated before, the referred weapon might not belong to the Early Modern Period, but it would rather be dated to the later time period.

The shape of the examined axe head was most likely a part of an axe for general use (Janotka/Linhart 1984, 100, 101) or an axe particularly used to notch and splinter wood and its further processing\(^8\) (Śtajnocht 1978, 157–159, tab. VI–IX; Žákovský/Schenk 2017, 33).

**Quatrefoil**

The axe head from Suceava (Fig. 8: 1), which is deposited and registered in the MNIR under no. 72492, was transferred to this museum from the Bukovina Museum in Suceava in 1975, according to the information from the Museum register of the MNIR.

The iron axe head has got a pointed beard. The eye of the axe head is distinct in profile or forms a relatively short socket. The upper part of the eye is wider than its lower part. The butt of the discussed axe head is rectangular and flat at its end. The axe head from Suceava is symmetric from the upper and lower angle of vision and the cutting edge of the blade tapers symmetrically too. There is a decoration in the form of a quatrefoil, which was punched on one side of the axe head, directly in the place of its neck. It would have been a possible maker’s mark as well.

The form of the referred axe in profile can be recognised at several exemplars from Central Europe and even from present-day Romania. In the area of Romanian Bukovina a similar symmetric axe head was found in Coșna-Flori. I.-E. Emandi (1981b, 40, fig. 10: 1) dated this specimen to the 13\(^{th}\)–14\(^{th}\) centuries. Then similar exemplars can also be found in Eastern Germany during the 12\(^{th}\)–13\(^{th}\) centuries (Heindel 1992, 32, 33, fig. 14: a), in Poland between the 13\(^{th}\) century and the 16\(^{th}\) century (e.g. Fig. 8: 2; Głosek 1990, 138, 502, fig. 22; 1996, 40–42, 80, tab. 4; 17–20)\(^9\), and in Slovakia probably during the 16\(^{th}\) century (Klčo 1988, 76, tab. 16; Novotný 1965, 76, 78, tab. XII: 1, 2, 7).

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8 On the base of the available figure and information (Croitoru 2016, 337, fig. 4) we cannot also exclude the presence of coggled lines there.

9 The axe called „hlavatka“ in the Czech and Slovak language.

10 These specimens are from the collections of present-day Poland that M. Głosek (1996, 40–42, 80, tab. 4; 17–20) integrated into his type IX of late medieval axe heads, whose shapes the referred exemplar owns.
The almost same axe head (Fig. 8: 3) in shape and with the same decoration (as the referred axe head) was found during the extraction of gravel near the River Váh, close to Moravany nad Váhom-Hubina in present-day Slovakia. M. Klčo (1988, 76, fig. 16) dated this axe head to the middle of the 16th century. Also there are two axe heads from Baia Mare in Romanian Maramureș County that were punched on one side of their necks by quatrefoil (Fig. 9: 1; Emandi 1981b, fig. 22: 2) and cinquefoil (Fig. 9: 2; Emandi 1981b, fig. 22: 5) decorations or marks. Nonetheless, they are of different forms in profile from the exemplar from Suceava and they have openwork cheeks with a shamrock pattern. Both of them were dated to the 15th–16th centuries by I.-E. Emandi (1981b, 56) in 1981.

Various punched/stamped decorations or makers’ marks, although not in a quatrefoil form, can be observed on late medieval axe heads of the above mentioned type IX defined by M. Głosek for Poland. Earliest ones should be dated within this type to the end of the 13th century or to the 14th century (Głosek 1996, 41, 42). However, exemplars with only one maker’s mark in the place of their necks might belong to the 14th–16th centuries (Głosek 1996, 88, 90–92; nr. kat. 64; 91; 115; tab. XIX: E; XX: G; XXI: C). B. Novotný (1956, 346) dated late medieval axe heads from Bohemia, which were inlaid and labelled with makers’ marks, between the end of the 14th century and the beginning of the 16th century.

Taking the stated facts into consideration, it seems to us that we might date the examined axe head from Suceava from the end of the 13th century or the course of the 15th century to the 16th century. The referred axe head was a part of an axe that might have been intended just for general use (Janotka/Linhart 1984, 100, 101).

Openwork cheek and blade and concave cuts

In 1975 the axe (Fig. 10), which originated from an unknown place, was brought from the History Museum of Brașov to the MNIR, where it was labelled by inv. no. 37793. The Museum register of the MNIR formerly dated this object to the 15th century.

The axe consists of an iron head and wooden handle. The blade of the head is convexly curved. The iron axe head was made asymmetric in cross-section from above or below and the cutting edge of its blade was sharpened asymmetrically as well. The blade and cheek of the head were decorated by cutting and piercing. There are 9 circular holes (0.4 x 0.4 cm in diameter) in the blade and cheek arranged in the circle and 6 concave cuts, which reach the cheek and neck of the head. On one side of the neck it can be noticed a maker’s mark that was punched. It is composed of an irregular pentagonal formation, from which a lime tree leaf and branch probably rise up (Fig. 10: c). The neck is quite long. The eye of the head is prolonged downwards (5.8 cm under the neck) in the form of a socket, which is semi-oval in cross-section. The quite shortly protruding butt of the axe head is flat and slightly trapezoid at its end. The blade is evenly widened out. Under the eye/socket of the axe head, i.e. on the surface of the handle,
10 (nail) heads (diameter: 0.9 x 0.9 cm, height: 0.3 cm) made of yellow non-ferrous metal are seen. At the back of the handle, there is one visible head (diameter: 0.35 x 0.4 cm) of a probable recent nail. Recently, the handle of the axe, which is made of an unknown wood, was most likely drilled three times through. The handle is semi-oval in cross-section, where it comes into contact with the mouth of the eye/socket, and oval in cross-section at its opposite end.

There is no direct analogy for the given axe (head), but we may date it according to some features, which can be observed on other contemporary axes, bardiches, guisarmes, pollaxes, halberds, and boar spears. The above mentioned features are: a convexly curved blade, pierced head, concave cuts applied on the neck and cheek of a head, a quite long neck, flat butt, and maker’s mark.

The closest parallels to the referred axe head might be three almost identical bardiche heads from Polish, Romanian and Ukrainian museum collections. Namely they are from the collections of the National...
Military Museum in Bucharest – Pavilion B, Exhibition of armament (unknown site, from Germany?)\(^\text{1}\), collections of the Wawel Royal Castle in Cracow – inv. no. dep. 257 (Fig. 11: 1; Czyżewski 2013, 235–237, 409, figures on page 235–237, 409; from Poland?), and collections of the Lviv Historical Museum – inv. no. 3-3532 (Fig. 11: 2; Terskyj 2005, 21, 23, 24, fig. 4: 18; from Львів?). All of them are fitted with convexly curved blades, quite long necks, four concave cuts on their cheeks pierced by 6 (grouped into threes) circular holes, which are between the above mentioned concave cuts, and by a cross-shaped perforation between their cheeks and blades. They have also got various marks of their makers. The find contexts of these bardiches are not known and they were dated variously – to the second half of the 15\(^{\text{th}}\) century (accompanying text of the Exhibition of armament in the National Military Museum in Bucharest), the 17\(^{\text{th}}\) century (Czyżewski 2013, 235–237, 409), and to the 16\(^{\text{th}}\)–17\(^{\text{th}}\) centuries (Terskyj 2005, 21, 23, 24). Bardiche heads from Bucharest and Cracow are connected to quite long shafts. The Exemplar from Cracow measures 180.5 cm altogether, although the referred axe from the MNIR just 61.9 cm.

Concerning the 9 circular holes in the blade and cheek of the examined axe head, which are arranged in the circle, we should mention four weapon parallels from the collections of European museums. Into

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\(^{1}\) This weapon is unpublished and one author of this article, M. Husár, just saw it in the particular exhibition of the National Military Museum in Bucharest.
this group we can place the Russian quisarme with its over a meter long blade and total span of 2.17 m, which is deposited in the Danish War Museum (former Royal Danish Arsenal Museum – Tøjhusmuseet in Danish) in Copenhagen, under inv. no. C50. This weapon dated to the year 1530 (after Waldman 2005, 166, 167, fig. 135); 2 – collection of Verfaffer (CH?), the middle of the 16th century (after Demmin 1893, 825, 826, fig. 13); 3 – collection of Van Zuylen (NL?), the beginning of the 17th century (after Boeheim 1890, 337, fig. 392: c). 1 – iron, brass, wood; 2, 3 – probably iron and wood. Not to scale.

In the first case by the group of two threes and in the following case by the group of one three.
are connected with the European continent and particularly with Austria, Denmark, Germany, Hungary, Moravia, Russia, and Swiss (e.g. Fig. 13: 2; Boehm 1890, 338, 341, 372, fig. 392: e–f; 395; 440; 441; Denmin 1893, 818, 819, 825, 826, fig. 5; 8; 11; Kalmár 1971, 33, 39, fig; Oakeshott 2000, 50, fig. 9: B–C; Stone 1961, 111, fig. 142: 2–4; Waldman 2005, 157, fig. 126). Their time of usage can be set be tween the 15th and 17th century that is based on the dating of particular exemplars made by assessments of several researchers. Two iconographical representations confirm the dating of weapons with concave cuts since the 15th century. The illustrator of the Radziwiłł Chronicle (15th century; St. Petersburg, Russia) depicted one axe with one concave cut on the cheek of its head (Fig. 14: 1; Radziwiłł Chronicle) and two axes with two above mentioned concave cuts (Fig. 14: 1, 2; Radziwiłł Chronicle). Then there is one bardiche with quite long neck and four concave cuts on the cheek its head (Radziwiłł Chronicle; Terskyj 2005, 21, pис. 3). Four or even six concave cuts on the cheek belong to the pollaxe/Mordaxt on the anonymous German woodcut dated circa between the year 1460 and 1470 (Waldman 2005, 158, fig. 127).

According to L. Belcredi (1989, 451, 453, tab. 5: 294), who created the terminology, classification, and code of medieval metal items, a flat butt appeared on axe heads during the 15th century. This feature is present on the examined axe as well. Probably the same maker’s mark (a lime tree leaf and branch), as occurs on the referred axe, we can recognise on two military boar spears, which are most likely from the early 16th century. They are placed in the Tower of London (the present-day United Kingdom; Ffoulkes 1916, 221, 488, makers’ marks nos. 54, 56, Appendix B: 170, 171).

We suppose that the axe registered in the MNIR under inv. no. 37793 can most likely be dated to the 15th/16th–17th centuries. The features of this axe are mostly connected with aforementioned arms and we may therefore assume this object to be a weapon. As far as we know there is not its analogy among contemporary medieval and modern axes used as tools.

CONCLUSION

The discussed objects – the decorated axe and three axe heads – from the MNIR belong to the transitional period between the Middle Ages and Modern Period. Each of them was embelished in a different way. Whereas the axe heads from Balta Neagră, Fântâna Mare, and Suceava are decorated by various punched decorations, the axe indexed under inv. no. 37793 was adorned by 6 concave cuts related to its openwork cheek and blade. A maker’s mark, which most likely contains a lime tree leaf and branch, is its only punched decoration and there are 10 assumed nails in its handle as well. On the surface of the first three axe heads various combinations of lines, curves, circles, cogged lines, and cogged curves were applied. They created the letter X, cross, branchlet (cogged ones and those made of

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13 http://radzivilovskaya-letopis.ru/index.php?id=208#sel [3. 7. 2019]
14 http://radzivilovskaya-letopis.ru/index.php?id=208#sel; http://radzivilovskaya-letopis.ru/index.php?id=338#sel [3. 7. 2019]
15 http://radzivilovskaya-letopis.ru/index.php?id=221#sel [3. 7. 2019]
three radially converging lines with circles at their ends), short bent cogged curve, rhomboid, sun-like, radial, and zig-zag patterns.

The exemplar from Balta Neagră and Suceava can probably be perceived as oldest objects from the examined assemblage. They might already have been produced in the 13th century (Balta Neagră) and at the end of this century or in the 15th century (Suceava). The making of the specimen from Suceava could have taken place yet in the 16th century at latest, but the axe head from Balta Neagră might have been made even yet in the 17th century or during the course of the Early Modern Period. The find context (the first phase of the private feudal chapel) of the specimen from Fântâna Mare clearly allows us to date it to the 15th century. The possible latest axe head from the examined assemblage would have been the exemplar with inv. no. 37793, which is dated to the 15th/16th–17th centuries.

Parallels to all the examined exemplars were not identified just in Romania, but also in Europe. Even though the specimen from Balta Neagră has got some common features (in regard to their form) with

Fig. 14. Analogies for features of the examined medieval and early modern axe (inv. no. 37793) from the National Museum of Romanian History in Bucharest (RO). Illustrations of the Radziwill Chronicle; 15th century (after Radziwill Chronicle).
the early (and high) medieval Lunow type of axe heads, its decoration evidently speaks for the high/late medieval and early modern analogies from Western and Central Europe. We can mention Central European parallels from the Late Middle Ages and the High and Late Middle Ages/Early Modern Period for axe heads from Fântâna Mare and Suceava. The specimen with inv. no. 37793 could be derived from the late medieval and early modern Western, Central, Northern or Eastern Europe.

In the matter of the utilisation of the examined objects we should designate some of them as a part of a tool and some as a part of a weapon. The axe head from Balta Neagră and maybe the axe head from Fântâna Mare as well were most likely used as parts of tools for wood processing. The specimen from Suceava and possibly also the specimen from Fântâna Mare would have been used as axes for general use. Lastly, the axe with inv. no. 37793 was likely produced for combat use.

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Zdobené stredoveké a včasnonovoveké sekery
z Národného múzea rumunskej histórie v Bukurešti

Súhrn

Príspovek je zamerný na tri zdobené hlavice seker a jednu kompletú sekeru z Národného múzea rumunskej histórie v Bukurešti (ďalej MNIR), ktoré môžeme datovať na prelom stredoveku a novoveku (tabela 1). Ide o obdobie medzi koncom vrcholného stredoveku a včasnom novovekom. V MNIR sú predmety bádania vedené pod inventármi číslami 37793, 72492, 178595 a jedným číslom daru, a to 1555. Dve hlavice z nich boli objavené v župe Sučava v rámci rumunskej Bukoviny a Moldavska – hlavica sekier z Fântâna Mare (inv. č. 178595) a Sučava (inv. č. 72492), jedna hlavica v župe Ilfov v rámci Valašska – hlavica sekery z Balta Neagră (č. daru 1555), a posledná hlavica sekery je uložená v MNIR bez špecifikácie jej nálezového kontextu pod inventármi číslom 37793 (obr. 1). Každý z vyššie spomenutých exemplárov má špecifický tvar a zdobenie. Okrem hlavic sekery z Fântâna Mare (Bătrîna/Monoranu/Bătrîna 1984, 172, obr. 5: 1) nebol zvyšok skúmanej kolekcie dosiahnutý obdobú. Avšak treba pripomenúť, že exemplár z Fântâna Mare nebol taktiež zhodnotený v súvislosti s jeho tvorom a dekoráciou.

Hlavica sekery širočiny s číslom daru 1555 (obr. 2: 1) bola v roku 2015 nájdená ako ojedinelá nález v priestre neznámeho lesa pri obci Balta Neagră, v rámci komún Neučia. Pokiaľ sa to týka tohoto exemplária, zdobená širočina a výzdoba riešená v rámci samostatnej školenosti na základe analógií ostria, telá a kŕčku danej hlavice z profilu, je možné uzaverať aj o jej včasno- a vrcholnostredovekom datovaní. Dané analogie sú symetrické zvrchu i zospodu, opatrené ostniakmi a väčšinou aj s obuchom. Takéto prvky posudzovaná hlavica ale postráda. Keby ich mali mať, mohla by patrīť k typu hlavic sekier nazvanej Lunow, ktorým vieme datovať včasnú toto poliar slovenskom novoveku 18. – 19. stor. (obr. 7; 8). Niektoľko exemplárov má špecifické tvar skúmanej hlavice zvrchu i zospodu a jeho razená/kolkovaná výzdoba poukazujú na obdobie vrcholného/neskorejšieho stredoveku a včasného novoveku v Evropí. Rôzne tvarové zdobené hlavice sekier, avšak odlišné od hlavice z Balta Neagră, boli ale rovnako zdobené. Objavené sa na nich tiež rôzne kombinované linie a body/krúžky/polmesiaci, ktoré sa razili v podobe vetvičiek alebo troch radiálne zbierajúcich sa línie s bodmi/kruhmi/polmesiaci v ich koncích. Pri spomínaných vetvičkách vieme o niekoľkých paralelách hlavic sekier zo súčasného Rumunska, Poľska a Českej republiky (obr. 4: 1, 2; 5: 1, 2; 6: 1), ktoré boli datované do 13. až 17. stor. Niektorí bádatelia pokračovanie tohto vzorkovania začali až do súčasnosti a vrcholnostredoveku a včasného novoveku v Európe. Rôzne tvarové zdobené hlavice sekier, avšak odlišné od hlavice z Balta Neagră, boli ale rovnako zdobené. Objavili sa na nich tiež rôzne kombinované línie a body/krúžky/polmesiaci, ktoré sa razili v podobe vetvičiek alebo troch radiálne zbierajúcich sa línie s bodmi/kruhmi/polmesiaci v ich koncích. Pri spomínaných vetvičkách vieme o niekoľkých paralelách hlavic sekier zo súčasného Rumunska, Poľska a Českej republiky (obr. 4: 1, 2; 5: 1, 2; 6: 1), ktoré boli datované do 13. až 17. stor. Niektorí bádatelia pokračovanie tohto vzorkovania začali až do súčasnosti a vrcholnostredoveku a včasného novoveku v Európe. Rôzne tvarové zdobené hlavice sekier, avšak odlišné od hlavice z Balta Neagră, boli ale rovnako zdobené.
Tab. IV; XV–XVI). Najbližšie analógie k dekorácii môžeme vidieť už vo vyššie spomenutá novoveké zbrani/pomocne zo Slovenského národného múzea v Martine (обр. 7; Piwowar 2016, 60–62, obr. 41, 42) alebo včasnoveneovekej hlavicí sekery z Valea Măruțău v rumunské ţăpă Gaļati (обр. 4: 1; Croitoru 2016, 337, obr. 4). V prvom prípade ide o ozubenú razbu, pri ktoré sú na liníe pripojené razené polkôrký a v druhom prípade ide snáď len o bodovú razbu.

Pod inštitučným člom 72492 sa v MNIR vedie hlavica sekery z neznanej lokalite v rámci katastrálneho územia Suceava, ktorú toto múzeum získalo v roku 1975. Zvyšuje sa na majm hrotitou bradou a kolkovanou výzdobou v tvare štvorička na jednej strane jej kôčku (обр. 8: 2; Croitoru 2016, 818, 819, 825, 826, obr. 13; Waldman 2005, 165, 166, obr. 135). Ostatné paralely viaže sa na konkávne výseky vieme pozorovať na zbraniach a v ikonografických prameňoch severnej, strednej a východnej Európy v období 15. až 17. stor. (napr. obr. 14: 1, 2; Boehm 1890, 338, 372, obr. 392: e–f; 395; 440, 441; Demmin 1893, 818, 819, 825, 826, obr. 5; 8, 8; 11; Kalmár 1971, 33, 39, obr.; Oakeshott 2000, 50, obr. 9: B–C; Radziwiłł Chronicle; Stone 1961, 111, obr. 142: 2–4; Waldman 2005, 157, obr. 126).

Nakoniec značka výrobcu, ktorá sa v podobe lono, konkrétu a konkrétu možno objavuje na kôčku posudzovanej sekery, nachádzame aj na dvoch bojových kopiiach v loveckom stle, pravdepodobne datovaných do vzácneho 16. stor., ktoré sú uložené v londýnskom Toweri (Foakes 1916, 221, 488, značka výrobcov 54, 56, Appendix B: 170–171).

Záverom treba uviesť ešte pár postreňov týkajúcich sa datovania a funkčného využitia skúmaných predmetov. Exempláre zo Balta Neagră a Suceava môžu byť pravdepodobne chápane ako najstaršie predmety v skúmanom súbore. Môžli by byť vyrábané už v 13. stor. (Balta Neagră) a na konci tohto storočia, či až v 15. stor. (Suceava). Výroba hlavice zo Suceava mohla byť najneskôr uskutočnená v 16. stor., no hlavica z Balta Neagră mohla byť vytvorená v 17. stor. (Balta Neagră) a na konci storočia, či až v 15. stor. (Suceava). Výroba palu z Suceava mohla byť najneskôr uskutočnená v 16. stor., no hlavica z Balta Neagră mohla byť vytvorená v 17. stor. (Balta Neagră) a na konci storočia, či až v 15. stor. (Suceava). Výroba palu z Suceava mohla byť najneskôr uskutočnená v 16. stor., no hlavica z Balta Neagră mohla byť vytvorená v 17. stor. (Balta Neagră) a na konci storočia, či až v 15. stor. (Suceava). Výroba palu z Suceava mohla byť najneskôr uskutočnená v 16. stor., no hlavica z Balta Neagră mohla byť vytvorená v 17. stor.
nejasný nálezový kontext, 15.–16. stor., možno 17. stor. (PL; podľa Zdaniewicz 2016, 269, obr. 2–5). Všetko železo. Mierka: a – 1, 2; b – 3.

Obr. 6. Skúmaná stredoveká a včasnonovoveká hlavica sekery z Fântâna Mare (inv. č. 178959) deponovaná v Národnom múzeu rumunského histórie v Bukurešti (RO) a analogie k jej prvkom. 1 – Fântâna Mare, nejasný nálezový kontext, 15. stor. (Župa Suceava, RO; inv. č. 178959 v MNIR; kresby a fotografie M. Husára); 2 – Radymno, vodný nález, 13. stor.? (PL; podľa Głosek 1996, 90, tab. XV: F). Všetko železo.

Obr. 7. Dvojsečná zbraň alebo pomôcka z neznámeho náleziska deponovaná v SNM v Martine (neznáme nálezové kontext, inv. č. KH5955, 18.–19. stor. (?); photografia a obrázok podľa Pivková 2016, 62, obr. 41; 42). Všetko železo. Mierka: a – a; b – b.

Obr. 8. Skúmaná stredoveká a včasnonovoveká hlavica sekery zo Suceavy (inv. č. 72492) deponovaná v Národnom múzeu rumunského histórie v Bukurešti (RO) a analogie k jej prvkom. 1 – Suceava, nejasný nálezový kontext, koniec 13. stor./15. stor. až 16. stor. (Župa Suceava, RO, inv. č. 72492 v MNIR; kresby a fotografia M. Husára); 2 – Siedlątków, ojedinelý nález z priestoru hradu, okolo roku 1380 (PL; podľa Głosek 1990, 138, 502, obr. 22); 3 – Moravany nad Váhom-Hubina, vodný nález, polovica 16. stor. (SK; podľa Klčo 1988, 76, obr. 16). Všetko železo.

Obr. 9. Analógie prvkov skúmanej stredovekej a včasnonovovekej hlavice sekery zo Suceavy (inv. č. 72492) deponovanej v Národnom múzeu rumunského histórie v Bukurešti (RO). 1 – Baia Mare, 15.–16. stor. (Župa Maramureș, RO, podľa Emandi 1981b, obr. 22: 2); 2 – Baia Mare, 15.–16. stor. (Župa Maramureș, RO, podľa Emandi 1981b, obr. 22: 5). Všetko železo.

Obr. 10. Analógie prvkov skúmanej stredovekej a včasnonovovekej sekery (neznáme nálezisko, inv. č. 37793, 15./16.–17. stor.) z Národného múzea rumunského histórie v Bukurešti (RO), a, b, d – kresby G. Ducman; c, e – kresba a fotografia M. Husára. a, c – železo; b, d–e – železo, neželezný žltý kov, drevo. Mierka: a – a–b, d–e; b – c.

Obr. 11. Analógie prvkov skúmanej stredovekej a včasnonovovekej sekery (inv. č. 37793) z Národného múzea rumunského histórie v Bukurešti (RO). 1 – Kráľovský hrad Wawel v Krakove (PL?), inv. č. dep. 2573, 17. stor. (podľa Czyżewski 2013, 235–237, 409, obr. na str. 235–237, 409); 2 – Ľvovské historické múzeum (Ľvov?), inv. č. 3–3532, 16.–17. stor. (podľa Terskyj 2005, 21, 23, 24, obr. 4: 18). 1 – železo, drevo; 2 – železo.

Obr. 12. Analógie prvkov skúmanej stredovekej a včasnonovovekej sekery (inv. č. 37793) z Národného múzea rumunského histórie v Bukurešti (RO). 1 – Dánske vojenské múzeum v Kodani (RF?), inv. č. C50, rok 1530 (podľa Waldman 2005, 166, 167, obr. 135); 2 – zbierka Verfaffer (CH?), polovica 16. stor. (podľa Denmin 1893, 825, 826, obr. 13); 3 – zbierka Van Zuylen (NL?), začiatok 17. stor. (podľa Boeing 1890, 337, obr. 392: c). 1 – železo, mosadz, drevo; 2, 3 – pravdepodobne železo a drevo. Bez mierky.

Obr. 13. Analógie prvkov skúmanej stredovekej a včasnonovovekej sekery (inv. č. 37793) z Národného múzea rumunského histórie v Bukurešti (RO). 1 – zbrojníca hohenzollernského paláca v Sigmaringen (DE?), koniec 16. stor. (podľa Boeing 1890, 341, obr. 394); 2 – neznáma zbierka i nálezisko (IT), 17. stor. (podľa Boeing 1890, 338, obr. 392: e). Pravdepodobne železo a drevo. Bez mierky.

Obr. 14. Analógie prvkov skúmanej stredovekej a včasnonovovekej sekery (inv. č. 37793) z Národného múzea rumunského histórie v Bukurešti (RO). Ilustrácie Radziviľskej kroniky; 15. stor. (podľa Radziwiłł Chronicle).

Tabela 1. Rozmery a váhy skúmaných stredovekých a včasnonovovekých sekerí z Národného múzea rumunského histórie v Bukurešti (RO).

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