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THE TYPOLOGY AND PRODUCTION OF BROOCHES ON THE EASTERN LIMES OF DACIA SUPERIOR ON THE BRÂNCOVENEȘTI-CĂLUGĂRENI SECTOR

Abstract: The authors analyse a number of 61 Roman brooches from the Brâncovenești-Călugăreni sector of the Dacian *limes*, discovered mainly in the last 15 years. In order to paint a better picture, in our analyses 9 brooches discovered at Brâncovenești before 2010 were included as well, thus raising the number to 70 pieces. Chronologically they fall between the 1st and 3rd centuries AD.

Keywords: *limes, vicus, forts, towers, brooches, bronze, iron, enamel, fibula workshop, Roman period.*

The currently discussed *limes* sector (Fig. 1) has been researched for over 150 years¹, but the area has benefitted from several intense research projects in the last 15 years, broadening our knowledge significantly about its material culture as well². Among the large variety of finds coming from these field researches, a considerable number of Roman brooches emerged³.

TYPOLOGICAL ANALYSES

I. Strongly profiled brooches (cat. no. 1–10). There's a total of 13 pieces of this type coming both from old (3 pieces)⁴ and the more recent field researches. The main characteristics of this type are: the spring is formed of 8 windings and the bow is strongly arched. In the early period there's a sheet that separates the spring from the head, but this will be later abandoned. The head is wider and the bow is strongly arched. Initially the bow had a vertical rib and was decorated with a nod, which in the later evolution of the type flattens and appears only on the upper part. Sometimes the head, bow

¹ ORBÁN 1870, 80, 88–89; PAULOVICS 1944, 23–38; PROTASE 1965; PROTASE/ZRÍNYI 1994; GUDEA 1997, 56–57.

² POPA *et alii* 2010, 106–110; MAN/CIOATĂ 2012; PÁNCZÉL *et alii* 2012; PÁNCZÉL 2015; HÖPKEN *et alii* 2016; DOBOS *et alii* 2017; PÁNCZÉL/MUSTAȚĂ/DOBOS 2018; OBERHOFER/HÖPKEN/FIEDLER 2019/2020; HÖPKEN/FIEDLER/OBERHOFER 2020; PÁNCZÉL/BAJUSZ 2021; PÁNCZÉL/SIDÓ/SZILÁGYI 2021.

³ We would like to thank our colleagues who participated in our field researches and in the restoration process of the finds, but we would especially like to thank Krisztina Csibi, Márton Ferenczi, Csongor Lukácsi and Éva Eunika Vajna for their drawings and Orsolya Szilágyi for the English translation.

⁴ PROTASE/ZRÍNYI 1994, 53 nr. 1, Pl. LIV/7, Brâncovenești, fort, MCM inv. n. a.; 54, nr. 3, Pl. LIVa/9, Brâncovenești, *vicus*, MCM inv. n. a.; 54, nr. 4, Pl. LIVa/10, Brâncovenești, fort, MCM inv. n. a.



Fig. 1. The *limes* sector between Brâncovenesti and Călugăreni (made by Máté Szabó)

and foot are decorated with a wolf dent or small triangles. The foot is long and usually ends in a knob. The catchplate usually had either a trapezoid or rectangular shape. They are usually made out of one or two pieces of metal. This type was most probably conceived in the Eastern Alps, becoming one of the most widespread and long-lasting forms in the Empire and in the *Barbaricum*. Moreover, there's a considerable number of variations of this type. The majority of these variants are from Noricum⁵, Pannonia⁶, Moesia⁷ and Dacia⁸. The westernmost discoveries are from the German provinces and Raetia⁹, respectively Dalmatia¹⁰ and Thracia¹¹ in the East. There's a very high number of them in the barbarian world, not considering the variations. This is the most prevalent brooch type in Dacia¹². The Almgren 68 type (cat. no. 1), strongly profiled brooch is the only kind that's manufactured from one piece of metal. This type is in circulation in the 1st century AD¹³. Their number is quite small in Roman Dacia, those pieces that originate from well dated contexts are from Trajan's era, most probably having been brought by soldiers and settlers. Those strongly profiled brooches from Dacia made out of two metal pieces can be dated from the

⁵ JOBST 1975, 29–42; GUGL 1995, 11–20; SEDLMAYER 2009, 31–34; LEITNER/FÄRBER 2013; KNAUSEDER 2014.

⁶ PATEK 1942, 21–26; KOŠČEVIĆ 1980, 20–23; SCHMID 2010, 18, 20–23; MERCZI 2014; SÁRÓ 2014, 163–167.

⁷ GENČEVA 2004, 98–101; REDŽIĆ 2007, 19–21; PETKOVIĆ 2010, 77–91; NUȚU/ELEFTERESCU 2018, 20–28.

⁸ COCIȘ 2004, 45–70.

⁹ ETTLINGER 1973, 61–63; BÖHME 1972, 13; RIECKHOFF 1975, 42, Pl. 2/13–24; RIHA 1979, 72–75; SCHLEIERMACHER 1993, 69–70; ORTISI 2002, 18–26; BOELICKE 2002, 73–74.

¹⁰ BUSULADŽIĆ 2010, 48–55.

¹¹ GENČEVA 2004, 98–101.

¹² COCIȘ 2004, 452, grafic 3.

¹³ RIECKHOFF 1975, 42; JOBST 1975, 28–29; RIHA 1979, 73; SEDLMAYER 2009, 32–33; COCIȘ/BĂRBULESCU/UDRESCU 2022, 339–340.

beginning of the 2nd century AD up until the third quarter of the same century.

II. Late Alesia brooches (cat. no. 11). They are made out of two pieces of metal; the fastening mechanism is comprised of a hinge. The hinge is obtained by folding the head's end towards the inside, while the chord with a blocker is rotated. The bow (which has a rectangular cross-section) is triangle shaped, widening towards the head and narrowing towards the foot. The foot is short, while the catchplate is trapezoid. Several specialists have been intrigued by the chronology of this type. Patek, Košćević, Bojović, Grbić, Genčeva and Petković, believe that Aucissa type, along with its variants, are one and the same¹⁴. These can be found in the Lower Danubian provinces. In the case of Dacia, we decided to create a separate variant, since several of the Aucissa type's signature elements, like the bow between the head and foot and the large knob, were missing¹⁵. The type at hand can be dated from the beginning of the 2nd century AD up until the third quarter of the same century.

III. Norico-Pannonian brooches with two knobs (Almgren 236, Garbsch 236h, Cociș 11c. type). Two

of this type were discovered during the old excavations at the *vicus* from Brâncovenesti¹⁶. These were made out of two pieces of metal. The spring of the fastening mechanism is made out of 8 to 10 windings. The head is slightly curved and widened. The bow has two nodes, the long foot usually ends in a knob. The catchplate has a cut-out. As the name of this type already hints, they were mainly used in Noricum and in Pannonia¹⁷, however they could be found in other provinces as well. Even though their number is quite small in Roman Dacia, there's clear evidence that they were manufactured in Napoca¹⁸. This type can be dated from the beginning of the 2nd century AD up until the third quarter of the same century. The pieces found at Brâncovenesti are the easternmost examples of this type.

IV. Knee brooches (cat. no. 12–27). The majority of the 18 pieces come from recent excavations (16 pieces), but there are 2 from earlier campaigns¹⁹. The fastening mechanism used for this type is quite diverse. The earliest type of mechanism is a spring system made out of 8 to 10 windings enclosed in a cylindrical or a semi-cylindrical case. The chord is tall, oftentimes pinned by a hook, or standing free. Another variant of the fastening mechanism is a hinge. The head is in the shape of a semicircle, triangle or rectangle. The bow of the brooch at the midpoint has a knee-like widening, from where the name of this type comes from. The decorations on these brooches are typically lined incisions in the shape of a wolf dent or the letter X. They are usually made out of two pieces. Knee brooches can be found throughout the whole Empire, but more dominantly in the German

¹⁴ PATEK 1942, 107; KOŠČEVIĆ 1980, 14; BOJOVIĆ 1983, 24; GRBIĆ 1996, 88–89; GENČEVA 2004, 104–106; PETKOVIĆ 2010, 54–56.

¹⁵ COCIȘ 2004, 75.

¹⁶ COCIȘ/MAN, 2008, 86, Pl. II/8–9, Brâncovenesti, *vicus*, MCM, inv. n. a.

¹⁷ GARBSCH 1965.

¹⁸ COCIȘ 2019, 25, Pl. 69/695–697.

¹⁹ COCIȘ/MAN 2008, 86–87, Pl. III/13, Brâncovenesti, *vicus*, MCM, inv. n. a.; Pl. II/11, Brâncovenesti, *vicus*, MCM, inv. n. a.

provinces²⁰, Noricum²¹, Pannonia²², Dacia²³, Moesia²⁴ and Dalmatia²⁵. Those brooches that have a semi-cylindrical case (cat. no. 12–17), are from the era of Trajan up to the era of Marcus Aurelius, but some were in use up until the end of the 2nd century AD. Cylindrical cased brooches of this type (cat. no. 18–23, 26) were in use from the second half of the 2nd century AD until the first decades of the 3rd century AD. The variants with hinged fastening mechanism (cat. no. 27) were circulating from the third quarter of the 2nd century AD and are in use up until the end of the following century.

A quite unique way of manufacturing is showcased with 2 brooches (cat. no. 24–25) that were produced from a single piece of metal. Although one has a protective cylinder (cat. no. 24), the technique used during the production process is typical for the single piece method. This is usually practiced in the barbarian world, which tries to imitate Roman forms. Knee brooches created with this method are characteristic of the *limes* area and the barbarian world²⁶. Brooches of this type manufactured from a single piece of metal can be dated, in the case of Dacia, from the middle of the 2nd century AD up until the beginning of the 3rd century AD.

V. Brooches with an anchor shaped head (cat. no. 28–30). These brooches are produced from two pieces of metal. The fastening mechanism consist of a spring with 12 to 16 windings, secured by a rectangular sheet. The head is in the shape of an anchor, its arms ending in a knob. The curved bow is decorated with a node (cat no. 28), and in two cases there are lateral wings right underneath it. Its short foot ends in a knob, while the catch plate has a triangular shape. In the case of the winged variants, the headplate has traces of beaded decoration. These elements were borrowed from the strongly profiled brooches²⁷. They have a regional distribution, appearing in Dacia, Dalmatia, Pannonia, Moesia Superior and Inferior²⁸. There were occasional findings in the barbarian world as well.²⁹ Variants with a spring fastening mechanism appear in Dacia in Trajan's or Hadrian's era (the form emerging from the strongly profiled brooches) and the larger and classical forms are predominantly in use (up until the middle of the 3rd century AD). We know that these were manufactured in at least two separate workshops in Dacia³⁰. The variants discussed here can be dated from the middle of the 2nd century AD up until the middle of the 3rd century AD.

VI. Trumpet brooches (cat. no. 31–35). Manufactured

²⁰ BÖHME 1975, 20–22.

²¹ JOBST 1975, 59–68.

²² PATEK 1942, 56–62; SCHMID 2010, 32–36; MERCZI 2011.

²³ COCIŞ 2004, 88–105, Pl. LVI–LXXX.

²⁴ GENČEVA 2004, 107–109; PETKOVIĆ 2010, 127–160; NUŢU/ELEFTERESCU 2018, 54–63.

²⁵ BUSULADŽIĆ 2010, 60–73.

²⁶ COCIŞ 2004, 92–94; MERCZI 2011, 23, Pl. 16/2, 43, Pl.15/11–12.

²⁷ PATEK 1942, 33; KOŠČEVIĆ 1980, 25.

²⁸ PATEK 1942, 29–32; KOŠČEVIĆ 1980, 25–26; BOJOVIĆ 1983, 44–46; GENČEVA 2004, 150; COCIŞ 2004, 105–111; COCIŞ 2006; REDŽIĆ 2007, 22–24; PETKOVIĆ 2010, 107–115; BUSULADŽIĆ 2010, 83–87; BUORA 2016, 169–171.

²⁹ GLADYSZ JUSCINSKA/JUSCINSKI 2005, 129–131; COCIŞ 2006, 401; SEDLMAYER 2015, 93; BUORA 2016, 171.

³⁰ COCIŞ 2019, 125, Pl. 9/13, 207, Pl. 91/1, 3.

out of one, or two pieces of metal. Made out of bronze, iron or even bone³¹. A total of 3 variants were identified in this sector. The first has a faceted head, the bow – also faceted – is shaped like an S. The spring has 8 windings, the catch sheet has a rectangular shape. Variant 21c (cat. no. 31–32) was mainly circulated regionally, primarily in Dacia³² and Moesia³³, but they can be found in other provinces as well. Moravia is the only territory outside of the Empire where they were found.³⁴ The fact that a large quantity of this type was discovered in Dacia makes us believe that they were locally produced, and this variant was quite possibly created here. They can be dated to the 2nd century AD, and most probably worn by soldiers.

What the following three pieces (cat. no. 33–35) have in common is the metal they were made out of: iron. Another shared trait of these is the fact that they were manufactured out of a single piece of metal. In one case, the spring fastening mechanism is secured by a cylinder (cat. no. 35). Brooches made out of a single piece of metal are typical for Pannonia, where they were inspired by strongly profiled brooches³⁵. The dating of these pieces is between the third quarter of the 1st century AD and the 2nd century AD³⁶, or from the second half of the 1st century AD up until the beginning of the following century³⁷. Iron brooches of this type produced from a single piece of metal are typical of the barbarian world³⁸. Up until now only two pieces made of iron were known from Dacia³⁹, they can be dated to the second half of the 2nd century AD.

VII. Almgren type German brooches, group VII, 1st series (cat. no. 36). Made out of two pieces of metal. There's a knob on the fastening support of the spring that is made out of 8 windings. The head is small, the bow is strongly arched bearing a central rib, and divided from the foot by a vertical rib. The short foot ends in a knob, while the equally short catchplate has a rectangular shape. While in the literature the “Sarmatian type”⁴⁰ moniker is oftentimes used interchangeably regarding this form, we strongly believe that both the insinuation that these originate from the Sarmatians and that they are associated with the Sarmatian world should be forgotten. The circulation⁴¹ and the manufacture of this type is clearly related to the whole barbarian world⁴², mainly in German regions, or connected to it⁴³. They also appear sporadically in some Danubian provinces, like:

³¹ SÁRÓ 2022, Fig. 2/10.

³² COCIŞ 2004, 115; COCIŞ/LĂZĂRESCU/CIUŢĂ, 2023, 350, cat. no. 54–55, Pl. V/54–55.

³³ NUŢU/ELEFTERESCU 2018, 58–60.

³⁴ PEŠKAŘ 1972, 88, Pl. 14/4; IVÁN 2015, 92, cat. no. 1284.

³⁵ KOŠČEVIĆ 1980, 25–26, Pl. XXI/154–155; MERCZI 2012, 492–493; SÁRÓ 2022, 304.

³⁶ MERCZI 2012, 493.

³⁷ SÁRÓ 2022, nota 73.

³⁸ PEŠKAŘ 1972, 85, 82–85, Pl. 13/9, Pl. 13/8–9; IVÁN 2015, tip 3.4.2.1.5.80–81, cat. nr. 1205–1211; 92, tip 3.4.2.6, cat. nr. 1285–1286; LASOTA-KUŠ/STEMPNIAK-KUSY 2019, 84, Fig. 1/1–3.

³⁹ COCIŞ 2004, cat. no. 1375–1376.

⁴⁰ MAČZYŃSKA 2011, 67–71.

⁴¹ MAČZYŃSKA 2011, Fig. 28.

⁴² COCIŞ/BÂRCĂ 2013, Fig. 7; BÂRCĂ 2019; BÂRCĂ 2023; BÂRCĂ/COCIŞ 2022, Fig. 6; BÂRCĂ/COCIŞ 2023, 29–30, Fig. 7; BAZOVSKÝ 2019.

⁴³ COCIŞ/BÂRCĂ 2014, 209; COCIŞ/BÂRCĂ 2020, 153; BÂRCĂ 2014, 114–117; BÂRCĂ/COCIŞ 2022, 250; BÂRCĂ/COCIŞ 2023, 27–28.

Noricum, Moesia Superior, but only on the *limes*⁴⁴. The situation is similar in Dacia, the pieces being discovered in forts along the *limes*.⁴⁵ These brooches were discovered in layers dated after the Marcomannic wars, being in use up until the first half of the 3rd century AD.

VIII. Flat cut-out brooches (cat. no. 37). This type is characterized by a flat bow in different geometrical shapes. The cut-out is usually in the shape of a *pelta*, trumpet etc. It has a hinged fastening mechanism, while the catch plate has a rectangular shape. They are created with more elements. Several variants are identical to fittings used by soldiers, the brooches quite possibly being inspired by them. The majority of these pieces were discovered in a military environment, which leads us to believe that they were mainly used by soldiers. This type can also be found in the provinces along the Rhine and Danube⁴⁶. They can be dated from the end of the 2nd century AD up until the beginning of the 3rd century AD.

IX. Enamelled and flat brooches (cat. no. 38–40). All three variants have a hinged fastening mechanism. The flat bow is decorated with concentric circles or ovals filled partially or entirely with enamel. These are essentially a sub-variant of the flat brooch type. They can be found in the entirety of the Roman world⁴⁷ and the *Barbaricum*⁴⁸. Compared to the western provinces, the number of enamelled brooches discovered in Dacia is quite small. The three brooches discussed here are as of yet unknown variants from this province.

The first one, in the form of a *lunula* (cat. no. 38) is dispersed widely in the Empire⁴⁹. They can be dated in the first three quarters of the 1st century AD in the Roman provinces⁵⁰. It's quite possible that the piece in question was brought here by the first soldiers on the *limes*, during the first decades of the 2nd century AD. The second piece (cat. no. 39) is also unique in the case of Dacia, but no similar brooch has been found in the whole Empire either. The catchplate itself could be dated in the 2nd century AD.

The third piece (cat. no. 40) is also unmatched in the province. The only identical one to it was discovered at the Forum Claudii Vallensium (Martigny).⁵¹ According to E. Riha, this piece is connected to the very last phase of development of enamelled brooches, at the end of the 2nd century AD⁵².

X. Penannular brooches (cat. no. 41). The bow of the brooch is in the shape of an Ω , having a mobile hinged

fastening mechanism. It can be found in the entire Empire⁵³. They appear in the 1st century AD up until the middle of the 3rd century AD.⁵⁴ Currently there isn't even one piece discovered from a datable archaeological context that is earlier than the middle of the 2nd century AD, being in use most probably up until the middle of the 3rd century AD. They were worn by both civilians and soldiers.

XI. Crossbow brooches (cat. no. 42–46). It has a spring fastening mechanism with a lowered chord, inserted through the brooch's inner part, resembling the shape of a crossbow. The bow is arched, with a rectangular, semi-circular or triangular cross-section. Vertical ribs and occasionally lateral antennas can be observed on the bow. The short foot is often-times faceted. The catchplate is tubular. This type is either made of a singular or two metal pieces. There are several variations of this type made out of bronze or iron. They originate from the barbarian region of Germania (*Elbenfibeln*), from where they will spread throughout the Empire⁵⁵. Those that have a knob on the head are also discussed here together with this type, since the shape of the bow resembles a cross-bow⁵⁶. In the case of other provinces these are considered as a completely different type (*Bügelknopffibeln*)⁵⁷.

One piece of this type was discovered in the *vicus* from Călugăreni, in an area that can be associated with metal-working⁵⁸. This lead brooch (cat. no. 44) proves that this type was manufactured in the *vicus*.

A second piece, a bronze waster (cat. no. 46), was discovered at the *principia* of the fort from the same location. The shape of the catchplate implies that this was also a cross-bow brooch. Its presence in the *principia* might suggest that bronze objects were collected here in order to be recycled at a later time⁵⁹.

Two other brooches made out of bronze (cat. no. 42–43) have analogies in Dacia⁶⁰, Moesia Superior⁶¹, Noricum⁶² and in the *Barbaricum*⁶³.

There's one piece made of iron (cat. no. 45), which it's quite widespread in Dacia⁶⁴, and there's a considerable amount found on the northern *limes* and Dacia Superior. M. Schulze's study regarding this type of brooch in Europe proves that these appeared first at the Przeworsk culture and in the Central Danube Region, around the end of the 2nd century AD and beginning of the 3rd century AD respectively; a second phase can be identified in the Elbe region and the Danubian provinces (Dacia included) and their bordering areas.⁶⁵ The catalogue of this paper, while discussing Romania, showcases only one iron brooch from Dacia⁶⁶, the

⁴⁴ JOBST 1975, 75–76; REDŽIĆ 2007, cat. nr. 289, Pl. XXVI/289.

⁴⁵ COCIȘ/BĂRCĂ 2014, 197; OPREANU/COCIȘ/LĂZĂRESCU 2020, 71–72; BĂRCĂ/COCIȘ 2022, 250–252. Fig. 5. BĂRCĂ/COCIȘ 2023, 32–35, Fig. 3–4, 6

⁴⁶ PATEK 1942, Pl. 17/14–21; BÖHME 1972, 43–44; JOBST 1975, 116–120; KOŠČEVIĆ 1991, 72–73; PETKOVIĆ 2010, 176–180.

⁴⁷ PATEK 1942, Pl. 14–16; BÖHME 1972, 40–41; ETTLINGER 1973, tip 41; JOBST 1975, 106–110; RIHA 1979, tip 7.4 7 7.20; FEUGÈRE 1985, tip 26–28; PETKOVIĆ 2010, 161–175; MACKRETH 2011, Pl. 116–118.

⁴⁸ KROPOTOV 2010, 302–310.

⁴⁹ ETTLINGER 1973, 113, tip 41 Pl. 12/19; KOŠČEVIĆ 1991, Pl. XVIII/259; GENČEVA 2004, Pl. XXV/6; SEDLMAYER 2009, 46. Pl. 29/609–610; MACKRETH 2011, Pl. 118/11392.

⁵⁰ SEDLMAYER 2009, 46–47.

⁵¹ REY-VODOZ 1986, 167, Pl. 13/205.

⁵² RIHA 1979, 197.

⁵³ FEUGÈRE 1985, 416–423.

⁵⁴ BÖHME 1972, 46; RIHA 1979, 206; SEDLMAYER 2009, 35.

⁵⁵ BÖHME 1972, 35; RIHA 1979, 83.

⁵⁶ COCIȘ 2004, 140–141, Pl. CXXII/1719–1722.

⁵⁷ BÖHME 1972, 35; RIHA 1979, 84.

⁵⁸ OBERHOFER/HÖPKEN/FIEDLER 2019/2020; HÖPKEN/FIEDLER/OBERHOFER 2020; BITAY *et alii* 2020.

⁵⁹ BAUMEISTER 2004, 82–90.

⁶⁰ COCIȘ 2004, Pl. CXXII–CXXIII/1715–1722.

⁶¹ PETKOVIĆ 2010, 227–234, 358–360, Pl. XLIV–XLV/2–5.

⁶² JOBST 1975, 85, nr. 206

⁶³ PEŠKAŘ 1972, 125–127 Pl. 43/1–9, 44/1,3.

⁶⁴ COCIȘ 2004, cat. nr. 1721–1770.

⁶⁵ SCHULTZE 1977, 168.

⁶⁶ SCHULTZE 1977, nr. 1453

rest being from the barbarian world bordering the province in the 3rd century AD⁶⁷, or the 4th century AD. It has to be mentioned that all the other iron brooches from Dacia were published after M. Schulze's book came out. The closest analogies for our pieces are the ones discovered in the barbarian territories east of Dacia⁶⁸. Those that were found in Dacia came from layers dated to the 3rd century AD. The relatively high number of such iron brooches in Dacia is quite surprising, since Roman manufacturing technology was closely followed and only bronze brooches were made. It's quite plausible, that a barbarian community existed in the centre of the province, who wore such brooches, or they appeared via trade routes.

XII. T shaped brooches (cat. no. 47–51). Hinged fastening mechanism. The bow is curved, rectangular shaped. The short foot can either be pointed or faceted. The catchplate is tubular. It's manufactured out of two pieces. The two variants (cat. no. 47 and cat. no. 48–50) can be found throughout the Empire⁶⁹, being considered a type used by the military. The pieces in question can be dated generally to the 3rd century AD⁷⁰. In the case of Dacia, archaeological contexts imply that they were circulated in the first half of the 3rd century AD.

XIII. Brooches with returned foot (cat. no. 52). There were only 2 pieces of this type identified in this sector, originating from older excavations⁷¹. The variants discussed here either have a spring or hinged fastening mechanism⁷², and are made out of two metal pieces. The arched bow is in the shape of a rectangle, occasionally decorated with lined incisions. The short foot is folded backwards, thus creating the catchplate, which winds around the bow in 3 to 5 times. Several hypotheses were created concerning the origin of this type⁷³. The extremely high number of such pieces from Dacia makes us believe that some variants were created in the province, strongly influenced by similar brooches coming from the barbarian territories bordering the province. During some evolutionary phases the influence of the T shaped brooches can be observed as well. This type can mainly be found in Dacia and the barbarian world. Gh. Diaconu, while analysing brooches with returned foot from the territory of Romania reached to the conclusion that they can be dated between 160–250 AD⁷⁴, or in the 3rd century AD, according to K. Horedt⁷⁵. Based on new analysis⁷⁶ they

appear in the 180's AD, or after the Marcomannic wars and are in use until the dissolution of the province.

Out of the 70 pieces analysed here, we were unable to specify the exact type in 9 cases (cat. no. 53–61).

Type	Total	Cat. no.
Strongly profiled brooches	13	1–10
Late Alesia brooches	1	11
Norico-Pannonian brooches with two knobs	2	-
Knee brooches	18	12–27
Brooches with an anchor shaped head	3	28–30
Trumpet brooches	5	31–35
Almgren type German brooches, group VII, 1 st series	1	36
Flat cut-out brooches	1	37
Enamelled and flat brooches	3	38–40
Penannular brooches	1	41
Crossbow brooches	5	42–46
T shaped brooches	5	47–51
Brooches with returned foot	3	52
Unidentifiable brooches	9	53–61
Total	70	61

Fig. 2. Brooch types identified on the *limes* sector between Brâncovenești and Călugăreni

CONCLUSIONS

The 13 brooch types represented in this section of the *limes* are well known in Dacia (Fig. 2), but some of the variants were as of yet unknown (cat. no. 39–40), this widens our knowledge about types used in this province. They came from different areas and sites (Fig. 3), and their number is high due to the years-long archaeological research at these sites. The majority of the brooches is made out of bronze (64), of which three are enamelled and one is silvered. Five are made out of iron, while one is made of lead. The two Norico-Pannonian brooches with nodes found at the *vicus* from Brâncovenești suggest the presence of settlers from that region in the first half of the 2nd century AD. The lead casting model and also the bronze brooch waster from the *principia* of the fort from Călugăreni proves the presence of a local brooch workshop during the first half of the 3rd century AD. This is the only proven workshop of this kind from the eastern *limes* of Dacia (Fig. 4). The origins of these Roman brooches can be categorized into three distinct areas: the West (Germania, Raetia and Gallia for the three enamelled brooches), the Central Danube area (Noricum, Pannonia), respectively the Lower Danube area (Moesia, Dacia). The Almgren 68 type of strongly profiled brooch (cat. no. 1) and the three enamelled ones (cat. no. 38–40) were surely imported. At least two or three (cat. no. 1, 38, 40?) are very early, and were most probably brought here by the first settlers that arrived to these parts of the *limes*. Upon a closer look, the number of military type brooches (knee brooches, trumpet brooches, flat cut-out brooches, crossbow brooches, T shaped brooches) is quite considerable. A close relationship with the barbarian world is hinted by the presence of knee brooches (cat. 24–25), of the Almgren type German

⁶⁷ SCHULTZE 1977, nr. 1428, 1435, 1444, 1446–1447.

⁶⁸ BICHIR 1973, Pl. CXVI/11; BICHIR 1984, Pl. XXXVIII/7–8.

⁶⁹ PATEK 1942, Pl. XXIV/2; TOLL 1949, Pl. XIII/84–95; BÖHME 1972, Pl. 17, 18, 19; Pl. 29; BOJOVIĆ 1983, Pl. XXXVIII.

⁷⁰ BÖHME 1972, 27–28; PETKOVIĆ 2010., 240–242.

⁷¹ PROTASE/ZRÍNYI 1994, 54–55, Pl. LIV/5–6, Brâncovenești, fort, 1973, MCM inv. n. a.; COCIȘ/MAN 2008, cat. nr. 20, Pl. IV/20, Brâncovenești, fort, 1984, MCM inv. n. a.

⁷² COCIȘ/MAN 2008, cat. nr. 20, Pl. IV/20.

⁷³ ALMGREN 1923, 71–74, 250–253; PATEK 1942, 127–140; AMBROZ 1966, 61–62; DIACONU 1971, 239–267; HORED T 1978, 219–222; PEŠKAŘ 1972, 108–118; BĂRCĂ 2014a; ANDRZEJOWSKI 2017; ANDRZEJOWSKI 2018.

⁷⁴ DIACONU 1971, 248.

⁷⁵ HORED T 1978, 222.

⁷⁶ BĂRCĂ 2014a; OPREANU/COCIȘ/LĂZĂRESCU 2020, 75.

group VII, 1st series brooch (cat. 36) and the brooches made out of iron (cat. 33–35, 45). A large number of these come from watchtowers located on the routes towards the *Barbaricum*.⁷⁷ The ones made out of iron were discovered only at the watchtowers, implying a preference for the use of this material and these types at the first line of defence.

Site	Vicus	Fort	Thermae	Tower	Total
Călugăreni	30	14	2		46
Brâncovenești	11	4			15
Ibănești – Cetățuia Mică				1	1
Chiheru de Jos – Dealul Pogor				4	4
Eremitu – Dealul Tompa				1	1
Eremitu – Cetatea Săcădat				3	3
Total	41	18	2	9	70

Fig. 3. Distribution of the brooches on the *limes* sector between Brâncovenești and Călugăreni.

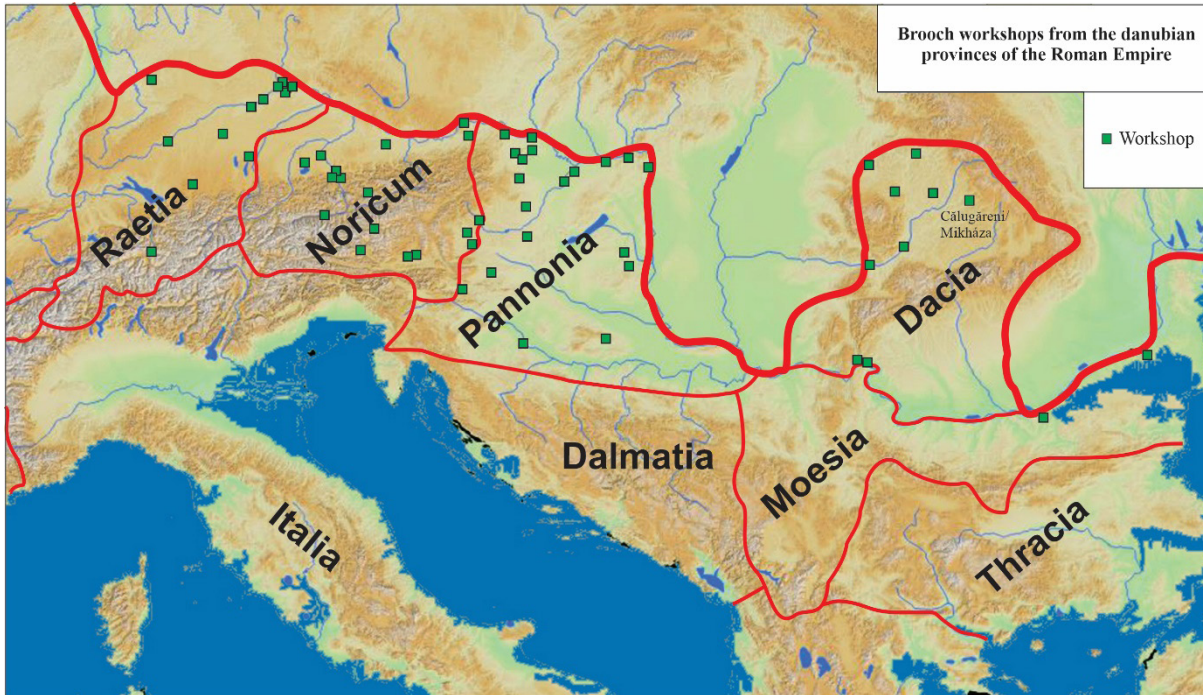


Fig. 4. The distribution of brooch workshops in the Danubian region with the one from Călugăreni.

⁷⁷ HÖPKEN *et alii* 2016, 248–250.

CATALOGUE⁷⁸

1. Bronze (Pl. 1/1). L=4,06 cm. Find spot: Călugăreni 2014, C1-C2, *vicus*, SF 4848. Almgren 68; Cociș 8a11b2 types – strongly profiled brooch. The brooch is made out of one piece of metal. Spring fastening mechanism, the chord is secured with a hook. The wide head has is separated from the spring with a sheet, the ribbing on the foot is gradual, while the foot itself ends in a knob. The catchplate is trapezoid and it's decorated with two perforations. Custodian: MCM, inv. no. 10797. Unpublished.

Dating: the second half of the 1st century AD – middle of 2nd century AD.

2. Bronze (Pl. 1/2). L=3,11 cm. Find spot: Călugăreni 2018, AIII/80 CM 2–3, *vicus*, context 11, SF 22; Jobst 4F; Cociș 8a11b types – strongly profiled brooch with trapezoid foot. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings and the chord is secured with a hook. Small, faceted head with a protective sheet, the base of the bow has ribbing on its upper part. The foot is trapezoid, the catchplate is rectangular. Custodian: MCM, inv. no. 8975. Unpublished.

Dating: first half of the 2nd century AD.

3. Bronze (Pl. 1/3). L=3,1 cm. Find spot: Brâncovenesti 2023, CV 89.16–17, *vicus*, context 140, SF 265. Jobst 4F; Cociș 8a11b types – strongly profiled brooch with trapezoid foot. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings and the chord is secured with a hook. Small, faceted head with a protective sheet, the base of the bow has ribbing on its upper part. The foot is trapezoid, the catchplate is rectangular. Custodian: MCM, inv. no. 16814 Unpublished.

Dating: first half of the 2nd century AD.

4. Bronze (Pl. 1/4). L=4,21 cm. Find spot: Călugăreni 2021, H. no. 22–24, *vicus*, context 148, SF 59. Almgren 84; Merczi 2014, var. 3; Cociș 8 b2b2 types – strongly profiled brooch. The brooch is made out of two pieces of metal. Wide head, faceted bow with a flattened rib on the upper part. The foot ends in a knob, the catchplate is rectangular. No spring. Custodian: MCM, inv. no. 16815. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

5. Bronze (Pl. 1/5). L=2,6 cm. Find spot: Dealul Pogor 2014, tower, field walking, SF PSF74. Almgren 84; Merczi 2014, var. 3; Cociș 8 b2b1 types – strongly profiled brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings and the chord is secured with a hook. Wide head with rectangular, faceted bow. Parts of the bow, the foot, catchplate and spring are missing. Custodian: MCM, inv. no. 10798. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

6. Bronze (Pl. 1/6). L=2,6 cm. Find spot: Dealul Pogor 2014, tower, field walking, SF PSF101. Almgren 84; Merczi 2014 var. 3; Cociș 8 b2b1 types – strongly profiled brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings and the chord is secured with a hook. Wide head with rectangular, faceted and decorated bow. Parts of the bow, the foot, catchplate and spring are missing. Custodian: MCM, inv. no. 10800. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

7. Bronze (Pl. 1/7). L=3,21 cm. Find spot: Călugăreni 2015, C3, *vicus*, context 2092, SF 5445. Almgren 84; Merczi 2014, var. 6; Cociș 8 b3c1 types – strongly profiled brooch. The brooch is made out of two pieces of metal. Wide head with notches; the bow is faceted with a ribbed notch. The foot, catchplate and spring are missing. Custodian: MCM, inv. no. 8969. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

8. Bronze (Pl. 1/8). L=3,5 cm. Find spot: Călugăreni 2015, A2, *principia*, context 121, SF 10019. Almgren 84; Merczi 2014, var. 6; Cociș 8 b3c1 types – strongly profiled brooch. The brooch is made out of two pieces of metal. Wide head with notches; the bow is faceted with a ribbed notch. The foot, catchplate and spring are missing. Custodian: MCM, inv. no. 10799. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

9. Bronze (Pl. 1/9). L=1,81 cm. Find spot: Cetatea Săcădat 2013, tower, field walking, SF F81. Almgren 84?; Cociș 8 b2b1? types – strongly profiled brooch. The brooch is made out of two pieces of metal. Only the short foot, ending in a knob remains, the catchplate is rectangular. Custodian: MCM, inv. no. 16816. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

10. Bronze (Pl. 1/10). L=1,91 cm. Find spot: Brâncovenesti 2023, CV 93–94, *vicus*, context 336, SF 360. Cociș 8 b2? Type – strongly profiled brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings. Wide head, the bow has a flat rib on the upper part. The rest of the bow and the foot are missing. Custodian: MCM, inv. no. 16823. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

11. Bronze (Pl. 1/11). L=6,83 cm. Find spot: Călugăreni 2017, B9, *thermae*, context 3200, SF 3653. Košević 5; Cociș 13a types – late Alesia brooch. The brooch is made out of two pieces of metal. The bow (with a rectangular cross-section) has a triangle shaped, wide at the head and narrow towards the foot. Hinged fastening system, with the end of the head being folded to form the hinge. The chord has a stopper, circling around it. The foot is short, the catchplate is rectangular. Custodian: MCM, inv. no. 16118. Unpublished.

Dating: first half of the 2nd century AD.

⁷⁸ The following abbreviations were used: MCM = Mureș County Museum – Archaeological Collection; L = length; SF = small find number; inv. no. = inventory number; inv. n. a. = no inventory number is available.

12. Bronze (Pl. 1/12). L=4,7 cm. Find spot: Călugăreni 2014, C2, *vicus*, context 2077, SF 5008. Merczi 2011, B/3; Cociș 19a1a1b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 10 windings, the chord is tall and is secured with a hook. The head is crescent shaped, the bow is faceted. The foot is missing. Custodian: MCM, inv. no. 8972. Unpublished.

Dating: Trajan's period – Marcus Aurelius' period.

13. Bronze (Pl. 1/13). L=4,5 cm. Find spot: Călugăreni 2015, C3, *vicus*, context 2088, SF 5116. Merczi 2011, A/2; Cociș 19a1b1a types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8–10 windings, the chord is missing. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 8964. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

14. Bronze (Pl. 2/14). L=3,2 cm. Find spot: Brâncovenești 2023, CV 89.8–9, *vicus*, context 27, SF 79. Merczi 2011, A/2; Cociș 19a1b1a types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, the chord is missing. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 16824. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

15. Bronze (Pl. 2/15). L=4,1 cm. Find spot: Călugăreni 2012, S3, *vicus*, context 5. Merczi 2011, B/3; Cociș 19a1b1a types – knee brooch. The brooch is made out of two pieces of metal. Spring fastening mechanism. Missing chord. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. n. a. Literature: MAN/CIOATĂ 2012, 88, 99, Pl. 9/7.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

16. Bronze (Pl. 2/16). L=3,1 cm. Find spot: Călugăreni 2014, C2, *vicus*, context 2039, SF 4371A. Merczi 2011, B/21; Cociș 19b1b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, the chord is missing. The head is rectangular, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 8967. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

17. Bronze (Pl. 2/17). L=1 cm. Find spot: Călugăreni 2017, A8, *principia*, context 446, SF 11224. Cociș tip 19a types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, the chord is missing. The head is crescent shaped. The bow and the foot are missing. Custodian: MCM, inv. no. 16817. Unpublished.

Dating: beginning of the 2nd century AD – third quarter of the 2nd century AD.

18. Bronze (Pl. 2/18). L=2,5 cm. Find spot: Călugăreni 2015, A1, *principia*, context 116, SF 10008. Jobst 12A; Cociș 19a6a1b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 8962. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

19. Bronze (Pl. 2/19). L=2,5 cm. Find spot: Călugăreni 2015, A1, *principia*, context 116, SF 10122. Jobst 12A; Cociș 19a6a1b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 10795. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

20. Bronze (Pl. 2/20). L=2,6 cm. Find spot: Călugăreni 2015, A2, *principia*, context 118, SF 973. Jobst 12A; Cociș 19a6a1b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM inv. no. 10796. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

21. Bronze (Pl. 2/21). L=2,3 cm. Find spot: Călugăreni 2022, A, *principia*, context 716, SF 13143. Jobst 12A; Cociș 19a6a1b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 16825. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

22. Bronze (Pl. 2/22). L=3,4 cm. Find spot: Călugăreni 2013, C, *vicus*, context 2014, SF 2494. Jobst 12A; Cociș 19a6a1a types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 16818. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

23. Bronze (Pl. 2/23). L= 3,5 cm. Find spot: Călugăreni 2013, C, *vicus*, context 2018, SF 2600. Jobst 12A; Cociș 19a6a1a types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is crescent

shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 16819. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

24. Bronze (Pl. 2/24). L=3 cm. Find spot: Călugăreni 2015, A3, *principia*, context 135, SF 10152. Cociș 19a5c1 type – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective tube. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. 8965. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

25. Bronze (Pl. 2/25). L=2,8 cm. Find spot: Călugăreni 2014, C1, *vicus*, context 2051, SF 4719. Cociș 19a5c1 type – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective tube. The head is crescent shaped, the bow is bent. The short foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 8963. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

26. Bronze (Pl. 3/26). L=3,1 cm. Find spot: Călugăreni 2018, AIII/80 CM 3–4, *vicus*, context 69, SF 137. Merczi 2011, B/16; Cociș 19a7b types – knee brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings, with a protective cylinder. The head is rectangular, the bow is straight with two rows of vertical incised lines. The trapezoid foot ends in a knob, the catchplate is rectangular. Custodian: MCM, inv. no. 8976. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

27. Bronze (Pl. 3/27). L=3,1 cm. Find spot: Călugăreni 2014, C1, *vicus*, context 2035, SF 4385. Redžić 2007, 15 version 1; Cociș 19a8f1b types – knee brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. Large, crescent shaped head. The bow is faceted at the top with two vertical ribs and two horizontal wings. The large foot ends in a button, the catchplate is rectangular. Custodian: MCM, inv. no. 8970. Unpublished.

Dating: the third quarter of the 2nd century AD – first two decades of the 3rd century AD.

28. Bronze (Pl. 3/28). L=5,68 cm. Find spot: Călugăreni 2016, C3, *vicus*, context 2121, SF 5856. Petković 2010, 15A; Cociș 20a1c1 types – brooch with an anchor shaped head. The brooch is made out of two pieces of metal. The spring fastening mechanism has 16 windings, protected by a rectangular sheet. The head is anchor shaped, each arm ending in a knob. The bow is curved, decorated with a node. The short foot ends in a large knob, the catchplate is trapezoid. Custodian: MCM, inv no. 8838. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

29. Bronze (Pl. 3/29). L=5,28 cm. Find spot: Brâncovenești 2023, *vicus*, CV 89.8.1, context 26, SF 112. Petković 2010, 15B; Cociș 20b2b2 types – brooch with an anchor shaped head. The brooch is made out of two pieces of metal. The spring fastening mechanism has 10 windings, protected by a rectangular sheet. The head is anchor shaped; the arms are without a knob. The curved bow is decorated with a node, followed by two small wings. The catchplate is trapezoid. Custodian: MCM, inv. no. 16826. Unpublished.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

30. Bronze and silver (Pl. 3/30). L=4,3 cm. Find spot: *Cetatea Săcădat*, tower, field walking, SF F0. Petković 2010, 15B; Cociș 20b3c types – brooch with an anchor shaped head. The brooch is made out of two pieces of metal. The spring fastening mechanism has 10 windings, protected by a rectangular sheet. There are remnants of silver on the sheet left by the knobs fastened onto it. The head is anchor shaped, each arm ending in a knob. The meeting point between the head and the protective sheet is decorated with a series of silver globules. The bow is curved and decorated with a node, followed by two small wings. The short foot ends in a large knob, the catchplate is trapezoid. Custodian: MCM, inv. no. 16827. Literature: HÖPKEN *et alii* 2016, 245, Abb. 5/1.

Dating: middle of the 2nd century AD. – first two decades of the 3rd century AD.

31. Bronze (Pl. 3/31). L=3,4 cm. Find spot: Călugăreni 2014, C1-C2, *vicus*, SF 4873. Cociș 21c1 type – trumpet brooch. The brooch is made out of two pieces of metal. Spring fastening mechanism. Faceted pyramidal head, while the similarly faceted bow has an S shape. The foot is short, the catchplate is rectangular. Custodian: MCM, inv. no. 14594. Unpublished.

Dating: second half of the 2nd century AD.

32. Bronze (Pl. 3/32). L=1,4 cm. Find spot: Călugăreni 2018, A5/2018, *principia*, context 550, SF 11700. Cociș 21c1 type – trumpet brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings. Faceted pyramidal head. The bow, foot and catchplate are missing. Custodian: MCM, inv. no. 16820. Unpublished.

Dating: second half of the 2nd century AD.

33. Iron (Pl. 4/33). L=3,7 cm. Find spot: *Dealul Pogor* 2014, tower, field walking, SF PSF159. Koščević 14; Sáró 2014a, 6.a.1; Cociș 21b3b types – trumpet brooch. The brooch is made out of one piece of metal. The spring fastening mechanism has 8 windings. The head is trumpet shaped, the bow is short and ends in a node. There's a possibility that both the head and the node were decorated with either a bronze or silver thread together with a line of pearls. The trapezoid foot ended in a knob. Custodian: MCM, inv. no. 16124. Unpublished.

Dating: second half of the 2nd century AD.

34. Iron (Pl. 4/34). L=3,5 cm. Find spot: *Dealul Pogor* 2014, tower, field walking, SF PSF98. Koščević 14; Sáró 2014a, 6.a.1; Cociș 21b3b type – trumpet brooch. The brooch

is made out of one piece of metal. The spring fastening mechanism has 8 windings. The head is trumpet shaped, the bow is short and ends in a node. There's a possibility that both the head and the node were decorated with either a bronze or silver thread together with a line of pearls. The trapezoid foot ended in a knob. Custodian: MCM, inv. no. 16123. Unpublished.

Dating: second half of the 2nd century AD.

35. Iron (Pl. 4/35). L=3,6 cm. Find spot: *Cetatea Săcădat* 2013, tower, field walking, SF F82. Koščević 14; Sáró 2014, 5.b. types – trumpet brooch. The brooch is made out of one piece of metal. The spring fastening mechanism has 8 windings. The head is trumpet shaped, the bow widens towards the short foot, the catchplate is tall and rectangular. Custodian: MCM, inv. no. 8978. Unpublished.

Dating: second half of the 2nd century AD.

36. Bronze (Pl. 4/36). L=3,6 cm; Find spot: Călugăreni 2016, C3, *vicus*, context 2095, SF 5573. Almgren group VII, 1st series, Cociș/Bârcă 2014, B2a1a1 types – German brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 8 windings. The small head ends in a knob. The bow is strongly arched, with a central rib in the shape of an S. The foot is short and ends in a rectangular catchplate. Custodian: MCM, inv. no. 8977. Unpublished.

Dating: third quarter of the 2nd century AD – middle of the 3rd century AD

37. Bronze (Pl. 4/37). L=2,5 cm. Find spot: Călugăreni 2015, C3, *vicus*, context 2050, SF 5358. Böhme 46 form b; Cociș 25g2 types – flat cut-out brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. Flat bow with a heart shaped cut-out in the middle. The foot and the catchplate are missing. Custodian: MCM, inv. no. 16125. Unpublished.

Dating: third quarter of the 2nd century AD – middle of the 3rd century AD

38. Bronze and enamel (Pl. 4/38). L=3,2 cm. Find spot: Călugăreni 2014, C1-C2, *vicus*, SF 4843. Ettliger 41; Riha 1979, 7.5 types – flat (*lunula*) enamelled brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. Flat bow with a cut-out in the middle and incisions at the top in the shape of concentric circles. There's a small knob in the centre. The heads of the bow have two stylized protrusions. Rectangular catchplate. Missing enamel. Custodian: MCM, inv. no. 8973. Unpublished.

Dating: first half of the 2nd century AD.

39. Bronze and enamel (Pl. 5/39). L=3,5 cm. Find spot: Brâncoveniști 2014, *vicus*, field walking, SF BSF07. Zoomorphic brooch with enamel. The brooch is made out of two pieces of metal. Hinged fastening mechanism. Flat bow, the central section is rectangular and decorated with two rows of incisions in the shape of concentric circles. The catchplate is rectangular and hooked. Missing enamel. Custodian: MCM, inv. no. 16821. Unpublished.

Dating: second half of the 2nd century AD – beginning of the 3rd century AD.

40. Bronze with blue enamel (Pl. 5/40). L=5,5 cm. Find spot: Călugăreni 2019, C6, *vicus*, context 2133, SF 6175. Riha 1979, 7.20 types – flat and enamelled. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The star shaped bow is divided into square and round sections. In the lower central area, there are incisions in the shape of concentric circles and a small knob. The heads of the bow have two stylized protrusions. The catchplate is rectangular. Missing enamel. Custodian: MCM, inv. no. 16822. Literature: OBERHOFER/ HÖPKEN/FIEDLER 2019/2020, 134, Abb. 6; HÖPKEN/FIEDLER/OBERHOFER 2020, 108, Abb. 9.

Dating: 2nd century AD.

41. Iron (Pl. 5/41). D=3,4 cm. Find spot: *Dealul Tompa* 2013, tower, field walking, SF F35. Feugère 30b; Cociș 28a1 types – penannular brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The bow is in the shape of an Ω , ending in two conical nodes facing each other. Custodian: MCM, inv. no. 8966. Unpublished.

Dating: 2nd–3rd centuries AD.

42. Bronze (Pl. 5/42). L=6 cm. Find spot: Călugăreni 2016, A5, *principia*, context 250, SF 10566. Petković 31B; Cociș 36a2a types – crossbow brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 16 windings, the chord is facing the inside. Lightly faceted head, strongly arched and faceted bow. Tubular catchplate. Custodian: MCM, inv. no. 8971. Unpublished.

Dating: first half of the 3rd century AD – 3rd century AD.

43. Bronze (Pl. 5/43). L=2,1 cm. Find spot: Călugăreni 2014, C1, *vicus*, context 2034, SF 2802. Petković 31B; Cociș 36a1a types – crossbow brooch. The brooch is made out of two pieces of metal. Spring fastening mechanism. A small part of the body is preserved with a narrowing towards the foot. Faceted foot with tubular catchplate. Custodian: MCM, inv. no. 14603. Unpublished.

Dating: first half of the 3rd century AD – 3rd century AD.

44. Lead (Pl. 5/44). L=6,6 cm. Find spot: Călugăreni 2013, C, *vicus*, context 2001, SF 2207. Petković 31B, Cociș 36a3 types – mould pattern in the shape of a crossbow brooch. Custodian: MCM, inv. no. 16140. Unpublished.

Dating: first half of the 3rd century AD – 3rd century AD.

45. Iron (Pl. 6/45). L=5,4 cm. Find spot: Ibănești 2014, tower, field walking, SF ISF01. Tipul Cociș 36b1 – crossbow brooch. The brooch is made out of two pieces of metal. The spring fastening mechanism has 12 windings. Small, slightly wide head. The bow is arched with a semicircular cross-section. The short foot ends in a tubular cross-section. Custodian: MCM, inv. no. 16119. Unpublished.

Dating: first half of the 3rd century AD – 3rd century AD.

46. Bronze (Pl. 6/46); L=6,2 cm. Find spot: Călugăreni 2015, A1, *principia*, context 127, SF 10153. Casting waster – T shaped brooch? Only the semicircular bow, the long and deformed foot and part of the tubular catchplate are visible.

There's a peg at the end of the foot due to casting. Custodian: MCM, inv. no. 14575. Unpublished.

Dating: end of 2nd century AD – first half of the 3rd century AD.

47. Bronze (Pl. 6/47). L= 4,8 cm. Find spot: Călugăreni, fort?, Collection of the former Roman Catholic College. Petković 33B; Cociş 39a3e types – T shaped brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The head is decorated with a knob, the arms are short. The trapezoid bow is arched. Vertical incisions on the surface. The variant at hand has a bow with cut-outs, while it has two schematic nodes at the base. Short and faceted foot, tubular catchplate. Custodian: MCM, inv. no. 2787. Literature: COCIŞ/MAN 2008, 88, no. 21, pl. IV/21.

Dating: first half of the 3rd century AD – 3rd century AD.

48. Bronze (Pl. 6/48). L=3,9 cm. Find spot: Călugăreni 2015, C3, *vicus*, context 2089, SF 5285. Petković 32A; Cociş 39b1c2 types – T shaped brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The small, semicircular head ends in a knob. The bow is rectangular with a triangular cross-section and has two angular ribs at the base. The foot has a rib in the centre, tubular catchplate with a cut edge. Custodian: MCM, inv. no. 8961. Unpublished.

Dating: end of 2nd century AD – first half of the 3rd century AD.

49. Bronze (Pl. 6/49). L=6 cm. Find spot: Călugăreni 2014, C1-C2, *vicus*, SF 4845. Petković 32A; Cociş 39b1a1 types – T shaped brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The small, semicircular head ends in a knob. The bow is rectangular with a triangular cross-section and has two angular ribs at the base. The foot has a rib in the centre, tubular catchplate with a cut edge. Custodian: MCM, inv. no. 8968. Unpublished.

Dating: end of 2nd century AD – first half of the 3rd century AD.

50. Bronze (Pl. 6/50). L=4 cm. Find spot: Călugăreni 2017, A8, *principia*, context 415, SF 10981. Petković 32A; Cociş 39b1c2 types – T shaped brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The small, semicircular head ends in a knob. The bow is rectangular with a triangular cross-section and has two angular ribs at the base. The foot has a rib in the centre, tubular catchplate with a cut edge. Custodian: MCM., inv. no. 16121. Unpublished.

Dating: end of 2nd century AD – first half of the 3rd century AD.

51. Bronze (Pl. 6/51). L=4 cm. Find spot: Călugăreni 2014, C2, *vicus*, context 2046, SF 4722. Petković 32A; Cociş 39b1c2 types – T shaped brooch. The brooch is made out of two pieces of metal. Hinged fastening mechanism. The small, semicircular head ends in a knob. The bow is rectangular with a triangular cross-section and has two angular ribs at the base. The foot has a rib in the centre, tubular catchplate with a cut edge. Custodian: MCM, inv. no. 8974. Unpublished.

Dating: end of 2nd century AD – first half of the 3rd century AD.

52. Bronze (Pl. 6/52). L=3,9 cm. Find spot: Călugăreni 2013, C, *vicus*, context 2001, SF 2032. Petković 35A, Cociş 37a2b2 types – brooch with returned foot. The brooch is made out of two pieces of metal. Spring fastening mechanism. Small head, only a small section of the bow is intact, decorated with lined incisions. Custodian: MCM, inv. no. 16828. Unpublished.

Dating: end of 2nd century AD – first half of the 3rd century AD.

53. Bronze (Pl. 7/53). L=0,8 cm. Find spot: Călugăreni 2014, C1, *vicus*, context 2034, SF 4044. Spring fragment. Custodian: MCM, inv. no. 14604. Unpublished.

54. Bronze (Pl. 7/54). L=1,5 cm. Find spot: Călugăreni 2016, A5/2016, *principia*, context 287, SF 10590. Spring and chord fragment. Custodian: MCM, inv. no. 14619. Unpublished.

55. Bronze (Pl. 7/55). L=1,5 cm. Find spot: Călugăreni 2016, C3-C5, *vicus*, SF 5962. Spring and chord fragment. Custodian: MCM, inv. no. 16829. Unpublished.

56. Bronze (Pl. 7I/56). L=4 cm. Find spot: Călugăreni 2014, C2, *vicus*, context 2037, SF 2942. Spring, chord and pin fragment. Custodian: MCM, inv. no. 14602. Unpublished.

57. Bronze (Pl. 7/57). L=1,5 cm. Find spot: Călugăreni 2014, C1, *vicus*, context 2034, SF 4069. Spring and pin fragment. Custodian: MCM, inv. no. 14600. Unpublished.

58. Bronze (Pl. 7/58). L=1,8 cm. Find spot: Călugăreni 2013, C, *vicus*, SF 2339. Spring and pin fragment. MCM., inv. no. 16830. Unpublished.

59. Bronze (Pl. 7/59). L=1,5 cm. Find spot: Călugăreni 2015, A1, *principia*, context 116, SF 962. Pin fragment. Custodian: MCM, inv. no. 15789. Unpublished.

60. Bronze (Pl. 7/60). L=1,8 cm. Find spot: Brâncovenesti 2017, S1, *vicus*, context 14, SF 08. Pin fragment. Custodian: MCM, inv. no. 10522. Unpublished.

61. Bronze (Pl. 7/61). L=4,5 cm. Find spot: Călugăreni 2017, B9, *thermae*, context 3198B, SF 3660. Brooch pin fragment with hinge. Custodian: MCM, inv. no. 16831. Unpublished.

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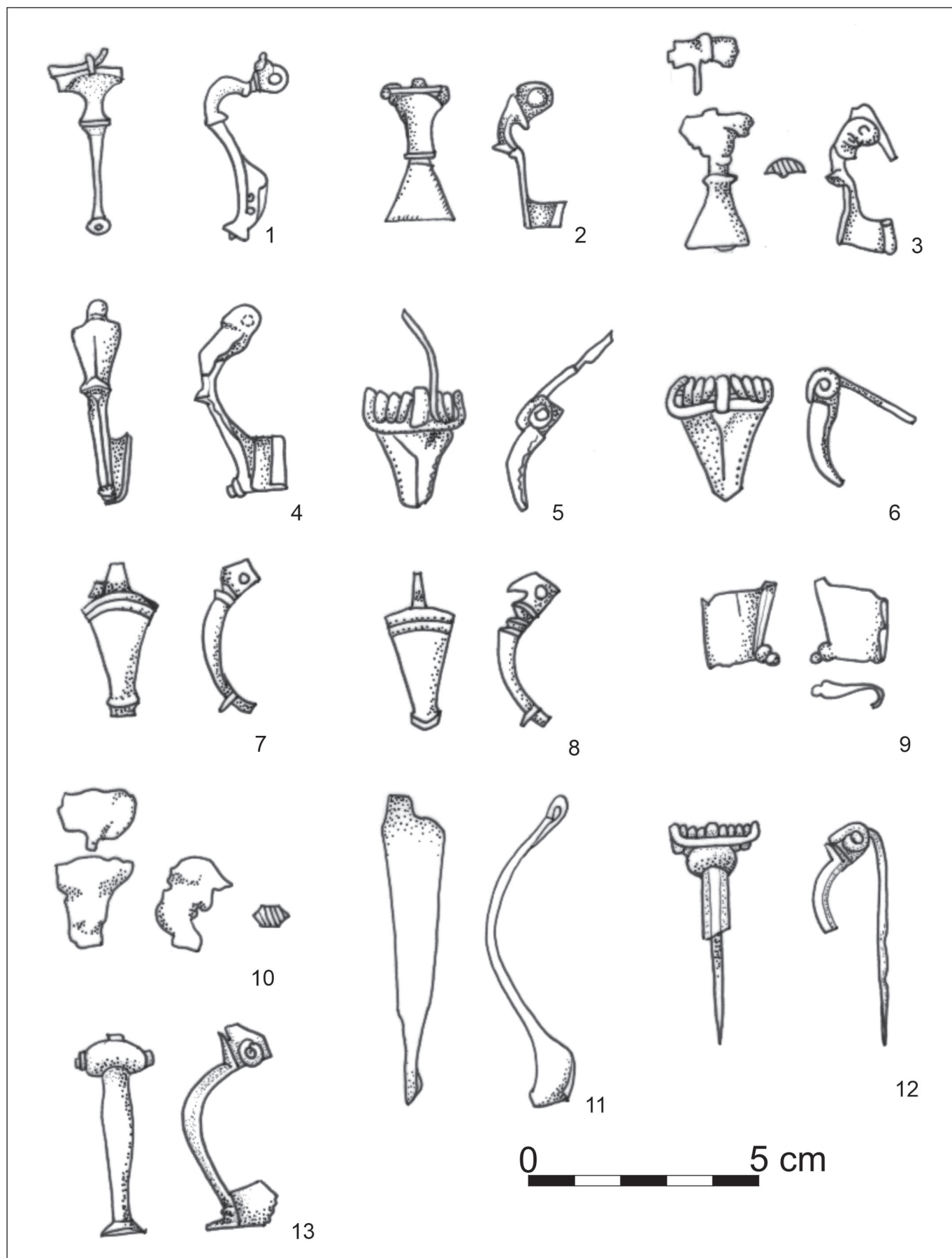
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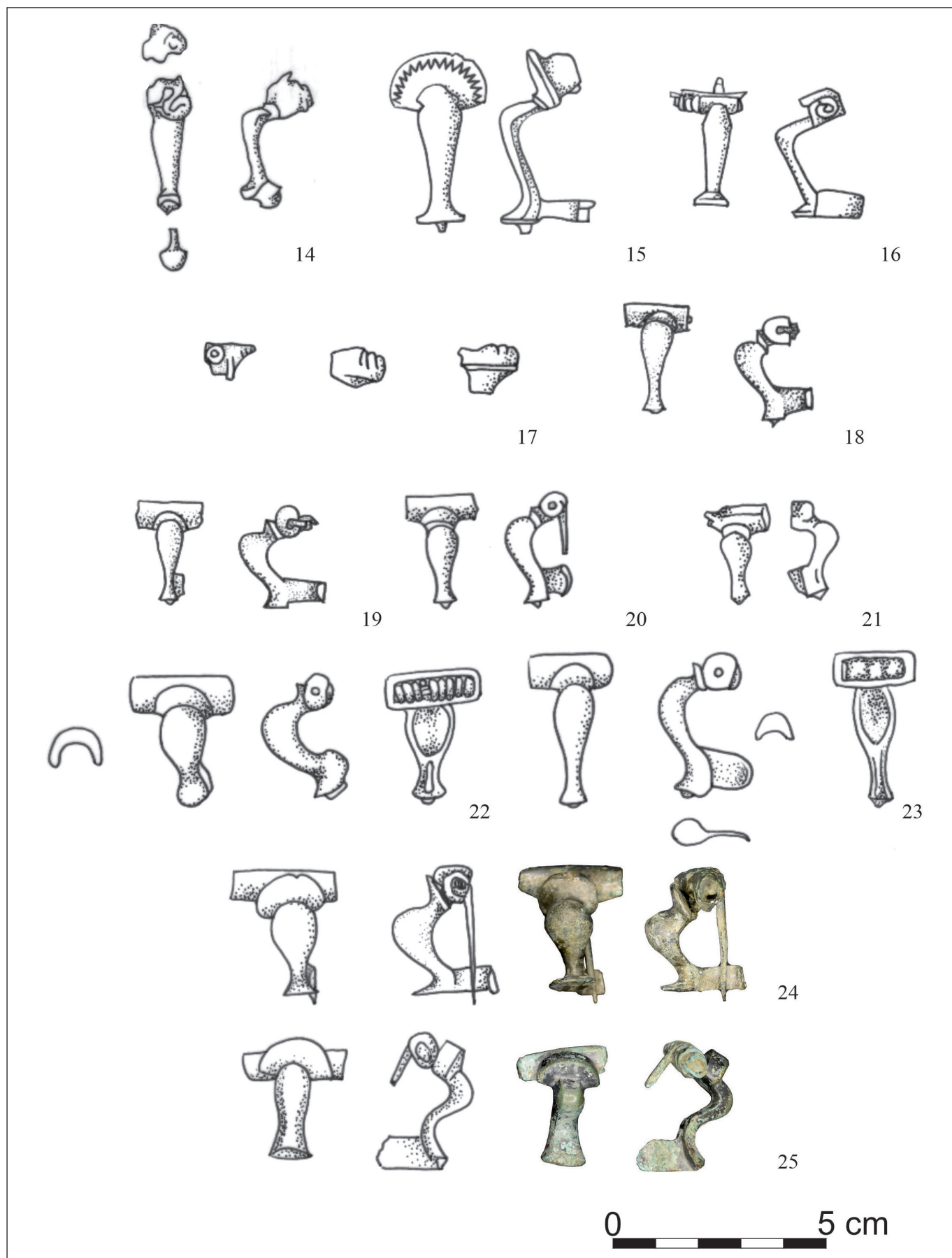
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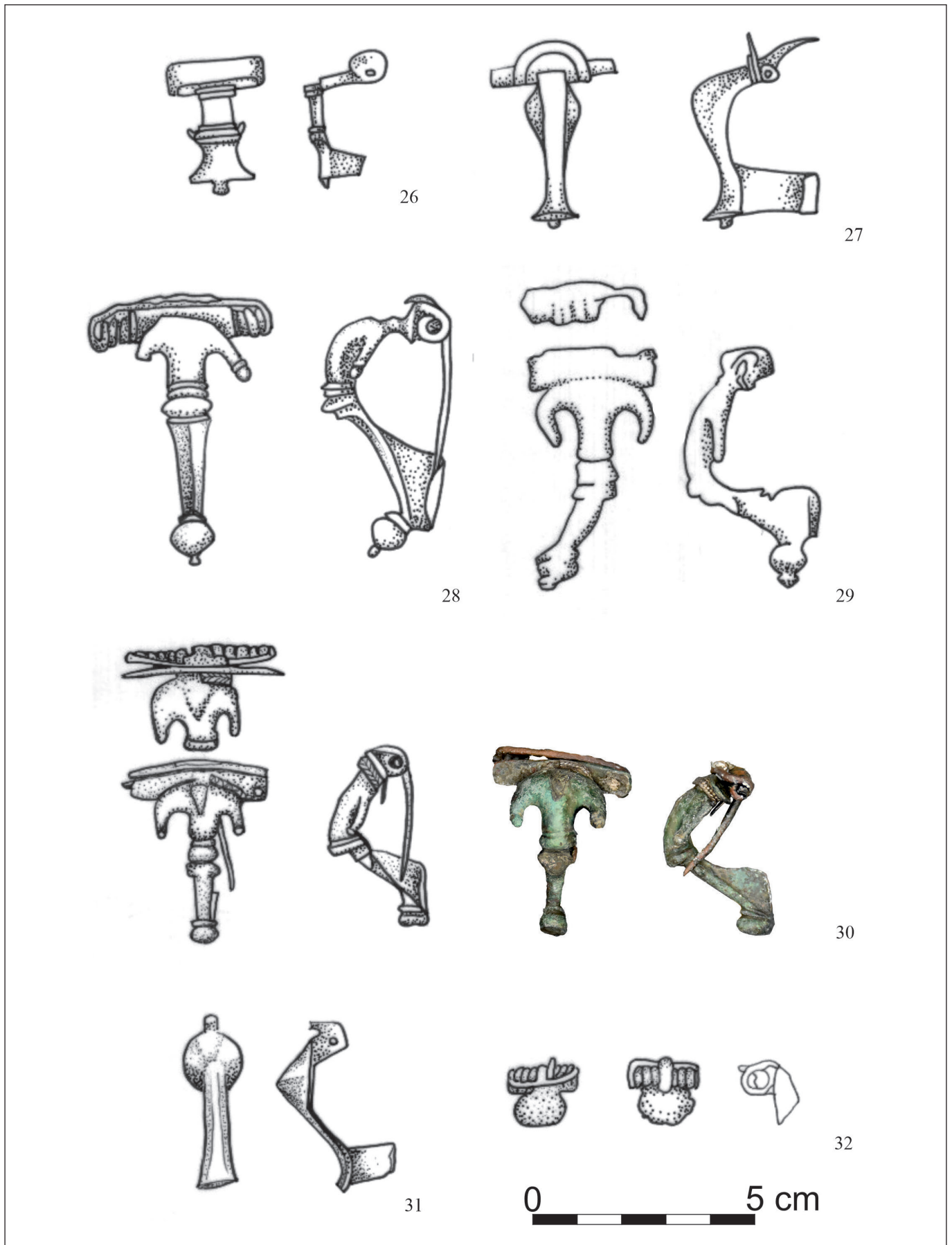
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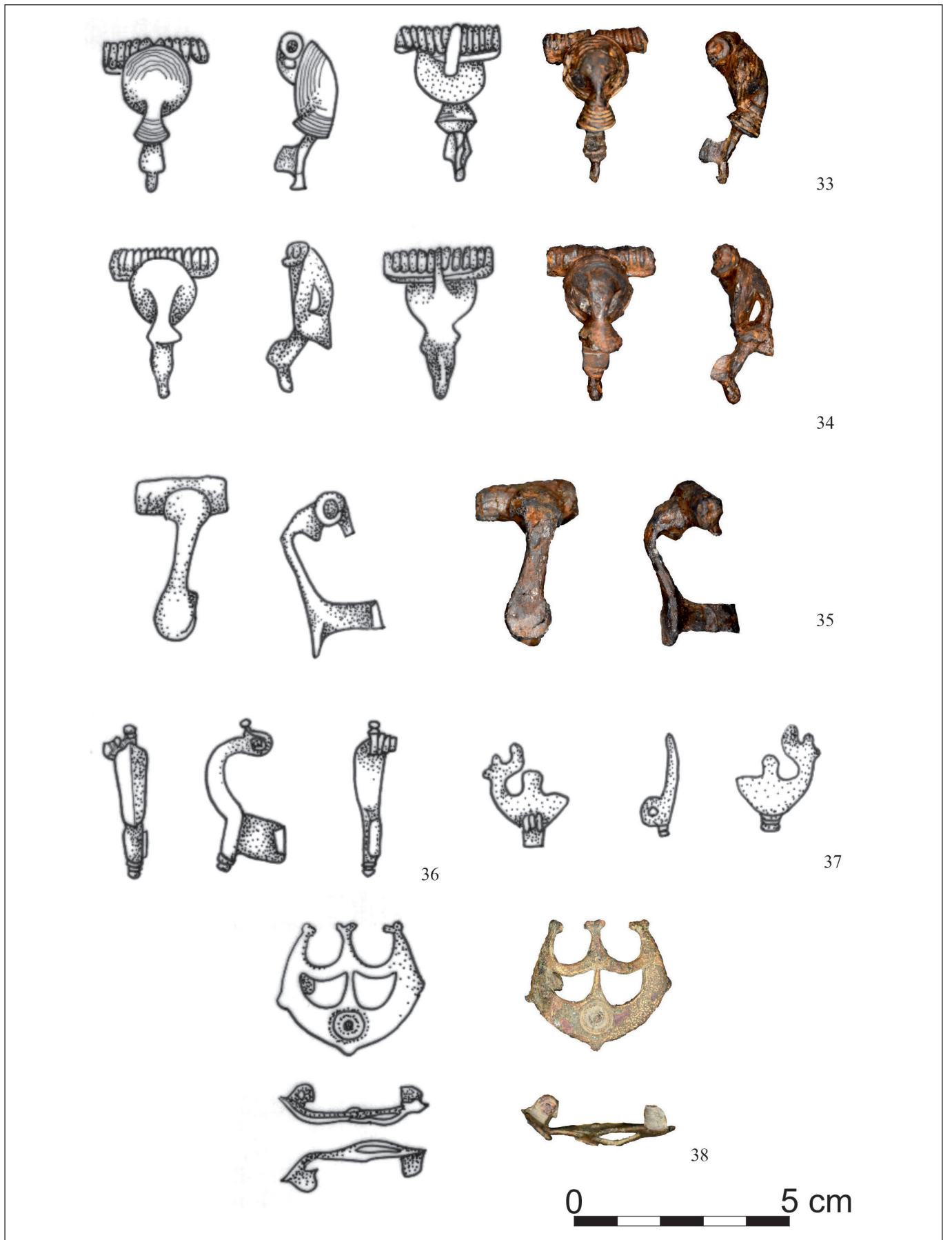
Pl. 1. The brooches from the Brâncovenești-Călugăreni sector.



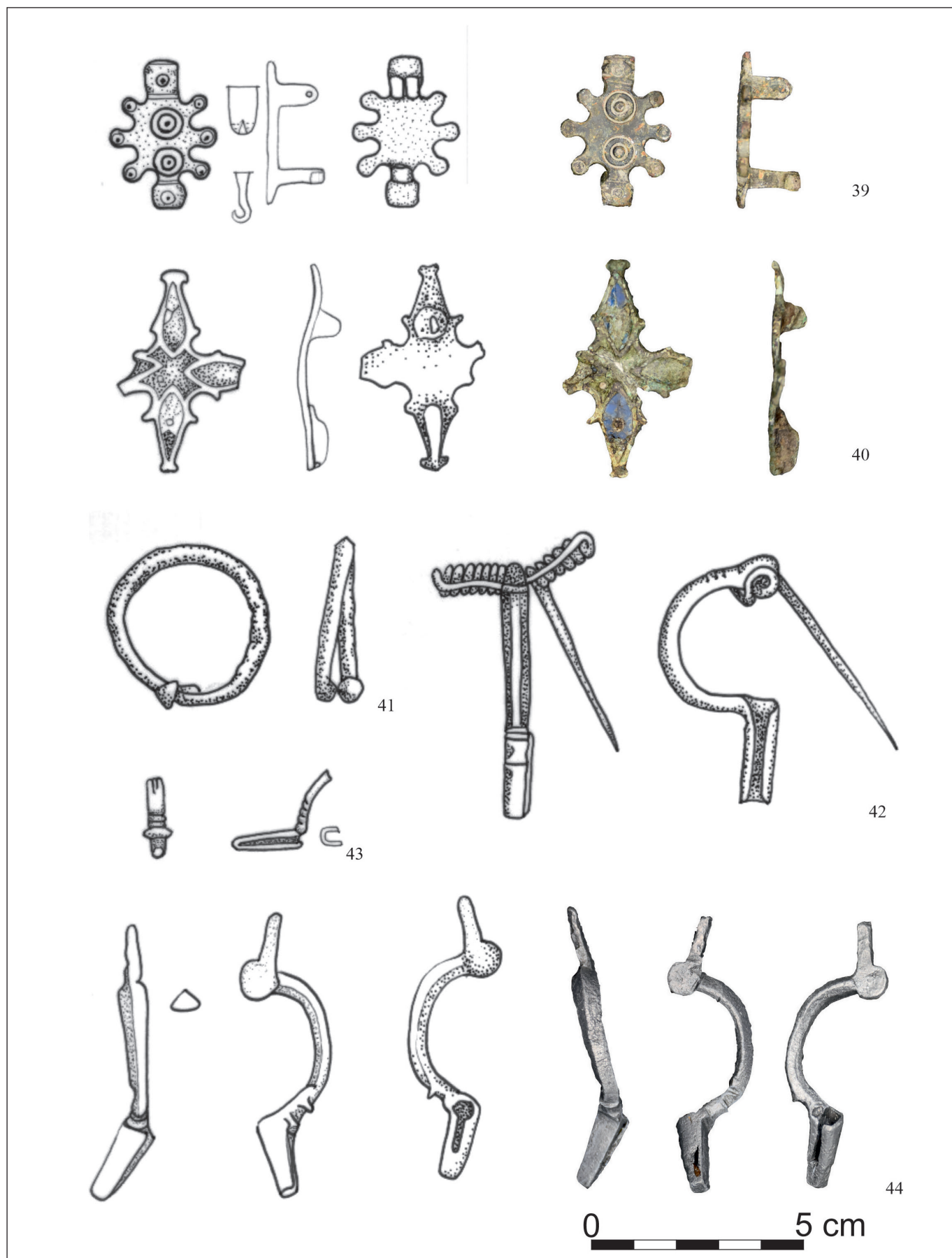
Pl. 2. The brooches from the Brâncovești-Călugăreni sector.



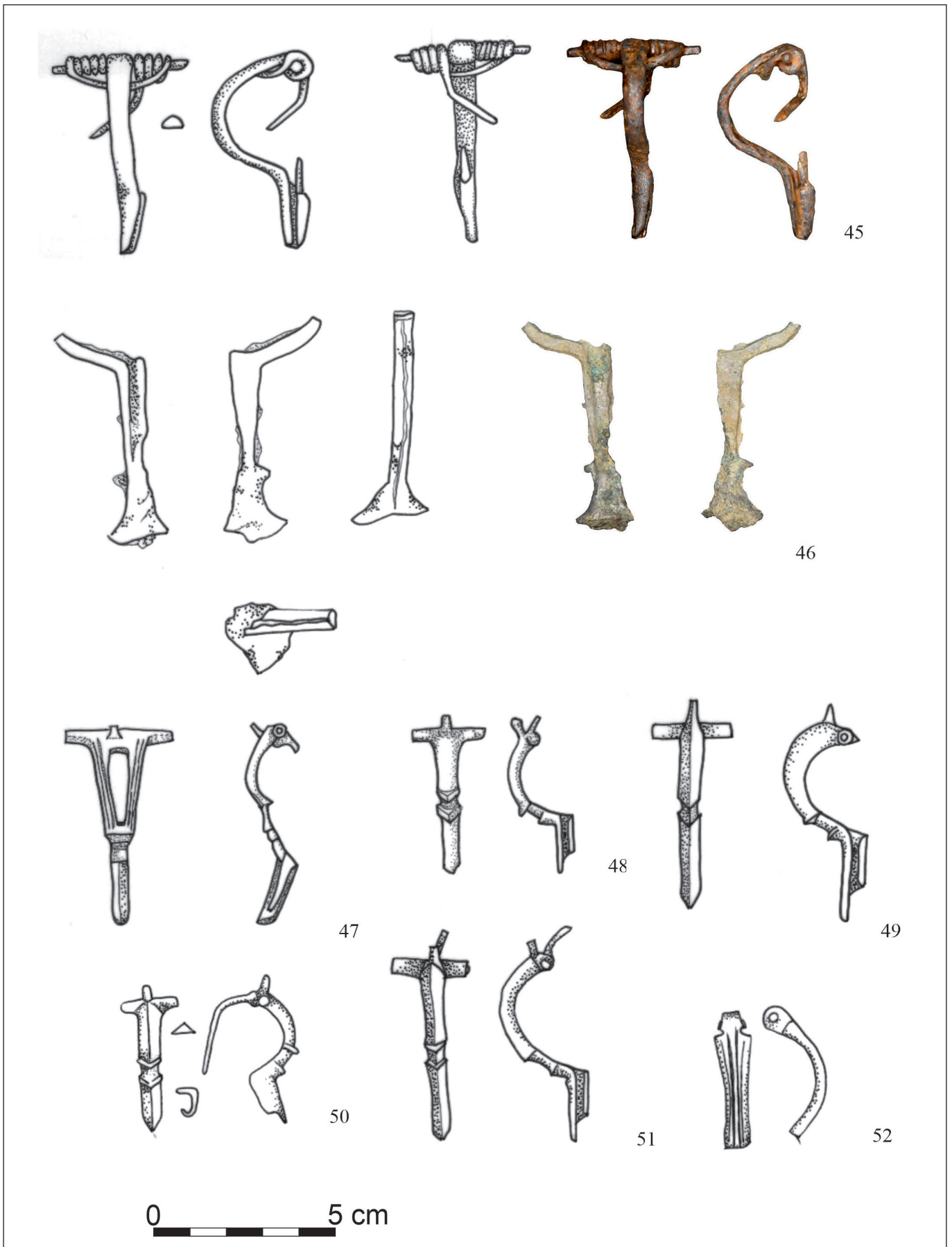
Pl. 4. The brooches from the Brâncovești-Călugăreni sector.



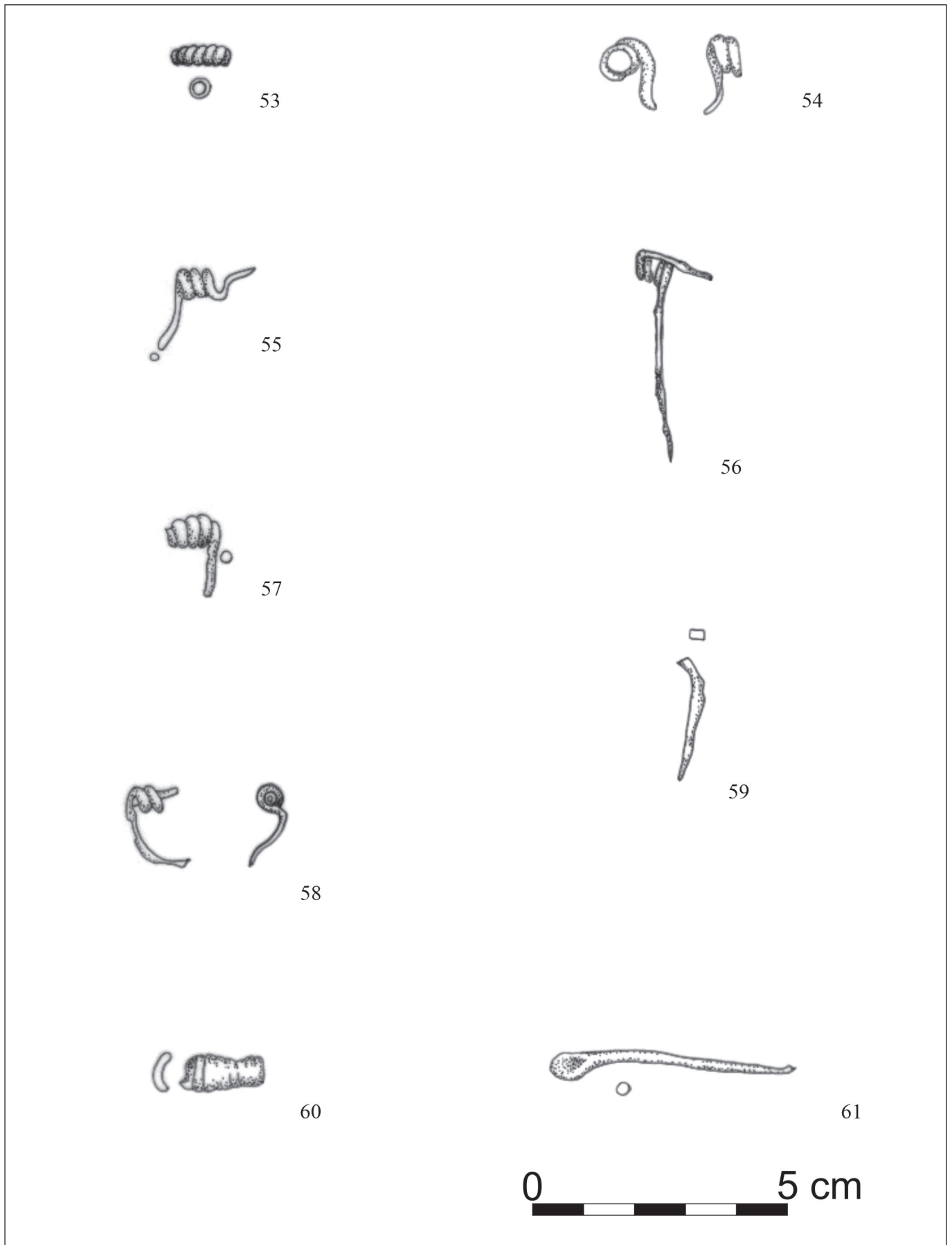
Pl. 4. The brooches from the Brâncovești-Călugăreni sector.



Pl. 5. The brooches from the Brâncovenești-Călugăreni sector.



Pl. 6. The brooches from the Brâncovești-Călugăreni sector.



Pl. 7. The brooches from the Brâncovești-Călugăreni sector.