

Roman belt-fittings from *Burgenae*

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The site of Novi Banovci on the Danube river, in the south-western part of the Serbian province of Vojvodina, has yielded a very large number of Roman finds since the 19th century. This is quite understandable since the village occupies the spot of a Roman frontier fort, *Burgenae*. In the decades preceding the collapse of the Austro-Hungarian Empire the archaeological finds from that area were usually dispatched to the Archaeological department of the Croatian National Museum. Nowadays, due to that fact, a great number of archaeological finds discovered on the sites of the Srijem region, as this part of Vojvodina is called, are kept in the Archaeological Museum in Zagreb. Among them is a fairly large collection of Roman finds from Novi Banovci, i.e. *Burgenae*. Some of them have since been published, but the majority still awaits a thorough analysis and publication. Considering the extent of that collection, and the limited amount of space for this paper, obviously a selection had to be made. For this occasion, I have chosen to present the finds of belt fittings, most of which can be attributed with a high level of certainty to the Roman military dress.

Since those are only stray finds, lacking any clear archaeological context, one cannot expect far-reaching conclusions, but their study can nevertheless give us an interesting insight about the presence of the Roman military units on that site.

The history of *Burgenae* and the military units that garrisoned the fort have been extensively discussed in several publications¹. Due to that, only a short introductory overview seems necessary in the present article. Most authors seem to agree that the fort was built during the Flavian period at the latest but nothing is known for sure about its garrisoning troops in the first decades of its existence. The *cohors II Asturum et Callaecorum* might have been the first unit stationed there, but this assumption is far from being certain². It could have been replaced by the *cohors V Gallorum*, which might have been in *Burgenae* during Trajan's reign³. The *ala I civium Romanorum* is thought to have garrisoned *Burgenae* between AD 118 or 119 and 138⁴.

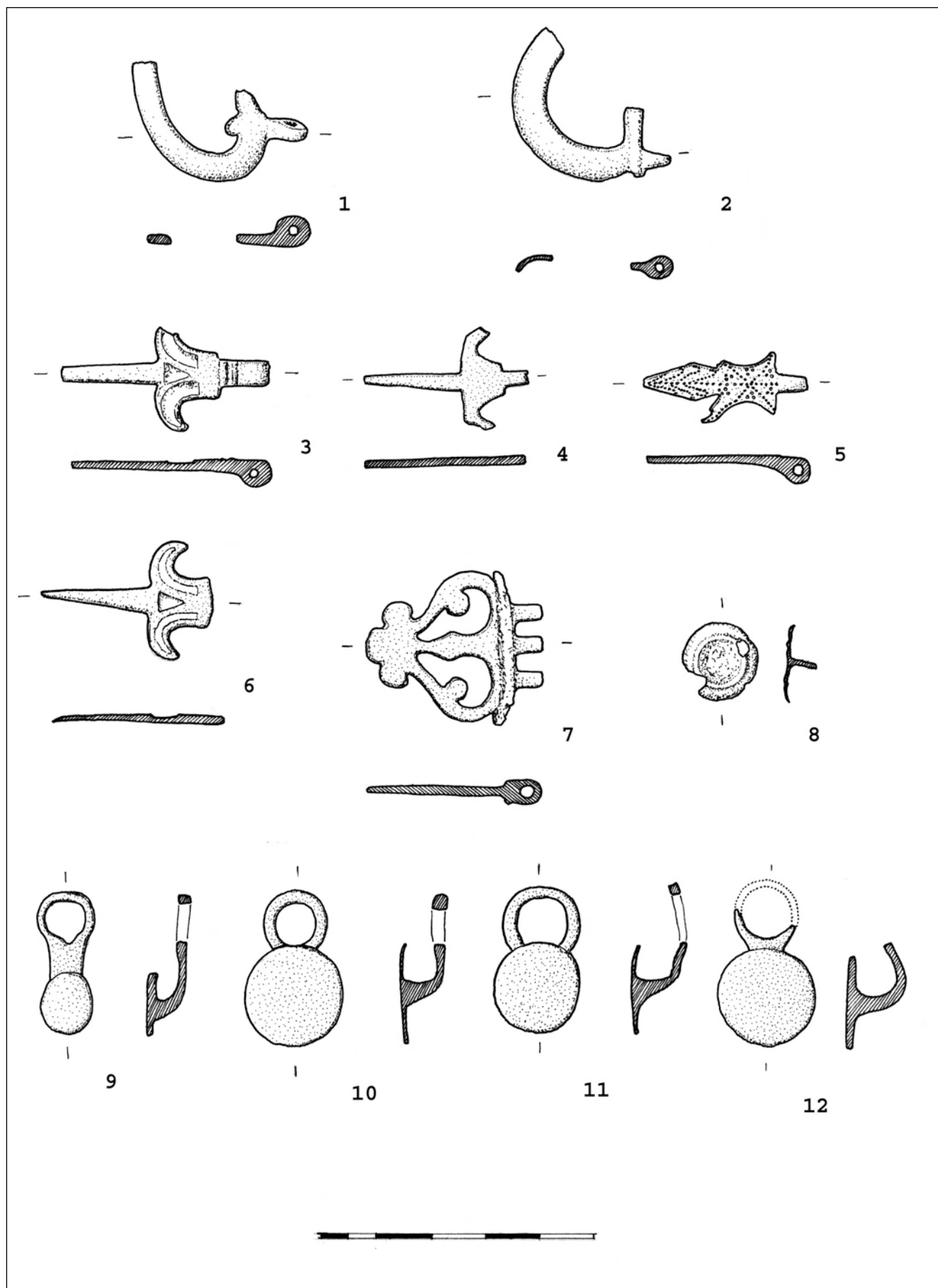
While one can only guess which units had been stationed in *Burgenae* during the 1st and early 2nd century AD, most

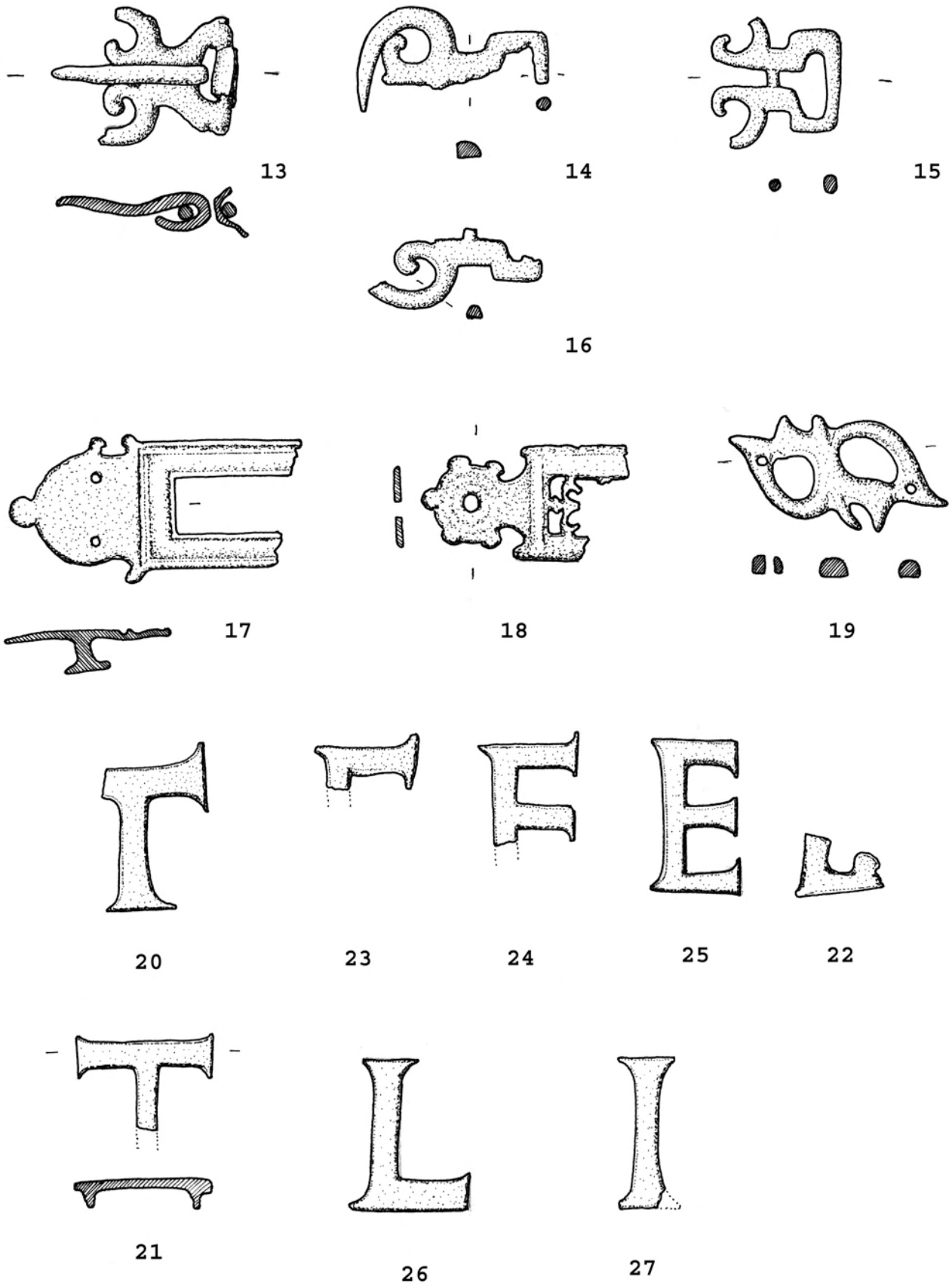
authors agree that the *cohors I Thracum civium Romanorum pia fidelis* was stationed in *Burgenae* after AD 138. It would seem that it remained there for a very long period of time, probably until the second half of the 3rd century AD, when it was moved to *Bassianae*⁵. The names of some units are recorded for the 4th century AD as well: one detachment of the *legio V Iovia*, the *equites Dalmatae* and the *cuneus equitum Constantianorum* were stationed in *Burgenae* according to the *Notitia Dignitatum*⁶. As one can see, the history of the site and its garrisoning troops is full of uncertainties, despite the fact that the fort was continuously garrisoned for almost four centuries. The long presence of the Roman army on that spot is corroborated by numerous finds, many of which were undeniably part of military equipment and dress.

The two fragmented buckles N° 1-2 can be dated to the first two centuries AD. Such belt buckles of "D" shape joined by a hinge with a belt fitting are very typical of that period⁷. It should be pointed out that earlier hinged buckles, i. e. those dated to the 1st century AD, have a hinged joint set wide apart in contrast to later two-piece buckles of similar shape, from the late 2nd and 3rd century, whose small hinge is placed right at the centre of the back part of the buckle. Since the hinged joint of the buckle N° 1 is set closer to the centre, that buckle is probably later in date than the buckle N° 2, which could be broadly dated to the 1st century AD. Thus, the buckle N° 1 could be dated to the 2nd century AD.

The four *fleur-de-lys* shaped buckle tongues are typical for the aforementioned buckles and the four specimens N° 3, 6 can therefore be dated within the same time-frame, i.e. the 1st century AD⁸. Especially interesting is the finely crafted specimen N° 5, which seems to have been silvered and whose surface is decorated with a punched vegetal design. Such a decoration is not unusual and has already been seen elsewhere, for example in Magdalensberg and Augst⁹.

It seems that the fragmented item N° 7 could be interpreted as a fragmented hinged fitting of a dagger suspension belt, i.e. a frog. Initially it most certainly had a suspension disc at the end, but no traces of it are now visible¹⁰. One might also think that it is a miscast. Similar suspension fittings were found on several sites like for example Augusta





Raurica or Vindonissa,¹¹ and a complete set has been discovered in Velsen¹².

The circular rivet N° 8 most probably belonged to the decorative stripes of a military belt, i.e. an apron¹³. Its poor state of preservation does not allow us to discern the original decoration but one can suppose that there was a portrait on it, just as was usually the case on similar rivets. Many such rivets with a stylised portrait in profile, done by repoussé, are found on Roman sites and they are dated to the second half of the 1st century AD, more precisely to the Flavian period, or in a somewhat larger time-span from the reign of Nero to that of Trajan. As the represented figure generally wears a wreath and a band tied at the back, it can be considered as an imperial portrait but because of the extreme stylisation it is most often impossible to identify the emperor represented on the rivet¹⁴.

The button-shaped fasteners with a single loop N° 9-12 are often found on Roman sites, but uncertainty regarding their exact function still remains. In all probability, they were multi-functional objects, probably used also in a civilian context. Apart from the assumption that they served for fastening a cloak, such fasteners with a single or a double loop were undoubtedly also used for hanging weapons, that is a sword or a dagger, to a belt, and the larger specimens may have also served for packing loads such as tents or linen transport bags¹⁵. Specimens like those from Burgenae find many parallels and according to Wild's typology of such fasteners, buttons N° 10-12 can be classified as type VIII, dated to the 1st century, which has both a button and a loop of circular shape¹⁶. Specimen N° 9 would perhaps be closer to Wild's type IV, but the dating remains identical to the others.

The four rather badly preserved buckles N° 13-16 belong to a later period. They are typical of the second half of the 2nd century AD, and were used in the first decades of the 3rd century as well. They are no longer attached to the belt fitting by a hinge but have a frame (mostly of a rectangular shape) behind the pin through which a sheet metal plate passed, which was bent around the edges and welded or riveted to the belt fitting¹⁷.

The two fragmented openwork fittings N° 17-18 are not uncommon finds either. One can find quite similar although not identical fittings on several Roman sites. One can mention similar belt plates from Germany,¹⁸ Romania,¹⁹ and Dura Europos²⁰.

It seems that they could be dated from the last decades of the 2nd century to the middle of the 3rd century AD²¹.

The fitting N° 19 is a rather crudely made trumpet-shaped fitting (unless this is an unfinished piece). Trumpet-shaped

fittings are quite common and are widely encountered on many sites, from one end of the Empire to the other. They are usually dated to the second half of the 2nd century AD and the early 3rd century AD²².

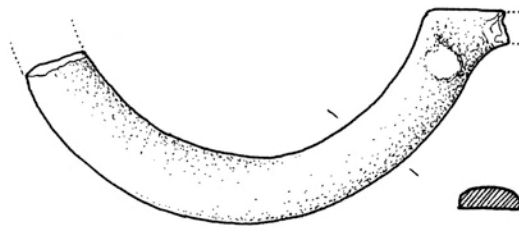
Fittings in the shape of letters appear in the second half of the 2nd century. When together on the belt, they form a word or a sentence, generally a message invoking luck, such as "*VTERE FELIX*", thus lending the belt a certain apotropaic function²³. Among the finds from Burgenae such letter-shaped fittings are found in relatively large numbers, with a total of 8 pieces in different states of preservation N° 20-27. Considering the variety of shapes, it is definitely unlikely that they belonged to the same set, even more so since the same letters appear in different forms. Thus, it would seem that these are the remains of several different belt sets, based on the same general idea but produced in a variety of ways. There are two fragmentary letters T, one fragment that might have been the lower part of a letter E or L, another one that could have been the upper part of an E or F, a slightly better preserved piece that might have been either a letter E or F, two fully preserved letters, an E and a L, and a slightly damaged letter I.

The ring buckles are also quite well represented among the Burgenae finds N° 28-32. Despite some opinions that they were used as brooches, i.e. *fibulae*, it seems more likely that the larger specimens served as buckles for a leather belt. They are characterized by an extension on the ring with an opening for the pin, and are dated to the 3rd and early 4th century²⁴.

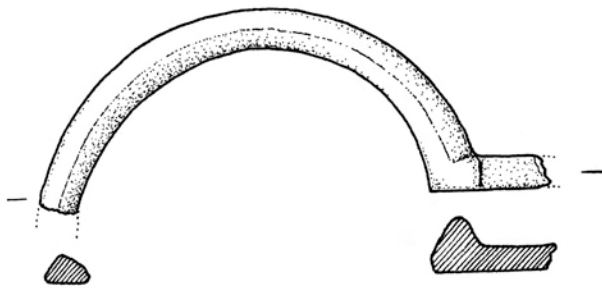
The double buttons N° 33-39 are quite a frequent find on Roman sites, and even though their use on the straps of a horse harness cannot be ruled out, it is more than likely that they served for fastening a belt with a ring- or rectangular buckle. Such fungiform studs with two circular heads linked by a shaft can be dated from the second half of the 2nd to at least the middle of the 3rd century²⁵. These specimens could have been used as belt fasteners since they seem to be large enough for two overlapping straps of leather.

Small pendants in the shape of a phallus, such as the eight Burgenae specimens N° 40-47 are roughly dated to the 2nd century, that is from the last decades of the 1st to the early 3rd century. Considering that such pendants were worn as amulets, it is certain that not only soldiers possessed them, but since many similar pendants were found in military camps, there was no reason to omit them within the scope of this paper²⁶.

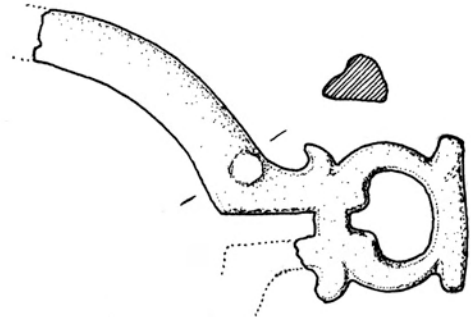
Teardrop-shaped pendants N° 48-65 are by far the most frequent strap terminal type on the belts from the end of the



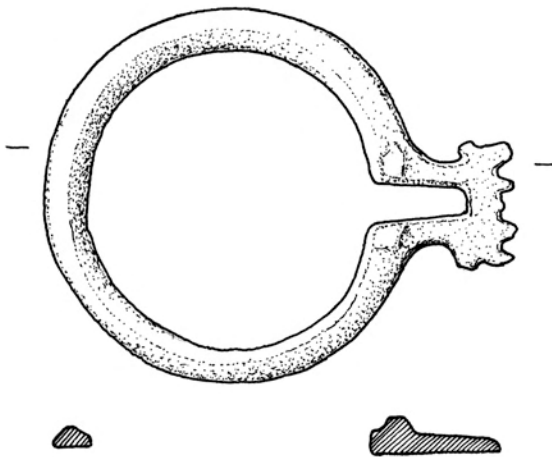
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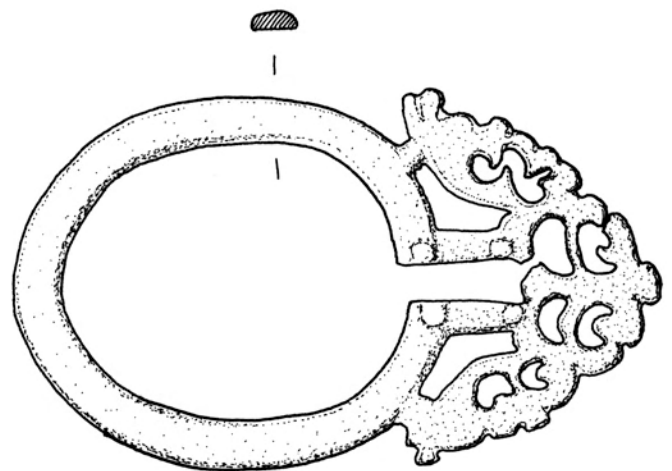
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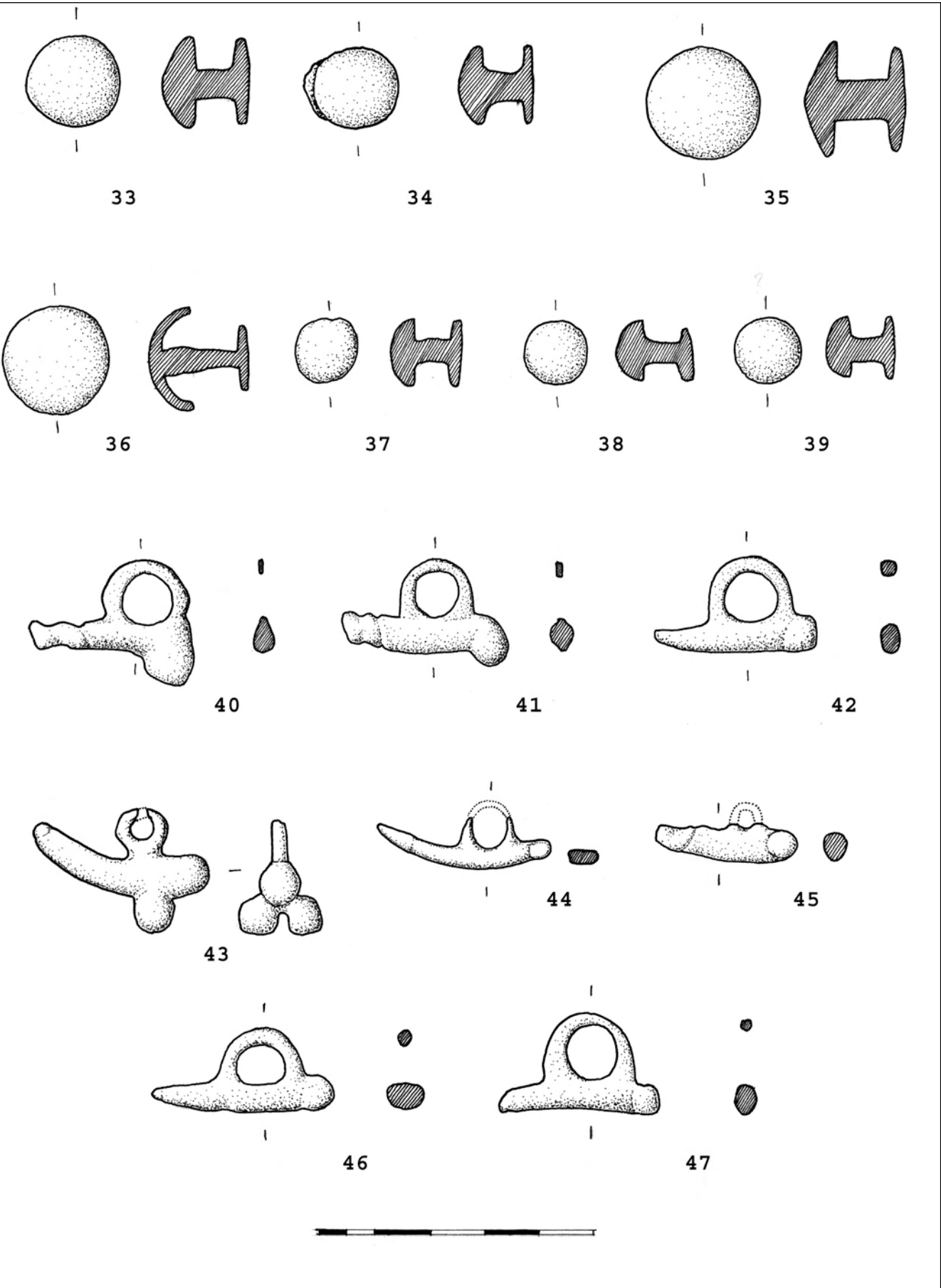


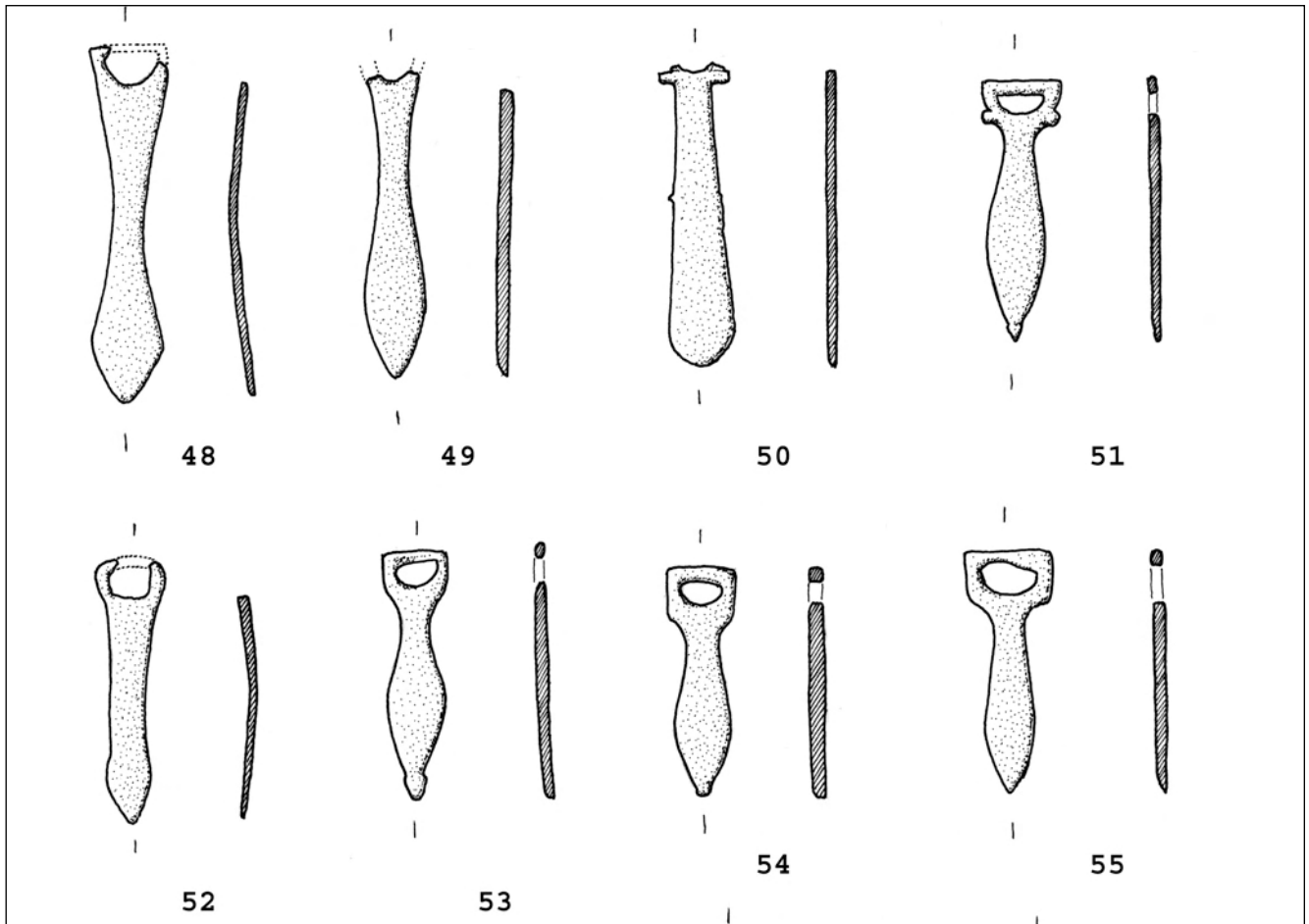
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2nd and from the 3rd centuries AD,²⁷ so that a large number of such strap terminals among the material from Burgenae is hardly surprising. They were generally worn in pairs, at the ends of the belt terminals, but are also encountered as pendants on horse harness²⁸. Although the majority of such strap ends are associated with the military, one cannot exclude the possibility that the civilians also sometimes used them,²⁹ so that not every find necessarily indicates the presence of soldiers. However in this context, it is quite likely that they belonged to military belts.

It should be mentioned that decorative fittings were also used on belts for swords as well. Namely, from the end of the 2nd and through the 3rd century a sword was not worn on the belt but hung from a wide baldric worn over a shoulder (in the contemporary literature it is customary to call this belt *balteus*)³⁰.

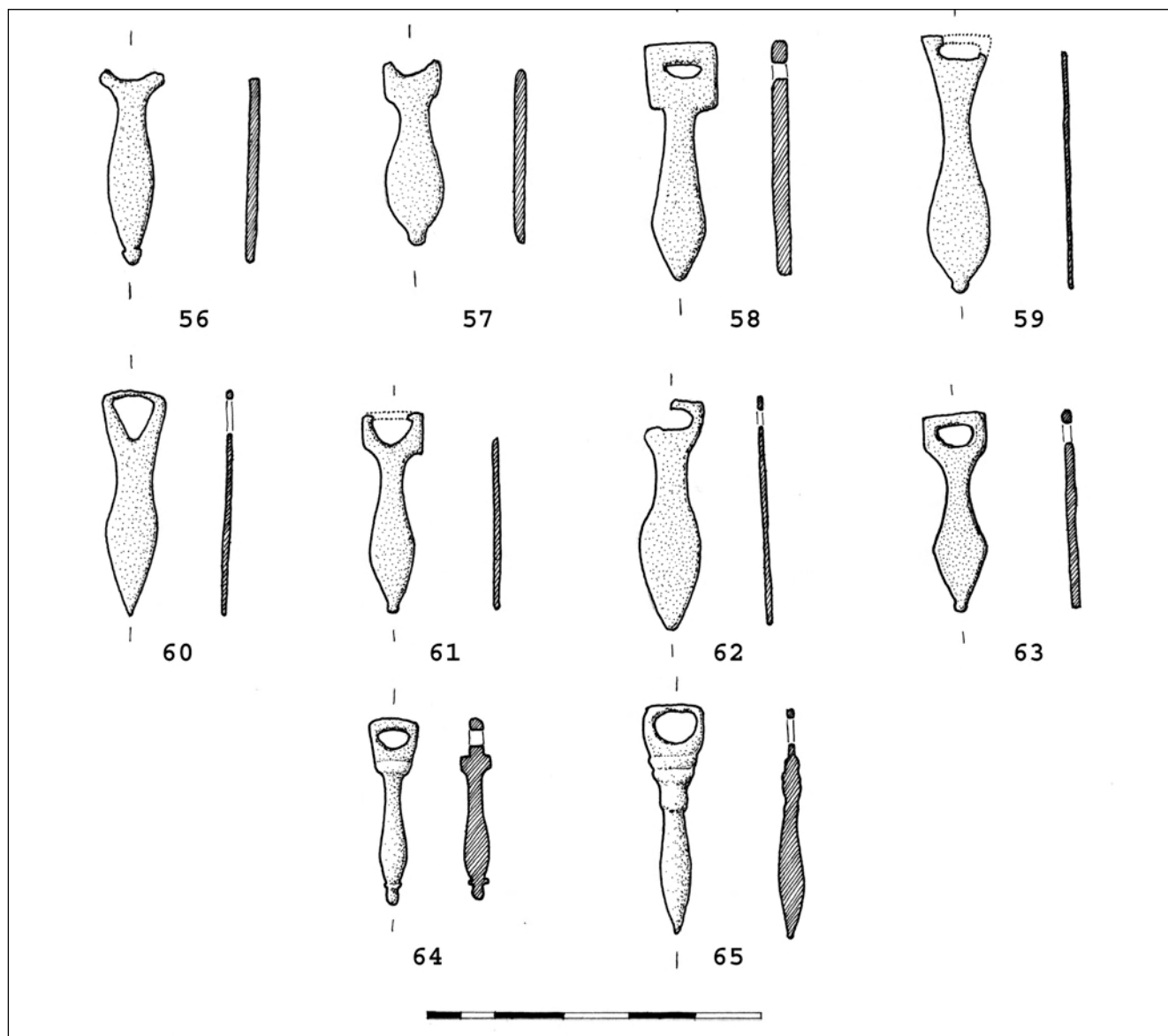
Five of the fittings from Burgenae could be associated to the baldric fittings N° 66-70.

The hinged fragmented terminal N° 66 seems to have been designed around a pelta motif. Many baldric strap terminals were hinged,³¹ and it is not unlikely that this pendant might have been a baldric terminal. It would also seem that some baldrics used to be decorated with pelta

shaped terminals, if some finds from Dura Europos were correctly interpreted³². If this is the case, the three fragmented fittings N° 67-69 might have served that purpose as well³³. Their similarity is quite striking and although one cannot be absolutely certain that they were cast in the same mould, it is quite likely that they were produced in the same workshop, perhaps even in Burgenae since they might be miscasts.

The copper alloy mount with two shanks on its rear N° 70 could be some kind of strap terminal since its voluted decoration is arranged only on one side of its long axis. Analogous pieces have been interpreted as baldric terminals, and thus the Burgenae specimen could also be interpreted as a baldric fitting³⁴. The probable dating would most likely be the 3rd century AD. It should be pointed out that this item seems to have a tinned surface, but since no analysis has been done yet, we can not be absolutely certain in which manner has this fitting been plated.

The Greek and Roman Collection of the Archaeological Museum in Zagreb also contains some pieces of belt sets from Burgenae that can be dated to the 4th or the beginning of the 5th century AD. The most numerous among them are the propeller fittings. Belt sets of that time were often equipped



with such fittings, which alongside a decorative also had a practical function, adding to the structural stiffness of the belt³⁵. There are 6 propeller fittings from Burgenae in the Museum Collection, N° 71-76. With the exception of the propellers N° 73 and 76, which might have formed part of the same set, they all belonged to different sets. Generally speaking, the propeller fittings show little variation in comparison with the basic form, and differ from one another in dimensions and simple ornaments, mostly limited to concentric circles in the central part (such as on specimens 73, 74 and 76)³⁶ or details in relief such as the central narrow rectangular bulge, placed vertically along almost the entire length of the propeller fitting N° 71-72³⁷.

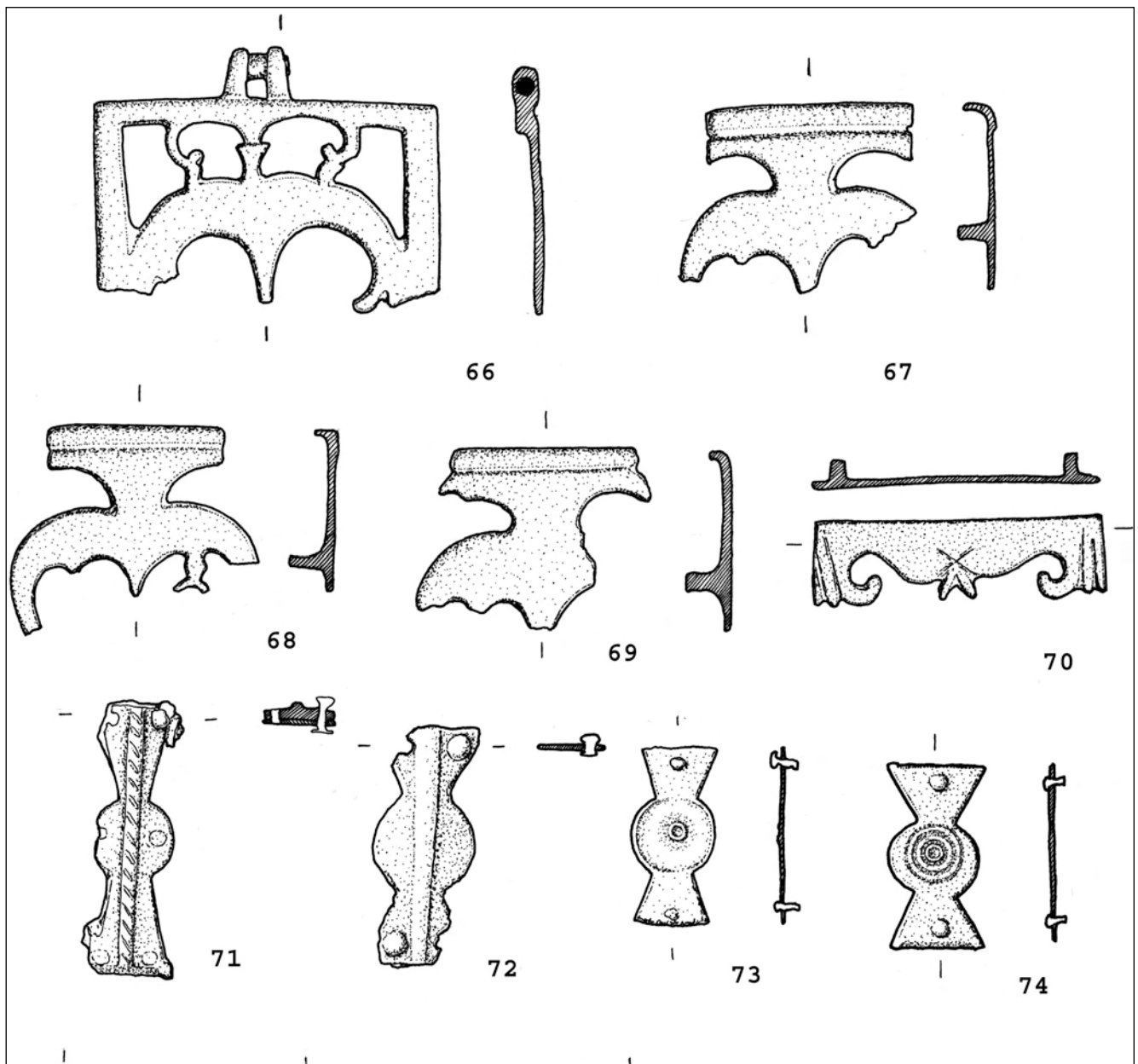
The propeller fittings were apparently more often used during the first half of the 4th century, although their use lasted until the beginning of the 5th century³⁸.

Strap ends rank among the most frequent finds of parts of Late Antiquity belt sets in the territory of the former

Roman Empire and the Greek and Roman Collection of the Zagreb Archaeological Museum contains several typical pieces originating from Burgenae.

Fragmentary strap ends N° 77-78 belong to the heart-shaped type of the belt strap ends of Late Antiquity. These simple strap ends, sometimes decorated with circular motifs as in the case of N° 77 are well represented among the Pannonian finds, and are also present in the other parts of the Empire. They are dated to the 4th and the beginning of the 5th century AD³⁹. According to the Sommer's typology those strap ends could be classified as belonging to the form A⁴⁰.

The last three pieces to be presented in this paper belong to a very widely distributed type of strap end from Late Antiquity, the so-called amphora-shaped strap ends N° 79-81. Within this type there are considerable variations, detectable on these specimens as well, but all the strap ends

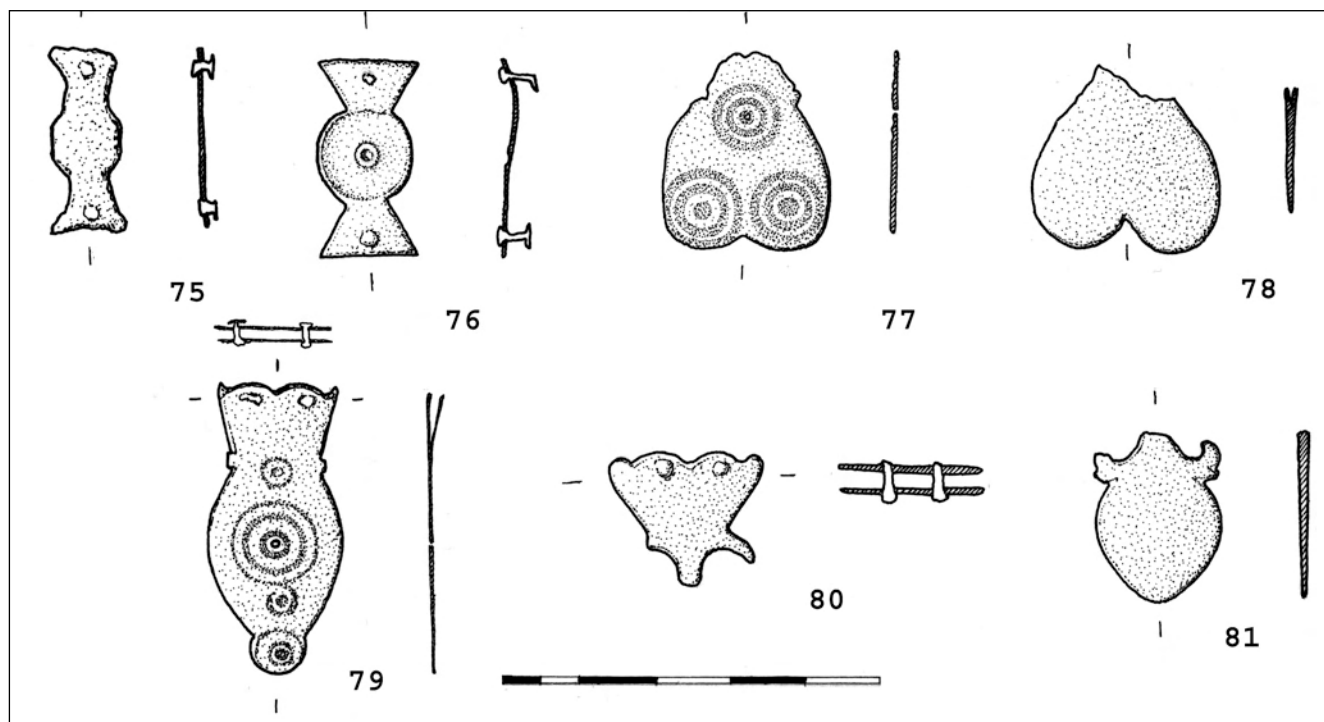


share the same basic shape. Variations primarily apply to decoration and method of attaching to the belt⁴¹. Strap ends of this type generally have a slot near the top into which the belt was inserted and riveted N° 79-80, but sometimes the strap end was hooked to the belt by a hinge. In the case of fragmentary strap end N° 81 the precise method of attachment can not be established. Following Sommer's typology, all of the Burgenae amphora-shaped strap ends belong to the form B, N° 80 and 81 could belong to the type a, while N° 79 seems related to the type b⁴². The amphora-shaped strap ends are placed within the frame of the 4th century AD⁴³.

Due to the circumstances of discovery, it would be irrelevant to make any kind of statistical analysis. Not only is this a rather limited sample but also these are exclusively stray finds, and their discovery owes far more to pure luck

than to a meticulous survey of the site. Nevertheless one can conclude that the finds, despite their limited scientific value, do corroborate the few facts we know about the site. According to the finds of belt fittings, it seems more than likely that Roman troops were present in Burgenae from the last decades of the 1st century to the 4th or even 5th century AD.

One can only hope that work will continue, if not on the site, then at least in museum collections. There are over a thousand Roman finds from Burgenae in the Archaeological Museum in Zagreb, and a thorough analysis of these items, followed by a detailed catalogue would certainly give us a good insight into the life of the Roman fort and the civilian settlement in its neighbourhood. Hopefully, one will not have to wait too long for such a publication.


CATALOGUE (drawings by Miljenka Galić):

1. fragmentary buckle, copper alloy, width 23 mm
2. fragmentary buckle, copper alloy, width 28 mm
3. buckle tongue, copper alloy, length 39 mm
4. buckle tongue, copper alloy, length 31 mm
5. buckle tongue, silvered copper alloy, length 30 mm
6. buckle tongue, copper alloy, length 32 mm
7. frog, copper alloy, length 33 mm, width 28 mm
8. apron, copper alloy, diameter 14 mm
9. button-shaped fastener with a single loop, copper alloy, length 21 mm
10. button-shaped fastener with a single loop, copper alloy, length 29 mm
11. button-shaped fastener with a single loop, copper alloy, length 27 mm
12. fragmentary button-shaped fastener with a single loop, copper alloy, length 26 mm
13. fragmentary buckle, copper alloy, length 32 mm
14. fragmentary buckle, copper alloy, length 34 mm
15. fragmentary buckle, copper alloy, length 23 mm
16. fragmentary buckle, copper alloy, length 30 mm
17. belt fitting, copper alloy, length 52 mm, width 26 mm
18. belt fitting, copper alloy, length 32 mm, width 20 mm
19. trumpet-shaped belt fitting, copper alloy, length 37 mm, width 21 mm
20. fragmented T letter belt fitting, copper alloy, length 29 mm
21. fragmented T letter belt fitting, copper alloy, length 11 mm
22. fragmented letter belt fitting, copper alloy, width 9 mm
23. fragmented letter belt fitting, copper alloy, width 11 mm
24. fragmented letter belt fitting, copper alloy, length 19 mm
25. E letter belt fitting, copper alloy, length 27 mm
26. L letter belt fitting, copper alloy, length 27 mm
27. I letter belt fitting, copper alloy, length 26 mm
28. fragmentary ring-buckle, copper alloy, length 65 mm
29. fragmentary ring-buckle, copper alloy, length 67 mm
30. fragmentary ring-buckle, copper alloy, length 55 mm
31. ring-buckle, copper alloy, diameter 49 mm
32. ring-buckle, lead, diameter 50 mm, length 86 mm
33. double button, copper alloy, diameter 11 mm
34. double button, copper alloy, diameter 10 mm
35. double button, copper alloy, diameter 21 mm
36. double button, copper alloy, diameter 20 mm
37. double button, copper alloy, diameter 7 mm
38. double button, copper alloy, diameter 7 mm
39. double button, copper alloy, diameter 8 mm
40. phallic pendant, copper alloy, length 30 mm
41. phallic pendant, copper alloy, length 30 mm
42. phallic pendant, copper alloy, length 30 mm
43. phallic pendant, copper alloy, length 33 mm
44. phallic pendant, copper alloy, length 32 mm
45. phallic pendant, copper alloy, length 26 mm
46. phallic pendant, copper alloy, length 33 mm
47. phallic pendant, copper alloy, length 30 mm
48. teardrop-shaped pendant, copper alloy, length 48 mm
49. fragmentary teardrop-shaped pendant, copper alloy, length 42 mm
50. fragmentary teardrop-shaped pendant, copper alloy, length 41 mm
51. teardrop-shaped pendant, copper alloy, length 31 mm
52. teardrop-shaped pendant, copper alloy, length 32 mm
53. teardrop-shaped pendant, copper alloy, length 29 mm
54. teardrop-shaped pendant, copper alloy, length 31 mm
55. teardrop-shaped pendant, copper alloy, length 33 mm
56. fragmentary teardrop-shaped pendant, copper alloy, length 30 mm
57. fragmentary teardrop-shaped pendant, copper alloy, length 28 mm
58. teardrop-shaped pendant, copper alloy, length 31 mm
59. teardrop-shaped pendant, copper alloy, length 40 mm
60. teardrop-shaped pendant, copper alloy, length 29 mm
61. teardrop-shaped pendant, copper alloy, length 31 mm
62. teardrop-shaped pendant, copper alloy, length 30 mm
63. teardrop-shaped pendant, copper alloy, length 30 mm
64. teardrop-shaped pendant, copper alloy, length 28 mm
65. teardrop-shaped pendant, copper alloy, length 30 mm
66. fragmentary *balteus* fitting, copper alloy, width 54 mm, length 42 mm
67. fragmentary *balteus* fitting ?, copper alloy, width 32 mm
68. fragmentary *balteus* fitting ?, copper alloy, width 29 mm
69. fragmentary *balteus* fitting ?, copper alloy, width 29 mm
70. *balteus* fitting, copper alloy, width 45 mm
71. fragmentary propeller fitting, copper alloy, length 43 mm
72. fragmentary propeller fitting, copper alloy, length 37 mm
73. propeller fitting, copper alloy, length 28 mm
74. propeller fitting, copper alloy, length 29 mm
75. propeller fitting, copper alloy, length 24 mm
76. propeller fitting, copper alloy, length 26 mm
77. fragmentary heart-shaped belt strap end, copper alloy, length 27 mm, width 22 mm
78. fragmentary heart-shaped belt strap end, copper alloy, length 24 mm, width 25 mm
79. amphora-shaped strap end, copper alloy, length 38 mm, width 18 mm
80. fragmentary amphora-shaped strap end, copper alloy, width 20 mm
81. fragmentary amphora-shaped strap end, copper alloy, width 17 mm

NOTES

1. LJUBIĆ 1879, 99-100; LJUBIĆ 1889, 62-63; BRUNŠMID 1895, 172-180; FRÖHLICH 1892, 40-44; PATSCH 1899, 1062; BRUNŠMID 1901, 156-168; RADNÓTI-BARKÓCZI 1951, 215-216; DIMITRIJEVIĆ 1961, 93-94; KLEMENC 1961, 22; PILETIĆ-RAŠIĆ 1961, 87; KLEMENC 1963, 66; PILETIĆ 1972, 7-14; PILETIĆ 1986, 138-140; PILETIĆ 1989, 82-85; LŐRINCZ 2001, 61, 63, 66, 69, 72, 75, 80, 82.
2. SPAUL 2000, 81; LŐRINCZ 2001, 29, 63.
3. SPAUL 2000, 168-169; LŐRINCZ 2001, 34-35, 80, 82.
4. SPAUL 1994, 85-86; LŐRINCZ 2001, 18, 88-89.
5. RADNÓTI-BARKÓCZI 1951, 215-216; DIMITRIJEVIĆ 1961, 94; KLEMENC 1961, 22; DUŠANIĆ 1968, 96-97; VISY 1988, 130; SPAUL 2000, 361-362; LŐRINCZ 2001, 42, 90, 99-101; VASIĆ 2003, 149-150; DAUTOVA RUŠEVLJAN-VUJOVIĆ 2006, 61-62; The older authors believed that it could have been replaced by the *cohors III Alpinorum* after the reign of Marcus Aurelius, but that seems quite unlikely; WAGNER 1938, 85-86, 189-190; DIMITRIJEVIĆ 1956-1957, 299-300; KLEMENC 1963, 66.
6. *Notia Dignitatum*, (Pann. II) Oc XXXII, 5=24, 18=37, 46; DIMITRIJEVIĆ 1961, 94; KLEMENC 1961, 22; VISY 1988, 130.
7. OLDENSTEIN 1976, 212, KatNr. 971-973; DEIMEL 1987, 88, Taf. 74, 3, 6, 7; GREW – GRIFFITHS 1991, 49-50; KOŠČEVIĆ 1991, 67, 94, sl. 442-449; BISHOP – COULSTON 1993, 98; UNZ – DESCHLER-ERB 1997, 34, Kat. 1045-1054, 36, Kat. 1138-1209; DESCHLER-ERB 1999, 40-42, Kat. Nr. 275-296; RADMAN-LIVAJA 2004, 87-88.
8. DEIMEL 1987, 88; UNZ – DESCHLER-ERB 1997, 36-37, Kat. 1186-1188; DESCHLER-ERB 1999, 42.
9. DEIMEL 1987, Kat. 77/4; DESCHLER-ERB 1999, Kat. 304.
10. Just as in the case of one fragmentary specimen from Wijk bij Duurstede; NICOLAY 2001, 54-55, Fig. 3.6.
11. UNZ – DESCHLER-ERB 1997, 37, Kat. 1210, 1214, 1216, 1218, 1243-1270; DESCHLER-ERB 1999, 42-43.
12. MOREL – BOSMAN 1989, 180-181.
13. JUNKELMANN 1986, 161; GREW – GRIFFITHS 1991, 52-53; KOŠČEVIĆ 1991, 94; BISHOP 1992, 81-91; BISHOP – COULSTON 1993, 98; FEUGÈRE 1993, 229; RADMAN-LIVAJA 2004, 89-90.
14. ULBERT 1971, 290-294; FEUGÈRE 1985, 119-136; FÜNFSCHILLING 1994, 204; KAUFMANN-HEINIMANN 1994, 107-108; KÜNZL 1996, 433-434; FERNÁNDEZ 1998, 40; DESCHLER-ERB 1999, 47-48; VOIROL 2001, 33-34.
15. DESCHLER-ERB 1991, 36; BOUBE-PICCOT 1994, 90-92; DESCHLER-ERB 1996, 28; DESCHLER-ERB 1999, 68; RADMAN-LIVAJA 2004, 92-94.
16. WILD 1970, 143, 153-154; UNZ – DESCHLER-ERB 1997, 53-54, Kat. 2058-2087, 2103-2105.
17. OLDENSTEIN 1976, 214-216; KOŠČEVIĆ 1991, 67; CRNOBRNJA – KRUNIĆ 1997, 266, 273-274; KOŠČEVIĆ 2000, 24, 16; JAMES 2004, 79, cat. 72-74; RADMAN-LIVAJA 2004, 94.
18. OLDENSTEIN 1976, 193-197, Kat. 780 (Kösching), 791 (Osterburken), 795 (Zugmantel).
19. PETCULESCU 1995, 134-137 (Lechința de Mureș).
20. JAMES 2004, 80, cat. 85, 89.
21. OLDENSTEIN 1976, 197.
22. OLDENSTEIN 1976, 203-207.
23. ULBERT 1974, 213, Abb. 4 (Lyon); PETCULESCU 1991, 392-394; BISHOP – COULSTON 1993, 133, Fig. 92 (Lyon); PETCULESCU 1995, 119, 123; STEPHENSON 1999, 100 (Dura Europos, Lyon); JAMES 2004, 61; RADMAN-LIVAJA 2004, 95; GALIĆ – RADMAN-LIVAJA 2006, 166-175; HOSS 2006, 240-245.
24. SÁGI 1954, 97-99; BÖHME 1972, 46; OLDENSTEIN 1976, 218-219; SAGADIN 1979, 307-308; KOŠČEVIĆ 1991, 65-66, 94; WIEWEGH 2003, 77-79; RADMAN-LIVAJA 2004, 95.
25. OLDENSTEIN 1976, 167-169; SCHWARZ 2002, 235-236.
26. OLDENSTEIN 1976, 158-160, Kat. 403-407; KOŠČEVIĆ 1991, 45, sl. 239, sl. 240; KAUFMANN-HEINIMANN 1994, 196-197; KOŠČEVIĆ 2000, 17-18, 95, Kat. br. 131, 132; RADMAN-LIVAJA 2004, 95.
27. OLDENSTEIN 1976, 142-144, Kat. 291-304; DAWSON 1989, 364, Fig. 4, 3-4; DAWSON 1990, 7, cat. 22-24; BISHOP 1992, 99; BISHOP – COULSTON 1993, 119-120, Fig. 80, 4, 12; KREKOVIĆ 1994, 216-217, Fig. 5, 13, Fig. 6, 1-2, Fig. 9, 2; RAJTÁR 1994, 92-93, Abb. 8, 4; TEJRAL 1994, 45, 47, 49, Abb.10, 10-13; PETCULESCU 1995, 124, 128, Plate 1, 3-4, Plate 2, 2; JAMES 2004, 85, cat. 152-158.; RADMAN-LIVAJA 2004, 96.
28. PALÁGYI 1997, 467, Fig. 6.73.
29. OLDENSTEIN 1976, 144.
30. BISHOP – COULSTON 1993, 130-135; SOUTHERN – DIXON 1996, 105-109; STEPHENSON 1999, 68-70.
31. OLDENSTEIN 1976, 223-234; STEPHENSON 1999, 69-70.
32. JAMES 2004, 76, cat. 33-35.
33. Very similar fittings were presented by Paula Zsidi during the 15th ROMEC congress in Budapest (*Bestandteile der Militärtracht aus dem Nordgräberfeld der Militärstadt von Aquincum*). Those items were interpreted as belt fittings and not terminals. However, the fact that the lower end of the *Burgenae* fittings are bent might indicate that they were intended as strap terminals and not as simple belt fittings.
34. BISHOP 1996, 71, cat. 439; JAMES 2004, 76, cat. 36.
35. BULLINGER 1969, 36-37, 45-47, 67; KOŠČEVIĆ 1991, 73-74, 100; BISHOP – COULSTON 1993, 173; FERNÁNDEZ 1996, 102-103; RADMAN-LIVAJA 2004, 97.
36. BULLINGER 1969, 89, cat. 103, (Pécs); 93, cat. 175, (Vermand); 93, cat. 176, (Vert-la-Gravelle), etc.

37. BULLINGER 1969, 85, cat. 4, (Altenstadt); 88, cat. 69, (Jambes).
37. BULLINGER 1969, 67; SAGADIN 1979, 314-315; BISHOP – COULSTON 1993, 173; FEUGÈRE 1993, 252; FERNÁNDEZ 1996, 103; SOUTHERN – DIXON 1996, 118-119.
39. BULLINGER 1969, 47, 93, cat. br. 175, (Vermand); 87, cat. br. 56, (Gellep); SIMPSON 1976, 201-202; KOŠČEVIĆ 1991, 69, 100; BISHOP – COULSTON 1993, 175; RADMAN-LIVAJA 2004, 98.
40. SOMMER 1984, 49.
41. BULLINGER 1969, 31; SIMPSON 1976, 198-200; KOŠČEVIĆ 1991, 70-71.
42. SOMMER 1984, 49-51.
43. SAGADIN 1979, 315; KOŠČEVIĆ 1991, 70; BISHOP – COULSTON 1993, 174-175; RADMAN-LIVAJA 2004, 99

BIBLIOGRAPHY

- BISHOP 1992: M.C. Bishop, The early imperial "apron", *Journal of Roman Military Equipment Studies* **3**, 1992, 81-104
- BISHOP 1996: M.C. Bishop, *Finds from Roman Aldborough, A Catalogue of Small Finds from the Romano-British Town of Isurium Brigantum*, Oxford, 1996
- BISHOP – COULSTON 1993: M. Bishop – J. C. N. Coulston, *Roman Military Equipment*, London, 1993
- BÖHME 1972: Astrid Böhme, Die Fibeln der Kastele Saalburg und Zugmantel, *Saalburg Jahrbuch* **29**, 1972, 5-112
- BOUBE-PICCOT 1994: Christiane Boube-Piccot, *Les bronzes antiques du Maroc, IV. L'équipement militaire et l'armement*, Paris, 1994
- BRUNŠMID 1895: Josip Brunšmid, Arheološke bilješke iz Dalmacije i Panonije, *Viestnik Hrvatskog Arheološkoga Društva*, Nova Serija, **I**, 1895, 148-183
- BRUNŠMID 1901: Josip Brunšmid, Arheološke bilješke iz Dalmacije i Panonije IV, *Viestnik Hrvatskog Arheološkoga Društva*, Nova Serija, **V**, 1901, 87-168
- BULLINGER 1969: Hermann Bullinger, *Spätantike Gürtelbeschläge*, Brugge, 1969
- CRNOBRNJA – KRUNIĆ 1997: Adam Crnobrnja – Slavica Krunić, *Vojna oprema i konjska orma*, Antička bronza Singidunma, ed. Slavica KRUNIĆ, Beograd, 1997, 261-302
- DAUTOVA RUŠEVLJAN – VUJOVIĆ 2006: Velika Dautova Ruševljan – Miroslav Vujović, *Roman Army in Srem*, Novi Sad, 2006
- DAWSON 1989: M. Dawson, *A review of the equipment of the Roman army of Dacia*, *British Archaeological Reports* **476**, 1989
- DAWSON 1990: M. Dawson, Roman military equipment on civil sites in Roman Dacia, *Journal of Roman Military Equipment Studies* **1**, 1990
- DEIMEL 1987: Martha Deimel, *Die Bronzekleinfunde vom Magdalensberg*, Klagenfurt, 1987
- DESCHLER-ERB 1991: Eckhard Deschler-Erb – Peter Markus und Sabine Deschler-Erb, Das frühkaiserzeitliche Militärlager in der Kaiseraugster Unterstadt, *Forschungen in Augst*, Band **12**, 1991
- DESCHLER-ERB 1996: Eckhard Deschler-Erb, Vindonissa: *Ein Gladius mit reliefverzierter Scheide und Gürtelteilen aus dem Legionslager*, Jahresbericht 1996, Gesellschaft Pro Vindonissa, 1997, 13-31.
- DESCHLER-ERB 1999: Eckhard Deschler-Erb, Ad arma, Römischer Militär des 1. Jahrhunderts n. Chr. in Augusta Raurica, *Forschungen in Augst*, Band **28**, 1999
- DIMITRIJEVIĆ 1956-1957: Danica Dimitrijević, Rad zemunskog Narodnog muzeja na rimskom limesu u Sremu, *Starinar*, Nova serija, **VII-VIII**, 1956-1957, 299-308
- DIMITRIJEVIĆ 1961: Danica Dimitrijević, Nekoliko podataka o rimskom limesu u Istočnom Sremu, Limes u Jugoslaviji I, *Zbornik radova sa simposiuma o Limesu 1960. godine*, Beograd, 1961, 93-107
- DUŠANIĆ 1968: Slobodan Dušanić, Rimska vojska u istočnom Sremu, Beogradski Univerzitet, *Zbornik Filozofskog Fakulteta*, **X-1**, 1968, 87-113
- FERNÁNDEZ 1996: Joaquín Aurrecoechea Fernández, Bronze studs from Roman Spain, *Journal of Roman Military Equipment Studies* **7**, 1996, 97-146
- FERNÁNDEZ 1998: Joaquín Aurrecoechea Fernández, Aprons fittings from Flavian times found in Spain, *Journal of Roman Military Equipment Studies* **9**, 1998, 37-41
- FEUGÈRE 1985: Michel Feugère, Nouvelles observations sur les cabochons de bronze estampés du cingulum romain, *British Archaeological Reports* **275**, 1985, 117-141
- FEUGÈRE 1993: Michel Feugère, *Les armes des Romains*, Paris, 1993
- FRÖHLICH 1892: Róbert Fröhlich, Emlékek és leletek. Acumincum vidéke és a régi Pannoniai Limes, *Archaeologiai Értésítő* **XII**, 1892, 34-44
- FÜNFSCILLING 1994: Sylvia Fünfschilling, Zu einigen ausgewählten Altfunden aus Augusta Raurica, *Jahresberichte aus Augst und Kaiseraugst* **15**, 1994, 187-210
- GALIĆ – RADMAN-LIVAJA 2006: Miljenka Galić – Ivan Radman-Livaja, VTERE FELIX belt set from Varaždinske Toplice, *Vjesnik Arheološkog muzeja u Zagrebu* **39**, 2006, 165-186
- GREW – GRIFFITHS 1991: Francis Grew – Nick Griffiths, The pre-Flavian military belt: the evidence from Britain, *Archaeologia*, Volume **109**, 1991, 47-84
- HOSS 2006: Stefanie Hoss, VTERE FELIX und MNHMΩN – zu den Gürteln mit Buchstabenbeschlägen, *Archäologisches Korrespondenzblatt* **36/2**, 2006, 237-253

- JAMES 2004: Simon James, *Excavations at Dura-Europos 1928-1937, Final Report VII, The Arms and Armour and other Military Equipment*, London, 2004
- JUNKELMANN 1986: Marcus Junkelmann, *Die Legionen des Augustus*, Mainz am Rhein, 1986 (7. durchgesehene Auflage, 1997)
- KAUFMANN-HEINIMANN 1994: Annemarie Kaufmann-Heinimann, *Die römischen Bronzen der Schweiz 5*, Neufunde und Nachträge, Mainz, 1994
- KLEMENC 1961: Josip Klemenc, Limes u Dolnjoj Panoniji, Limes u Jugoslaviji I, *Zbornik radova sa simposiuma o Limesu 1960. godine*, Beograd, 1961, 5-34
- KLEMENC 1963: Josip Klemenc, Der pannonische Limes in Jugoslawien, *Arheološki radovi i rasprave* **3**, 1963, 55-68
- KOŠČEVIĆ 1991: Remza Košćević, *Antička bronca iz Siska*, Zagreb, 1991
- KOŠČEVIĆ 2000: Remza Košćević, *Arheološka zbirka Benko Horvat*, Zagreb, 2000
- KREKOVIČ 1994: E. Krekovič, Military equipment on the territory of Slovakia, *Journal of Roman Military Equipment Studies* **5**, 1994, 211-225
- KÜNZL 1996: Ernst Künzl, Gladiusdekorationen der frühen römischen Kaiserzeit: dynastische Legitimation, Victoria und Aurea Aetas, *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* **43**, 1996, 383-474
- LJUBIĆ 1879: Šime Ljubić, Rittium (Surduk), *Viestnik Hrvatskoga Arheološkoga Društva* **I/4**, 1879, 97-101
- LJUBIĆ 1889: Šime Ljubić, Rimske starine u Novih Banovcih, *Viestnik Hrvatskoga Arheološkoga Društva* **XI/2**, 1889, 62-63
- LŐRINCZ 2001: Barnabás Lőrincz, *Die römischen Hilfstruppen in Pannonien während der Prinzipatszeit*, Teil I: Die Inschriften, Wien, 2001
- MOREL – BOSMAN 1989: J. M. A. W. Morel – A. V. A. J. Bosman, An early Roman Burial in Velsen, *Roman Military Equipment: The Sources of evidence, Proceedings of the Fifth Roman Military Equipment Conference*, C. van DRIEL-MURRAY, ed. BAR International Series **476**, 1989, 167-191
- NICOLAY 2001: Johan A. W. Nicolay, Interpreting Roman military equipment and horse gear from non military contexts. The role of veterans, *Jahresbericht 2001 (ROMEC XIII 2001)*, Gesellschaft Pro Vindonissa, 2002, 53-66
- OLDENSTEIN 1976: Jürgen Oldenstein, Zur Ausrüstung römischer Auxiliareinheiten, *Bericht der Römisch-Germanischen Kommission* **57**, 1976, 51-284
- PALÁGYI 1997: Sylvia Palágyi, Rekonstruktionsmöglichkeit des Zaumzeuges aus dem Wagengrab von Kozármisleny (Pannonia), *Proceedings of the XVIth International Congress of Roman Frontier Studies*, ed. W. GROENMAN-van WAATERINGE, Oxford, 1997, 467-471
- PATSCH 1899: Carl Patsch, s.v. Burgenae, *RE*, **III**, 1062
- PETCULESCU 1991: Liviu Petculescu, Vtere felix and optime maxime con(serva) mounts from Dacia, ed. V.A. MAXFIELD and M. J. DOBSON, *Roman Frontier Studies* 1989, Exeter, 1991, 392-396
- PETCULESCU 1995: Liviu Petculescu, Military equipment graves in Roman Dacia, *Journal of Roman Military Equipment Studies* **6**, 1995, 105-145
- PILETIĆ – RAŠIĆ 1961: Dragoslav Piletić – Bogdan Rašić, Pregled radova Vojnog muzeja na Limesu od Novih Banovaca do Sremskih Karlovaca, Limes u Jugoslaviji I, *Zbornik radova sa simposiuma o Limesu 1960. godine*, Beograd, 1961, 87-92
- PILETIĆ 1972: Dragoslav Piletić, Preliminarni rezultati istraživanja rimskog kastruma Burgenae u Novim Banovcima 1971. godine, *Vesnik Vojnog muzeja* **18**, 1972, 7-26
- PILETIĆ 1986: Dragoslav Piletić, Acumincum i Burgenae - dva važna uporišta na donjopanonskom limesu, Odbrambeni sistemi u praistoriji i antici na tlu Jugoslavije, *Materijali XXII, Referati XII Kongresa arheologa Jugoslavije* (Novi Sad, 1984.), Novi Sad, 1986, 137-144
- PILETIĆ 1989: Dragoslav Piletić, Rimske fortifikacije na teritoriji SR Srbije, *Vesnik Vojnog muzeja* **33**, 1989, 79-104
- RADMAN-LIVAJA 2004: Ivan Radman-Livaja, *Militaria Sisciensia, Musei Archaeologici Zagrabiensis Catalogi et Monographiae*, Vol. **1**, 2004
- RADNÓTI – BARKÓCZI 1951: A. Radnóti – L. Barkóczi, The Distribution of Troops in Pannonia Inferior during the 2nd Century AD, *Acta Archaeologica Academiae Scientiarum Hungaricae* I, fasciculi **3-4**, 1951, 191-230
- RAJTÁR 1994: Ján Rajtár, Waffen und Ausrüstungsteile aus dem Holz-Erde Lager von Iža, *Journal of Roman Military Equipment Studies* **5**, 1994, 83-95
- SAGADIN 1979: Maksimiljan Sagadin, Antične pasne sponne in garniture v Sloveniji, *Arheološki vestnik* **30**, 1979, 294-338
- SÁGI 1954: Károly Sági, Die Ausgrabungen im römischen Gräberfeld von Intercisa im Jahre 1949, *Intercisa I*, Dunapentele-Sztálinváros, Geschichte der Stadt in der Römerzeit, L. BARKÓCZI, G. ERDÉLYI, E. FERENCZY, F. FÜLEP, J. NEMESKÉRI, M. R. ALFÖLDI, K. SÁGI, Budapest, 1954, 61-123
- SCHWARZ 2002: Peter-Andrew Schwarz, Kastelen 4, Die Nordmauer und die Überreste der Innenbebauung der spätrömischen Befestigung auf Kastelen, Die Ergebnisse der Grabung 1991-1993 im Areal der Insulae 1 und 2 von Augusta Raurica, *Forschungen in Augst* **24**, Augst, 2002
- SIMPSON 1976: C. J. Simpson, Belt-buckles and strap-ends of the later Roman Empire: a preliminary survey of several new groups, *Britannia* **7**, 1976, 192-223

- SOMMER 1984: Markus Sommer, Die Gürtel und Gürtelbeschläge des 4. und 5. Jahrhunderts im römischen Reich, *Bonner Hefte zur Vorgeschichte* **22**, Bonn, 1984
- SOUTHERN – DIXON 1996: Pat Southern – Karen R. Dixon, *The late Roman army*, London, 1996
- SPAUL 1994: John Spaul, *Ala 2*, Andover, 1994
- SPAUL 2000: John Spaul, *Cohors 2*, British Archaeological Reports, International Series **841**, 2000
- STEPHENSON 1999: I.P. Stephenson, *Roman Infantry Equipment – The Later Empire*, Stroud, 1999
- TEJRAL 1994: Jaroslav Tejral, *Römische und germanische Militärausrüstungen der antoninischen Periode im Licht norddanubischer Funde*, in von CLAUS von CARNAP-BORNHEIM (ed.), Beiträge zur römischer und barbarischer Bewaffnung in den ersten vier nachchristlichen Jahrhunderten, Akten des 2. Internationalen Kolloquiums in Marburg a. d. Lahn, Lublin/Marburg, 1994, 27-60
- ULBERT 1971: Günter Ulbert, Römische Bronzeknöpfe mit Reliefverzierung, *Fundberichte aus Schwaben* **19**, 1971, 278-297.
- ULBERT 1974: Günter Ulbert, *Straubing und Nydam, Zu römischen Langschwerten der späten Limeszeit*, Studien zur Vor- und Frühgeschichtlichen Archäologie, Festschrift für Joachim Werner zum 65. Geburtstag, München, 1974
- UNZ – DESCHLER-ERB 1997: Christoph Unz – Eckhard Deschler-Erb, Katalog der Militaria aus Vindonissa, *Veröffentlichungen der Gesellschaft pro Vindonissa*, Band **XIV**, Brugg, 1997
- VASIĆ 2003: Miloje Vasić, *The Ripa Pannonica in Serbia*, in ed. Zsolt VISY, *The Roman Army in Pannonia, An Archaeological Guide of the Ripa Pannonica*, Pécs, 2003, 143-150
- VISY 1988: Zsolt Visy, *Der pannonische Limes in Ungarn*, Stuttgart, 1988
- VISY 2003: Zsolt Visy ed., *The Roman Army in Pannonia, An Archaeological Guide of the Ripa Pannonica*, Pécs, 2003
- VOIROL 2001: A. Voirol, Etats d'armes. Les militaria d'Avenches/Aventicum, Jahresbericht 2001 (ROMEC XIII 2001), *Gesellschaft Pro Vindonissa*, 2002, 31-40
- WAGNER 1938: Walter Wagner, *Die Dislokation der römischen Auxiliarformationen in den Provinzen Noricum, Pannonien, Moesien und Dakien von Augustus bis Gallienus*, Berlin, 1938
- WIEWEGH 2003: Zoran Wiewegh, *Rimske prstenaste fibule iz antičke zbirke Gradskog muzeja Sisak*, Godišnjak Gradskog muzeja Sisak, III-IV, 2002.-2003, 75-88
- WILD 1970: J. P. Wild, Button- and Loop-Fasteners in the Roman provinces, *Britannia* **1**, 1970, 137-155