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# FIRST-CENTURY MILITARY GEAR FROM SALONA

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Ancient Salona (Map 1) was situated next to modern-day Solin in the immediate vicinity of Split (Map 2). It had been organized as a colony (*colonia Martia Julia Salona*) during Caesar's time,<sup>1</sup> and after the Augustan reform of the Empire it became the principal seat of the imperial province of Dalmatia. The first historical mention of Salona is associated with military conquests, in 119 BC, when the Roman military leader Lucius Caecilius Metellus wintered in Salona during his campaign against the Illyrian tribes, remaining there until 117 BC (*App. Illyr., XI*).<sup>2</sup> Salona probably only became a permanent Roman possession in the 70s BC. From 78 to 76 BC, the proconsul Gaius Cosconius once more conquered Salona, which in the meantime had fallen into the hands of the Illyrian tribe - Delmatae. Thereafter Italic settlers began to move into Salona. It was a stronghold of the Roman army for its more or less successful raids against the Illyrian Delmatae tribe, until the latter's final subjugation after the Roman victory in the war from 6 to 9 AD, better known as the Great Illyrian (Pannonian) Revolt.<sup>3</sup> After this the province was pacified, and in Salona's hinterland,

roughly thirty kilometres north of it, the Roman legionary camp Tilurium (Gardun) was established.<sup>4</sup> One more legionary camp (Burnum) was also established in Dalmatian territory,<sup>5</sup> as well as several castles (*castra*) in which auxiliary units were posted.<sup>6</sup> Soon afterward, veteran settlements were also established in Dalmatia.<sup>7</sup> Besides written sources,<sup>8</sup> epigraphic monuments also testify to the military presence in Salona during the Roman era. Numerous preserved military inscriptions, generally sepulchral in character, serve as a source to study their origins, social status, and the duties they performed in the provincial capital,<sup>9</sup> either as members of military detachments in Salona or as officials in the administration of the city and province in the consul's office,<sup>10</sup> to which they were assigned from their units.<sup>11</sup>

<sup>1</sup> SUIĆ 2003, 63; WILKES 2002, 90; SUIĆ 1991, 84-85; WILKES 1969, 221.

<sup>2</sup> IVANIŠEVIĆ 2002, 43.

<sup>3</sup> ZANINOVIĆ 2010, 16-18.

<sup>4</sup> SANADER - TONČINIĆ 2010; ZANINOVIĆ 1996a, 284, 285.

<sup>5</sup> MILETIĆ 2010; CAMBI et al. 2007; ZANINOVIĆ 1996b, 272 - 274.

<sup>6</sup> SANADER 2002; SANADER 2008, 80, 81.

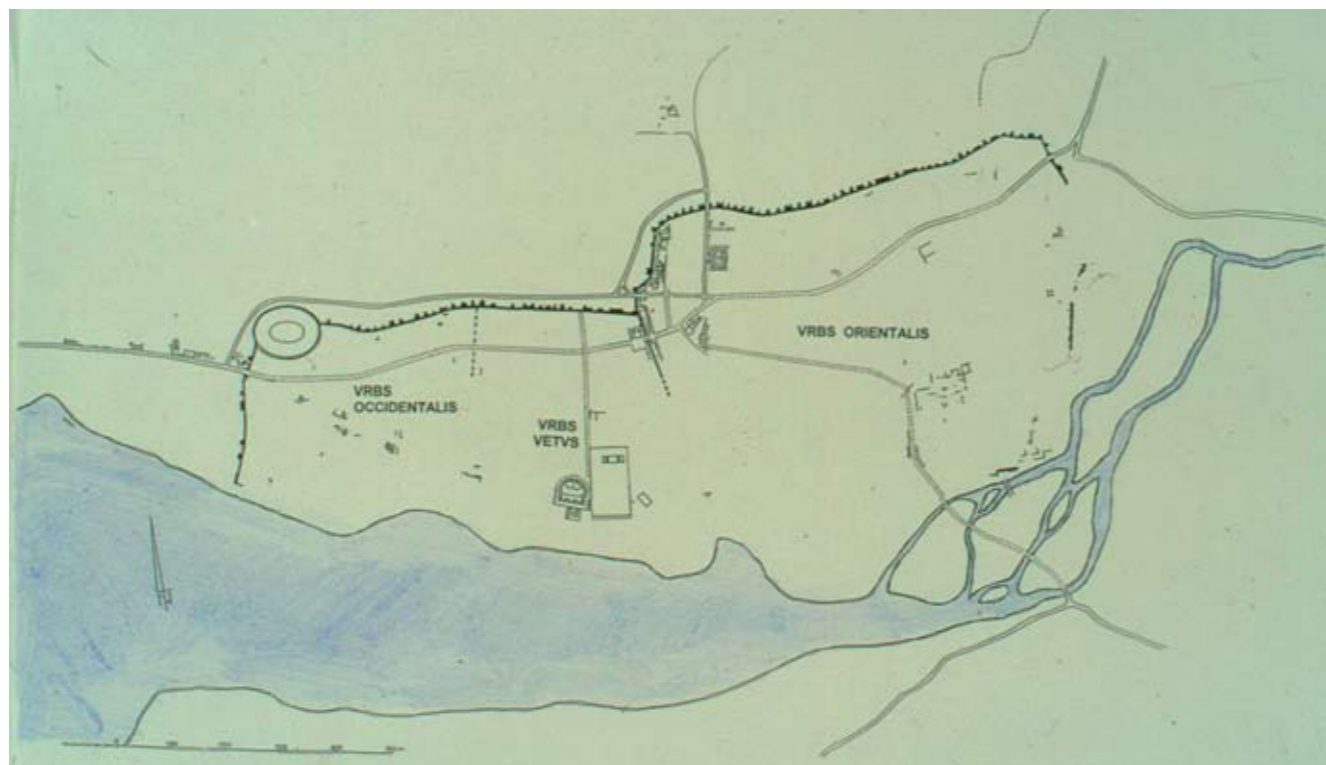
<sup>7</sup> WILKES 1969, 107-114.

<sup>8</sup> For an exhaustive overview of sources on ancient Salona's history, see IVANIŠEVIĆ, 2002.

<sup>9</sup> WILKES 2002, 92-94.

<sup>10</sup> WILKES 1969, 10.

<sup>11</sup> ZANINOVIĆ 2007; WILKES 1969, 120-127.



Map. 1. The plan of ancient Salona

The discovery of several grave stelae in the city's eastern necropolis,<sup>12</sup> has led to the hypothesis<sup>13</sup> on the existence of an occupational cemetery in which soldiers on active duty were interred. According to all previous finds, these were the members of Legio VII who were detached to Salona to perform public works or to participate in provincial administration in the consul's office. After the departure of Legio VII from the province of Dalmatia,<sup>14</sup> interments of the members of

<sup>12</sup> All monuments are held in the Archeological Museum in Split. The inscription on the stela of Gaius Asurius (inv. no. AMS-A 1424) mentions Legio VII without its honorary title, which was assigned after the suppression of Scribonian conspiracy in 42 AD, so the stela should be dated to the time prior to that year. It was found in 1888 at the Zgon site on land belonging to Ante Pletikošić-Suda, not far from the *Porta Andetria*. It was probably found in the eastern Salona necropolis; Tončinić 2011, 27, cat. no. 5. The stela of Quintus Valerius (AMS-40499), found at Bilankuša, Tončinić 2011, 91, cat. no. 59, was dated in the same fashion, while on the stela of Quintus Metius Valens (AMS-38403), Legio VII bears the honorary title *C(laudia) p(ia) f(idelis)*, so it should be dated to the period following 42 AD; Tončinić 2011, 69, cat. no. 41. The altar of Marcus Titius, a soldier of Legio VII (AMS-A 4407) has also been dated post-42 AD; it was discovered in secondary use near the find-site of the other three stelae; Tončinić 2011, 85, cat. no. 56.

<sup>13</sup> CAMBI 1986, 80-84; MILETIĆ 1992, 33, 34.

<sup>14</sup> The departure of Legio VII is dated by most scholars to the mid-first century. On this problem with a list of earlier literature, see SANADER - TONČINIĆ 2010, 46, notes 54-58, Tončinić 2011, 11-15.

smaller units probably continued, as shown by the find of the grave altar of Titus Flavius Lucilius, a centurian of *cohors VIII voluntariorum*, dated to the second century.<sup>15</sup> The existence of one or more sections for the members of Legio VII may be assumed in the northern necropolis, which yielded the highest number of military grave inscriptions.<sup>16</sup>

Over and above written sources,<sup>17</sup> and inscriptions on stone monuments<sup>18</sup> and military diplomas,<sup>19</sup> the Roman presence in Salona throughout the entire Roman era is also demonstrated by the military gear found in the city's territory. In earlier works, much more attention was dedicated to stone monuments, while the military gear from Salona has only been published in a few works.<sup>20</sup> In the case of military material, there is

<sup>15</sup> JELIČIĆ - RADONIĆ 2006.

<sup>16</sup> MILETIĆ 1990, 179.

<sup>17</sup> IVANIŠEVIĆ 2002.

<sup>18</sup> BETZ 1938; WILKES 1969, 105-152; ALFÖLDY 1962; MATIJEVIĆ 2009; TONČINIĆ 2011.

<sup>19</sup> Both are diplomas from the Flavian era (CIL 16, 14 and CIL 16, 38), ILKIĆ 2010, 269.

<sup>20</sup> KLIŠKIĆ 2002, 516-538; VIŠIĆ-LJUBIĆ 2006; IVČEVIĆ 2008, 2009.



Map. 2. Ancient Salona was the capital of the province of Dalmatia. The Roman military camp Tilurium (Gardun) was established in Salona's hinterland.

generally no preserved data on the archaeological context in which it was discovered, and normally the only information known is that the artefact was found in the Salona area. The questions of whether the gear was in military use (by active soldiers on duty in Salona), in social use (components of gear, most often belts, retained as status symbols after completion of military

service) or whether they played some other role (e.g. votive offering) remain unanswered. These data have been irretrievably lost.

It is also difficult to draw any conclusions on production and workshops in Salona and its environs based on the materials found and the current level of research.



There are hypotheses on the existence of a workshop with a casting kiln in the area between the forum and curia, based on the remains of iron slag found in Salona in research conducted from 1969 to 1972,<sup>21</sup> and the data from the *Notitia Dignitatum* which pertains to the period from the end of the fourth and early fifth centuries, which mention the administrator of the imperial armoury (*magister officiorum Salonitana armorum*).<sup>22</sup> A metallurgy workshop certainly existed in Salona, and part of its output probably went to meet military needs, although there was a military camp in the vicinity at which production of at least some of the needs of soldiers may have proceeded. Whether only luxury exponents were produced and how production of military gear was organized remain open questions at this point.

## WEAPONS

The weapons found in the territory of Salona are few in number. There are only a few items: a pyramidal javelin head, a javelin head with inscription, a foliate arrowhead, and lead slingshot projectiles.<sup>23</sup>

The iron pyramidal javelin head<sup>24</sup> with rectangular cross-section and shaft socket cannot, without its find context, be dated any more precisely than the imperial period. Such heads (extended, as opposed to Republic-era heads which were shorter and more compact) were used from the end of the first to the fourth centuries.<sup>25</sup> The Salona example, based on its shape, corresponds to the pyramidal projectile heads with shaft sockets which are often found at Roman military sites,<sup>26</sup> but it is possible that it also served as a javelin head. Since the discovery circumstances are not known, it is possible to define this item's purpose solely on the basis of the assumption that javelin heads were lighter than ballistic projectiles.

<sup>21</sup> CLAIRMONT - GONZENBACH 1975, 59-63.

<sup>22</sup> *Notitia Dignitatum*, 1876, IX, 22.

<sup>23</sup> The weapons, like other components of military gear from Salona, have been published in the more recent literature, and here they are not presented in catalogue fashion, see note 20.

<sup>24</sup> The javelin head was published in: KLIŠKIĆ 2002, 522-524, P. VI, 5.

<sup>25</sup> BISHOP - COULSTON 2006, 88-90, 168, 169.

<sup>26</sup> Similar examples can often be found at Roman sites. In Croatia's territory, the most similar are the finds from Trilj (RADMAN-LIVAJA 2010, 56, 57, cat. no. 2, 3) and Sisak (RADMAN-LIVAJA 2004, 170, 171, P. 21, 22), while those from Burnum differ somewhat and by all accounts the socketed javelin head has an earlier date than the Salona example. For analogous finds outside of Croatia, see: KLIŠKIĆ 2002, 522-524, notes 351-366.

The javelin head is roughly the same length as the socket, which indicates the imperial era, and its weight is 16.2 g, which should support opinion that it was used as a javelin head and not as a catapult projectile (for 25-30 g is the threshold weight for distinguishing javelin heads from ballistic projectile tips).<sup>27</sup> On the other hand, the diameter of the socket is 1.4 cm. This deviates from the average diameters of javelin heads (0.9 cm) and corresponds to some bolt heads.

Since they were used only by legionary units, the navy and praetorians, they are normally dated on the basis of historical circumstances, i.e., the time in which such units were posted at a given site. Legion vexillations, and probably the navy at various times, were stationed in Salona, and the city was also the scene of combat, particularly in the earlier centuries. There were many situations in which these weapons could have remained in Salona, and any attempt at more precise dating based on historical circumstances is pure conjecture.

A flat-bladed, socketed spearhead<sup>28</sup> (its shape renders chronological determination difficult) has an interesting decoration on both sides. Since there are no detailed circumstances surrounding its discovery, it cannot be dated, for not even the decoration on the spearhead allows for dating (on one side there is a serpentine decoration or inverted letter S, while on the other the decoration consists of upright lines with horizontal dashes at the ends and in the middle). Incrustation as a decorating technique was applied to weapons even in later periods, until the High Middle Ages, and the motif itself, for which no analogies have been found, also cannot be restricted to any specific time. The only conclusion that can be drawn is that it had some symbolic role given the quality of the decorations on it, but neither the motif nor the shape confirms this.

Flat-bladed arrowheads<sup>29</sup> are type 5 according to J. Coulston's typology,<sup>30</sup> and flat-bladed socketed arrowheads are dated throughout the period of the Empire, so they cannot be typologically dated precisely. The Romans had incorporated archers into their troops already during the Republican era, while during the early imperial period specialized archery units were formed. However, the finds of archery components are not linked exclusively to the presence of specialized archery troops, as recorded in Salona, for many troops

<sup>27</sup> BAATZ 1966, 205, 206.

<sup>28</sup> Published: KLIŠKIĆ 2002, 222, P. VI.1.

<sup>29</sup> Published: KLIŠKIĆ 2002, 222, P. VI.4.

<sup>30</sup> COULSTON 1985, 264-266.

were equipped with archery weapons although they were not officially archery units. Given the military presence in Salona<sup>31</sup> and the numerous finds of archery gear throughout the Empire,<sup>32</sup> such finds could only be expected in Salona.

Lead projectiles<sup>33</sup> are a customary find at Roman-era sites, and slingshots were a customary component of Roman military gear. The two Salona examples belong to different types according to Vollig.<sup>34</sup> One projectile may be type Ic (for which an ovoid shape with one tapered and one blunt tip is characteristic), and dated from the second century BC to the second century AD. The other example belongs to type IIb, with a lightly biconical body, and it has been dated from the latter half of the second century BC to the latter half of the second century AD.

There are two basic types of sword hilts that were made of bone or wood, one with slots for the fingers, and the other, like the Salona example, without slots, with rounded cross-section and decorated with engraved lines.<sup>35</sup> The Mainz-type bone sword hilt from Salona (cat. no. 1., P. 1. 1) may be dated to the time in which this sword type was in use, i.e., from the end of the first century BC to the Flavian era,<sup>36</sup> or simply the first century.<sup>37</sup>

## MILITARY GEAR

A "D-shaped" belt buckle, a tang for such a buckle, two buckles with studs, a belt mount, and rectangular and circular mounts from a military apron are components of first-century military gear.

The recently published belt buckles with pelta-shaped frames have been approximately dated to the first century based on numerous finds in the territory of the Roman Empire.<sup>38</sup> The buckle<sup>39</sup> with prominent inter-

<sup>31</sup> WILKES 2002, 92-94.

<sup>32</sup> For archery equipment finds, see: RADMAN-LIVAJA 2004, 55, notes 290, while for archery finds analogous to these, see KLIŠKIĆ 2002, 528, notes 404-408.

<sup>33</sup> Published: KLIŠKIĆ 2002, 222, P. VI, 2,3.

<sup>34</sup> VÖLLING 1990, 34.

<sup>35</sup> OLDENSTEIN 1977, 89-91.

<sup>36</sup> BISHOP - COULSTON 2006, 78; DESCHLER-ERB 1999, 23; FIN-GERLIN 1972, 226, Fig. 13. 12; BEHRENS 1912, 108, Fig. 20. 1.

<sup>37</sup> GOSTENČNIK 2005, 200.

<sup>38</sup> OLDENSTEIN 1977, 212, P. 74. 971- 974; DEIMEL 1987, 88, P. 74. 6,7; BISHOP - COULSTON 2006, 107, 108; UNZ - DESCHLER-ERB 1997, 34, P. 43. 1138- 1163, P. 44. 1164-1209; DESCHLER-ERB 1999, 40, 41, P. 16, P. 17, 293-309; RADMAN-LIVAJA 2004, 87, P. 35. 202, 205.

<sup>39</sup> Published: VIŠIĆ-LJUBIĆ 2006, 164, Fig.1.

nal edge on the frame arch ending in spirals on both sides, has been dated to the first half of the first century.<sup>40</sup> It belongs to Grew and Griffiths type D,<sup>41</sup> like the buckle<sup>42</sup> with a different cross-section on the arch, albeit very similar to the preceding example in other elements. Two buckles<sup>43</sup> belong to Grew and Griffiths type B,<sup>44</sup> while group E<sup>45</sup> encompasses another buckle.<sup>46</sup> Buckles of this type have been found throughout the territory of the Roman Empire,<sup>47</sup> which are mutually similar in terms of basic features, but with differences in details, which renders difficult a precise classification into types. Thus, the Salona buckles in their basic features correspond with the typology which Francis Grew and Nick Griffiths developed for the territory of Britannia, but they differ particularly in the arch cross-section and decoration. The preserved tang (cat. no. 2, P. 1. 2) has a shape characteristic of this type of buckle. Almost identical belt buckles of different variants have been found in the nearby camp of Tilurium,<sup>48</sup> and somewhat farther north in the Burnum camp.<sup>49</sup> The mount (cat. no. 3, P. 1. 3) adorned with engraved, niellated motifs of laurel branches and circlets belongs to this buckle type. Belt mounts in the first century were often adorned by niello and coated with tin, and the motifs on them were quite diverse, from geometric and vegetable to figural.<sup>50</sup> In the typology compiled for Britannia, mounts are divided into two basic types given their shape and manner of decoration.<sup>51</sup> The Salona example, based on its features, corresponds to type A, which includes rectangular mounts with flat polished surfaces, often adorned with punched dots, engraving and niello. Mounts adorned in the same fashion were found in various territories of the Roman Empire, either as buckle or belt mounts.<sup>52</sup> As to the production

<sup>40</sup> FRANZIUS 1999, Fig. 14. 10, 11.

<sup>41</sup> GREW - GRIFFITHS 1991, 49, Fig. 15. 140, 142.

<sup>42</sup> Published: VIŠIĆ-LJUBIĆ 2006, 164, Fig. 2.

<sup>43</sup> Published: VIŠIĆ-LJUBIĆ 2006, 164, Fig. 3, 4.

<sup>44</sup> GREW - GRIFFITHS 1991, 49, Fig. 14. 109, 110.

<sup>45</sup> GREW - GRIFFITHS 1991, 49, Fig. 15. 152-154.

<sup>46</sup> Published: VIŠIĆ-LJUBIĆ 2006, 164, Fig. 5.

<sup>47</sup> ŠEPAROVIĆ 2003, 221, 233, P. 2, 6; UNZ - DESCHLER-ERB 1997, 32-34, P. 43. 1138-1163, P. 44. 1164-1182; KOŠČEVIĆ 1991: 66, 67, P. XXVI, 365; NEDVED 1981: 180, Fig. 8. 316; SAGADIN 1979, 312, 313, P. 9. 15; OLDENSTEIN 1976, 211, 212, P. 74. 971; PETRU 1972, P. XCIII. 26; RITTERLING 1913, P. XI. 14, 20, 21; BEHRENS 1918, 28, Fig. 8. 1, 2; BEHRENS 1912, 87, Fig. 3. 15.

<sup>48</sup> IVČEVIĆ 2004, 166, P. 1. 1-5; luxury silver-plated variant found in research in 2000, see: ŠEPAROVIĆ 2003, P. 2.6.

<sup>49</sup> ŠEPAROVIĆ - URODA 2009, 43, cat. no. 55.

<sup>50</sup> BISHOP - COULSTON 2006, 107.

<sup>51</sup> GREW - GRIFFITHS 1991, 49.

<sup>52</sup> BISHOP - COULSTON 2006, 108; GREW - GRIFFITHS 1991, 61-65, Fig. 5-8; DESCHLER-ERB 1999, P. 19. 359; UNZ - DESCHLER-ERB 1997, P. 38-40.

and distribution of these buckles, it may be said that they were produced in a number of different workshops judging by their wide distribution as well as the mutual differences in types and craftsmanship.

The buckle with stud, which helped to hang a weapon such as a dagger or sword to the belt, dates to the first century. Such finds appear throughout the Roman Empire's territory, and most of them are from the first century, while they were rare in the Flavian era.<sup>53</sup> Two such buckles from Salona have been preserved: one entirely (cat. no. 4, P. 1. 4), but without the mount customarily found on these buckles, while the other is missing its stud (cat. no. 5, P. 1. 5), but based on the preserved portion one may conclude that they were almost identical, differing only slightly in their dimensions. Their decoration is simple, and the section between the stud and mount is triangular, with slightly concave inwardly drawn sides.<sup>54</sup> Given their formation, the only close analogy is from Gardun,<sup>55</sup> and one other simpler example was found in Vindonissa.<sup>56</sup>

Buckles with studs are relatively rare finds, particularly if compared with finds of belt buckles which are much more numerous, even though the opposite situation could be expected given that four such buckles were necessary to hang a dagger and sword. This fact is interpreted by the assumption that studs with loops were also used for the same purpose,<sup>57</sup> and a considerable number of these have been found at Roman military sites.<sup>58</sup> The use of studs with loops has not been entirely clarified. Since they are rather fragile and made of sheeted bronze, they were probably used to hold softer fabrics. There are a number of hypotheses concerning their purpose, but not one has been definitively proven.

Besides views that they were used to fasten the upper portions of clothing or as parts of the riding harness, it is also held that they were components of military aprons or belts,<sup>59</sup> to which knife straps or swords with belts were attached.<sup>60</sup> Larger examples were thought to be studs used in the packing of large loads (tents or transport sacks, or to fasten riding harness straps).<sup>61</sup>

<sup>53</sup> GREW - GRIFFITHS 1991, 51; UNZ - DESCHLER-ERB 1997, P. 45, 46. 1239-1270.

<sup>54</sup> MATEŠIĆ 2005, 107, P. 11. 142; IVČEVIĆ 2004, P. 1. 6; UNZ - DESCHLER-ERB 1997, P. 45. 1212, 1213.

<sup>55</sup> IVČEVIĆ 2010, 141, P. 1.2.

<sup>56</sup> DESCHLER-ERB 1997, P. 45. 1215.

<sup>57</sup> GREW, GRIFFITHS 1991, 51.

<sup>58</sup> WILD 1970, 148 ff.

<sup>59</sup> MÜLLER 2002, 43; DESCHLER-ERB 1999, 68.

<sup>60</sup> DESCHLER-ERB 1997, 29, Fig. 17c.

<sup>61</sup> WILD 1970, 145.

They are dated to the first century, and they were generally found in the military camps of the pre-Flavian and Flavian times,<sup>62</sup> while by the end of the first century they probably fell out of use.

Among the finds from Salona, the largest number belong to Wild's type VIII, present in both variants (VIIIa with hollow head shaped from hammered sheet bronze and a circular loop, VIIIb with a flat head and circular loop).

The group with single loop and circular convex head (cat. no. 6-11, P. 1. 6-11) belongs to type VIIIa in the typology developed by J.P. Wild.<sup>63</sup> Although Britannia is seen as the territory in which the stud with loop appeared, examples such the Salona pieces are also called the Vindonissa type due to their high presence in that military camp.<sup>64</sup>

Two examples (cat. no. 12, 13, P. 1. 12, 13) belong to type VIIIb, and they have also been dated to the first century, like the studs with double loops (cat. no. 14, P. 1. 14).

The bone examples under catalogue numbers 15, 16 and 17 (P. 1. 15, 16, 17), which were also used in the first century and fell out of use thereafter, are customary finds in military camps of pre-Flavian and Flavian times.<sup>65</sup> Since such finds have also been discovered at civilian sites, their use was not strictly military.<sup>66</sup>

The military apron mounts, two rectangular (cat. no. 18, 19, P. 1. 18, P. 2. 19) and one circular (cat. no. 20, P. 2. 20) are counted among the belt components from the first century. According to the latest thinking, it is believed that the apron did not play a protective role, rather it was decorative, so that during the movement of a large number of soldiers even an sound effect was created when the decorative mounts on the apron straps hit each other, and this, among other things, was supposed to frighten enemies; it may also have been an indication of status or, depending on its shape and decoration, it may have designated a specific unit.<sup>67</sup> There are no preserved images nor coating on one rectangular mount (cat. no. 18), while on the other (cat. no. 19) there are barely visible remains of tin coating. They may be generally dated to the first

<sup>62</sup> WILD 1970, 146.

<sup>63</sup> WILD 1970, 142, 143, Fig. 2.

<sup>64</sup> UNZ - DESCHLER-ERB 1997, P. 71. 2064 - 2087; VOIROL 2000, 27; WILD 1970, 143.

<sup>65</sup> DESCHLER-ERB 1997, P. 71. 2170-2119; DESCHLER-ERB 1999, P. 42. 809; RADMAN- LIVAJA 2004, P. 190-170; WILD 1970, 143.

<sup>66</sup> They belong to Wild type X, WILD 1970, 142, Fig. 2.

<sup>67</sup> BISHOP 1992, 101; BISHOP - COULSTON 2006, 109, 110.

<sup>68</sup> IVČEVIĆ 2004, P. 1.9; VOIROL 2000, P. 9. 71, 73; UNZ - DE-

century, during which aprons were worn.<sup>68</sup> Judging by the images on grave monuments<sup>69</sup> and the finds at some sites,<sup>70</sup> circular appliqués were most often placed on the straps. The mount under catalogue number 20 has a circular field in its central section bordered by a sculpted rib, within which there was probably a portrait applied in relief as was customary in the latter half of the first century, particularly during the reign of the Flavian dynasty.<sup>71</sup>

## ARMOUR

The serpentine chest hooks from a mail armour have been dated to the first, and possibly the early second century at the latest. Although this armour had been in use from the Republican era to Late Antiquity,<sup>72</sup> shoulder straps, meant as protection from downward blows, have been dated to the first century, while as of the early second century they began to be replaced with two breast-plates just below the neck,<sup>73</sup> so that during the second century chest-hooks fell entirely out of use. Thus mail chest-hooks, which are customary finds at military sites dating to the entire first century and the entire Flavian era, are absent from sites of the Antoninian era.<sup>74</sup> Normally their tips were shaped like animal heads: a ram or, more often, a serpent, and sometimes they bore inscriptions as well.<sup>75</sup> The two chest hooks from Salona belong to different types. The one under catalogue number 21 (P. 2. 21), which fastened the armour's right shoulder piece, would belong, according to the typology developed by E. Deschler-Erb, to type 2, characterized by a serpentine body with the head of a ram, snake or horned serpent at the tip.<sup>76</sup> On this example the serpentine body is adorned with incisions, while the head is that of a horned serpent. The example from the Tilurium military camp differs in the shape of its head, but it belongs to the same type,<sup>77</sup> while the examples with horned heads can be found in various sites of the Empire.<sup>78</sup>

SCHLER-ERB 1997: 52, P. 69,1984; OLDENSTEIN 1977, 191, 265, P. 59. 743.

<sup>69</sup> BISHOP 1992, 81- 91.

<sup>70</sup> Thus in Sisak, the circular belt strap rivets are far more numerous; RADMAN-LIVAJA,2004, 89.

<sup>71</sup> LIBRENJAK 2010, 83, cat. no. 57; RADMAN-LIVAJA 2004, 89; DESCHLER- ERB 1999, 47.

<sup>72</sup>RADMAN-LIVAJA 2004, 76, 77, notes 423.

<sup>73</sup> BISHOP - COULSTON 2006: Fig. 84.1; FEUGÈRE 2002, 152, Fig. 204.

<sup>74</sup> BISHOP - COULSTON 2006, 139.

<sup>75</sup> FEUGÈRE 2002, 101; FRANZIUS 1992, 362, Fig. 8.2; WIEGELS 1992, 384, Fig. 1, 387, Fig. 2.

<sup>76</sup>DESCHLER- ERB 1999, 38, note 158.

<sup>77</sup> IVČEVIĆ 2010, 140, P. 1. 3.

<sup>78</sup> RADMAN-LIVAJA 2004, 176, P. 27.131; UNZ - DESCHLER-ERB 1997, P. 35. 862.

The other example (cat. no. 22, P. 2. 22) has a thicker body and prominent rivets, and it differs somewhat and belongs to type 3 according to the Deschler-Erb typology,<sup>79</sup> while it fastened a mail armour's left shoulder piece.<sup>80</sup>

The hinge buckle (cat. no. 23, P. 2. 23) was used to connect the parts of a Corbridge A and B/C segmented armour,<sup>81</sup> and these are dated within the first century.<sup>82</sup> Since its mount was not preserved, there is no way to more closely classify it typologically, except to say that it may have belonged to type A i or ii according to the Thomas typology,<sup>83</sup> but due to the absence of the other mount, it has been classified as type Ai - indeterminate buckles (typologically). Among the armour parts, the most numerous at archaeological sites are buckles, mounts and tie-hooks (fittings),<sup>84</sup> which were made in several variants and decorated differently. Despite this, it is not possible, for the present at least, to ascertain the chronological development of these variants.<sup>85</sup>

On armour, shoulder-hinges were used to connect the upper shoulder-plates and the breast and shoulder-neck plates of Corbridge segmented armour. The example under catalogue number 24 (P. 2. 24) belongs to Thomas F vi type, for which it is typical of the external side to have three lobes at the top, while at the hinge the plate is cut square.<sup>86</sup> This example has a straight external edge, while most mounts of this type have this portion curved.<sup>87</sup>

## RIDING GEAR PARTS

Riding gear was decorated with metal fixtures, not only by giving the functional components of this gear a decorative dimension but also by adding exclusively decorative components, which contributed to the im-

<sup>79</sup> DESCHLER-ERB 1999, 38, P. 15. 269.

<sup>80</sup> RADMAN-LIVAJA 2004, 176, P. 27. 130; UNZ - DESCHLER-ERB 1997, P. 35. 859, 860, 863; BISHOP - COULSTON 2006, 96, Fig. 51.5.

<sup>81</sup> BISHOP 2002, 31-46.

<sup>82</sup> RADMAN-LIVAJA 2004, 83; VOIROL 2000, 14; KOŠČEVIĆ 1991, 67; SAGADIN 1979, 305.

<sup>83</sup> THOMAS 2003, 6.

<sup>84</sup> Since these were the most sensitive parts of an armor, they had to be repaired and replaced frequently; BISHOP 2002, 37.

<sup>85</sup> BISHOP 2002, 39.

<sup>86</sup> THOMAS 2003, 62, tip vi, 78, 79, fig. 51, 52.

<sup>87</sup> Similar to the Salona examples are those from Ivoševci (ŠEPAROVIC - URODA 2009, 38, fig. 39); Sisak (RADMAN-LIVAJA 2004, 180, P. 31); Broxtowa (THOMAS 2003, 78, fig. 51, 4); Rottweil (THOMAS 2003, 78, fig. 51, 37); Gardun (ŠEPAROVIC 2003, P. 3.6); Augsuta Raurica (DESCHLER-ERB 1999, P. 15.254); Vindonissa (UNZ - DESCHLER-ERB 1997, P. 34. 828-830); Longthorpe (FRERE - JOSEPH 1974, 47, 49, Fig. 25, 26, 17-20.



pression created by the rider's appearance. Riding gear depended on the social status of the rider, i.e. his military rank. Classification of a given item as a component of military gear, particularly when the circumstances of its discovery are not known, is aided by numerous similar finds from military camps, portrayals of horsemen on military grave monuments,<sup>88</sup> and descriptions of cavalry in the sources.<sup>89</sup> Based on the portrayals on the monuments, even if the gear on them is simplified or vaguely indicated, it nonetheless is possible to approximate the manner in which pendants were worn, and the social and military status of the bearer. Written sources are important because a great deal of data on military equipment, whether they directly or indirectly describe the methods for production and use of military gear, and through historical descriptions, legal documents, etc.

The riding gear used by the Romans was a combination of Italic and foreign elements, generally Celtic.<sup>90</sup> The sources for studying riding gear are iconographic and archaeological.<sup>91</sup> Its purpose was to fasten the saddle so that the rider could concentrate on combat unburdened. For this purpose the saddle straps were fastened to the horse's body using the leather straps, which had five connections – at the breast, two at the shoulder and two at the flanks.<sup>92</sup> It is precisely these metal components of the fasteners which are the most numerous archaeological finds. Among the Salona examples, the group of functional parts includes the bit cheek piece, junction loop, female strap fastener and strap terminal. Harness pendants and strap mounts are purely decorative elements.

Junction loops are among the most common riding gear finds, which should not be surprising given that each harness had a minimum of fifteen, and of-

ten more. The harness was connected with the help of hooks which were fastened to phalerae or connecting rings. The example from Salona (cat. no. 25, P. 2. 25) is closest to Bishop type 5.<sup>93</sup> They are generally dated to the first century, and they were in use in the second century as well.<sup>94</sup> Besides these permanent fasteners, the riding gear also had to have separable fasteners to make it easier to mount and remove it from the horse. By pulling the male fastener through the loop on the female fastener, the harness could be simply and quickly buckled.<sup>95</sup> These are generally dated to the first century,<sup>96</sup> and they were made in three variants: loop affixed to the body with hinge, loop and body forged in a single piece, and, most rarely, the type with a simple rectangular opening.<sup>97</sup> A female strap fastener (cat. no. 26, P. 2. 26) from Salona has been preserved; it was made by forging in a single piece, and its shape is most similar to Bishop type 6d.<sup>98</sup> It is decorated with engraved lines, and traces of silver plating are visible on its body. It was made without a hinge, in a single piece. These are somewhat more rare than the two-piece examples.<sup>99</sup>

The connection at the horse's shoulder and flank may have had a decorative strap which ended in a strap terminal (cat. no. 27, P. 2. 27). The terminal knob is missing from the Salona example, while on its front a thick layer of tin or silver plating has been preserved. The shape is unusual, similar to Bishop type 6.<sup>100</sup>

A bit cheek piece (cat. no. 28, P. 2. 28) which was used to hold the reins and straps around the head and also the bit, has been entirely preserved. Only the triangular loop to which the harness strap was tied is missing. Bit cheek pieces of this shape are not common finds, and they were dated based on the find circumstances to the first,<sup>101</sup> end of the first and early second,<sup>102</sup> and second centuries.<sup>103</sup>

<sup>88</sup> BISHOP 1988, 68-91, provides and analyzes some grave monuments; cavalry monuments see also: GABELMANN 1973 and JENKINS 1985, 151, note 17. Several military monuments depicting horsemen have been preserved in the territory of Roman Dalmatia – both types of monuments (those depicting the rider attacking an opponent and those which in the lower part of the stela show a servant leading the horse). Unfortunately, due to the poor state of preservation of these monuments, the riding gear cannot be seen very well. An example of the first type is a stela from Narona, CAMBI 1980, 136, Fig. 5; a stela from Trilj, CAMBI 2008, 102, Fig. 27; a fragment of the stela of Marcus Percenius from Trilj, TONČINIĆ 2011, 79, cat. no. 48; stela depicting a horse led by a servant, for example that of Marcus Elvadius from Košuta at Gardun, SCHÖNAUER 2001, 256-259, P. X.

<sup>89</sup> BISHOP - COULSTON 2006, 39-42.

<sup>90</sup> BISHOP - COULSTON 2006, 121; RADMAN-LIVAJA 2004, 101; FEUGÈRE 2002, 134-136; DIXON - SOUTHERN 1992, 67, 68; BISHOP 1988, 105.

<sup>91</sup> BISHOP 1988, 68-91.

<sup>92</sup> BISHOP 1988, 105; RADMAN-LIVAJA 2004, 104.

<sup>93</sup> BISHOP 1988, 157, Fig. 50.

<sup>94</sup> RADMAN-LIVAJA 2004, 107; ŠEPAROVIĆ 2003, P. 5. 7; DESCHLER-ERB 1999, P. 36. 681; UNZ - DESCHLER-ERB 1997, P. 62. 1744 - 1747; FRANZIUS 1992, 369, Fig. 12. 5

<sup>95</sup> DESCHLER-ERB 1999, 63, Fig. 67.

<sup>96</sup> DESCHLER-ERB 1999, 63, 64.

<sup>97</sup> BISHOP 1988, 103.

<sup>98</sup> BISHOP 1988, 167, Fig. 54.

<sup>99</sup> VOIROL 2000, 60, P. 18. 177; VANDEN BERGHE, 1996, 60, Fig. 1.32; RABEISEN 1990, 86, Fig. 9. 3.

<sup>100</sup> BISHOP 1988, 164, Fig. 52.

<sup>101</sup> UNZ - DESCHLER-ERB 1997, P. 68. 1960.

<sup>102</sup> DESCHLER-ERB 1999, 65, P. 39. 724.

<sup>103</sup> AURRECOECHEA FERNÁNDEZ 1996, 137, Fig. 1.

The strap mount is deemed to have had an exclusively decorative role. The example here (cat. no. 29, P. 2. 29) may be classified as Bishop type 1d, and an almost identical example was found in the Tilurium camp,<sup>104</sup> and they have been found in other parts of the Empire.<sup>105</sup>

Riding harness pendants did not serve exclusively as decorations, rather their form, details or the images on them added a symbolic meaning. The protective role was most important, as they were meant to ward off evil and misfortune. The symbolic meaning of riding harness pendants can only be assumed, as belief in the power of symbols was very widespread in the Roman era. Pendants probably had this protective role for both the horse and rider, particularly the lunular and phaloid pendants, and the power of these two symbols was enhanced on some types by the additional portrayal of a "figa fist".<sup>106</sup>

It is possible that they were emphasized as indications of military prowess or conferred as symbols of bravery, but probably as informal prizes in internal competitions, such as sporting games.<sup>107</sup> There are views according to which they showed the status of the rider, or his military rank, as well.<sup>108</sup>

The earliest pendants appeared in the Augustan era, and they persisted into the second century.<sup>109</sup> By the latter half of the second century pendants fell out of fashion, and they were replaced by decorative sequins, to which the absence of finds in military graves testify, as do images on stone monuments.<sup>110</sup>

In recent years, sixteen Salona pendants which decorated riding harnesses have been published,<sup>111</sup> and they belong to different types.

Two examples from Salona belong to the three-piece foliate pendants which Bishop classified as type 1 in his typology.<sup>112</sup> A luxurious pendant<sup>113</sup> with the re-

<sup>104</sup> IVČEVIĆ 2004, 166, P. 1. 17.

<sup>105</sup> UNZ - DESCHLER-ERB 1997, P. 63. 1809; FRANZIUS 1992, 369, Fig. 12. 1; BEHRENS 1918, 28, Fig. 8, 9; RITTERLING 1913, T. XIII, 16, 17.

<sup>106</sup> The lunula is a powerful protective symbol: phallus-shaped pendants were worn to ward off evil, grape-vine leaves were fertility symbols, while birds in this context were associated with the Celtic war god iconography. "figa" fists were known since ancient times as a gesture with protective meaning, and only in the Middle Ages did it become a symbol of vice and insults, KOHLERT-NEMETH 1988, 68; KOŠČEVIĆ 2003, 30, 32; IVČEVIĆ 2003, 138.

<sup>107</sup> LAWSON 1978, 152.

<sup>108</sup> VOIROL 2000, 22.

<sup>109</sup> BISHOP 1988, 96.

<sup>110</sup> LAWSON 1978, 153.

<sup>111</sup> IVČEVIĆ 2008, IVČEVIĆ, 2009.

<sup>112</sup> BISHOP 1988, 96, 142, Fig. 43, 145, Fig. 44.

<sup>113</sup> Published: IVČEVIĆ 2009, 87, cat. no. 4.

mains of silver-plating over the entire surface, and the engraved plant motifs were inlaid with niello. The dimensions and quality of rendering of the Salona example suggest that it served as a decoration on the chest of a horse.<sup>114</sup>

A smaller pendant<sup>115</sup> belongs to the same type, which completely corresponds to the Bishop 1 type according to its basic features.<sup>116</sup>

The pendant with elliptical body ending in palmette shape<sup>117</sup> belongs to Bishop type 2, variant 2a, like the pendant with ellipsoid body and cast loop and palmette-like ending,<sup>118</sup> although its oblong body makes it closer to Bishop type 5. One example<sup>119</sup> reflects a tie to the so-called bird-shaped pendants<sup>120</sup> (Bishop 7), whose production began in the second quarter of the first century. This tie manifests itself primarily in the formation of the loop, which is bent forward and is made in the shape of stylized bird's head. Despite the shape of the top of the loop and the sharper line of the body, the example here may be classified as type 5e,<sup>121</sup> which has been dated to the mid-first and the entire second century.<sup>122</sup> Typologically it is between the aforementioned types.

Five tear-shaped pendants<sup>123</sup> belong to Bishop type 5, variant 5e. The appearance of these pendants has been placed in the Claudian era, and they persisted until the end of the second century.<sup>124</sup> All pendants from this group are unadorned, and they differ from one another by the shape of their plates.

<sup>114</sup> Lawson divided them by width, so those approximately 7 cm wide probably served as the central decoration on the forehead or chest, those 5 cm wide were hung on the straps along the body, and those approximately 2 cm wide hung on the straps on the horse's head; LAWSON 1978, 153.

<sup>115</sup> Published: IVČEVIĆ 2009, 86, cat. no. 3.

<sup>116</sup> BISHOP 1988, 96.

<sup>117</sup> Published: IVČEVIĆ 2008, 218, P. I. 1.

<sup>118</sup> Published: IVČEVIĆ 2008, 218, P. I. 2.

<sup>119</sup> IVČEVIĆ 2008, 218, P. I. 3.

<sup>120</sup> This tie manifests itself primarily in the formation of the loop, which is bent forward and is made in the shape of stylized bird's head. Examples from Burnum and Benkovac (NEDVED 1981, 156, 157, Fig. 2. 68, 69) show similarities, but their bodies are not oblong to the extent of those from Salona, while the closest analogy to the Salona piece is an example from the Tilurium military camp near Salona (ŠEPAROVIĆ 2003, P. 5, 1).

<sup>121</sup> BISHOP 1988, 147, Fig. 45. 5e.

<sup>122</sup> RADMAN-LIVAJA 2004, 113.

<sup>123</sup> Published: IVČEVIĆ 2008, 218, 219, P. I. 4, 5, P. II. 6, 7, 8.

<sup>124</sup> Voirol dated them from the Claudian to Trajanic eras: VOIROL 2000, 24; Bishop placed their appearance in the Claudian era: BISHOP 1988, 96; RADMAN-LIVAJA 2004, 113.

Another heart-shaped pendant belongs to the same type, Bishop 5,<sup>125</sup> corresponding to variant 5a.<sup>126</sup>

The tear-shaped pendant also belongs to Bishop type 5<sup>127</sup> although it deviates from pendants of that type in some details.<sup>128</sup> The closest typological definition of this pendant is the early tear-shaped form, i.e. the transitional form from the three-piece foliate to the tear-shaped variety.

A powerful apotropaic meaning was accorded to lunular-phalloid pendants.<sup>129</sup> Lunular pendants are a frequent find at Roman-era sites. They appeared throughout the era of Emperor Augustus and the entire first century.<sup>130</sup> The lunula had protective symbolism and it was probably one of the reasons why this form was so widely adopted.<sup>131</sup> The custom of decorating riding harnesses with such pendants had already existed among Celtic horsemen, while as of the Augustan era Roman horsemen also used these pendants.<sup>132</sup>

In his pendant typology, M. C. Bishop particularly classified lunular pendants (type 9), and two groups of lunular-phalloid pendants: type 6, on which the lunula is turned downward, and type 10, with the lunula turned upward.<sup>133</sup>

Among the four published lunular pendants, one belongs among the customary forms often found at military and civilian sites,<sup>134</sup> and according to Bishop's pendant typology it would belong to type 9d. Three pendants belong to the lunular-phalloid pendants, and they correspond to different variants of type 10. One belongs to the more numerous variant 10h,<sup>135</sup> which

has generally been dated to the first century, while the remaining two belong to the more rarely present variants 10c and 10r.<sup>136</sup>

Here two as-yet unpublished examples are presented which belong among the lunular-phalloid pendants. The one listed under cat. no. 30 (P. 2. 30) is identical to an already published pendant fragment from Salona which belongs to type 10c. These are pendants with lunula turned upward and ends rendered in the shape of a phallus on one and a figa fist on the other end, and with pendant on the lower side of the lunula. Given their great similarity, one may assume that they belonged to the same set. It may be specified as Bishop type 10c, based on the lower portion of the pendant shaped like a bull's head rendered in relief, with azure glass insets where the eyes should be. Such pendants are rare,<sup>137</sup> attributed to a northern Italic workshop and dated to the first two thirds of the first century.<sup>138</sup>

The other lunular-phalloid pendant (cat. no. 31, P. 2. 31) also features a bull's head, but it is between the arms. Such pendants are also dated to the first century.<sup>139</sup>

The Salona military materials from the first century are interesting for a number of reasons, primarily in terms of typology, as military materials from a civilian site, and also because until recently greater attention was accorded to the Salona military gear of Late Antiquity, generally notched belt gear and more luxurious equipment, and the impression was created that gear from this period was better represented at the site. Salona in Late Antiquity was a large and important centre, and it experienced something of a blossoming and restoration, so that a higher quantity of such materials seemed logical. It should also be noted that the orientation of researchers to Late Antiquity in the past also contributed to this impression. However, no final conclusions should be drawn on the basis of such a summary presentation of materials that were largely discovered in older research, and the fact remains that the military gear from the period preceding Late Antiquity is at a minimum just as present at the site, particularly that dating to the first century.

<sup>125</sup> Published: IVČEVIĆ 2008, 89, cat. no. 6.

<sup>126</sup> BISHOP 1988, 147, Fig. 45; 5a RADMAN-LIVAJA 2004, 113.

<sup>127</sup> Published: IVČEVIĆ 2008, 88, cat. no. 5.

<sup>128</sup> First and foremost, the concentric circle decoration, which is not customary, and the prominent spherical decoration on the bottom, which if they even exist on Bishop 5 pendants are much simpler and smaller. The prominent straight shoulder recalls type 7, but some characteristics are lacking for it to be ascribed to this type.

<sup>129</sup> KOHLERT-NÉMETH 1988, 66; KOŠČEVIĆ 2003, 30, 32.

<sup>130</sup> BISHOP 1988, 98.

<sup>131</sup> BISHOP 1987, 118.

<sup>132</sup> DESCHLER-ERB 1999, 55.

<sup>133</sup> BISHOP 1988, 98.

<sup>134</sup> Published: IVČEVIĆ 2009, 84, cat. no. 1.

<sup>135</sup> A lunula turned upward with ends shaped like a good luck fist and a phallus, a ring-shaped loop for hanging, and, on the lower side, a phalloid pendant and three loops for hanging the pendant. An initial examination of this example reveals its lack of refinement, and it is possible that this is an unfinished or poorly cast article; published: IVČEVIĆ 2009, 84, cat. no. 1.

<sup>136</sup> Published: IVČEVIĆ 2008, 219, P. II. 9, 10.

<sup>137</sup> UNZ-DESCHLER-ERB 1997, P. 58. 1630; FRANKEN 1996, 107, Fig. 204; BISHOP 1988, 155; DEIMEL 1987, P. 78. 1a.

<sup>138</sup> KOŠČEVIĆ 1991, 45.

<sup>139</sup> DESCHLER-ERB 1999, 55; KAUFMANN-HEINIMANN 1998, 105.

## CATALOGUE<sup>140</sup>

1. inv. no. AMS Kk - 896, sword hilt, Salona, bone, end of 1<sup>st</sup> cent. BC - end of 1<sup>st</sup> cent. AD, length 9.6 cm, dia. 3.35 x 2.35, bone sword hilt, decorated with engraved diagonal lines.

References: BISHOP - COULSTON, 2006, 157. Fig. 98. 2, 3; GOSTENČNIK, 2005, p. 43. 3; OLDENSTEIN 1977, P. 10. 18; FINGERLIN 1972, 226, Fig. 13. 12; BEHRENS 1912, 108, Fig. 20. 1.

2. inv. no. AMS H-3505, buckle tang, Salona, 1<sup>st</sup> cent., bronze, length 4,3 cm, width 1,75 cm, lily-shaped buckle tang

References: IVČEVIĆ 2004, 166, P. 1.5; SIMPSON 2000, P. 25.20, 23; DEIMEL 1987, P. 77. 2 - 4.

3. inv. no. AMS H-3388, belt buckle mount, Salona, 1<sup>st</sup> cent., bronze, niello, length 5.2 cm, height 1.8 cm, thickness 0.1 cm, rectangular mount decorated with engraved motifs, laurel branch in middle with series of small crosses at its top and bottom, motifs niellated.

References: RADMAN-LIVAJA 2004, 35, P. 35. 206; DESCHLER-ERB 1999, P. 19. 359; GREW - GRIF-FITHS 1991, Fig. 7. 27.

4. inv. no. AMS H- 1645, buckle with stud, Salona, 1<sup>st</sup> cent., bronze, length 3.9 cm, width 2.6 cm, dia. of head 1.8 cm, stud's head is flat, no decorations preserved.

References: IVČEVIĆ 2010, 141, P. 1.2; MATEŠIĆ 2005, 107, P. 11. 142; IVČEVIĆ 2004, P. 1. 6.

5. inv. no. AMS H - 4890, buckle with stud, Salona, 1<sup>st</sup> cent., bronze, length 3.3 cm, width 2.3 cm, stud's head not preserved.

References: see cat. no. 4.

6. inv. no. AMS H - 3195, stud, Salona, 1<sup>st</sup> cent., bronze, length 4 cm, dia. of head 2.65 cm, stud with single loop and circular convex head.

References: DESCHLER-ERB 1999, P. 41. 791-797; UNZ, DESCHLER-ERB 1997, P. 71. 2066-2084; DE-IMEL 1987, P. 81. 7-10; UNZ 1974, Fig. 14. 178-180;

7. inv. no. AMS H - 3267, stud, Salona, 1<sup>st</sup> cent., bronze, length 3.3 cm, dia. of head 2.5 cm, stud with single loop and circular convex head.

References: see cat. no. 6.

8. inv. no. AMS H - 1911, stud, Salona, 1<sup>st</sup> cent., bronze, length 3.35 cm, dia. of head 2.4 cm, stud with single loop and circular convex head.

References: see cat. no. 6.

<sup>140</sup> The items were conserved by Helena Tresić - Pavičić, the sketches were done by Branko Pender, all items are from Archaeological museum in Split.

9. inv. no. AMS H - 2856, stud, Salona, 1<sup>st</sup> cent., bronze, length 3.3 cm, dia. of head 2.8 cm, stud with single loop and circular convex head.

References: see cat. no. 6.

10. inv. no. AMS H - 2432, stud, Salona, 1<sup>st</sup> cent., bronze, length 1.9 cm, dia. of head 1.3 cm, stud with single loop and circular convex head.

References: see cat. no. 6.

11. inv. no. AMS H - 1353, stud loop, Salona, 1<sup>st</sup> cent., bronze, length 2.4 cm, external dia. 1.4 cm.

References: see cat. no. 6.

12. inv. no. AMS H - 3360, stud, Salona, 1<sup>st</sup> cent., bronze, length 2.5 cm, dia. of head 1.3 cm, stud with single loop and flat head with engraved concentric circles.

References: RADMAN-LIVAJA 2004, 35, P. 40. 256-261; UNZ - DESCHLER-ERB, 1997, P. 71. 2062, 2063; UNZ 1972, Fig. 4. 33.

13. inv. no. AMS H - 3741, stud, Salona, 1<sup>st</sup> cent., bronze, length 3.2 cm, dia. of head 1.6 cm, stud with single loop and flat head with engraved concentric circles.

References: see cat. no. 12.

14. inv. no. AMS H - 2422, double stud loop, Salona, 1<sup>st</sup> cent., bronze, length 2.05 cm, width 2.1 cm

References: MÜLLER 2002, P. 44. 485; DEIMEL, 1987, P. 81. 1-6; UNZ 1972, Fig. 4. 30

15. inv. no. AMS Kk - 393, stud with loop, Salona, 1<sup>st</sup> cent., bone, length 3.5 cm, dia. of head, 2.5 cm, width of loop 2.25 cm, stud's head decorated with engraved lines, loop triangular with semi-circular opening, stud made of single piece of bone.

References: RADMAN-LIVAJA 2004, 190, P. 41. 270; DESCHLER-ERB 1999, P. 42. 809; UNZ - DESCHLER-ERB 1997, P. 71. 2114-2119.

16. inv. no. AMS Kk - 392, stud with loop, Salona, 1<sup>st</sup> cent., bone, length 2.75, dia. of head 1.65 cm, width of loop 1.4 cm, stud's head decorated with engraved lines, loop triangular with circular opening, stud made of single piece of bone.

References: RADMAN-LIVAJA 2004, 190, P. 41. 270; DESCHLER-ERB 1999, P. 42. 809; UNZ - DESCHLER-ERB 1997, P. 71. 2111-2112.

17. inv. no. AMS Kk - 601, stud with loop, Salona, 1<sup>st</sup> cent., bone, length 2.7 cm, dia. of head 1.6 cm, width of loop 1.4 cm, stud's head decorated with engraved lines, loop triangular with circular opening, stud made of single piece of bone.



References: DESCHLER-ERB 1999, P. 42. 809; UNZ - DESCHLER-ERB 1997, P. 71. 2111-2112.

18. inv. no. AMS H - 720, military apron mount, Salona, 1<sup>st</sup> cent., bronze, length 2.8 cm, width 1.7 cm, rectangular military apron mount, four prongs on rear side.

References: IVČEVIĆ 2004, P. 1.9; VOIROL 2000, P. 9. 71, 73; UNZ - DESCHLER-ERB 1997: 52, P. 69,1984; OLDENSTEIN 1977, 191, 265, P. 59. 743.

19. inv. no. AMS H - 1610, military apron mount, Salona, 1<sup>st</sup> cent., bronze, tin?, length 3 cm, width 1.55 cm, rectangular military apron mount, visible remains of coating on surface, four tangs on rear side.

References: see cat. no. 18.

20. inv. no. AMS H - 2451, military apron mount, Salona, 1<sup>st</sup> cent., bronze, dia. 2.9 cm, round rivet, rib and recessed circular field on front, perhaps for appliqué, prong preserved on rear side.

References: UNZ - DESCHLER-ERB 1997, P. 72. 2281; UNZ 1974, 42, Fig. 14. 187.

21. inv. no. AMS H - 658, mail chest-hook, Salona, 1<sup>st</sup> cent., bronze, length 6.75 cm, chest-hook for right shoulder of armour, serpentine body decorated with incisions, ends with horned serpent's head.

References: RADMAN-LIVAJA 2004, 176, P. 27.131; UNZ - DESCHLER-ERB 1997, P. 35. 862.

22. inv. no. AMS H - 2191, mail chest-hook, Salona, 1<sup>st</sup> cent., bronze, length 4.7 cm, fragment of chest-hook, single rivet preserved.

References: BISHOP - COULSTON 2006, 96, Fig. 51.5; RADMAN-LIVAJA 2004, 176, P. 27. 130; DESCHLER-ERB 1999, 38, P. 15. 269; UNZ - DESCHLER-ERB 1997, P. 35. 859, 860, 863.

23. inv. no. AMS H - 3845, segmented armour buckle, Salona, 1<sup>st</sup> cent., bronze, length 3.65 cm, width of mount 1.35 cm, dia. of buckle frame 2 cm.

References: SIMPSON 2000, P. 25. 7; UNZ - DESCHLER-ERB 1997, 30, 31, P. 33, P. 34. 783-790; KOŠČEVIĆ 1991, 67, P. XXV. 362, 363; NEDVED 1981, 180, Fig. 8, 317; PETRU 1972, P. XXIX, grave 450, 22; FINGERLIN 1972, Fig. 11. 8; BEHRENS 1914, 68, Fig. 2. 7, 8; RITTERLING 1913, P. XI, 12,13, 15-19; BEHRENS 1912, 87, Fig. 3. 13.

24. inv. no. AMS H - 2463, segmented armour mount, Salona, 1<sup>st</sup> cent., bronze, length 2.2 cm, width 2.4 cm, armour mount with four preserved rivets, one missing.

References: ŠEPAROVIĆ - URODA 2009, 38, Fig. 39; RADMAN-LIVAJA 2004, 180, P. 31; THOMAS 2003, 78, Fig. 51. 4; THOMAS 2003, 78, Fig. 51. 37,

ŠEPAROVIĆ 2003, P. 3. 6; DESCHLER-ERB 1999, P. 15. 254; UNZ - DESCHLER-ERB 1997, P. 34. 828-830; VANDEN BERGHE 1996, 60, Fig. 1. 3.5; FRERE - JOSEPH 1974, 47, 49, Fig. 25, 26. 17-20.

25. inv. no. AMS H - 1727, junction loop, Salona, 1<sup>st</sup>/2<sup>nd</sup> cent., bronze, silver or tin?, length 4.2 cm, width 1.5 cm, visible remains of silver or tin plating on surface, three prongs on rear side.

References: MÜLLER 2002, P. 52. 578; UNZ - DESCHLER-ERB 1997, P. 61. 1675, 1676.

26. inv. no. AMS H - 3499, female strap fastener, Salona, 1<sup>st</sup> cent., bronze, silver or tin?, length 6.1 cm, width 1.9 cm, visible remains of silver or tin plating on loop, engraving decoration on other end.

References: UNZ - DESCHLER-ERB 1997, P. 64. 1842; VANDEN BERGHE 1996, 60, Fig. 1. 3.2; RABEISEN 1990, 86, Fig. 9. 3.

27. inv. no. AMS H - 833, strap terminal, Salona, 1<sup>st</sup> cent., bronze, silver or tin?, length 5.4 cm, width 1.2 cm, terminal knob missing, thick layer of tin or silver plating preserved on front.

References: UNZ - DESCHLER-ERB 1997, P. 63. 1770; FRERE - JOSEPH 1974, 53, Fig. 28.45.

28. inv. no. AMS 28. H-4691, bit cheek piece, Salona, 1<sup>st</sup>/beginning 2<sup>nd</sup> cent., bronze, height 6.1 cm, width 7.3 cm, loop missing.

References: DESCHLER-ERB 1999, 65, P. 39. 724; UNZ - DESCHLER-ERB 1997, P. 68. 1960.

29. inv. no. AMS H - 893, strap mount, Salona, 1<sup>st</sup> cent., bronze, length 6 cm, width 1 cm, mount has three small rivet holes.

References: IVČEVIĆ, 2004, 166, P. 1. 17; UNZ - DESCHLER-ERB 1997, P. 63. 1809; FRANZIUS 1992, 369, Fig. 12. 1; BEHRENS 1918, 28, Fig. 8. 9; RITTERLING 1913, P. XIII, 16, 17.

30. inv. no. AMS 40694, lunular-phalloid pendant, Salona, first two thirds of 1<sup>st</sup> cent., bronze, height 7.6 cm, width 8.5 cm, lunular pendant on which lunula ends with phallus and "figa" fist, bull's head pendant on lower side.

References: IVČEVIĆ 2008, P. II, 9; UNZ - DESCHLER-ERB 1997, P. 58. 1630; FRANKEN 1996, 107, Fig. 204; DEIMEL 1987, P. 78. 1a.

31. inv. no. AMS H- 2468, lunular-phalloid pendant, Salona, 1<sup>st</sup> cent., bronze, height 3.4 cm, width 5 cm, preserved central portion of pendant shaped like bull's head and right part of lunula which ends in "figa" fist.

References: DESCHLER-ERB 1999, P. 27. 549; KAUFMANN-HEINIMANN 1998, 105, cat. no. 289.

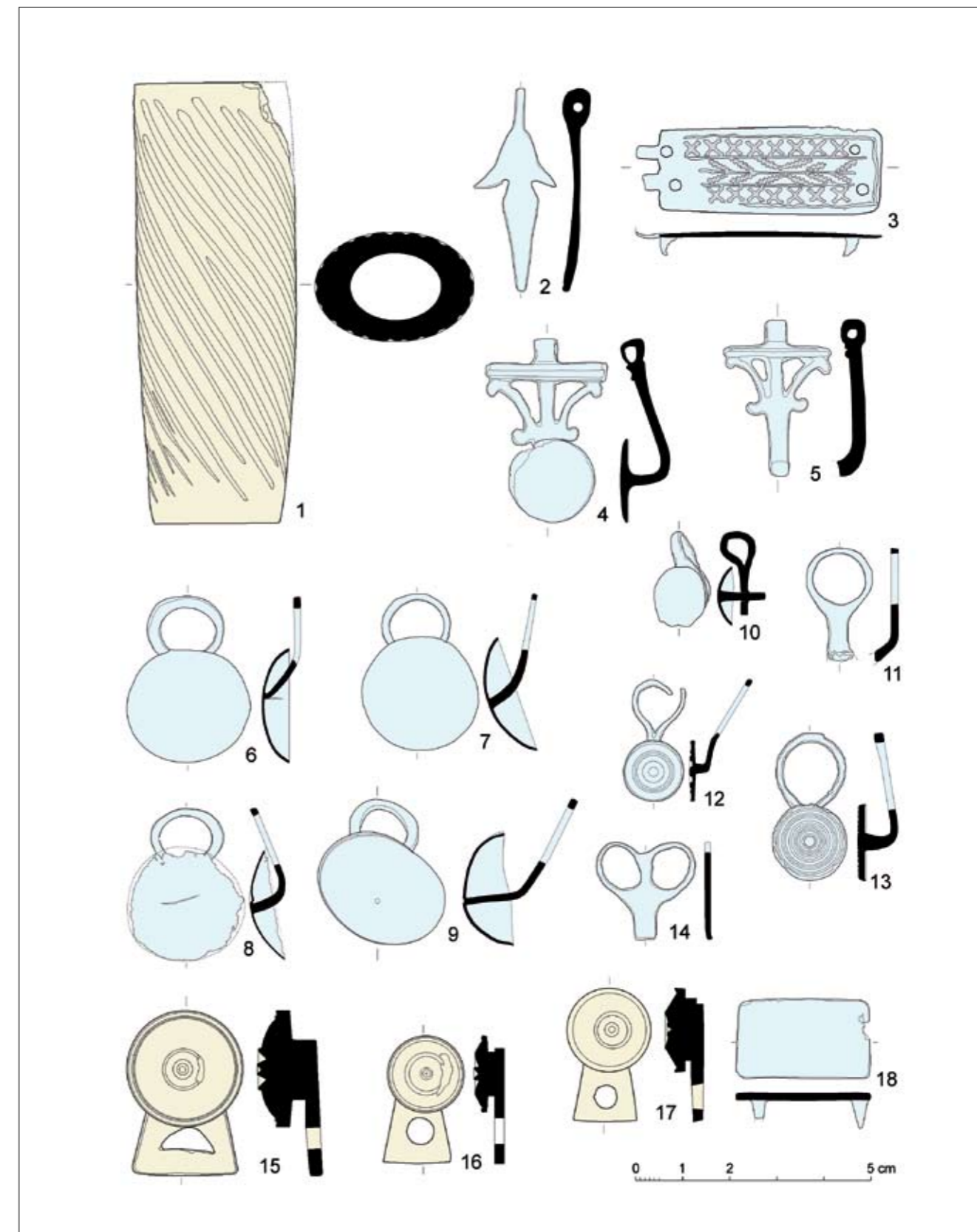
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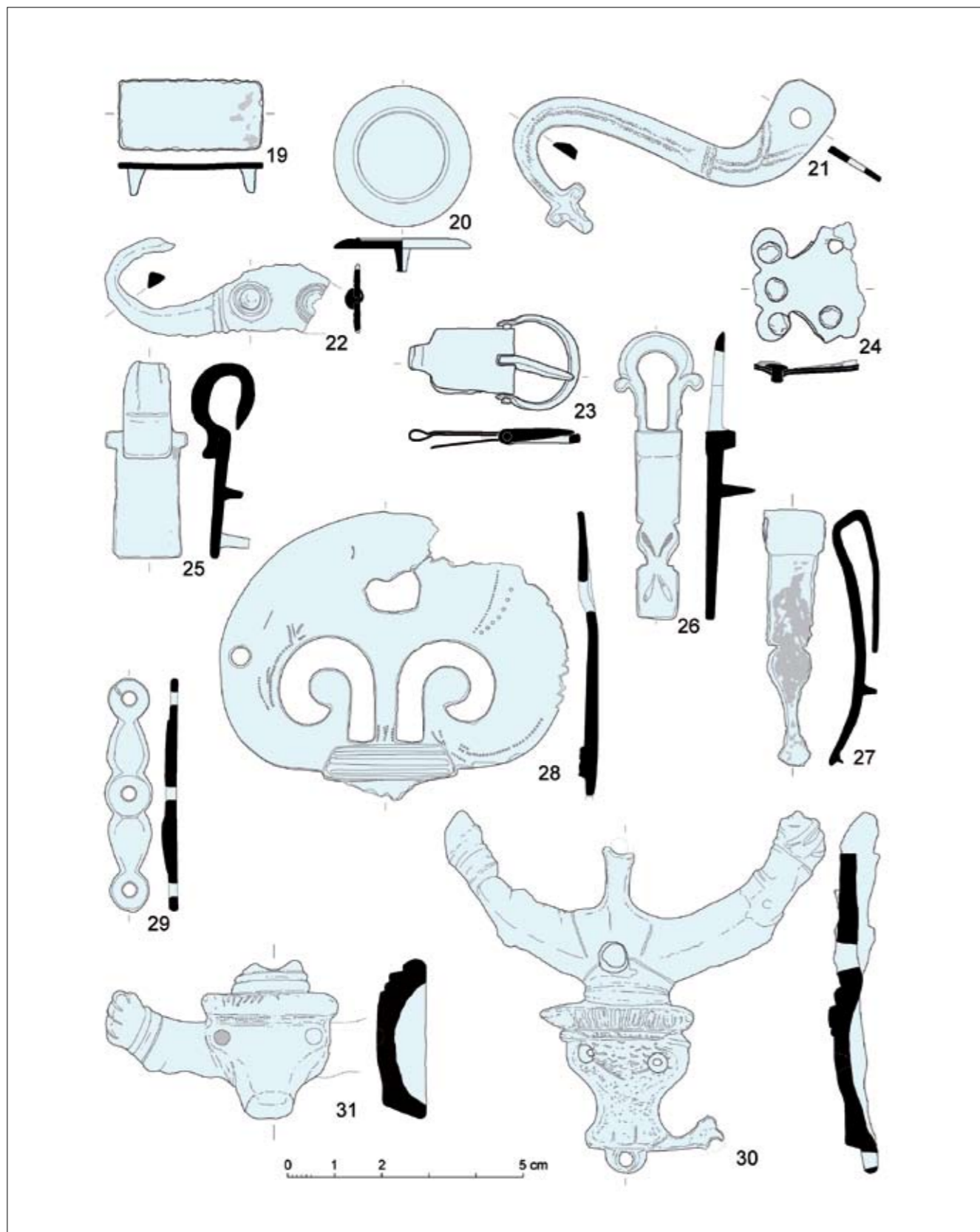
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P. 1 / Cat. 1-18



P. 2 / Cat. 19-31

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## A THEORETICAL APPROACH TO ROMAN MILITARY BELTS

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As suggested in the title, in this paper I would like to concentrate on a theoretical aspect of military belts; namely the question of how we can define a set of decorated belt mounts as having originally belonged to a military belt. In Roman archaeology, the term military belt is regularly used for any belt decorated with elaborate metal mounts. In fact, these mounts are seen as distinguishing a common leather belt - which could have been worn by anybody - from a military belt worn only by soldiers. While this is a reasonable working assumption, it does carry a theoretical sting: many finds of belt mounts are made without an obvious military connection.

Most finds of metal belt pieces were made individually, the pieces having been lost or broken and either thrown away or put aside for recycling in antiquity.<sup>1</sup> Loose finds of belt mounts from forts or legionary camps abound and finds from the surrounding *vici* and *canabae legionis*, the refuse dumps and nearby cemeteries of those military installations are common and only to be expected.<sup>2</sup>

<sup>1</sup> While re-melting old artefacts for their metal was common practice in antiquity (and later), some large military waste dumps prove that the Roman army was not always so thrifty. Examples of such waste dumps are the river dump of Alphen aan de Rijn (NL) and the 'Schutthügel' of Vidonissa (CH). In the latter, almost 500 belt pieces were found. See UNZ - DESCHLER-ERB 1997.

<sup>2</sup> The belt finds from Vindonissa include finds from the legionary camp, the *canabae legionis* and the refuse dump (see UNZ - DESCHLER-ERB 1997). Examples from auxiliary forts, the *vici* of these forts and from cemeteries are known from many places as well (see for instance Kronberger 1997, Kat. Nr. 150; Gschwind 2004, Kat. Nr. C386\* and Krecovič 1995, Abb. 5, 1).

Finds were also made in civilian settlements not directly connected with legionary camps or auxiliary forts but situated in what might be termed the "Limes zone", the direct hinterland of the Limes.<sup>3</sup> While Nicolay interpreted them as representing the weapons taken home by Veterans, a large number may well have been lost by active soldiers patrolling the area or building temporary camps as an exercise.

Finds without a direct military connection come from civilian settlements located in the hinterland far away from any military installation, others from rivers, lakes or bogs.<sup>4</sup> But some of the most prominent examples are belt mounts found in graves in cemeteries without a military connection.<sup>5</sup>

There are many valid explanations for the appearance of individual belt mounts in non-military contexts - some of them were presented at the XIII Roman Military Equipment Conference 2001 in Brugg (CH).<sup>6</sup> But the question remains: How do we know if these are really mounts from military belts? Is there any law or

<sup>3</sup> NICOLAY 2007.

<sup>4</sup> Villa: Kerkrade, NL (see HOSS - VAN DER CHIJS 2005, Abb. 7.9); City: Augst, CH (see DESCHLER-ERB 1999, Kat. Nr. 332); Hinterland: Maria Saal, AU (see Fundberichte Österreich 28, 1989, Abb. 708) and Greater Kelco Cave, GB (see DEARNE 1990, Abb. 1), wet contexts: Lake near Wimbourne, GB (see GREW - GRIFFITH 1991, Kat. Nr. 63) and Vimose bog, DK (see JØRGENSEN et al. 2003, Kat. Nr. 6.10).

<sup>5</sup> Three of the more famous examples are the belt finds from the Lyon (F) grave (see WUILLEUMIER 1952), from Neuburg an der Donau, D (see HÜBNER 1963) and from Lechința de Mureș, RO (see PETCULESCU 1995).

<sup>6</sup> DESCHLER-ERB 2002.