

Roman Military Equipment in Dacia in the First Century A.D.

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The first Roman military objects penetrated Dacia already before the beginning of the second century A.D., when the Romans conquered the kingdom of Decebalus.

If it is possible that some Roman weapons arrived in Dacia as early as the middle of the first century B.C. when the Dacians interfered in the Roman civil wars, so far there is no example of Roman military objects in Dacia which can be dated prior to the Augustan times. So, discussing the Roman weapons in Dacia in the first century A.D., one can analyse all the bearings of this particular kind of "imports" in the Dacian civilization before the Roman conquest.

In opposition with the frontiers of the Roman province of Dacia, the boundaries of *Dacia libera* are not so easy to define. Anyway, in the period of time under discussion, Dacia extended in the mountainous land north of the Lower Danube, that is in today's Romanian regions of Banat and Transylvania and in the hills of Wallachia and Moldavia. Besides these regions, the other territories included in Dacia are both variable in time and difficult to specify. Thus trying to avoid false specifications I shall deal with the Roman military objects in the northern Danubian parts of contemporary Romania.

As in other territories in the vicinity of the Roman Empire, the Roman equipment have been mainly discovered in temporary Roman camps or in native contexts such as graves and votive offerings mostly found in water deposits. Finally, there are the objects deposited in native sites.

From the Augustan times until the end of the first century A.D. the Romans organized many military campaigns north of the Danube against the Dacians. Consequently, there must be a large number of temporary Roman camps in Dacia. Unfortunately, at present, there is no programme of aerial reconnaissance of the Roman temporary camps in Romania and we know only few of them, all situated in the Orăștie mountains. These camps were erected during the wars between Trajan and Decebalus, in A.D. 101-102 and 105-106, that is beyond the limits of my research. Besides, they have not been excavated, except for one small trial excavation, and thus they have not yet produced any military equipment.

In the period of time under discussion we do not know Dacian graves since, like some continental Celtic tribes, and probably being influenced by the latter, the Dacians have passed to the so-called "discreet burials", which had left no traces discernible by archaeological methods and consequently are unknown to us¹.

As a continental people the Dacians did not venerate the small lakes and bogs from their country. The Danube east of the Iron gates has not been dradged systematically and thus no water deposits of any period of time were found.

So it remains only the last source of evidence for the study of Roman military equipment in Dacia libera, namely the site deposits.

I shall not include among the military equipment I deal with the trilobate tanged arrowheads because such pieces are known both in Roman and Sarmatian contexts and the leafshaped spearheads, the bits and spurs as they represent common European types of items. Moreover the bits and spurs can also be of civilian use.

The pieces of military equipment which I know will be presented in geographical order from the south-western part of Dacia eastwards².

I. DIVICI (Caraş-Severin County)

Hill-fort with few Roman imports among which a couple of coins, the latest one an *as* issued by Claudius in A.D. 42-44³. The authors of the archaeological excavations thought that the fortified settlement was destroyed by the Romans in the period of time between A.D. 86-101⁴.

1. Silvered-bronze disc-headed nail for fastening a shield boss probably also made of bronze⁵. This is a common accessory of Roman shields of the first three centuries A.D. It is the evidence that at Divici were used shields with circular bosses of Roman origin.

2. Belt-plate⁶. Bronze rectangular plate with the ends rolled over to form a tube for receiving a spindle, making a pseudo-hinge. The plate was fixed to the strap through four rivets, now lost. Its embossed decoration consists of concentric rings.

The belt-plates decorated with rings and pseudo-hinges were already in use in the first half of the 1st century A.D. as it is proved by their presence at Magdalensberg which was abandoned c.A.D.45, but the exact time of their appearance seems to me uncertain so far⁷. Similarly decorated bronze plates were worn by the Herculanaeum soldier in A.D. 79 and other silver examples were found at Tekija in association with a *denarii* hoard ending with an issue of A.D.81 which attests their being in fashion at least until the beginning of the Domitianic period⁸.

This type of plates were spread along the northern frontier provinces, from Britannia, Germania Superior and Raetia as far as Noricum, Moesia or behind the limes in Dalmatia⁹. So it seems that they were largely distributed in the Roman army, indiscriminately of the class of units the owner of these items belonged to or to the province they were quartered in.

Besides the discovery of the real objects bearing such decoration, their frequent depiction on sculptures, and above all on Trajan's Column support Bishop

and Coulston's assertion that they were the most usual belt plates of the second half of the first century A.D.¹⁰

Consequently the piece no.2 represents one of the common Roman military belt fittings and it could have arrived at Divici from the Moesian army, anytime during the last three quarters of the first century A.D., but most probably in its second half.

II. PIATRA CRAIVII (Alba County)

Hill-fort with very few Roman imports¹¹.

3. Socketed *pilum* head with leaf-shaped tip¹². It is a rare example compared to the common tanged heads with pyramidal tip.

III. SOCU-BĂRBĂTEȘTI (Gorj County)

The small-scaled excavations made so far at Socu-Bărbătești revealed the presence of a hill-fort and of a down-hill settlement but have produced only few small finds and consequently not enough evidence concerning their finer chronology or their relationship with the Roman provinces¹³.

The two items I deal with in this context are stray finds which were originally kept in the small collection of the Socu-Bărbătești primary school from where they were later transferred to the Gorj County Museum in Tg. Jiu (inv. nos 9402 and 9401)¹⁴.

4. Belt buckle. Large, massive, bronze oval buckle with internal volutes. The tongue has a large quadrilateral expansion with concave horizontal sides placed near the loop terminal as to fit the internal volutes of the buckle. Therefore the piece no.4 is different from the common 1st century A.D. oval belt buckles which had a vertical bar between the loop and the hinge making them look like a D-letter and whose tongue were of the 'fleur de lys' type.

A good parallel to no.4 is represented by a buckle from Haltern dated between 7 B.C. and A.D. 9, which has similar size, shape and a tongue of the same type even if openwork decorated¹⁵.

Similarly shaped tongues but of a smaller size are met with a buckle from Kalkriese, lost in A.D.7-9¹⁶, in the famous belt from Velsen deposited around A.D. 28¹⁷, in the Rheingönheim fort dated c.A.D. 40-70¹⁸ or in Kaiseraugst Unterstadt¹⁹. Besides, the lavishly decorated buckle of the Chassenard grave dated A.D. 14-37 has a tongue provided with the same kind of central expansion²⁰. Of some interest is also the presence in a number of sites as E.g. Kaiseraugst or Vindonissa and especially at Magdalensberg which was abandoned c.A.D. 45, of a hybrid form of tongue which combines the expansion similar to Socu-Bărbătești

example with the arched bilateral branches of the 'fleur de lys' types of tongues²¹.

The parallels mentioned above for the item no. 4 or only for part of it point to its dating in the first half, perhaps even in the first quarter of the first century A.D.

5. Harness ring junction. Bronze ring with four junction loops. On the loops there are traces of tinning. The ring and the loop are decorated with moulded relief.

The ring junctions of this type were common in the first half of the first century A.D. After that period they are progressively replaced by the phalerae junctions²².

Thus I think probable that no. 5 was manufactured during the first half of the first century A.D. as much as in this period of time is also dated the buckle no.4 which seems to have been associated with the ring junction.

IV. OCNIȚA (Vâlcea County)

Hill-fort and a down-hill settlement with many Roman imports²³. The coin currency ended with an undated coin of Domitian²⁴. At Ocnița was found at least one Greek-inscribed large vessel dedicated at the beginning of the first century A.D. to an unnamed god by a basileus, which testifies that it was the centre or one of the centres of a 'Barbarian' kingdom²⁵.

As I have lately published the Roman military items from Ocnița in a large article including a catalogue²⁶, in this context I shall only give the pieces with their dating and for any further information the reference to my previous publication.

6. Sword with sheath²⁷. The item manufactured in the second half or even only in the last quarter of the first century B.C. was deposited in a pit of a temple at the beginning of the first century A.D., probably during the first decade.

7. Dagger sheath²⁸. Inlaid decorated iron sheath of Scott type B dated in the second half of the first century A.D. most likely between A.D. 50-80. It was deposited in a ritual pit together with the shield boss no. 9 probably during the last quarter of the first century A.D.

8. Suspension loop of a dagger sheath²⁹. The bronze hinged suspension loop was found in a dwelling-house. It belongs to a type which was in use at least between c. A.D. 25-70.

9. Shield boss³⁰. Iron conical boss deposited together with the dagger sheath no.7.

10. Shield nail³¹. Bronze disc-headed nail of the same type as Divici piece no.1.

11. Shield handgrip³². Bronze handgrip of Jahn type 7, group 3. It is dated probably in the last quarter of the first century A.D.

12. Belt buckle³³. Bronze D-shaped buckle with internal and external volutes decorated with dots forming circular and spiral motifs. It seems to date from the Claudian until the early Flavian period.

13. Junction loop of a harness junction ring³⁴. The bronze loop was found in a dwelling-house. It seems to have been manufactured early during the period when junction rings were in fashion (for the dating of the rings see above the piece no.5).

14. Harness *phalera* ³⁵. Bronze *phalera niello* - decorated with stylized foliage motifs dated probably during the Claudian-Flavian periods. It was found in a pit whose function was not stated.

15. Junction loop of a harness *phalera*³⁶. Bronze loop dated c. A.D. 40-80.

16. Harness strap mount³⁷. Bronze mount of Bishop type 6b, found in the down-hill settlement. Dating as no.15.

17. Saddle plate³⁸. Bronze plate of the same dating as nos 15-16.

V. PREJMER (Braşov County)

Hill-fort where was excavated only a trial trench³⁹.

18. Harness *phalera*-pendant. The silvered bronze pendant whose shape I think is ultimately derived from vine leaf had an oakleaf central lobe flanked by reversed swan-heads ending in acorn terminals. Above the central oakleaf the fitting is decorated with 'eyebrows' and 'noses'.

The Prejmer piece is an example of the so-called 'trifid' pendants of Bishop type 1b also met in Britannia at The Lunt, Lincoln and in Germania Inferior among the items forming the famous sets of harness fittings from Doorwerth and Xanten⁴⁰.

As the set from Doorwerth and probably also the one from Xanten were manufactured c. A.D.40 and both were almost certainly deposited in A.D. 69/70, it results that the piece no.18 could be dated from c. A.D. 40 until at least the beginning of the Flavian period but of course that it is impossible to specify the time it arrived in Dacia and when it was deposited at Prejmer⁴¹.

VI. POIANA (Nicoreşti, Galaţi County)

Hill-fort which was extensively excavated⁴². Taking into consideration the large size of the fortified settlement, the agglomeration of the dwelling-houses and the wealth and variety of the small finds it seems that Poiana was the centre of a small Dacian kingdom. The coin currency ceases during Vespasian⁴³.

The site produced many Roman imports including a lot of military objects. In this context I shall deal only with part of the Roman military items: those

already published and the others kept in the National History Museum of Romania in Bucharest. The pieces still unpublished which are in the collections of the museum from Tecuci will be included in a paper, accompanied by a catalogue, on all the Roman militaria from Poiana⁴⁴.

19. *Gladius*⁴⁵. *Gladius* with the length of 645mm and the blade of 485mm in length and 58mm in width. The piece has a broad blade with a long point as the 'Mainz' type examples characteristic of the first half of the first century A.D. but its almost parallel edges are a feature of the 'Pompeii' type of swords which were most frequent between A.D. 60-80⁴⁶. So no.19 looks like a transitional example between these two types which means that it was probably manufactured around the middle of the first century A.D.

20. Sword handguard⁴⁷. Bone handguard decorated on the middle of the polished outer face with two groups of vertical diverging grooves. The upper corners of the side faces are decorated with incisions making up a herring-bone motif. I know parallels of no. 20 in the Rheingönheim fort dated c.A.D. 40-70, at Vin-donissa dated in the first century A.D., Augst and Avenches/Aventicum⁴⁸.

As undecorated handguards of this shape are met with *gladii* of 'Pompeii' type⁴⁹ I think that the Poiana piece could be dated in the second half of the first century A.D.

21. Sword handguard⁵⁰. Bone handguard similarly shaped to no. 20 but with small differences in the decoration. So the ornamentation of the middle of the outer face, the only one preserved, is made up by grooves forming three V, divided by a central vertical bar.

The same dating as for no. 20.

22-23. Sword handgrips⁵¹. Bone ribbed handgrips of polygonal cross-section. Handgrips of this common shape were used in association with handguards of the same type as nos. 20-21 and consequently it is probable that nos. 22-23 could also be dated in the second half of the first century A.D.

24. Sword handgrip⁵². Bone handgrip of the same common type as nos 22-23 but of a less frequent oval cross-section.

25. Dagger⁵³. Lower part of a badly corroded slim dagger blade. Its narrow blade without a pronounced midrib and the long tapering point represent later features of the first century A.D. daggers⁵⁴.

The Ocnița dagger sheath (no.7) has approximately the same with as no. 25. A good parallel of Poiana piece is the *pugio* from the Roman fort of Orăștioara de Sus (Hunedoara County) which could not be deposited earlier than the beginning of the second century A.D.⁵⁵

Consequently it is almost certain that the Poiana *pugio* was used in the second half of the first century A.D. and perhaps one could even confine its dating to the last quarter of the century.

26. Shield boss⁵⁶. Bronze domed boss with flat, round flange. It has a poor incised decoration consisting of a circular line supporting four arches.

The bronze made flat circular bosses thought to have been auxiliary armour items are met from the first to the 3rd century A.D. Consequently it is not possible to date precisely Poiana example as much as it was found by chance in slip on the slope of the hill.

27. Shield boss⁵⁷. Fragment of a tinned or silvered hemispherical boss with flat round flange. It is decorated with an embossed mythological scene of funeral significance with the representations of Medusa, Mercurius and a dog (Cerberus).

By its shape and the considerable thickness (1.5mm on the flange), no. 27 ranges among the service armour worn in field by the auxiliary troops in spite of the embossed decoration using funeral motifs which is characteristic for the 'sports' armour.

The funeral motifs also fit with a gladiatorial armour. Nevertheless, as it should be hard to explain the presence of gladiatorial equipment items in a Dacian settlement, it seems that in spite of its decoration no. 27 was a military piece.

The embossed decoration of the 'normal' shield bosses is very rare and in fact I know only few examples bearing such an ornamentation: a conical piece from a grave in Panticapaeum (Kertch) dated at the beginning or in the first half of the 2nd century A.D.; a fragment of a circular flange from the Buch fort where *cohors III Thracum veterana* was quartered, dated c.A.D. 150-260; a 4th century A.D. domed boss originating probably in Minor Asia, from the Lateran museum⁵⁸. All these examples seem to originate in Thracia or its neighbouring regions but only the one from Buch is decorated like Poiana piece with funeral motifs.

So I think that Poiana no. 27 was most probably manufactured in the Balkan Peninsula but anyway in the Oriental part of the Empire and it could date from the second half of the first century A.D. until the middle of the 3rd century A.D. However as the representation of mythological scenes on the armour is abandoned during the 2nd century A.D. in favour of an accumulation of isolated different mythological motifs and as the boss was fastened to the shield according to an early fashion by more than four nails, I am inclined to place it at the beginning of this period of time.

28. Buckle plate⁵⁹. Fragmentary bronze very short belt-buckle plate. It is an unfinished example of a type frequently met in the Roman forts of the Claudian-Neronian period from Germania Superior and Raetia⁶⁰.

29. 'Apron' mount⁶¹. Plain rectangular mount made from a thin sheet of bronze which was used for reinforcing the hanging straps of the military belt.

Similar examples are met in the Roman forts of the Claudian-Early Flavian period⁶².

30. Harness strap mount⁶³. Silvered-bronze elongated mount decorated 'a niello' of Bishop type 6j⁶⁴.

I know a close parallel of this purely decorative mount in Britannia at Stockton and another one in Germania Superior at Rheingönheim where originates an undecorated or badly-preserved piece⁶⁵. Besides, the more largely distributed mounts of Bishop type 6e which are also met in the well-known hoards from Fremington-Hagg and Doorwerth, the last one made up by items dated between c.A.D. 40 and 69/70, differ from Poiana example only by the details of their richer decoration⁶⁶. So it seems that the mounts of B. type 6j represent a stylisation i.e. simplification of those of B. type 6e which probably means that the former are somewhat later than the latter. Consequently I am inclined to place the production of no. 30 during the third quarter of the first century A.D.

The excavations at Poiana produced a single bronze ribbed scale of armour⁶⁷. The ribbed armour scales originate in the Orient from where they were diffused in the European parts of the Roman Empire in the first century A.D., most probably by the units of Oriental archers⁶⁸. However, the ribbed scales also represent a common piece of first century A.D. equipment of Sarmatians warriors⁶⁹ and at Poiana were unearthed several indisputable Sarmatian items: a mirror and knife handgrips with *tamga*-signs⁷⁰. Hence the Poiana armour scale could had been either an Oriental-Roman or, more probable, a Sarmatian military equipment item.

As it was written above, at Poiana were found a lot of other first century A.D. Roman military equipment items which I could not use in this context⁷¹. Among these still unpublished pieces there are: a sword handgrip, a dagger handguard in bronze, two bone nocks of arrows, helmet accessories, belt fittings, bronze straps for securing the fixing of the harness strap mounts, harness strap terminals, a dolabra sheath fragment, two tent pegs. Consequently at Poiana originates the largest and the most diversified assemblage of first century A.D. Roman military items discovered so far in Dacia.

DISCUSSION

At the end of this survey it is worth dealing with some general matters.

The first problem is weather the military items I have presented were real Roman pieces or autochtonous artefacts made after Roman prototypes. Since at Ocnîța and Poiana as in nearly every first century A.D. Dacian settlement of some importance there is plenty evidence of metal working the answer to this question is not readily apparent⁷². However, as the objects I dealt with are in every respect similar to those found in the Roman Empire, despite that on one hand some of them are difficult enough to be manufactured and on the other in Dacia were not found series of them presenting a progressive stylisation characteristic of the Bar-

barian imitations, I think that they are genuine examples of Roman military equipment.

More difficult is to specify if these items were locally made by Roman craftsmen according to the Roman fashion or they originate in the Roman Empire. In fact the presence of the Roman workers in the first century A.D. in Dacia is conclusively attested. Thus already in the Augustan times at Ocnița was working for the local basileus a Roman pot-maker named Markus who was writing in Greek⁷³. Also at Ocnița, in the second half of the first century A.D. were active other Roman scribes as it is proved by the discovery of several ink-pots and a decorated ink-pot lid with parallels at Pompeii⁷⁴. Besides, as it is mentioned by Cassius Dio, 67, 7, after Domitianus' Dacian wars the Romans sent craftsmen to Decebalus, some of them specialized on military matters, but it is likely that they were kept at Sarmizegetusa, his capital.

Yet I consider that the objects I dealt with were made inside the Roman Empire. One reason of my conviction is that in Dacia these pieces are still few but remarkably diverse and dispersed within almost a century and this fact does not fit with a local production which would normally produce a few categories of items but each of them in more examples. Moreover, some pieces as the belt fittings represent only accessories of the Roman soldier dress and consequently their production should be wasteful for the Dacians who tried to copy the Roman arms and not their military dress. Also among the surveyed objects many are of higher profile and some of them as the dagger sheath no. 7 or the shield bosses no. 26 and especially no.27 bear an outstanding decoration for which I do not know close parallels. So it is hard to accept that such complex and exceptional items were manufactured by a single or a few Roman craftsmen working in isolation in Barbaricum and not in a specialized Roman workshop. Besides, at Ocnița, some of the most valuable items were found in votive or ritual pits which fits better with plundered goods than with locally-made weapons. And even if there is no recorded information on the discovery of the fittings from Socu-Bărbătești, taking into consideration their association and their remarkable good state of preservation it is likely that they originate in a votive context as well.

A distinct situation is met at Poiana. There was found an unfinished buckle-plate (no.28) and many Roman small fittings or fragments of fittings of equipment unparalleled in the other Dacian settlements. Moreover, items like a *dolabra* sheath and tent pegs which are not met in Barbarian contexts, as their specific function made them useful only to the Roman soldiers, were unearthed at Poiana. Consequently it seems that for a short period of time in the second half of the first century A.D. here was quartered a Roman auxiliary unit. If this is the case only part of the Roman military equipment should originate in the Dacian settlement and the rest in an unlocated temporary camp erected inside the Dacian hill-fort. Unfortu-

nately until the expected publishing of all the Roman military artefacts from this site one cannot try to separate these two lots of equipment. Alternatively but less probably, it is still possible that the Dacians from Poiana had captured in a successful campaign this full range of Roman military equipment together with prisoners used eventually as workers.

As for the *pilum* head from Piatra Craivii (no.3), it is more likely that it had belonged to a Roman soldier rather than to a local Dacian warrior.

The autochthonous settlements with Roman military equipment concentrate in southern Dacia, that is in the region situated near the Danube which was the Roman frontier in the first century A.D. (fig.1). The unexpected almost complete lack of Roman arms in Transylvania is probably due, at least partly, to the fact that I was not able to extend my inquiry to the stories of Muzeul Național de Istorie al Transilvaniei (National History Museum of Transylvania from Cluj-Napoca), where unpublished small finds produced by the excavations in Munții Orăștiei, the centre of the Dacian state in the first century A.D., are preserved⁷⁵.

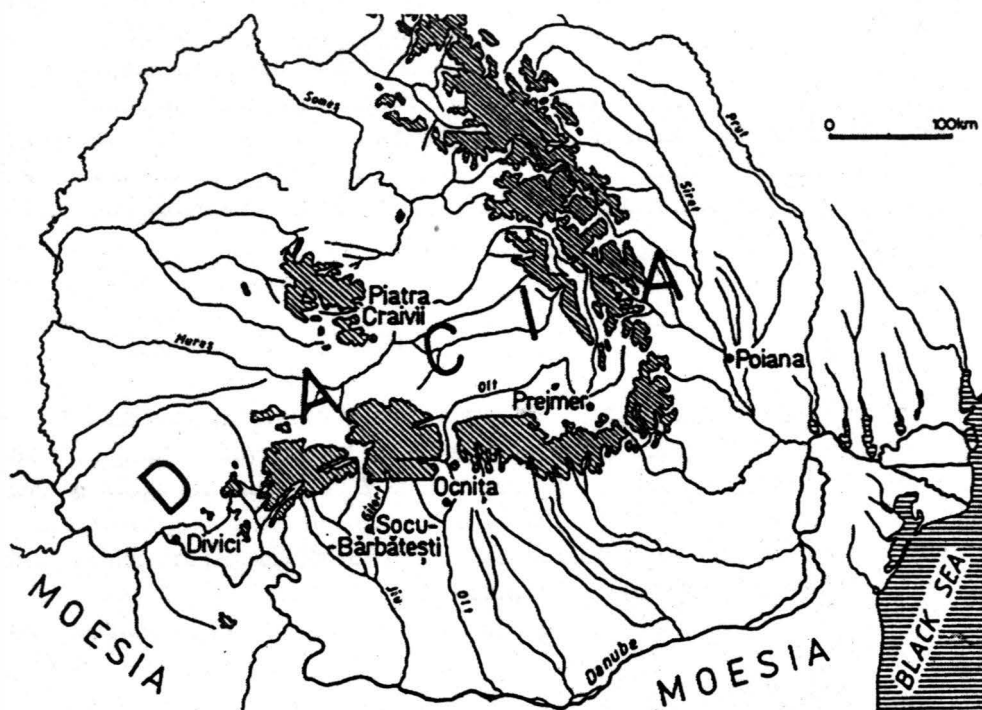


Fig.1. Dacian settlements with first century A.D. Roman military equipment.

The Roman military items are also totally absent from the Dacian hill-forts situated on the Siret river, upstream from Poiana. As the archaeological material from these sites, including many Roman imports, has already been published, the lack of Roman soldier equipment is significant but so far I do not have a satisfactory explanation for it.

The Roman military equipment is concentrated in the hill-forts which are important Dacian tribal centres. The most consistent assemblages of these artefacts are at Ocnița and Poiana, both settlements representing capitals of small kingdoms, where all kinds of Roman imports are present in a fairly great number.

The oldest Roman weapon in Dacia Libera is the Augustan sword from Ocnița (no.6) and the most recent the Neronian-Flavian equipment objects from Divici, Prejmer, Ocnița and Poiana. The items which could be dated more precisely seem to concentrate in two different periods of time: the first half, perhaps only the first quarter of the first century A.D. and the third quarter of the century. In the first period the Roman equipment pieces made their appearance in Dacia but they were still very few (the sword no. 6 and the junction loop no. 13 from Ocnița and Socu-Bărbătești examples). In the second period they are more numerous and diverse. The earliest examples appear in the south-western part of Dacia westward of the river Olt, as it was to be expected, and the later are diffused all over the southern Dacia.

Some of the most valuable objects were found in votive contexts at Ocnița and perhaps Socu-Bărbătești. They were in usable condition at the time of their deposition like part of the other Roman military items from Dacia for which there is no recorded information on the condition of their unearthing. The common pieces were kept or thrown away in different places of the hill-forts. Some of them were heavily damaged during the unearthing process and others were certainly broken before deposition which is the usual condition of such objects found in settlement deposits (e.g. nos 26-27). However the latter were not hammered, flattened or distorted which means that it is probable that they also arrived in Dacia in workable condition and were discarded only after becoming worn. So it seems that all the Roman military items came in Dacia in usable condition and not as scrap metal for recycling which is in agreement with the fact that they were spread all over the sites and were not concentrated in what could have been workshop stores.

Apart from Poiana pieces and no.3 from Piatra Craivii the objects I dealt with could have arrived in Dacia in many ways: by legal or contraband trade, like supply to client kingdoms and as booty. As for the horse harness fittings whose use was not restricted to the militarymen, they could be simply exported by the Romans to Dacia. However for the weapons and armour the situation must have been different. Starting with the Augustan period there has been a strict control over the production and especially the distribution of military weapons in the

Roman Empire. Thus, except for hunting weapons and a few arms belonging to the retired soldiers who were kept under some sort of military control anyway, the civilians had no legal right to possess weapons.

Consequently, neither legal trade nor large-scale smuggling can seriously account for the presence of Roman weapons in Barbaricum. Hence two possibilities remain: the first is to see them as originating in the usual supply of equipment for the client kingdoms; the second is that they were plundered weapons and in fact there is some evidence for this. The ritual deposition or destruction of a part of captured weapons was a common custom in the antiquity and there are no reasons to consider that the Roman arms offered up by the Dacians had another origin. If this was the case, the Roman military equipment dated in the Neronian-Flavian period was probably plundered by the Dacians during the expeditions occasioned by the civil wars of A.D. 68-69 and/or during the war with Domitian in A.D. 85-89.

The Roman military objects discovered so far in southern Dacia are relatively few but from the middle of the first century A.D. all the classes of equipment are represented and as it is normal for 'imported' items many of them are of a high profile. Thus there are met swords and daggers, decorated dagger-sheaths and shield bosses, decorated harness fittings.

In the hill-forts with Roman military pieces the only autochthonous weapons are a few flat socketed arrowheads and perhaps some spearheads. So it seems that in the second half of the first century A.D. the Dacians living south of the Carpathian Mountains had largely adopted the Roman military equipment.

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1. M. Babeş, *Descoperiri funerare şi semnificaţia lor în contextul culturii geto-dace clasice*, SCIVA, 39, 1988, 3-32.

2. The numbers of the items correspond to those of their drawings.

3. M. Gumă, A.S. Luca and C. Săcărin, *Principalele rezultate ale cercetărilor arheologice efectuate în cetatea dacică de la Divici între anii 1985-1987*, Banatica, 9, 1987 (1989), 199-238; M. Gumă, A. Rustoiu and C. Săcărin, *Raport preliminar asupra cercetărilor arheologice efectuate în cetatea dacică de la Divici între anii 1988-1994. Principalele rezultate*, Cercetări arheologice în aria nord-tracă, 1, Bucureşti, 1995, 401-414, especially 409-410.

4. M. Gumă, A. Rustoiu and C. Săcărin, *op. cit.* (note 3), 410-411.

5. M. Gumă, A.S. Luca and C. Săcărin, *op. cit.* (note 3), pl. 22/3.

6. A. Rustoiu, *Metalurgia bronzului la daci (sec. II î.Chr. - sec. I d.Chr.). Tehnici, ateliere şi produse de bronz*, Bucureşti, 1996, 151, notes 43-44, fig. 95/5.

7. M. Deimel, *Die Bronzekleinfunde vom Magdalensberg*, Klagenfurt, 1987, 293-5, pl. 77/5-7,12. For the chronology of Magdalensberg see G. Piccottini, H. Vetters, *Führer durch die Ausgrabungen auf dem Magdalensberg*, Klagenfurt, 1990, 144. E. Deschler-Erb et alii, *Das frühkaiserzeitliche Militärlager in der Kaiseraugster Unterstadt*, Augst, 1991, 62, no. 38 and 64, no. 49, think that they are dated from A.D. 15 to A.D. 60.

8. Herculanaeum: M.C. Bishop and J.C.N. Coulston, *Roman military equipment from the Punic Wars to the fall of Rome*, London, 1993, 98. Tekija: D. Mano-Zisi, *Nalaz iz Tekije*, Beograd, 1957; B. Boric-Bresković, in I. Popović (ed.), *Antique Silver from Serbia*, Belgrade, 1994, 198-9, no. 46, the coin hoard.

9. E.g. Britannia: Longthorpe (S.S. Frere and J.K.St. Joseph, *The Roman fortress at Longthorpe*, Britannia, 5, 1974, 50, no. 32, fig. 27/32), Colchester (N. Crummy, *Colchester archaeological report 2: The Roman small finds from excavations in Colchester 1971-9*, Colchester, 1983, 132-3, nos. 4210-1). Germania Superior: Rheingönheim (G. Ulbert, *Das frühromische Kastell Rheingönheim*, Berlin, 1969, pl. 27/1 - 5,8-9), Vindonissa (Ch. Unz, *Römische Funde aus Windisch im ehemaligen Kantonalen Antiquarium Aarau*, Jahresber. Ges. Pro Vindonissa, 1973 (1974), 20, nos. 45-46, fig. 7/45-46 and many other unpublished examples), Kaiseraugst (E. Deschler-Erb et alii, *op. cit.* (note 7), 62-65, nos. 38 and 49, figs. 63/38 and 43/49). Raetia: Aislingen (G. Ulbert, *Die römische Donau-Kastelle Aislingen und Burghöfe*, Berlin, 1959, pl. 18/17), Risstissen (G. Ulbert, *op. cit.* pl. 61/21-22; Idem, *Das römische Donau-Kastell Risstissen*, 1, Stuttgart, 1970, 20, pl.1/3), Eining (M. Mackensen, *Frühkaiserzeitliche Kleinkastelle bei Nersingen und Burlafingen an der oberen Donau*, Münchner Beitr. Vor- und Frühgesch. 41, 1987, 173 no. 3 and 151 fig. 6/10). Noricum: Magdalensberg (See above note 7). Moesia: Tekija (See above note 8). Dalmatia: Bumum (S. Zabehlicky-Scheffenecker and M.Kandler, *Bumum I*, Österr. Akad. Wissensch. Schr. Balkankommission. Antiqu. Abt.14, 1979, pl. 18/10, without pseudo-hinges).

10. Bishop and Coulston, *op. cit.* (note 8), 98.

11. I. Berciu and Al. Popa, *Cetatea dacică de la Piatra Craivii*, Sesiunea de Comunicări Ştiinţifice a Muzeelor de Istorie 1964, Bucureşti, 1971, vol. 1, 261-84.

12. *Ibidem*, 268, fig. 10/8.
13. P. Gherghe, *Săpăturile din aşezarea geto-dacă de la Socu-Bărbăteşti (jud. Gorj)*, MCA, 13, Oradea, 1979, 91-9; Idem, *Aşezarea geto-dacă de la Socu-Bărbăteşti*, MCA, 14, Tulcea, 1980, 186-90, a bronze coin of Augustus issued in the years 19-15 B.C.; P. Gherghe, Gh. Calotoiu, *Aşezarea geto-dacă de la Socu-Bărbăteşti (jud. Gorj)*, MCA, 17, Ploieşti, 1983, 153-160.
14. Photographs of both items are published without any comment in Gh. Calotoiu, I. Mocioi, V. Marinoiu, *Mărturii arheologice în Gorj*, Tg. Jiu, 1987, 71.
15. R. Asskamp (ed.), *2000 Jahre Römer in Westfalen*, Mainz, 1989, fig. 109, right side. For the dating of the fortress see H. Schönberger, *BerRGK*, 66, 1985, 427-8, A10.
16. G. Franzius, *Die Römischen Funde aus Kalkriese 1987-95 und ihre Bedeutung für die Interpretation und Datierung militärischer Fundplätze der augusteischen Zeit im nordwesteuropäischen Raum*, in C. van Driel-Murray (ed.), *Roman Military Equipment: Experiment and Reality* = *JRMES*, 6, 1995, 81, fig. 8/6, dating p. 82.
17. J.-M.A.W. Morel and A.V.A.J. Bosman, *An early Roman burial in Velsen I*, in C. van Driel-Murray (ed.), *Roman Military Equipment: The Sources of Evidence*, BAR, Internat. Series, 476, Oxford, 1989, 179-80, fig. 5/1; dating 187-8.
18. G. Ulbert, *op. cit.* (note 9 - Rheingönheim), pl. 26/18-19. Schönberger, *op. cit.* (note 15), 442, B 31, dating.
19. E. Deschler-Erb et alii, *op. cit.* (note 7), 58, no.23, fig. 40/23.
20. F. Beck and H. Chew, *Masques de fer. Un officier romain du temps de Caligula*, Paris, 1991, 59-61.
21. Kaiseraugst: E. Deschler-Erb et alii, *op. cit.* (note 7), 20, nos. 29-31, fig. 41/29-31. Vindonissa: Ch. Unz, *op. cit.* (note 9), nos. 68, 71, fig. 8/68, 71. Magdalensberg: M. Deimel, *op. cit.* (note 7), 279-80, pl. 74/6-8.
22. M.C. Bishop, *Cavalry equipment of the Roman army in the first century A.D.*, in J.C. Coulston (ed.), *Military Equipment and the Identity of the Roman Soldier*, BAR, Internat. Series 394, Oxford, 1988, 94 and table 4, for the diffusion of these items. M.C. Bishop and J.C.N. Coulston, *op. cit.* (note 8), 105, dating.
23. See D. Berciu, *Buridava dacică*, Bucureşti, 1981 and the annual reports of excavations published in the journal *Thraco-Dacica*.
24. D. Berciu, *op. cit.* (note 23), 134.
25. D. Berciu, *op. cit.* (note 23), 136-141, wrong reading of the inscription (Dr. Al. Suceveanu, pers.comm.).
26. L. Petculescu, *Roman military equipment in the Dacian hill-fort at Ocnîşa*, in C. von Carnap-Bornheim (ed.), *Beiträge zu römischer und barbarischer Bewaffnung in den ersten vier nachchristlichen Jahrhunderten*. Marburger Kolloquium 1994, Lublin/Marburg, 1994, 61-77.
27. L. Petculescu, *op. cit.* (note 26), 64-65, no. 1
28. L. Petculescu, *op. cit.* (note 26), 65-67, no. 2.
29. L. Petculescu, *op. cit.* (note 26), 67, no. 3.
30. L. Petculescu, *op. cit.* (note 26), 67, no. 4.
31. L. Petculescu, *op. cit.* (note 26), 67-68, no. 5.

32. L. Petculescu, *op. cit.* (note 26), 68, no. 6.
33. L. Petculescu, *op. cit.* (note 26), 68, no. 7.
34. L. Petculescu, *op. cit.* (note 26), 68-69, no. 8.
35. L. Petculescu, *op. cit.* (note 26), 69, no. 9.
36. L. Petculescu, *op. cit.* (note 26), 69, no. 10.
37. L. Petculescu, *op. cit.* (note 26), 69, no. 11.
38. L. Petculescu, *op. cit.* (note 26), 69, no. 12.
39. The excavations led by M. Marcu are still unpublished.
40. M.C. Bishop, *op. cit.* (note 22), 96, fig. 43/1b; 143, table 6 for the diffusion of these items.
41. Doorwerth: M. Brouwer, *Römische Phaleræ und anderer Lederbeschlag aus dem Rhein*, Oudheidkundige Mededelingen, 63, 1982, 64-67. Among the furnishing of the Nawa burial dated in the 2nd century A.D. there are phaleræ and pendants of this type: S. Abdul-Hak, *Rapport préliminaire sur des objets provenant de la nécropole romaine située à proximité de Nawa (Hauran)*, Annales archéologiques de Syrie, 4-5, 1954-1955, pl. 11/1-2. However it seems that at the time of their deposition in the grave these harness fittings were already antique items.
42. R. and E. Vulpe, *Les fouilles de Poiana*, Dacia, 3-4, 1927-32, 253-351; R. Vulpe et alii, *Activitatea şantierului arheologic Poiana-Tecuci*, SCIV, 2, 1951, 177-216; Idem, *Şantierul Poiana*, SCIV, 3, 1952, 191-230.
43. V. Mihăilescu-Bîrliba, *La monnaie romaine chez les Daces orientaux*, Bucureşti, 1980, 276-78, nos 189, 190, 195, 199, 200, different groups of coins found during the excavations in Poiana ending with *denarii* struck by Vespasian in A.D. 69-71, some of them 'fleur de coin'; 277, no. 197, a hoard of 95 *denarii* ending with an issue of Titus was found by chance at a considerable distance north to the hill-fort and consequently it is not entirely certain that it could be linked with the Dacian site.
44. L. Petculescu and M. Nicu, *Roman military equipment at Poiana*, forthcoming.
45. R. Vulpe et alii, *Activitatea şantierului arheologic Poiana-Tecuci*, SCIV, 2, 1951, 207, fig. 27/1.
46. For the chronology of these types see lately M.C. Bishop and J.C.N. Coulston, *op. cit.* (note 8), 69-71.
47. M. Nicu in *Catalogul expoziţiei 'Civilizaţia geto-dacilor din bazinul Siretului'*, 1992, 29, no. 232, fig. 240.
48. Rheingönheim: G. Ulbert, *op. cit.* (note 9), 56, fig. 6/1-2, pl. 60/1-2; H. Schönberger, *op. cit.* (note 15), 442, B 31, dating. Vindonissa: Ch. Unz and E. Deschler-Erb, *Katalog der Militaria aus Vindonissa*, in print, nos. 22-24. Augst: S. Deschler-Erb, *Römische Beinartefakte aus Augusta Raurica. Rohmaterial, Technologie, Typologie und Chronologie*, in print, no. 4000, pl. 41/4000. Avenches: Unpublished piece from Avenches Museum, inv. no. 72.166. E. Deschler-Erb, pers. comm.
49. G. Ulbert, *Gladii aus Pompeji*, Germania, 47, 1969, 99, no. 3, pl. 17/3 and pl. 29.
50. R. Vulpe et alii, *op. cit.* (note 45), 207, fig. 22/1.
51. 22. R. and E. Vulpe, *op. cit.* (note 42), 323, no. 5/3, fig. 129/38. 23. Unpublished item in the Muzeul Naţional de Istorie al României (National History Museum of Romania) from Bucureşti, inv. no. 16491.

52. R. Vulpe et alii, SCIV, 3, 1952, 198, fig. 20/4.
53. R. and E. Vulpe, *op. cit.* (note 42), 333, no. 3, fig. 112/6.
54. I.R. Scott, *First-century military daggers and the manufacture and supply of weapons for the Roman army*, in M.C. Bishop (ed.), *The Production and Distribution of Roman Military Equipment*, BAR, Internat. Series 277, Oxford, 1985, 164-5.
55. C. Daicoviciu, N. Gostar and H. Daicoviciu, *Şantierul arheologic Grădiştea Muncelului-Costeşti. VI Castrul roman de la Orăştioara de Sus*, MCA, 6, 1959, 352; I. Glodariu and E. Iaroslavski, *Civilizaţia fierului la daci*, Cluj-Napoca, 1979, 164, fig. 72/4 with wrong findspot and inventory number.
56. M. Brudiu et alii, *Catalogul expoziţiei 'Civilizaţia geto-dacilor din bazinul Siretului'*, 1977, 14, no. 153, without illustration.
57. *Ibidem*, 14, no. 152, without illustration.
58. Kertch: M. Kazanski, *Les éperons, les umbo, les manipules de boucliers et les haches de l'époque romaine tardive dans la région pontique: origine et diffusion*, in C. von Carnap-Bornheim (ed.), *op. cit.* (note 26), 436, fig. 7/6. Buch: ORL.B, no. 67, 13, no. 8, pl. 3/6; H. Schönberger, *op. cit.* (note 15), 485, E75, dating. Lateran museum: F. Magi, *Un umbo à figures du Musée du Vatican*, Demareteion, 2, 1, 1936, 35-45.
59. R. and E. Vulpe, *op. cit.* (note 42), 330, no. i/3, fig. 111/20.
60. E.g. Kempten: W. Krämer, *Cambodunumforschungen 1953-1*, Kallmünz/Opf, 1957, 65, pl. 16/21, piece found in the layer of the 3rd phase; 120 dating of the deposition of the military items probably at the beginning of the 3rd phase, during the Claudian period. Rheingönheim: G. Ulbert, *op. cit.* (note 9), pl. 26/12; H. Schönberger, *op. cit.* (note 15), 442, B 31, dating of the fort c.A.D. 40-70. Aislingen: G. Ulbert, *op. cit.* (note 9, Aislingen and Burghöfe), pl. 17/30-31 and 33; H. Schönberger, *op. cit.* (note 15), dating of the fort from the late Tiberian period until c.A.D. 69/70. Oberstimm: M.C. Bishop and J.C.N. Coulston, *op. cit.* (note 8), fig. 59/17; H. Schönberger, *op. cit.* (note 15) 447, B62, dating of the first phase of the fort from A.D. 40/50 until 69/70. Vindonissa: Ch. Unz, *op. cit.* (note 9), fig. 8/66; the fortress was used during the first century A.D.
61. R. and E. Vulpe, *op. cit.* (note 42), 331, no. 8, fig. 113/23.
62. E.g. Rheingönheim: G. Ulbert, *op. cit.* (note 9), pl. 28/6-9; for dating see above note 59. Ristissen: G. Ulbert, *op. cit.* (note 9 - Aislingen und Burghöfe), fig. 13/9-10, pl. 61/30-33; H. Schönberger, *op. cit.* (note 15) 445, B55, dating of the fort c.A.D. 50-80.
63. R. and E. Vulpe, *op. cit.* (note 42), 331, no. 7, fig. 108/7, 113/32.
64. M.C. Bishop, *op. cit.* (note 22), 170, fig. 56/6j, table 11/6j.
65. Stockton: *Ibidem*, 173, table 11/6j. Rheingönheim: G. Ulbert, *op. cit.* (note 9), pl. 28/21.
66. M.C. Bishop, *op. cit.* (note 22), 170, fig. 56/6e, table 11/6e. Fremington Hagg: G. Webster, *A Hoard of Roman military equipment from Fremington Hagg*, in R.M. Butler (ed.), *Soldier and Civilian in Roman Yorkshire*, Leicester, 1971, 117, fig. 14/56. Doorwerth: M. Brouwer, *op. cit.* (note 41), 197, pl. 10/279.
67. R. Vulpe et alii, *op. cit.* (note 45), 207, without illustration, piece in the Tecuci museum without inv. no.

68. Y. Yadin, *Masada. Herods Fortress and the Zealots Last Stand*, London, 1967, 54, armour of ribbed scales of a Zealot warrior. R. Robinson, *The Armour of Imperial Rome*, London, 1975, 173, figs. 481, 484, armours made up of mail and iron and bronze ribbed scales from Augsburg, Ouddorp and Newstead. L. Bekker, *Militärische Funde aus Augusta Vindelicum*, in *Die Römer in Schwaben. Jubiläumsausstellung 2000 Jahre Augsburg*, Augsburg, 1985, 90, fig. 60, armour from Augsburg dated around A.D. 50, which probably belonged to a Thracian officer.

69. V. Bârca, *Considerații privind armamentul, tipul de trupe și tactica militară la sarmați*, AMN, 31, 1994, 56-59, fig. 1/2-3 and 8, with references.

70. R. Vulpe et alii, *op. cit.* (note 45), fig. 25/6 mirror; fig. 29/1-3 handgrips; fig. 28/7 and 12 trilobate tanged arrowheads of Sarmatian or Roman origin.

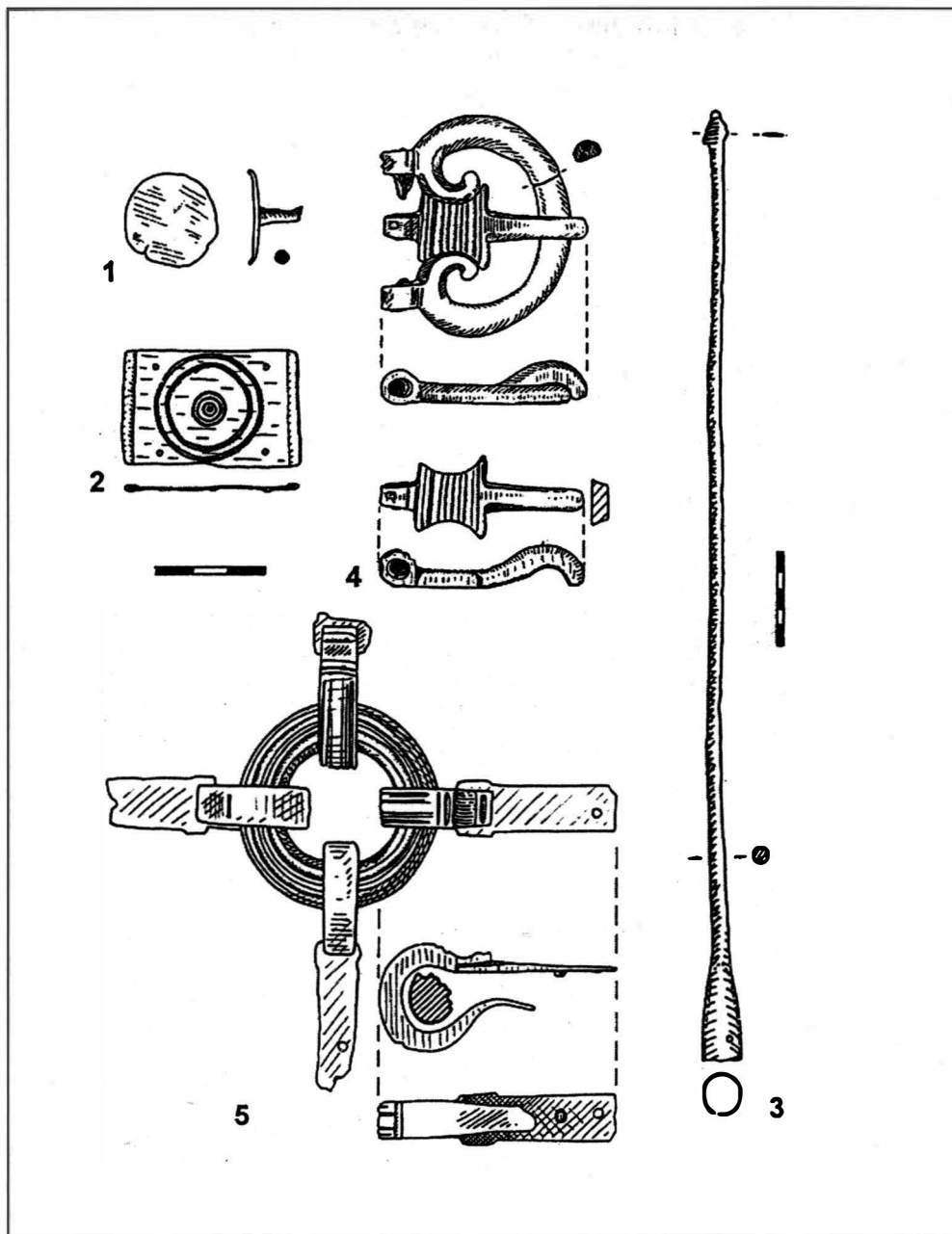
71. See above note 44.

72. Ocnița: D. Berciu, *op. cit.* (note 23), pls 21/8, 32/4, 49/6, 88/14, 91/1 etc., earthen crucibles. Poiana: R. Vulpe et alii, *op. cit.* (note 45), 203-4, earthen crucibles with traces of smelted bronze, bronze ingots, bronze and iron slag, unfinished brooches and earrings, metalworking tools. At Vadu Anei, a small settlement in the plain near București were also found several earthen crucibles (P. Damian, pers.comm.)

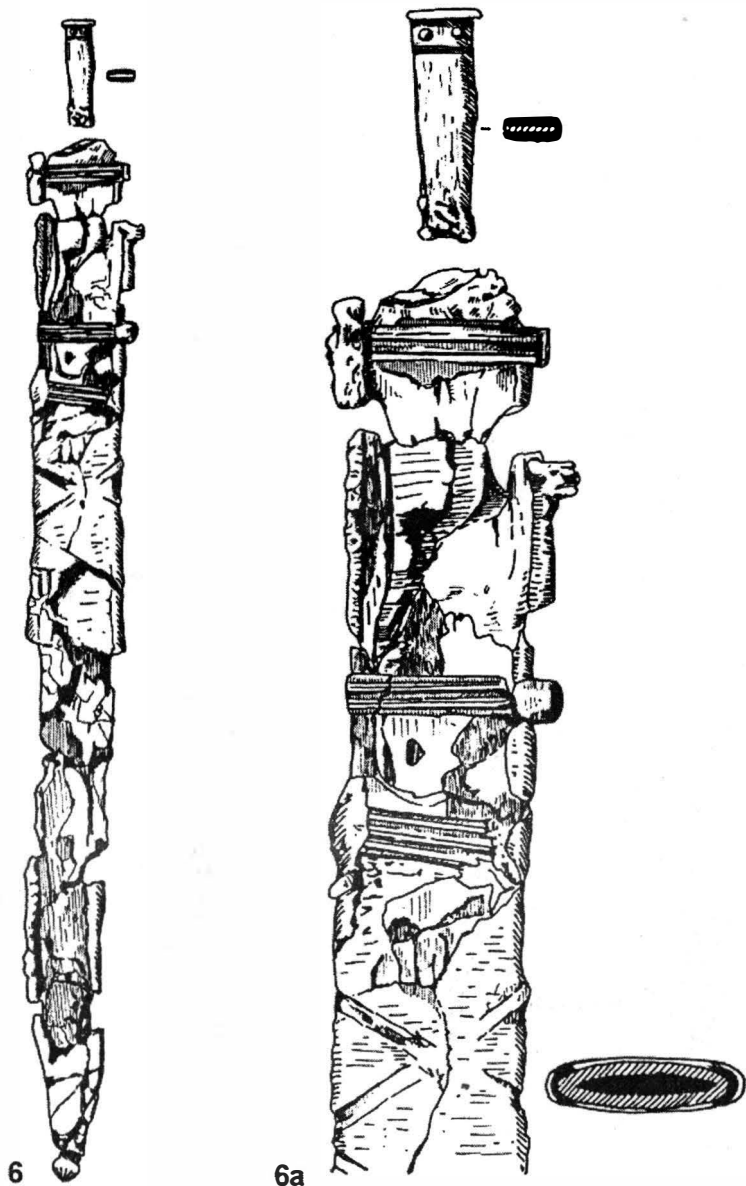
73. See above note 25.

74. D. Berciu, *op. cit.* (note 23), pl. 265/8 ink-pot; the unpublished lid is kept in the Muzeul Județean Vâlcea (Vâlcea County Museum) from Rm. Vâlcea.

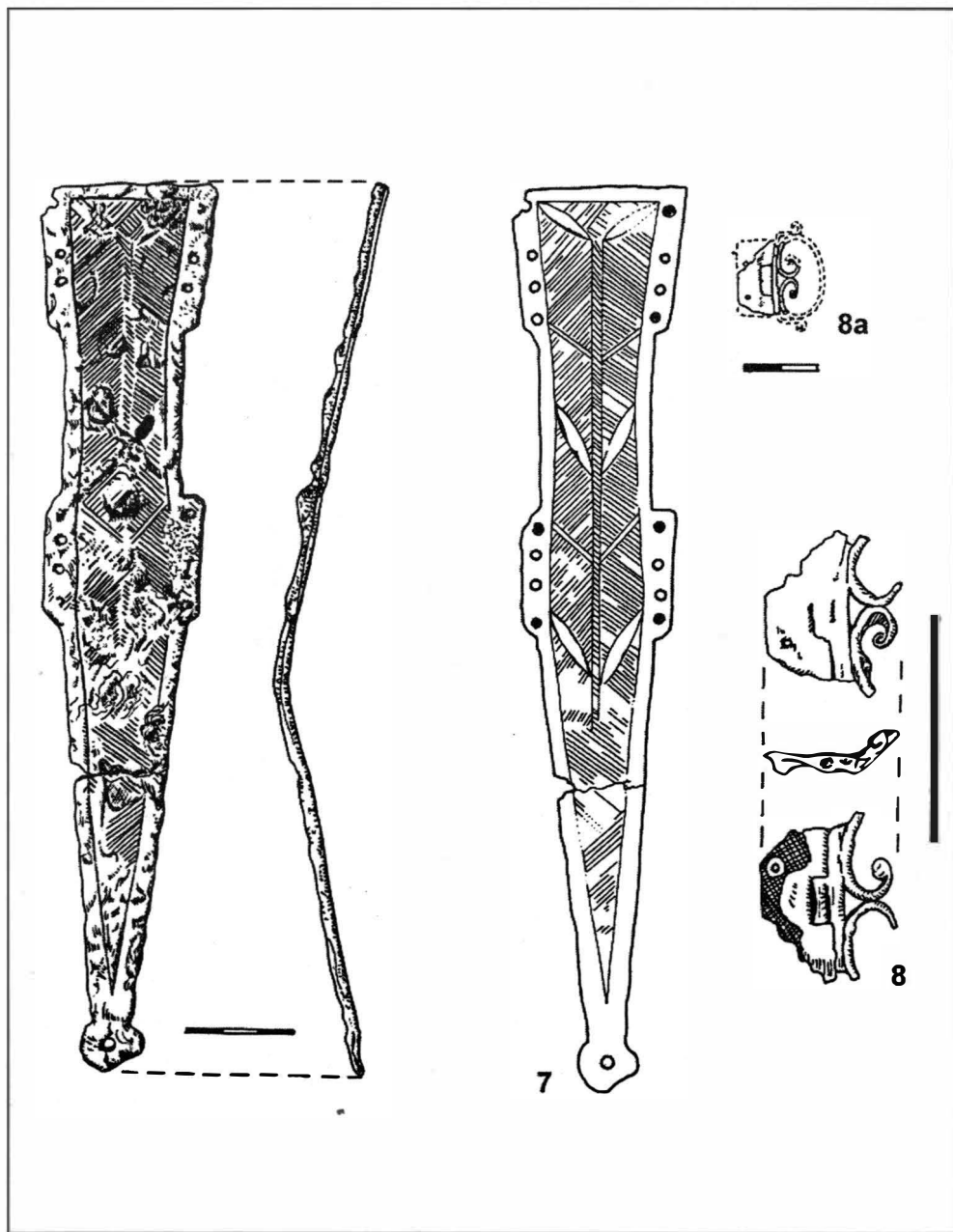
75. I. Glodariu, E. Iaroslavschi, *op. cit.* (note 55), figs. 68/4-11, 69/1-23, 72/11-12, published several iron Roman military items among which two *dolabrae* and many socketed pyramidal bolt-heads or javelin heads but without any stratigraphical data and consequently they could originate in the Roman forts from Munții Orăștiei.



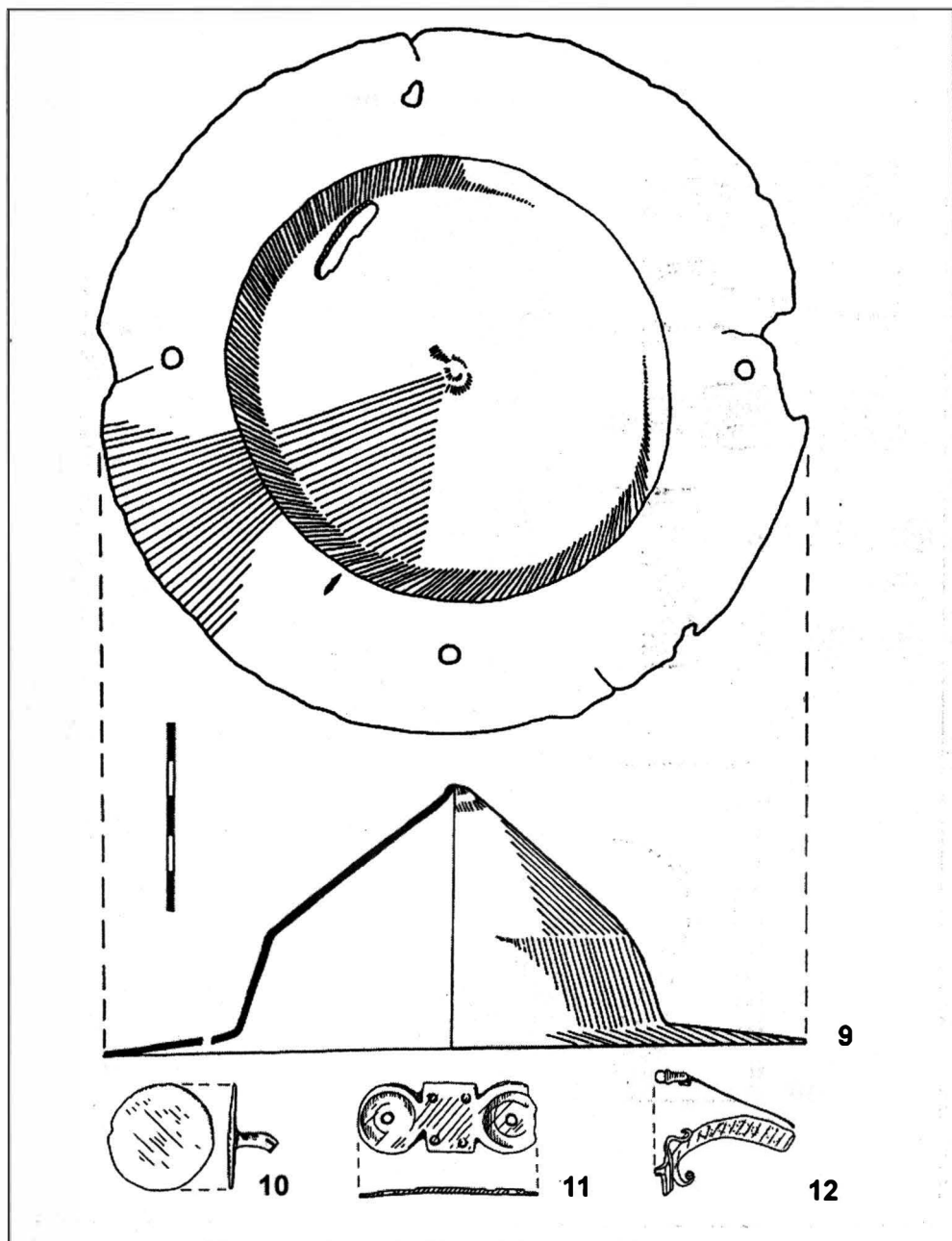
Pl. 1. 1-2 Divici (after Rustoiu); 3 Piatra Craivii; 4-5 Socu-Bărbătești. 1,5 Silvered bronze; 2,4 Bronze; 3 Iron. 1-2, 4-5 Scale 1:2; 3 Scale 1:4.



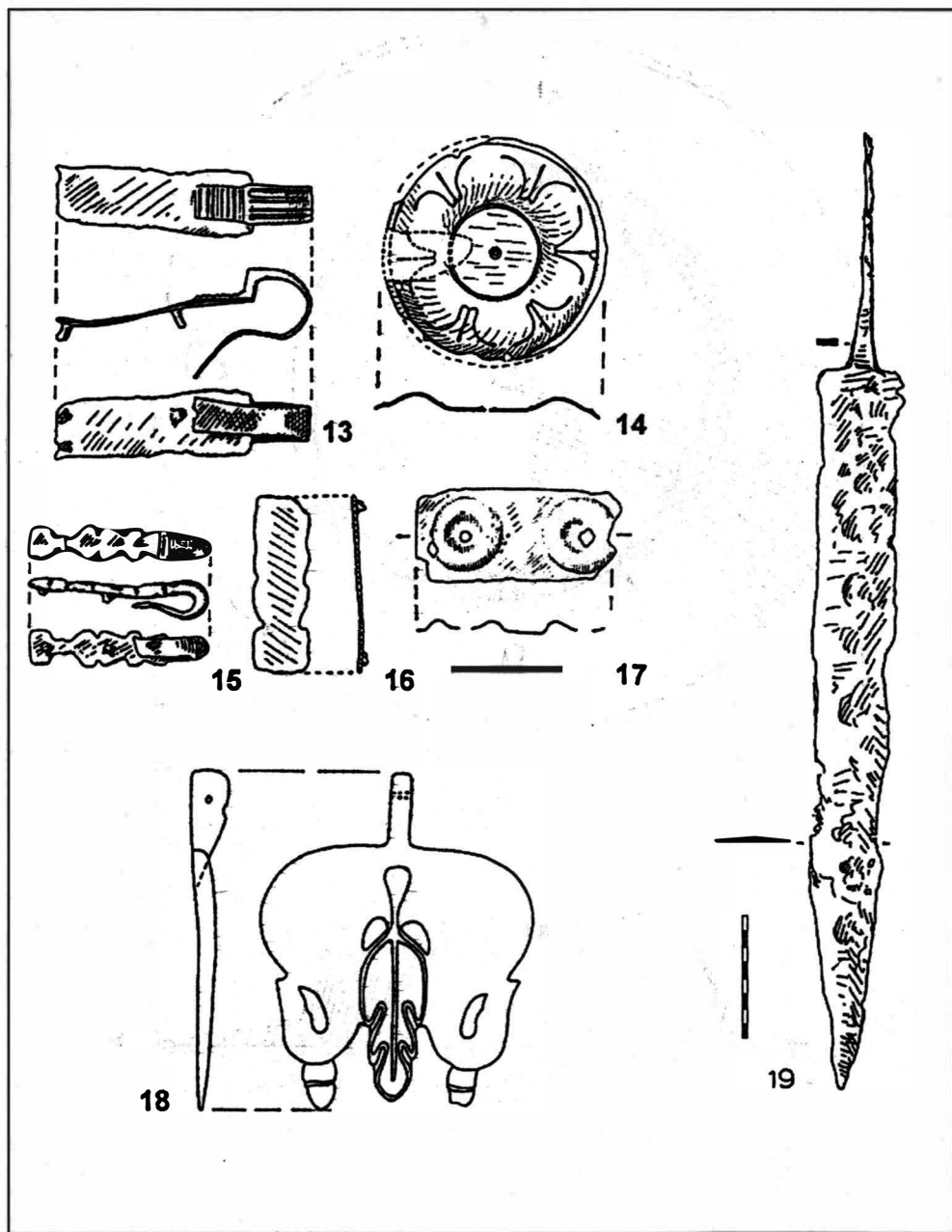
Pl. 2. 6 Ocnița (after Berciu). Iron and Bronze. 6 Scale about 1:5; 6a Not to scale.



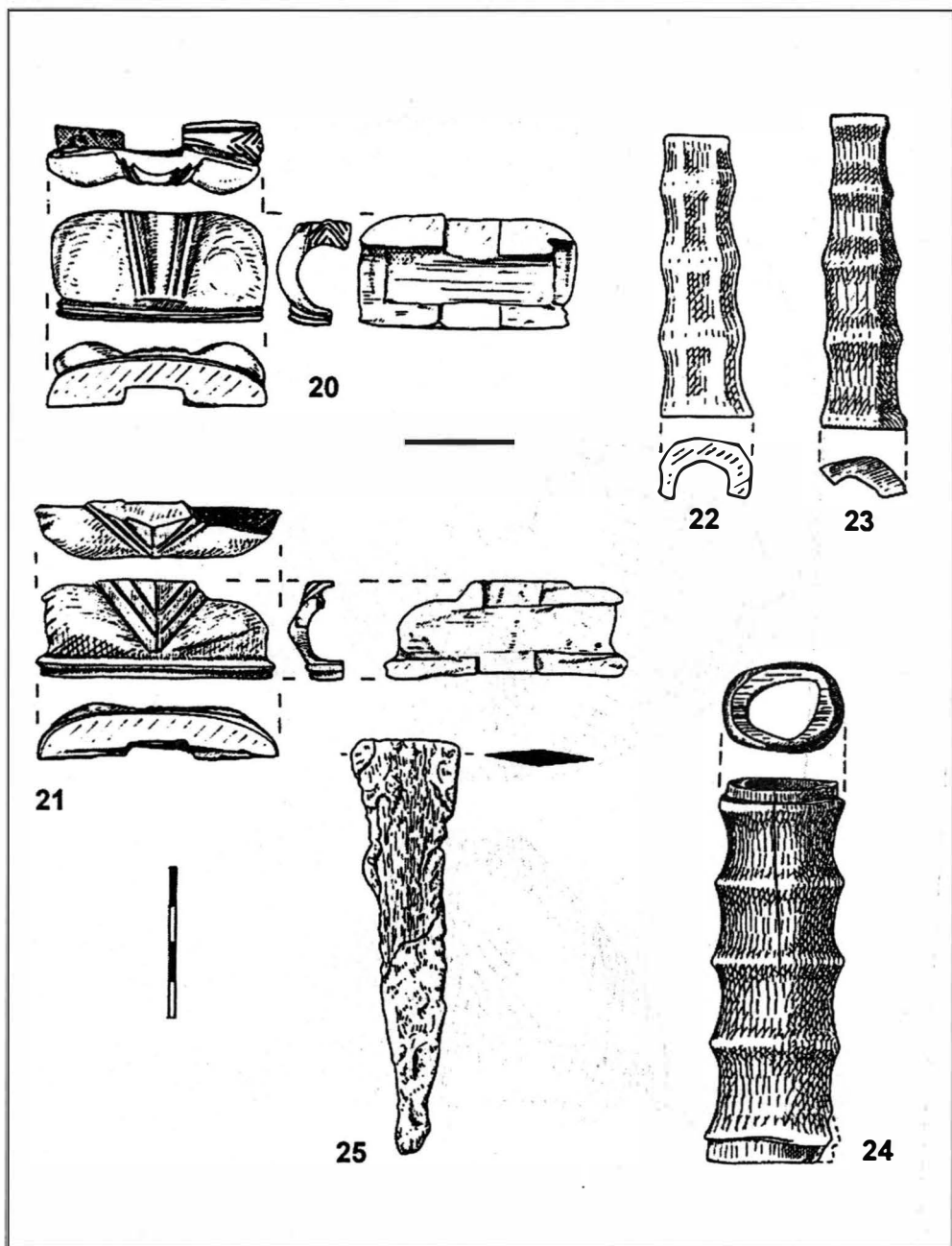
Pl. 3. 7-8 Ocnîța. 7 Iron with metal inlay; 8 Bronze. 7, 8a Scale 1:2; 8 Scale 1:1.



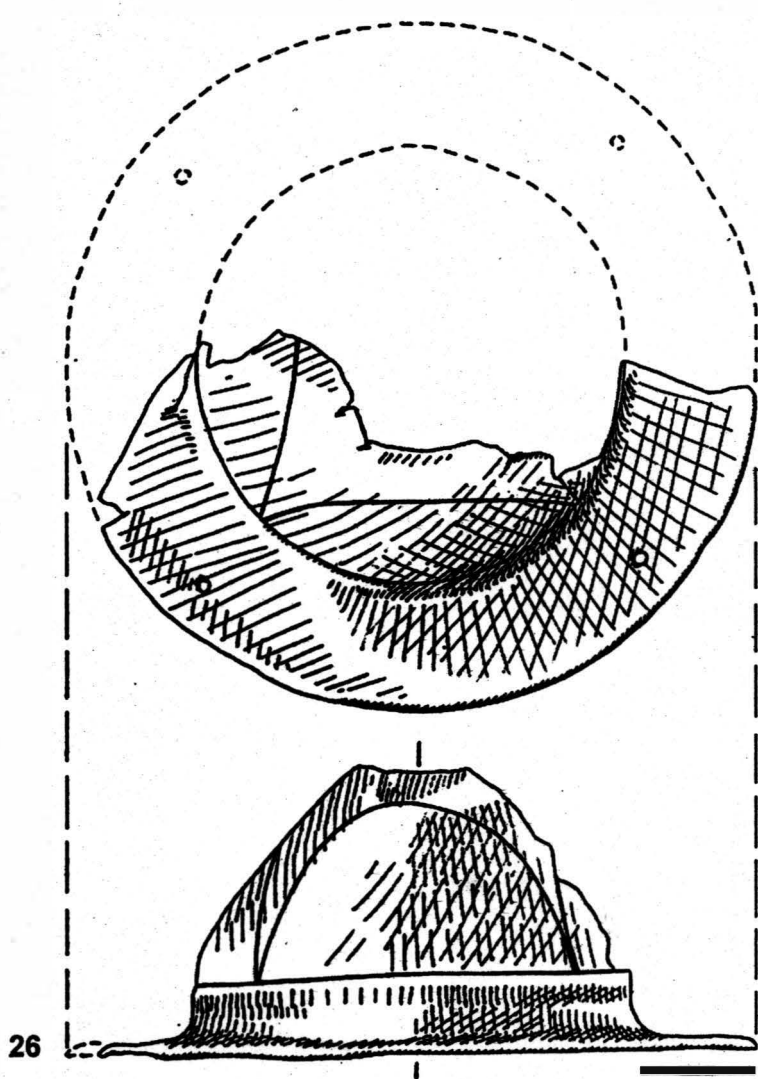
Pl. 4. 9-12 Ocnîța. 9 Iron; 10-12 Bronze. Scale 1:2.



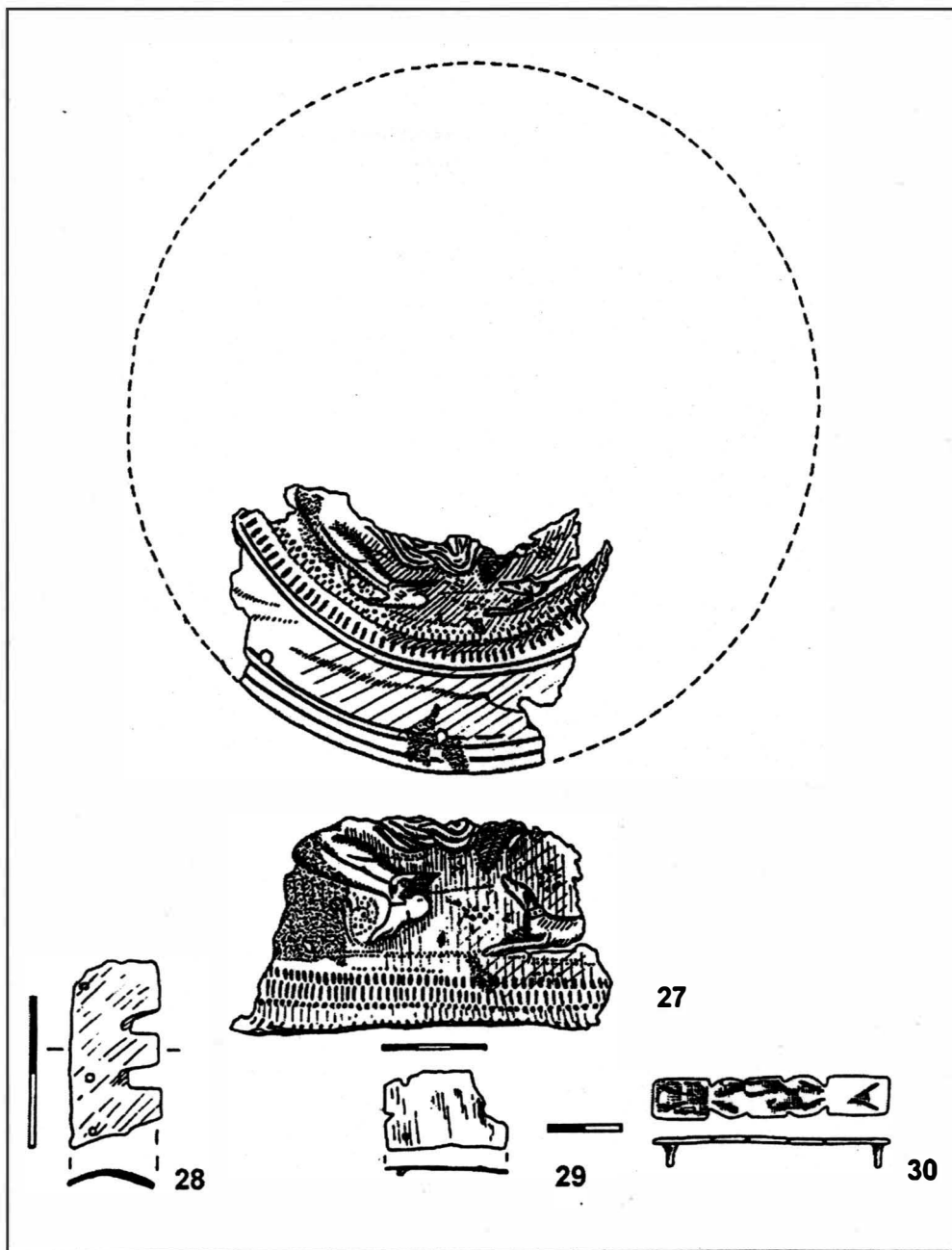
Pl. 5. 13-17 Ocnîța; 18 Prejmer (after Marcu, unpublished drawing); 19 Poiana.
 13, 15-17 Bronze; 14 Silvered bronze with niello inlay; 18 Silvered Bronze;
 19 Iron. 13-18 Scale 1:2; 19 Scale 1:5.



Pl. 6. 20-25 Poiana. 20-24 Bone; 25 Iron; Scale 1:2.



Pl. 7. 26 Poiana. Bronze. Scale 1:2.



Pl. 8. 27-30 Poiana. 27 Silvered bronze; 28-29 Bronze; 30 Silvered bronze with niello inlay. 27, 29-30 Scale 1:2; 28 Scale 1:1.