

CHAPTER IX

Dress and Armour

As we gather together the relics brought to light from the abandoned wells and rubbish-pits at Newstead, the figure of the Roman soldier inevitably rises before us. It is a figure rendered familiar by the great monuments which commemorate Imperial triumphs, and by the portrait-reliefs which once stood above the graves of centurions, cavalry soldiers, or standard-bearers recalling to the passers-by the likeness of the dead. It is to such memorials, and to the scanty finds of weapons and armour which have been preserved to our time, that we owe most of the knowledge we possess regarding the arms and equipment of the army of the Empire. The columns and the triumphal arches furnish us with a series of pictures of the soldier in action. The victories of Trajan over the Dacians are sculptured on the column which he had set up in Rome in A.D. 104. The triumphs of Marcus Aurelius over the Marcomanni are unfolded in the reliefs decorating the huge pillar that gives its name to the Piazza Colonna. We follow each stage in the campaigns, the army making roads, building bridges, constructing forts, attacking and attacked. Many details are given which help us to realise vividly the scenes commemorated. No doubt in such sculptures, executed, as they were, in Rome, the artists drew their inspiration to some extent from older Hellenic models, and there thus enters into the treatment a somewhat conventional element. The grave stones of the legionaries or auxiliaries, on the other hand, are probably more exact in details. The personages they represented were familiar both to the hands that carved the monuments, and to the eyes that looked upon them; and the minutiae of dress and arms would naturally be more accurately produced. As works of art these sculptures are often rude, while many of them are sorely defaced and in worn condition. Still, their value as guides can hardly be overestimated.

Three types of design are common on the grave-reliefs. In one the soldier stands in his armour facing the passing throng. In a second he is mounted and riding over a prostrate enemy. In a third we see him with his horse before him, starting on his long journey to the shades. Such monuments occur most frequently on the frontiers. The great legionary camps on the Rhine—Xanten, Bonn, Mainz—have furnished the best examples. But other well known specimens are preserved at Cologne, Wiesbaden, Creuznach, Worms, and Verona. In England the Museum of Colchester possesses an interesting tombstone of a centurion of the Twentieth Legion, while further north, besides several examples at Chester,^[1] there is the grave slab of the standard-bearer Flavinius, probably from Corbridge on Tyne, now set up in the Abbey Church of Hexham. As a whole, the reliefs that have come to us from the forts along the wall of Hadrian are rude in execution and add little to our knowledge of the subject.

The collections of weapons and arms are very poor. Graves yield little that can help. The ashes of the Roman soldier were laid to rest with vessels of glass and earthenware; it was only the barbarian warriors who had their arms placed beside them. The few objects we do possess have been gathered from marshes, from wells, from rivers. A considerable proportion of them have been dredged from the bed of the Rhine. Speaking generally, we may say that more has been obtained by chance finds of this sort than by systematic search. Iron objects recovered near the surface in the course of excavations have too often been reduced to shapelessness by corrosion, or have been allowed to become disintegrated through lack of knowledge how to preserve them. The exploration of the legionary fortress of Carnuntum in and after 1899, however, incidentally resulted in the gathering of a collection that is of high importance for the study of Roman armour. The objects, which are more than one thousand in number, and which consist of portions of weapons and armour, most of them in a fragmentary condition, were found on the floor of what appears to have been a storehouse. The only body of material obtained by excavation, which can at all compare with that from Carnuntum, is the collection which has been obtained at Newstead. Unfortunately we are not yet within sight of any proper classification of Roman armour and weapons such as would enable us to approach this question satisfactorily. Over the wide extent of the Empire, with its many races, there must without doubt have existed local usages and fashions

1 Haverfield, *Catalogue of the Roman Inscribed and Sculptured Stones in the Grosvenor Museum, Chester*.

in dress and weapons which changed and altered from time to time. But we know too little of these—and, it may be added, of the garrison at Newstead, legionary or auxiliary—to deduce from our finds the race or even the rank of the wearers.

Leather

The soldier of the Empire was clad in leather. Under his armour he wore a coat or jerkin, which is sometimes represented as cut quite short below the waist, the serrated edges appearing beneath the armour, and sometimes as being prolonged into a kilt-like skirt reaching almost to the knees. Not infrequently he wears short tight-fitting breeches ending at the calf of the leg, while over the shoulders hangs a cape or a long military cloak (*sagum*) which could be wrapped round the body.

Although no single complete garment could be put together, many pieces of this leather clothing occurred among the find. Three of the larger and more perfect of these may be specially noted. They measure respectively twenty-three inches by seventeen inches, twenty-six and a half inches by fifteen inches, and twenty-three and a half inches by eighteen and a half inches. All had their margins carefully stitched, and seemed to have originally belonged to tunics. In addition to having their margins stitched, many of the pieces show near the edging lines of needle holes, usually circular but sometimes square, indicating where a patch had been applied. Two more or less triangular fragments, twelve inches by seven inches and eleven inches by six inches, stitched as usual along their margin, have a square patch at the apex. These would seem to have formed the lappets of a cloak. Another piece, approximately semi-circular in shape and measuring twenty inches by twelve inches, shows at the edge a series of needle-holes in the form of a star. Numerous examples of the patches themselves came from the pits. They are of varying shapes and sizes, the needle-holes being always visible round the margin (Plate XIX., Figs. 1, 3, 6, 7, 8, 10, 13, and 14). Some of them had no doubt been inserted in order to mend cuts or tears in the leather, but others, especially those of more or less circular form, must have been intended to secure and strengthen the loops by which the garments to which they belonged were fastened. Many of these circular patches had in the middle two small holes placed opposite each other with a narrow band of leather between. The edge of the leather between the holes invariably showed signs of having been pulled outwards, a feature which was ultimately explained by the discovery of a patch still retaining the remains of a loop formed by a leather thong which was knotted behind it (Plate XIX., Fig. 13). One of

these loops may be seen in Plate XIX., Fig. 16. The loops may have been brought together by leather laces, but it is also possible that they may have been fastened, like a modern frogged coat, by a button attached to a thong.

Several objects which seemed designed for the purpose just indicated were among the miscellaneous finds. One of these came from Pit LXV. It is made of horn and is shaped like a double button (Plate LXXVII., Fig. 16). The narrow neck between the two portions is exactly such as would be convenient for the attachment of a cord. It measures one and a quarter inches in length, and is quite flat on the back. Analogous objects in bronze are illustrated in Plate LXXXII., Figs. 6 and 8. A specimen in bone, which resembles Fig. 8, is preserved in the Blackgate Museum, Newcastle-on-Tyne. It appears to have been found with Romano-British antiquities, while another specimen considerably ruder in execution was recently discovered in a cave near Dirleton, in the County of Haddington.¹ A different type of button is probably represented by two articles in bronze which are shown on Plate LXXVII., Figs. 2 and 3. In these there is a hole perforated through the middle for the attachment of the cord. Buttons of the ordinary modern type may also have been to some extent in use. A number were found, but in no case did they come from pits. In Block XIV, however, a well-made specimen occurred at a depth of three feet in association with a denarius of Trajan. It should be added that one piece of leather showed the serrated edging which may be noted on the coats of soldiers on the Trajan column, and that straps and thongs occurred as well as some neatly stitched pockets (Plate XIX., Figs. 2 and 4).

Of all the leather objects, however, the most complete were the specimens of footgear. There were heavy boots for men and women, and tiny shoes for children. The skill of the leather workers as displayed in the variety of their patterns was as striking at Newstead as at Bar Hill. Some of the best preserved specimens are illustrated in Plate XX.

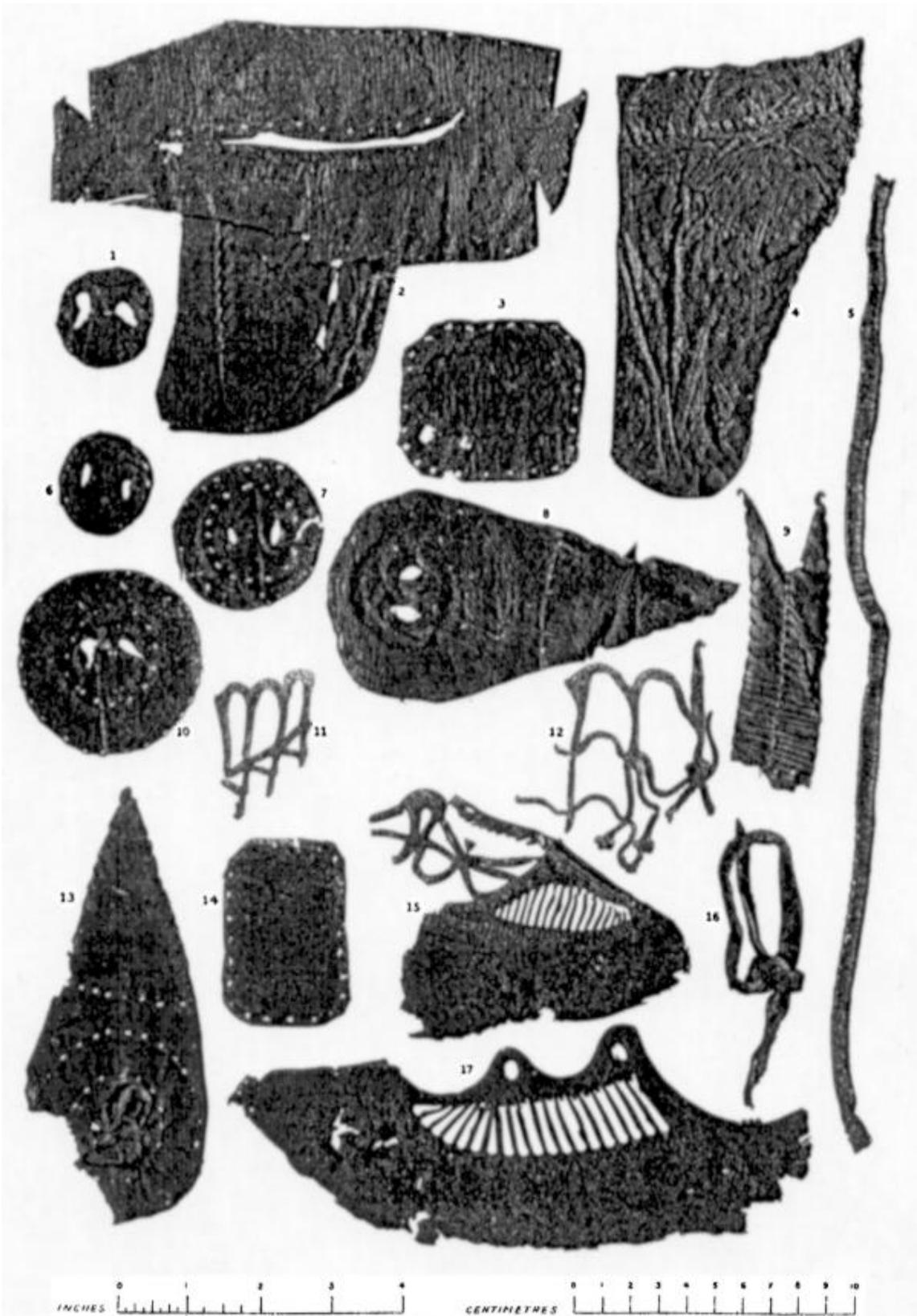
The ordinary footgear of the Roman legionary was the *caliga*—a sole laced to the foot by an assemblage of light thongs—the toes being exposed. Such shoes are to be seen on the columns of Trajan and of Marcus Aurelius, on the monument of Adamklissi, as well as upon most of the legionary grave slabs. A large number of these *caligae* were discovered in Mainz in the year 1857, and are now preserved in the Museum there.²

1 *Proceedings of the Society of Antiquaries of Scotland*, vol. xliii. p. 251, fig. 5 (3).

2 *Die Alterthümer unserer heidnischen Vorzeit*, Band iv. Taf. 37, Figs. 1–10.

PLATE XIX. LEATHER WORK

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1. Circular patch through which a loop has been attached to a garment.	149
2. Pocket.	150
3. Patch.	149
4. Pocket.	150
5. Shoe lace.	152
6, 7, 8. Patches by which loops were attached.	149
9. Portion of a strap.	
10. Patch.	
11, 12. Parts of shoe uppers.	152
13. Leather patch, showing loop still in position.	149
14. Patch.	149
15. Shoe upper.	152
16. Loop.	150
17. Shoe upper.	152



It is clear that in this find, which probably dates from the first century, we have precisely the type of shoe of the monumental reliefs. The leather-work of the uppers is strong and light. There is no unnecessary ornamentation. It consists simply of a series of light loops, holding the shoe in its place and enabling it to be laced round the ankle and across the foot. The toes were exposed, one or more thongs passing between them. The whole upper and one thickness of the sole were cut out of a single piece of leather, the only stitching required being where the two sides are brought together at the back of the heel. A strong outer sole was clamped upon this with heavy nails, and one or more soles of a lighter character were inserted inside.

When we compare the figures of the Dacians and Germans represented on the Roman columns with those of the legionaries,¹ the difference in the shoes is striking. The barbarians are represented wearing a close-fitting shoe entirely covering the foot and fastened round the ankle, the ends of their long wide trousers being caught into it. This type of shoe, the *calceus*, is to be seen on the monuments representing the civil population, such as those from Neumagen, and good examples of the shoes themselves dating from about the second century are preserved at the Saalburg. In these we find examples of much more skilled leather-work than in the simple *caligae* from Mainz. Of these two types of shoes, the light-thonged upper, representing the military, and possibly Italian type, and the close-fitting shoe, possibly of Gaulish type, we have traces at Newstead. Of such *caligae* as those found at Mainz only one incomplete specimen was noted. The whole of the light thongs surrounding the heel had disappeared, but those covering the foot remained, and here the upper and one thickness of the sole had been cut from a single piece. Two inner soles were fitted on the inside, while an outer sole was affixed with strong nails. This method of construction seemed, however, to be exceptional. Except in the case of light shoes cut from a single piece of leather, the upper in most of the Newstead shoes was made separately from the sole. The soles consisted of from five to six thicknesses of leather, the inner layers being laced together by one or more narrow thongs of leather neatly inserted either down the middle or round the edges. In most cases the edges of the upper were doubled beneath the inner sole, while the outer sole was kept in its place by

¹ Cichorius, *Die Traianssäule*, cf Taf. xix. 102 and Taf. xxxii. 110.

the nails inserted through it. Nearly all the soles were strongly made and studded with nails. The light shoes made from a single piece were not uncommon, in these the leather being brought together at the heel, where alone there was any stitching (Plate XX., Figs. 1 and 3). Laces passing through the loops on the sides kept the shoe on the foot. The variety just described had no nails. Such shoes should probably be termed *carbatinae*. A similar shoe is still in use in Shetland and in Eastern Europe.¹

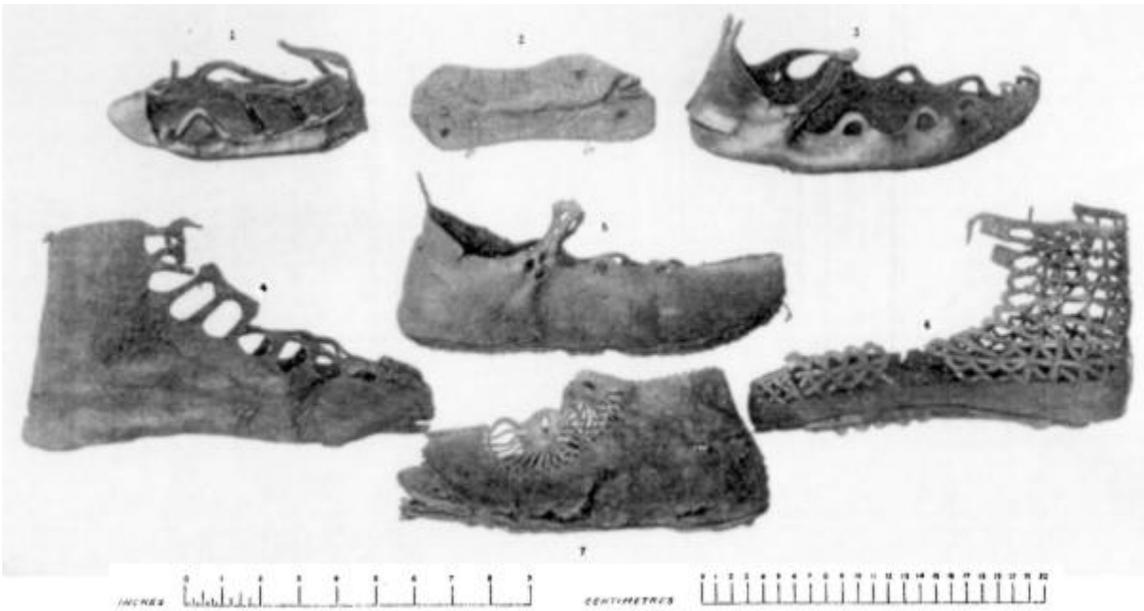
Generally speaking, shoes were much more common than boots, but it could not be said that there was any predominating type which marked itself out as the soldiers' ordinary wear; it was probably one of the coarser forms illustrated in Plate XX., such as Fig. 4. The soles with their heavy tackets were abundant. Sometimes the strong counter of the heel remained in its original position, even when the upper had entirely disappeared. Again, in many cases the shoes were obviously those of women and children rather than of grown men. There was no evidence that the sandal was in common use although one or two examples were noted.

Fig. 4 is probably a second-century type. It was found with others resembling it in the inner ditch of the East Annexe. Fig. 5, which came from Pit XXV, represents the calceus, the close-fitting type of shoe. It probably belonged to a youth. It is remarkably well preserved, even to the little tag at the heel for pulling it on to the foot. The nails form a decorative pattern on the sole, a feature not uncommon in the shoes of the period. Many of the shoes are remarkably fine examples of the skill of the leather worker, who exercised the greatest ingenuity and skill in cutting out the uppers, and occasionally in stamping them with lines of small decorative punch work. One of the most remarkable specimens (Plate XX., Fig. 6) came from Pit XVI. It was probably made for a woman, judging by its size and shape. Notwithstanding the lightness of its uppers, its sole is heavily covered with nails. Its light openwork associates it in the same class as the more simple caligae from Mainz, and like them it must belong to the first century. A child's shoe of the same sort was also found, but in less perfect preservation. Like the larger shoe, it had nails in the sole, and the same was the case in a tiny shoe which must have belonged to a child about four years old. In Fig. 7 we have another example of finely cut leather work. Others, again, may be seen in the fragments illustrated as Figs. 11, 12, 15, and 17 of Plate XIX., where also we have

¹ Haverfield, *The Classical Review*, Vol. xii. p. 142.

PLATE XX. SHOES

	PAGE
1. Child's shoe made from a single piece of leather (<i>carbatina</i>).	152
2. Oak sole for a child's sandal.	152
3. Shoe of the same type as No. 1.	152
4. Upper of shoe. Inner ditch, East Annexe.	152
5. Close shoe (<i>calceus</i>) with heavily nailed sole. Pit XXV.	152
6. Open work shoe (<i>caliga</i>) for a woman, with nailed sole. Pit XVI.	152
7. Shoe with finely worked upper.	152



a specimen of the long flat laces employed to fasten boots and shoes. The small sole of oak (Plate XX., Fig. 2) has evidently been intended for a child's sandal, but it bears few marks of wear.

Passing from boots and shoes, we come next to an object which illustrates more strikingly than anything else the decorative skill of the Roman leather worker. At the bottom of Pit LXXVIII, associated with a group of vessels which must belong to the first century, there were lying a number of fragments which at once attracted attention because, even in their muddy condition, they exhibited clear traces of a pattern executed in bright brass studs. When they were collected and examined in the National Museum, it became evident that originally they had all belonged to one and the same article—apparently a single piece of leather, which on being put together was found to measure twenty-two and a half inches in height and twenty and a quarter inches in breadth.

At first sight it bears some resemblance to a conventional eagle with outspread wings, but a closer examination conveys the impression that the portion which appears to correspond to the eagle's head is really a terminal peak. Along the straight margin, at the opposite end, is a line of small holes which seem to have been made with a view to attach the leather to some other object. There is no corresponding line on any of the other margins, although one or two isolated holes are to be noted elsewhere, and it seems probable that the whole hung from a line of studs inserted along this straight margin. The exact shape of the object will be seen in Plate XXI. From the ends of the margin which seems to form its base the sides expand in graceful curves, forming wing-like projections, and the whole figure terminates in three peaks,—a central point resembling a hammer in its outline with two leaf-shaped pieces springing from its base. Two circular openings, three and three-quarter inches in diameter, occupy a central position, one on each side of the figure.

Examination showed that two pieces of leather, not one, had been employed in its production—an upper layer of considerable thickness, and a backing of finer and thinner material. Here and there on its lower surface are small metal washers, apparently of bronze, of the type to be seen on the back of the studs in Plate XXV., Figs. 28 and 30. It is probable that the function of these was to assist in holding the two layers of leather together. Three such washers seem to have been attached to the back of each leaf or circle in the pattern on the front, to be

described presently. Doubtless they mark the place of larger studs, all of which have disappeared. The whole of the leather is covered with a design, executed partly by tooling and partly by inserting brass-headed studs of three different sizes. Parallel tooled lines appear to have formed a border round the entire figure, with the exception of the two leaf-shaped terminals, as well as round the circular openings already noted, and between these lines there has been inserted a continuous row of brass-headed studs. None of these studs are now left, but the exact size of the original series is evident from those that remain in the circle which forms the central point in the pattern. They were probably precisely similar to the studs illustrated in Plate XXV., Fig. 36. Fig. 35 of the same plate shows examples of the smallest size, here the chief element in the working out of the design. On the middle of the central hammer-shaped peak are two concentric circles of the small studs, while on each of the leaf-shaped projections which flank it are leaves of a well-known Roman type, the points curving inwards.

At the base of the three terminals are two concentric circles of the smaller studs, with a line of the medium-sized studs, already referred to, running between them. On either side of this circular ornament a straight line of the smaller studs extends as far as the tooling of the border. From this line rise six semi-circles, executed in the same way, three on each side of the circular device in the centre, and each divided from its neighbours by an upright line, which, broadened by the addition of a couple of studs near the top, has a spear-shaped ending. To judge from the washers on the back, there must have been three of the medium-sized studs in the field of each of these semi-circles, and three in each of the pointed leaves in the design, while on each side above the semi-circles there was placed a stud of the largest size. One of the large studs remains in its original position.

Below the straight line which divides the pattern, the design is composed entirely of leaves. Two of these, side by side, with the points turned outwards, seem to have filled the central space between the circular openings, while between the openings and the outer edge on either side we have a leaf springing from a stem below, with the point turned inwards. All of the leaves are outlined by double rows of tooling. Below the circular openings, where the figure is narrow, we have an oblong panel with *ansa*-like projections at either end. This has been outlined by a single tooled line filled in with a row of studs of the smallest size. The studs have disappeared almost entirely.



PLATE XXI. ORNAMENTED LEATHER WORK
Pit LXXVIII

Below the oblong panel the whole surface is covered by a design of leaves and stems. The centre of the design is occupied by a diamond-shaped panel formed by the stems of the leaves. At the top of the panel two stems first approach close to one another and then separate, the ends curving outwards. From each side a stem springs upwards, terminating in a leaf which points outwards. At the lowest point the stems, after being brought together, curve outwards and terminate on either side in pointed leaves.

The whole elements of this design are characteristic of provincial Roman art. The same pointed leaves may be seen frequently employed in sculpture, while both leaves and arcading appear in the decoration of an altar from Birrens, dedicated to Mars and Victory by Rhaetians serving in the Second Cohort of Tungrians. An excellent example of the leaf design is also to be noted in an enamelled bronze plate, of unknown provenance, now in the Museum of Carlsruhe. [1]

Of the purpose the article just described was intended to serve it is difficult to put forward a satisfactory explanation. It was not unique. A portion of a similar object was subsequently found in Pit CII, also associated with early pottery. This fragment probably forms about a quarter of the whole piece, but in it we have part of the terminals and of one side. The surface has been covered with decoration, but the brass studs have all disappeared. The leather has been strong and is fully one-eighth of an inch in thickness. In this respect it differs entirely from the many fragments of leather with stitched margins which must have belonged to garments. It does not seem to have formed any part of clothing, and its whole appearance conveys the impression that it was used as a horse trapping. The stitching lines on the margin may indicate that it had been applied to some other material, perhaps a brightly coloured saddle-cloth, but no trace of such material remains. The circular openings may have been filled with thin metal plates. More than one example of thin circular discs of brass was recovered in the course of the excavations. Whatever may have been its use, it speaks plainly enough of the skill of the craftsman, and of the luxury in appointments out on the frontiers of the Empire in the first century of our era.

Over his leather surcoat the soldier wore his armour. This was of three kinds. The so-called *lorica segmentata* consisted of breast and back plates, with overlapping bands of iron or bronze, protecting the lower part of the body and the shoulders. This is the armour of Trajan's legionaries, and it

1 *Alterthümer unserer heidnischen Vorzeit*, Band iii. Heft ix. Taf. 4.

appears also in the column of Marcus Aurelius. The second variety, *lorica squamata* or scale armour, is worn on the Trajan column only by the archers and by the Dacians, but it is more common on the column of Marcus. Lastly there was the *lorica hamata* or chain mail.

Lorica Segmentata at Carnuntum

No specimen of the first of these kinds seems to have been found, or at least preserved, prior to 1899, when a number of fragments were discovered at Carnuntum. With the aid of the sculptures of the Trajan column, Colonel von Groller, who described the find, was able to reconstruct the original.¹ It appears to have consisted of a breastplate formed of two curved pieces of iron, with a similar protection for the back. No entire specimen of any of the four pieces was included, but from numerous fragments which retained their bronze mountings, von Groller came to the conclusion that the plates on the back had been hinged, while those protecting the breast had been fastened by straps and buckles. Below the breastplate and backplate there were worn from five to seven bands of thin iron encircling the body and coming down to the hips. These appear to have been from two to two and a half inches wide. They slightly overlapped and were fastened together by bronze rivets which probably served at the same time to attach them to a leather backing beneath. Like the outer plates, the bands seem to have been hinged at the back, and to have each been provided in front with two hooks, one on either side, through which they were laced together with a cord or leather thong. Similarly there were fastened on each shoulder from three to five curved iron bands of the same breadth and thickness as those round the waist, and also fastened to leather by means of bronze rivets. The whole formed a light strong protection not too rigid to prevent a man working in it.

Lorica Segmentata at Newstead

A set of iron pieces found at Newstead in the pit in the Principia illustrates this type. The largest plate measures eight and a half inches wide and five and a half inches high (Plate XXII.). The metal is about a sixteenth of an inch thick and was curved to fit the body. It had evidently formed part of the breastplate, being in fact the lower portion of the half protecting the right side. On the left margin the metal is curved and slightly turned back to prevent the edge chafing the arm. Along the lower side are two rectangular slits, each five-eighths of an inch by one quarter of an inch, surrounded by a mounting of brass three-eighths of an inch wide, fastened to the iron by studs. On the right the

1 Von Groller, 'Römische Waffen,' *Der Römische Limes in Österreich*, Heft ii. p. 84.

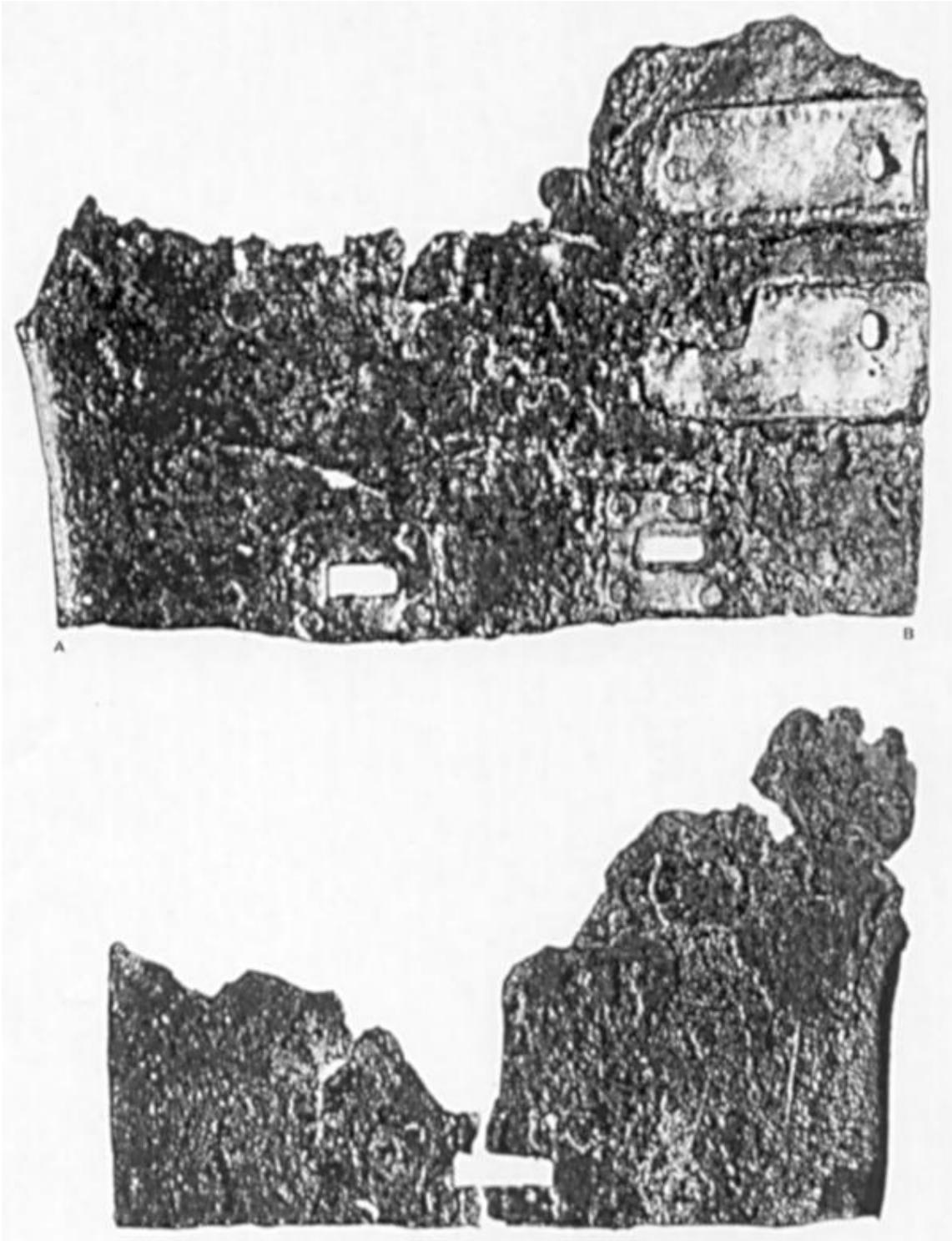


PLATE XXII. REMAINS OF IRON BREASTPLATE WITH BRASS MOUNTING.
A to B 8½ inches

plate terminates in a straight edge. It is ornamented by two horizontal bands of brass, one inch and an eighth wide, extending about three inches inwards from the edge and rounded off at the inner end. Half an inch

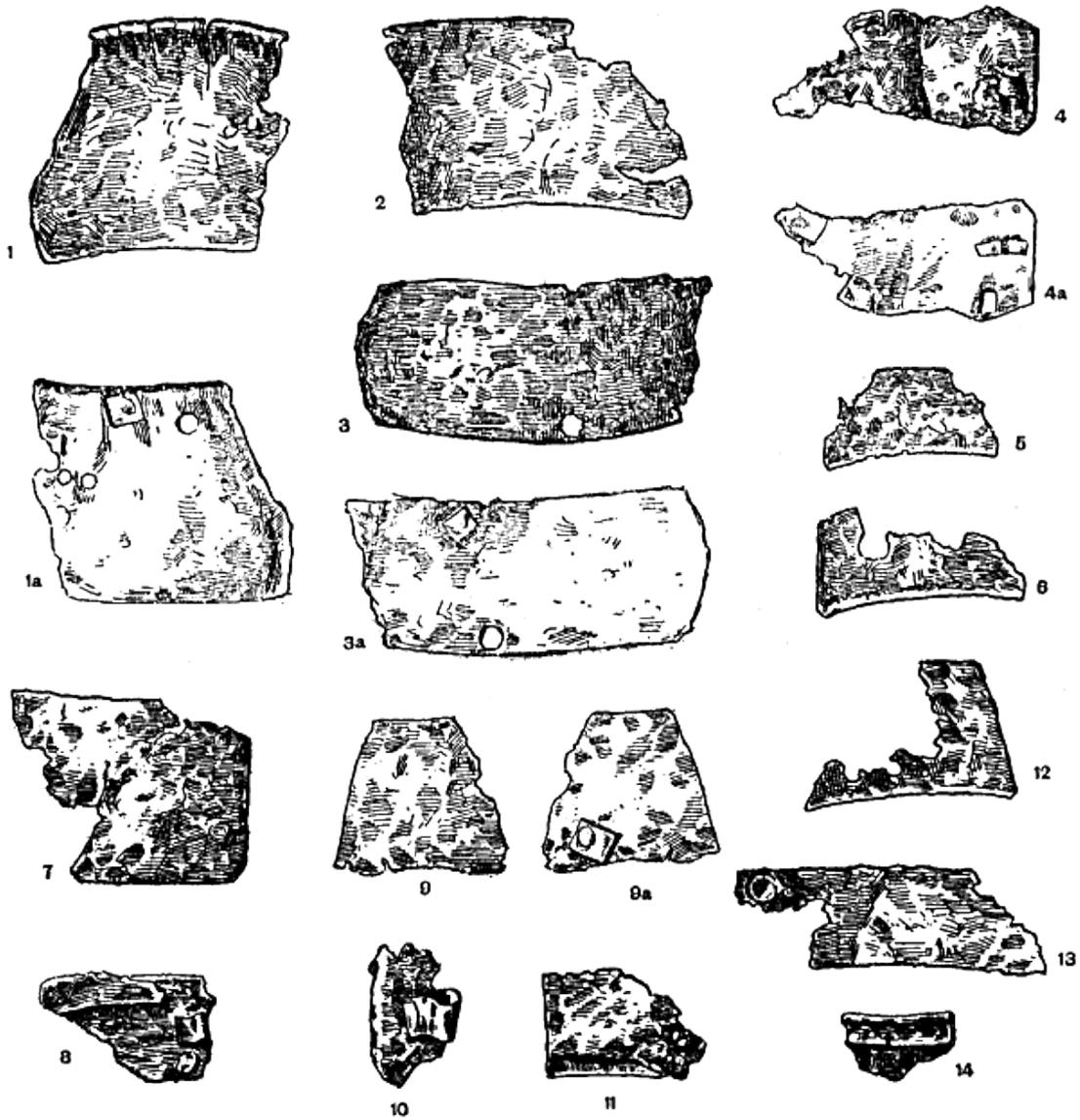


FIG. 11. REMAINS OF ARMOUR. 1a, 3a, 4a, 9a, show the backs of 1, 3, 4 and 9

from the margin of the plate each of these brass bands is furnished with a round hole about a quarter of an inch in diameter. A smaller fragment (Plate XXII.), broken in two, appears to be part of the corresponding plate for the back. It is seven and a quarter inches wide. On the right side the metal is turned back for the armhole. On the left the margin of

the plate is straight. The lower edge has a single brass mounted slit in the centre. The upper part of both plates is destroyed.

In addition to the preceding, there are some forty smaller fragments, a number of which are illustrated in Fig. 11. One of them appears to be the corner of one of the corresponding pieces of the backplate. Others from their smaller curve seem to have formed the overlapping plates employed to protect the shoulders. The width of three of these plates can still be ascertained. One (1, 1a), which was probably intended to be worn near the neck, has the edge turned back to prevent chafing, and measures three inches, a second (2) two and seven-eighths inches, and a third (3, 3a) two and an eighth inches. Each of them is furnished with a nut intended to fasten it to leather, and many show bronze rivets (13), probably for the same purpose. Two of the smaller pieces are furnished with loops for attachment. In one case the loop is of iron (4, 4a), inserted in the edge of the plate. In another it is of bronze (10). Some of these smaller plates (5, 6, 12 and 13) were probably part of the bands which went round the body. There is, however, no trace at Newstead of the characteristic hinge mountings of brass to be seen on the fragments at Carnuntum and elsewhere. While these pieces are too fragmentary to enable us to reconstruct the armour in any satisfactory way, the larger pieces from the breast and back plates furnish us with a detail which was absent at Carnuntum—the brass-mounted rectangular slits. These were doubtless intended for the passage of straps to bear the weight of the encircling iron bands worn below.

Lorica Squamata

Of the *lorica squamata* or scale armour the pit in the Principia (No. I) produced a remarkable specimen. No fewer than 346 armour scales were brought to the surface.



FIG. 12. ARMOUR SCALES
showing method of lacing

They were made of brass, which in the wet black mud had preserved its golden yellow colour. Each scale measures one and an eighth inches in length and half an inch in breadth, and one mm. in thickness. They are cut square at the upper end and rounded at the lower end. Close to the upper edge is a hole one-eighth of an inch in diameter, while a little lower down on each side are two smaller holes. The scales were fastened together by ties of brass wire, square in section, passing through the smaller holes. Through the larger upper



PLATE XXIII. SCALE ARMOUR.
Found in Principia, Chamber No. 5

holes passed thin leather thongs, by which the scales were laced on to a leather tunic or apron as shown in the accompanying figure.¹ Many of the scales were still fastened together when found, the largest number thus attached in any one case being fifteen. The right side of the upper scale always overlaps the left side of the scale below it, so that the two pairs of holes on the edges are brought exactly opposite one another. All trace of leather had disappeared. In addition to the find just described a single scale of the same type came from the Baths.

Remains of another type of scale armour were discovered in the floor of the chamber situated at the north-west corner of the Principia. Unfortunately, here also the pieces were too small to enable the cuirass of which they had formed part to be reconstructed. Altogether there were more than one hundred fragments (Plate XXIII.). These consisted for the most part of thin plates of brass from one inch to one inch and three-sixteenths in width, slightly curved, and having a thickness of two mm. The longest piece was about three and a half inches in length. In several instances it was clear that the fragment had formed the extreme end of the band to which it belonged. In such cases it was noted that the outer margin formed an acute angle with the lower edge, but that the sharp corner was blunted in the same manner as were the corresponding parts of heavier iron bands from Carnuntum. On the concave side of the bands near the upper edge are rivets. Upon several of these there are still to be seen adhering pieces of the leather backing to which they have been attached. At the end of each band near the edge a round hole has been bored; as none of these holes were found with rivets in them, it is possible that they were used for the insertion of a cord to draw the coat together. It is quite evident from the oxydisation of the metal that when the armour was left where it was ultimately discovered, the bands were overlapping. The curve of some of the pieces suggests that they were intended to protect the shoulders and arms. Others may well have covered the body. About half a dozen pieces, the largest of which measures four inches by three and seven-sixteenths inches, may have belonged to the breastplate.

Scale armour came from the East. It was in use as early as the fourth century B.C. in Southern Russia, where the great tumuli dating from this period have yielded not only bronze scales covering a leather cuirass, but also

1 This illustration of the method of lacing the scale on to the leather backing is taken from Thibetan scale armour, which probably preserves the ancient system.

scales of iron and of bone. The form of these scales varies considerably. One type of scale differs but little from those figured in Plate XXIV., but there is also a variety showing an irregular serrated edge, while another is composed of long metal strips arranged in perpendicular fashion.¹ We are told by Ammianus Marcellinus that the armour of the Parthians was fashioned of tongues of iron like feathers,² and the archers who wear it on the Trajan column were probably Orientals. As a matter of fact, at Carnuntum the shapes of the armour scales differ considerably. Colonel von Groller figures thirty-six different types.

In England the occurrence of scale armour has been noted on several occasions. About forty-seven scales were found at Ham Hill in Somerset.³ These were of burnished bronze, every alternate one being tinned or silvered. They were fastened together by bronze rings, and resembled in form the Newstead specimens shown in Plate XXIV., except that they had mostly at the upper end two holes, instead of one, for the leather thong or other fastening to pass through. From Hod Hill in Dorset came two armour scales of a larger size,⁴ while we have also specimens from Walltown Crag turret and Aesica on the wall of Hadrian. The last mentioned find, made in 1894, consisted of a considerable number of scales of very small size.⁵ Each scale measures half an inch by five-sixteenths of an inch, and is pierced with six holes in two rows of three. They were bound together with small ties of Wire, which passed through the outer holes, leaving the middle holes for securing them to the tunic.

Scale armour has continued in use down to the present day. The British Museum possesses a Polish cuirass dating from the seventeenth century, and among the objects brought back by the recent expedition to Thibet were specimens which closely resemble those worn in Roman times. The scales of the Thibetan examples are of iron, and are two and three-eighths inches long and three-quarters of an inch wide. In each scale were twelve holes, through which passed the leather thongs for lacing them together, while a larger hole was punched through the upper end

1 Collection Khanenko. *Antiquités de la Région du Dniepre*. Kieff, 1899. Liv. ii. plate vii.; also liv. iii. plate xxxix.

2 Hostem undique laminis ferreis in modum tenuis plumac contactum. Ammianus, xxiv.

3 Haverfield, *Victoria County History, Somerset*, vol. 1. p. 296.

4 *Proceedings of the Society of Antiquaries*, vol. xxi. p. 135.

5 *Proceedings of the Society of Antiquaries of Newcastle-on-Tyne*, vol. vi. p. 245.

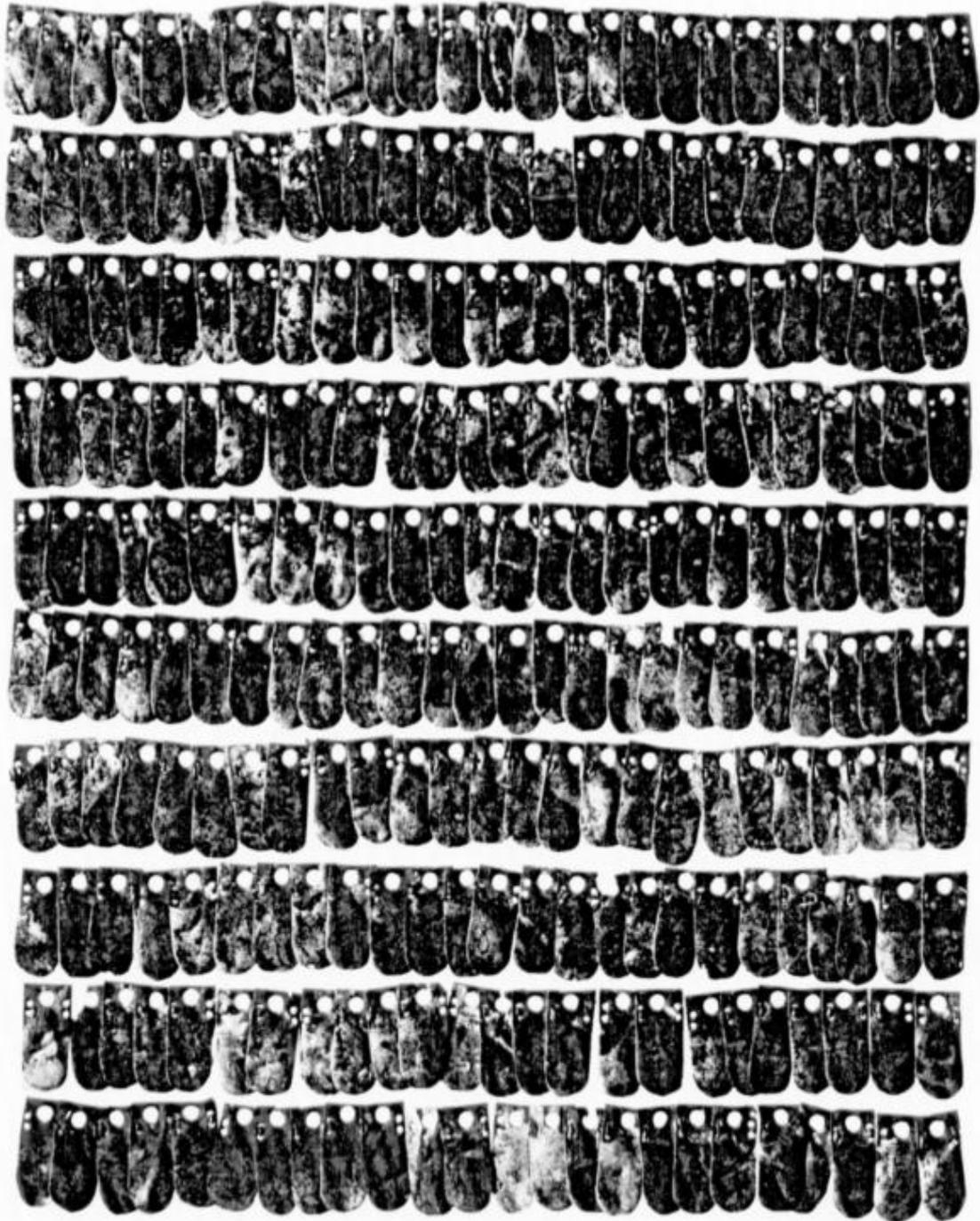


PLATE XXIV. SCALE ARMOUR OF BRASS.
Principia P

of each scale corresponding in position to the large hole in the Newstead scales. Through these larger holes there passed a double thong which bound the scales together, and at the same time prevented the sharp edges from chafing.

Scale armour is not of frequent occurrence on the grave monuments of the German frontier, but on the tombstones of the Sertorii at Verona—one that of a centurion, the other that of a standard-bearer—both figures are represented wearing a tunic of scale armour which covers the shoulders and comes down below the belt. The Carnuntum monument of Calidius (a work of the middle of the first century) shows also a scaled tunic of a centurion. Again, in the collection of marble portrait-busts from the great Gallo-Roman villa of Chiragan near Toulouse, the Emperors Antoninus Pius and Severus both appear wearing corselets of scale armour.¹

Lorica Hamata

The third variety of body armour, *Lorica Hamata*, was also represented at Newstead. Among the finds from the pit in the Principia (No. I) were pieces of chain mail, reduced by rust almost to a solid mass. They were composed of rings of iron wire having a diameter of about a quarter of an inch (Plate XXXVIII., Fig. 10). These rings were of two kinds. In one case the ends of the wire forming the ring had been hammered flat and riveted together, in the other they appear to have been welded. The two kinds are arranged in alternate rows, a system which was employed in the chain mail of the Thorsbjerg moss. When the whole is fastened together, each ring is attached to four others. In one small fragment a single ring of brass was noted; perhaps it was employed decoratively, as was done in later Oriental chain mail. Again, from the floor level at the west end of the Storehouse (Block XVI), two fragments of extremely fine chain mail were picked up (Plate XXXVIII., Fig. 8). They were composed of bronze rings of two different sizes, attached together in alternate rows, the larger rings having a diameter of three-sixteenths of an inch, the smaller a diameter of an eighth of an inch. The wire composing the larger rings appeared to have been flattened out at the ends and riveted together. Here and there affixed to the rings were small scales, also of bronze, three-eighths of an inch long by a quarter of an inch wide, resembling in shape the larger armour scales, but without any perforations and ribbed down the centre.

¹ *Joulin, Les Établissements gallo-romains de la Plaine de Martres Tolosanes*, plate xix. 276 B, plate xxiii. 299 B.

The Military Girdle

Around his waist, above his armour, the soldier wore the *cingulum* or military girdle. Most of the monuments on the German frontier show this utilised to support the sword on the right thigh and the dagger on the left, although sometimes, as on the Trajan column, the sword is worn on the *balteus*, a strap crossing the left shoulder.¹ The *cingulum* is usually represented as terminating in an ordinary strap and buckle, while the leather of which it consists is overlaid with mountings of decorative metal work, these being occasionally of circular shape. Sometimes the girdle terminates in front in an apron-like arrangement of leather straps, usually strengthened by studs inserted into it and ending in decorative terminals of metal. Metal objects which must have formed part of girdles were by no means uncommon at Newstead, though it is not always easy to distinguish them from mountings which had been attached to harness. One set of mountings is, however, specially noticeable, and must have belonged to the belt of some soldier of rank. It came from Pit XXVII.

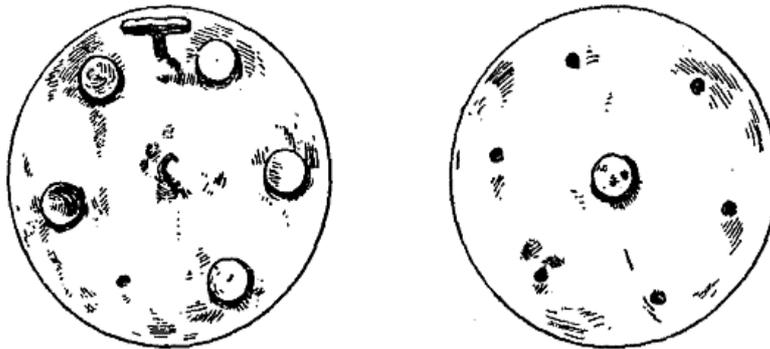


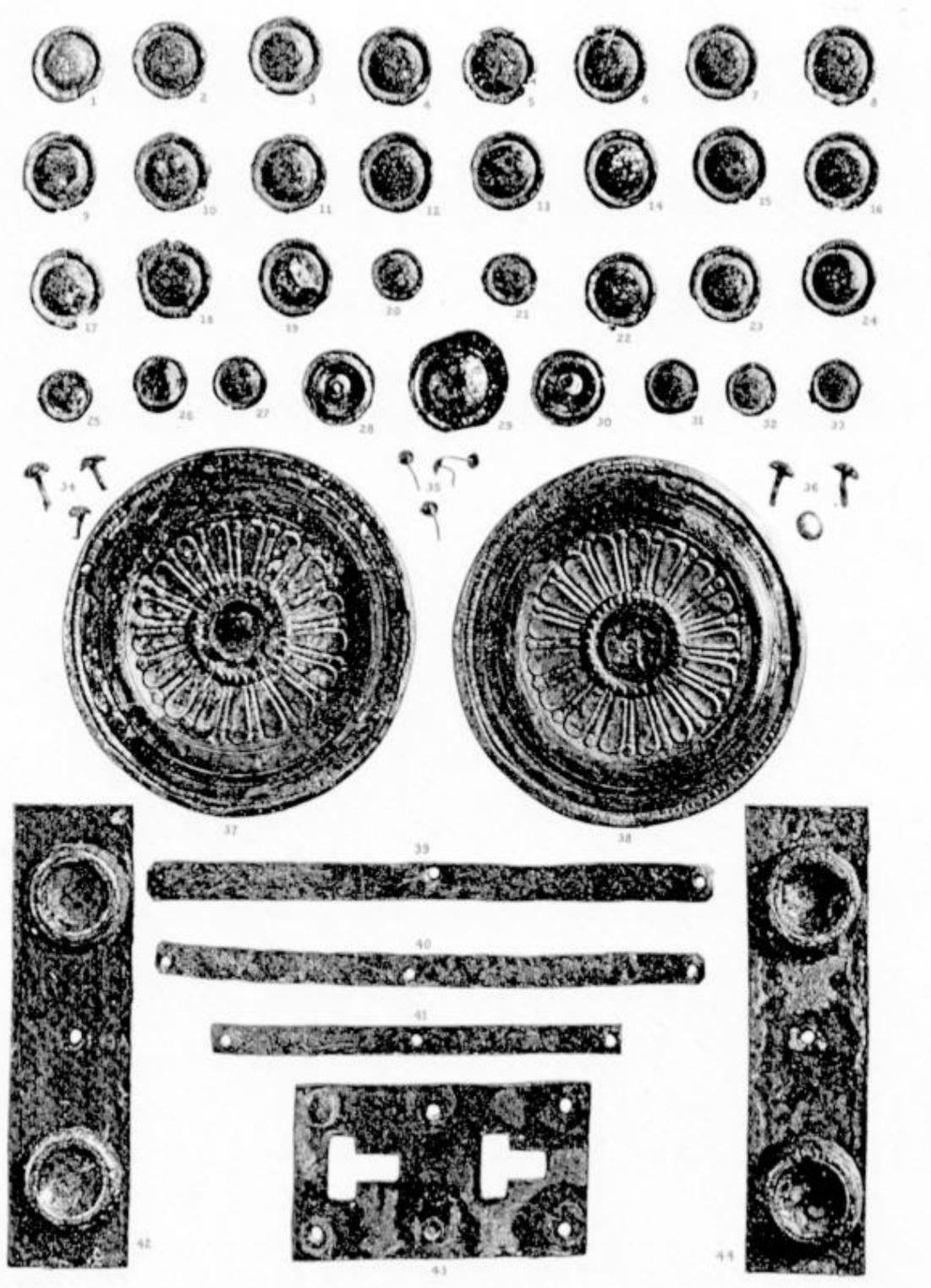
FIG. 13. BELT CLASPS. THE BACK OF THE PLATES

This consists of two circular plates of brass (Plate XXV, Figs. 37 and 38), and three rectangular plates of the same metal (Figs. 42, 43, and 44). The circular plates are each three inches in diameter, and the edges are turned over to catch a thin plate of silver embossed in the centre, which is in the form of a rosette. The plates, the back view of which is shown in Fig. 13 above, were fastened to the leather belt by small round flat-headed bronze studs. On one of the plates five of these remain. From the edge of the same plate depends a small T-shaped catch of copper, seven-sixteenths of an inch in length. The purpose for which this catch was designed is evident from an examination of the small rectangular plate (Fig. 43) two and a half inches by one and three-eighths inches, which was also included in the find.

¹ Lindenschmit, *Tracht und Bewaffung des römischen Heeres*, p. 8.

PLATE XXV. MOUNTINGS AND STUDS OF A LEATHER BELT

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1 to 36. Brass studs for ornamentation of a leather belt.	163
28, 29 and 30 are reversed, showing the back view. 28 and 30 have small washers to keep them in position.	163
37, 38 and 43. The clasps of the belt.	162
39 to 41. Brass laminae, probably for stiffening the belt.	163
42 and 44. Ornamental mountings, all found in Pit XXVII.	162



INCHES 0 1 2 3

CENTIMETRES 0 1 2 3 4 5 6 7

In it there are two corresponding T-shaped slots. The rectangular plate must obviously have formed one of the terminals of the girdle, while the circular disc with its catch formed the other. The catch, when inserted and slipped back into the stem of the T, would be securely fastened, while the double slot enabled the wearer to tighten his belt. The two remaining rectangular plates of brass were three and three-quarter inches long by one inch broad, and had evidently been fastened to the belt, each by three studs. The end studs were of copper, circular in shape, seven-eighths of an inch in diameter with a concave surface.

In addition to these there were found four laminae of thin brass (Plate XXV, Figs. 39, 40 and 41) varying from five to three and a quarter inches long, which had perhaps been inserted in the belt for stiffening purposes, as well as 100 studs of different shapes and sizes (Figs. 1 to 36). The studs were of five different types. The largest, which are circular with a diameter of eleven-sixteenths of an inch, are furnished with small washers (Figs. 28 and 30) to prevent them slipping out of the belt. Many of them had portions of leather still adhering. The size of the smallest heads is hardly greater than that of an ordinary pin (Fig. 35). No doubt these studs were employed to form a decorative pattern on the leather. In shape they very closely resemble those found at Hofheim,¹ and we have among them precisely the same types as are used to execute the decoration of the leather object illustrated in Plate XXI. No metal terminals were discovered to suggest that the belt had had the apron-like arrangement so frequently to be seen worn on soldiers' monuments. But that this did not always form part of the girdle is proved by the example shown in the monument of the Centurion Favonius at Colchester. Here the decorated plates are rectangular, filled in with a richly embossed design. The method of fastening noted in the Newstead girdle is evidently one which was commonly in vogue among the Celtic peoples. The same T-shaped catch is used for the gold torc from Broughter near Limavady, as well as for the torc from Serries en Val near Carcassonne figured by Mr. Arthur Evans,² and it is employed as a fastening for the decorated circular clasps of a hauberk of chain mail in the Thorsbjerg find.³

1 Ritterling, *Das frühromische Lager bei Hofheim*, p. 51, fig 16.

2 *Archaeologia*, vol. lv. pp. 399 and 400.

3 Engelhardt, *Denmark in the Early Iron Age*, Th., pl. 7, fig. 8.

Helmets

Only the helmet is now required to complete the figure of the soldier in his armour. Of this the pits furnished specimens remarkable alike for their beauty and for their preservation. Pit No. XXII yielded an iron helmet without decoration, an iron helmet with a visor-mask, and a brass helmet, while the brass visor-mask of a fourth helmet came from the pit in the Bath Buildings. These appear to be the first Roman helmets that have come to light in Scotland. In England, at least five such helmets have been found. Four of them are preserved in the British Museum, and one in the Municipal Museum at Colchester. The specimens from England present a considerable variety in shape, only two of them being of the same type. No one of them quite represents the helmet of the legionary of the Trajan column, which was probably of thin iron, or perhaps sometimes of thick leather with raised metal bands, usually of bronze, projecting from the surface to protect the head.

The Legionary Helmet

The undecorated iron helmet from Newstead (Plate XXVI., Fig. 1) is probably the ordinary legionary helmet of the end of the first century. It is of very simple form, covering the head and coming well down over the brow. At the back it is prolonged downwards to protect the neck, and terminates in a rim projecting outwards for a distance of one inch and three-eighths. The inside of this undecorated helmet was no doubt furnished with thick padding, as we shall see to have been the case with the decorated helmet. On the outside, mountings which are now lost were probably attached to it for the better protection of the wearer and for ornament. The face was covered by two hanging cheek-pieces or *bucculae*, hinged one on either side of the helmet, and fastened together under the chin, so that only the eyes, nose and mouth were left exposed. The loops to which the cheek-pieces were attached still remain on the rim in front of the portion cut out for the ears.

Several different forms of helmets are known to have been in use among the Romans. In all of them we begin with a simple cap of metal whose general appearance is modified in various ways according to the particular method employed for protecting the back of the neck, and according to the particular mountings attached to strengthen or to ornament the whole. The helmets themselves are usually either of iron or of bronze or of brass. Many appear to have been made of iron with mountings of bronze. The hanging cheek-pieces, traces of which are so distinct on Plate XXVI., Fig. 1, are a constant feature of the legionary helmet in common use at the end of the first

PLATE XXVI. HELMETS

	PAGE
1. Iron helmet. Pit XXII.	164
2. Iron visor-helmet. Pit XXII. Back view.	168
3. Brass helmet. Pit XXII. The figure of Victory on the crown.	167



INCHES 0 1 2 3

CENTIMETRES 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 FIG. 1

INCHES 0 1 2 3 4 5

CENTIMETRES 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 FIG. 2

INCHES 0 1 2 3 4 5

CENTIMETRES 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 FIG. 3

century and for at least a hundred years longer. They are to be seen on the helmets of the legionaries sculptured on the bases of the Praetorium pillars from Mainz (Fig. 14), which cannot be later than 100 A.D. They are worn by the soldiers on the Trajan column. In both cases a band, which frequently ends in a projecting peak over the forehead, is added in order to thicken the helmet round the temples. Such a mounting is of common occurrence on the actual Roman helmets which have survived to our own day. As a simple peak, it forms an integral part of the example from St. Albans, which is to be seen in the Municipal Museum at Colchester. It appears as an attachment in the helmet from Friedberg, in Hesse, preserved at Darmstadt.¹ Or again, as in the specimen from Witcham Gravel, Cambridgeshire, now in the British Museum, it is present as a band running all the way round the margin, doubling the thickness of the metal not only over the brow, but also at the back.



FIG. 14. BASE FROM THE
PRAETORIUM, MAINZ

Other characteristic mountings which may be mentioned are the raised rims fastened behind the ears, and a comb-like crest of metal running from above the forehead down to the back of the head, dividing the helmet into two equal portions, and sometimes having a second band crossing it from ear to ear transversely. A good specimen of the latter method of strengthening is to be seen in the helmet from Friedberg already mentioned, while detached mountings of the sort have been met with in several of the Limes forts, as at the Saalburg and at Pfünz. Helmets with such attachments must have been worn at Newstead, as a small portion of a bronze crest (Plate XXXV., Fig. 8) was discovered in tracing the lines of the later barrack buildings of the Praetentura.

There is no indication that the specimen now under discussion had ever had a crest. On the other hand, the line of small holes, surrounding the crown and placed at a distance of five-eighths of an inch apart, may well have been originally intended for the attachment of some thickening band which

¹ Figured by Lindenschmit, *Tracht und Bewaffnung des römischen Heeres*, Taf. ix. 24.

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PLATE XXVII. BRASS HELMET.
Pit XXII

in his left hand, while with his right he urges his team onward with a whip. The animals rear with their paws thrown forward, producing a sense of motion and of the strain of the heavy car behind them. The car itself is boat-shaped and is set upon two low wheels, with the figure of the driver perched upon the top of it. Behind it a large pointed leaf, doubtless intended for a palm, projects into the design. Above this is a cone-like object which has a similar object corresponding to it on the other side of the helmet, in front of the leopards. These represent the *metae* or goals. On the upper part of the crown, behind the peak, is a second winged figure, floating in the air (Plate XXVI., Fig. 3). In the right hand this second figure holds what appears to be a piece of floating drapery but may possibly be intended for a palm branch, while with the left it grasps the cords attached to the harness of the leopards. In the Roman Art of the first century it is not uncommon to find Cupids represented engaged in some handicraft, as in the well-known frescoes of the house of the Vettii at Pompeii, or personifying one of the greater gods. Here a Cupid plays the part of the Indian Bacchus, urging on his leopard car while Victory flying before guides him past the goal. The modelling of the figures is coarse, but the design is well spaced and the general result effective. On the rim of the helmet at the hack a punctured inscription can be distinctly traced. It appears to consist of eight letters.

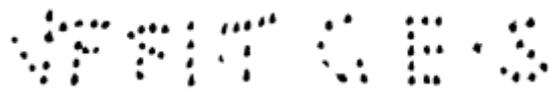


Fig. 15. PUNCTURED INSCRIPTION ON THE BRASS HELMET

A Cavalry Helmet

The first four are somewhat doubtful; the last four, TGES, seem quite plain. It is possible that the formula of the inscription is a soldier's name, followed by T, standing for *Turmae* (= 'of the troop'), and the name in the genitive case of the troop-commander.¹ The helmet is certainly of a shape worn by cavalry soldiers. The same high-peaked form is to be seen on the monuments of horsemen preserved at Cologne—Marcus Sacrilus of the Norician Ala, serving in the troop of Paterclus, and T. Flavius Bassus of the Norician Ala, of the troop of Fabius Pudens (TVR·FABI·PVDENTIS), while the inscription presents a close analogy to the letters punctured on the bronze

¹ Cf. Kastell Osterburcken, p. 31, small metal plate with punctured inscription, T·QVARTI·AGRAPTI; also Kastell Pfünz, plates inscribed, T·FLAVI·VICTORIS·CV: Taf. ix. Fig. 4; and T·FLAVI·ALPINI, Taf. ix. Fig. 2.

visor-mask found in the river Olt in Roumania and now in Vienna,—VITALIS.T.CRISPINI.¹ Finally, there is a marked resemblance in shape between this brass helmet and the head-piece of the beautiful bronze helmet found at Ribchester in Lancashire in 1796. The last, which can be seen in the British Museum, has preserved its visor-mask modelled in the form of a human face. The embossed decoration of the two head-pieces is in the same high relief. The designs, however, are different, the Ribchester helmet having figures of horsemen and men on foot engaged in combat. Curiously enough, cone-like metæe occupy a similar position in both designs. Helmets such as these are of the highest rarity. There is, however, a bronze one from Nikopolis in Bulgaria² which furnishes a notable parallel to the Newstead specimen. There too the visor-mask is wanting. At the same time there is considerable general similarity in design and in the method of decoration. It is clear that both must belong to the same period.

The Helmet with Visor-Mask

Of Roman helmets having visors in the form of a human face at least two varieties are known. One of these is represented by the Ribchester helmet, the other by the helmet found at Bettenberge, in Wurtemberg, and now preserved at Stuttgart.³ We have seen that, in the former case, the head-piece had a high projecting peak, under which the visor-mask was attached. In the Bettenberge helmet, on the other hand, there is no projecting peak, and the visor-mask overlaps the head-piece. This latter type was also exemplified at Newstead by an iron helmet, which, even in its present mutilated condition, must rank as one of the most beautiful things that the receding tide of Roman conquest has left behind it. It consists of two portions—a head-piece and a visor-mask—both hammered out of very pure metal (Plate XXIX.). Unfortunately it lay on heavy stones and has been seriously damaged. Large portions are wanting on the back and right side of the head-piece, while the mask has been broken in two, and the greater part of the upper portion above the forehead entirely destroyed. As in the other helmets already described, the head-piece terminates over the neck in a projecting rim, one inch and a half deep, which has been overlaid with a thin plate of bronze, decorated with an embossed chevron pattern. The treatment of the chevron is distinctly inferior to the work on the rest of the helmet. The whole of the head-piece is embossed with a representation of elaborately dressed hair. Round a central knot on the back of the head are rows of

1 Benndorf, *Antike Gesichtshelme und Sepulcralmasken*, Taf. x.

2 Benndorf, *Op. cit.*, Taf. xii. Fig. 34.

3 *Ibid.* Taf. viii.

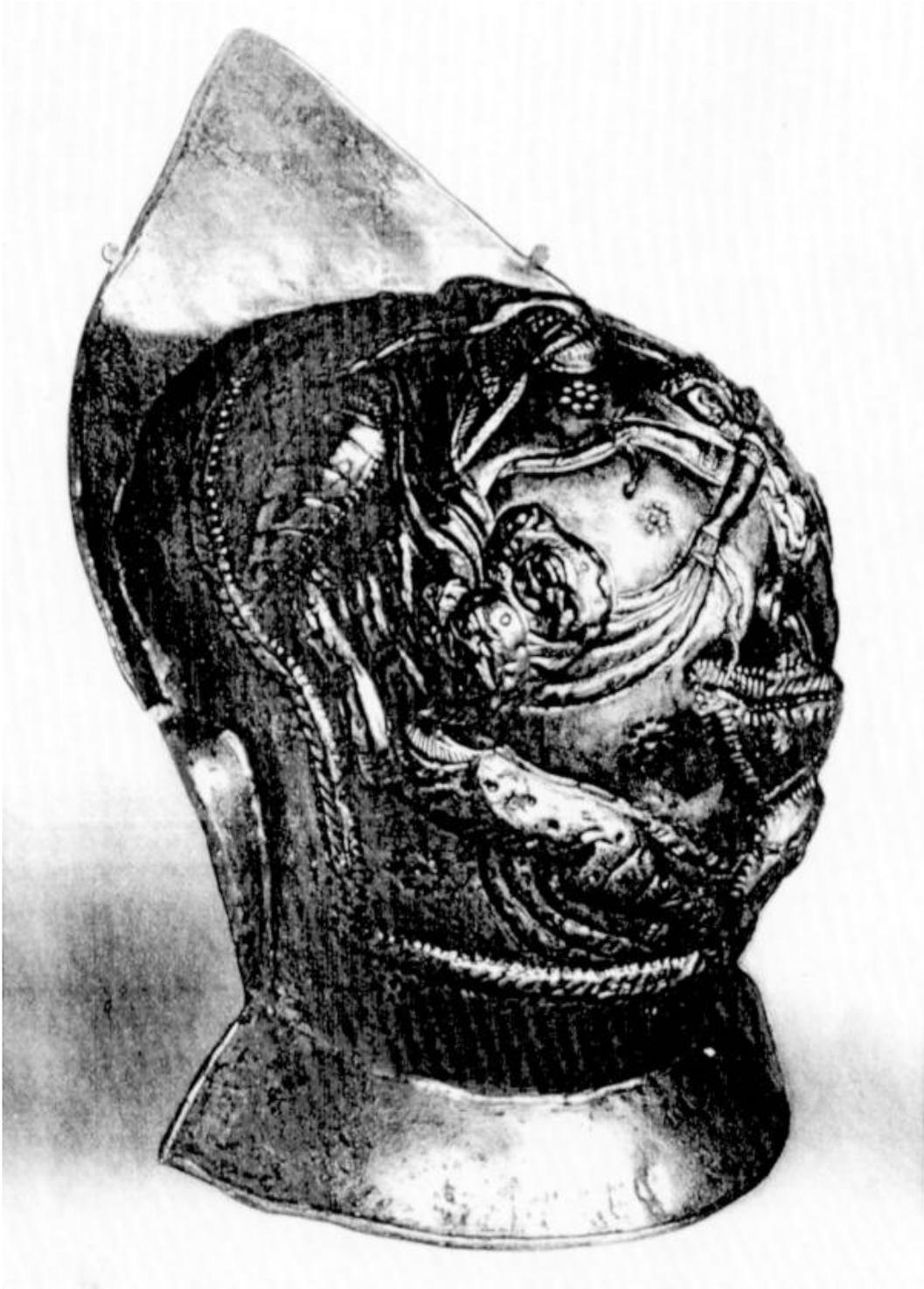


PLATE XXVIII. BRASS HELMET
Pit XXII

hair-locks, all bound together by a laurel wreath, the flowing ends of which divide over the nape of the neck. The same curling hair comes down over the temples of the visor-mask. The ears are gone, but on the left side the beautiful clear-cut profile of the face shows little signs of injury. The features are beardless and youthful. The lips are slightly apart, and the nostrils and eye-holes both open. The stud which is visible low down, beneath the ear, doubtless formed part of the fastenings that held head-piece and visor together. Among the locks of hair, small attachments of silver can still be discerned. Five of these are on the left side of the face, one on the lock over the forehead, and two on the right side. These fragments of silver have the appearance of small circular pins inserted into the iron. One of those on the left side of the face has still affixed to it a small piece of thin silver plating, a circumstance which appears to indicate that the purpose of the circular pins was to hold a plating of silver in place over the hair, and probably over the whole face. The thin plate of bronze with its chevron pattern, which covers the projection over the neck, may also have been plated with silver or with gold. Traces of similar decoration on the rim of the plain iron helmet have already been noted, and several of the visor-masks known to us have evidently been enriched by a plating of more precious metal. Thus, on a visor-mask found at Gräfenhausen, Wurtemberg, the hair, the eyebrows, and the eyelids are gilded, while the rest of the face is overlaid with silver; the Bettenberge helmet is plated with silver, and the helmet from Nikopolis is bronze gilt.

The helmet with visor-mask was doubtless developed by a simple process of evolution from the helmet with hanging cheek-pieces. The cheek-pieces would tend more and more to cover the face, and would thus gradually assume the form of a mask. On a bronze cheek-piece from a votive helmet found at Dodona, the lips, the heavy moustache, and beard, are all reproduced.¹ Another example in the same metal, which shows the lips and moustache but is of coarser execution, is in the Museum of St. Germain-en-Laye, its original *provenance* being unknown. Such cheek-pieces are in all probability the forerunners of the complete visor-mask. The masks themselves sometimes show traces of their ancestry. In the Bettenberge helmet, as also in a helmet from Heddernheim, the visor retains the outline of the cheek-pieces, while the open space between them is filled up with a small mask that covers the eyes, nose, and mouth, and can be detached at will. In the Ribchester and

1 Benndorf, *Op. cit.* Taf. xiv. 4.

the Newstead helmets the distinction of the cheek-pieces has disappeared, and the mask is formed of a single piece of metal.

Mountings on the Head-Piece

Returning to the head-piece, we may note that it is provided with a number of attachments. At the back of the neck, just at the spring of the projecting rim, is a small bronze loop. A somewhat larger loop is fastened to the central hair knot, while on the left side is a tube-like socket of bronze, and on the right a triangular projecting stud. Two bronze loops in the very front, at the highest point, were doubtless employed to keep the visor-mask in position. Of the remaining attachments the ring at the back of the neck was perhaps used with one of the others to sling the helmet. The tube-like object and also the central loop were apparently for plumes. The plume, or *crista*, appears on various monuments; worn transversely, it was a distinguishing mark of the centurion. As a bunch of feathers on the top of the helmet, it can be seen on the gravestone of the legionary C. VALERIUS CRISPUS, at Wiesbaden, or, in a more exaggerated form, on the monument of the standard-bearer FLAVINUS of the ALA PETRIANA at Hexham—a monument which in the opinion of Professor Haverfield may belong to an early period in the occupation of North Britain. That the helmet had been intended for actual use is obvious, not only from the attachments described above, but also from the fact that there were remains of thick padding in the inside of the head-piece. The padding appeared to have been composed of wool, and to have been fastened to the metal by some resinous substance, which became sticky when hot water was applied. Traces of similar padding were found adhering to the mask.¹

Visor-Mask from the Baths

Even more complete is the specimen of a visor-mask which came from Pit LVII at the Baths (Plate XXX.). It is made of brass, and weighs 1½ lbs. avoirdupois. Like the iron mask, it represents a beardless face with a nose slightly aquiline. The hair is elaborately braided and curled over the temples, a few loose locks falling down in front of the ears. The lower edge of the metal, which is three mm. thick, is turned back to prevent chafing. Some distance below each of the ears a hole has been bored to receive a fastening for attaching the visor to the head-piece. On the upper edge, where the metal is somewhat thinner, there are signs of repair; a copper plate 4½ inches by 2¼ inches has been riveted to the back, and in this a hole about 3¼ inches square has been cut to give

¹ On the back of a mask found at Hellingen, near Luxemburg, traces were recognised of a resinous substance probably applied for the same purpose. *Nordiske Fortidsminder*, ii. p. 42.



PLATE XXIX. IRON HELMET WITH VISOR MASK.
Pit XXII

passage for yet another fastening. The dressing of the hair recalls in a measure the elaborate coiffures of the Roman ladies of the first and second centuries, so much so indeed that the mask can hardly have been intended to represent a male head. Compared with the iron visor, which, with its beautiful idealised features, must rank as a work of art of high quality, the brass mask is distinctly inferior in style. It is altogether more mechanical. Yet, both are the outcome of that phase of art which, under the influence of Greek tradition and Greek craftsmen, produced in Rome the remarkable portrait busts and reliefs of the first and second centuries.

It may be doubted whether any of the surviving monuments provides a representation of a Roman visor helmet in actual use. Nor indeed is it likely that a representation of a man should show the visor drawn down and the face concealed. M. Reinach has pointed out among the arms in the trophies upon the balustrade of Pergamum a helmet which is evidently of this type.¹ But it belongs to an earlier period. On the tombstones of the standard-bearers QUINTUS LUCCIUS and CAIUS VALERIUS at Mainz, the helmet is shown on the left shoulder, and the front of it appears to take the form of a face with peaked ears. In both instances, however, long bands hang over the shoulder below the helmet, suggesting the skin of an animal's forelegs terminating in paws. It is, therefore, probable that we have in each of these cases a representation of a skin hood with the animal's features drawn over the helmet. In the gravestone of the standard-bearer PINTAIUS of the Fifth Cohort of the Asturians at Bonn, a hood of this kind is shown worn above a helmet with cheek-pieces, the long bands of skin with their claws being crossed over the breast.² Such coverings for helmets had been fashionable at least since Hellenistic times. On some of the coins of Seleucus I., for example, the king wears a helmet covered with the skin of a panther.

The Period of the Helmets

The great rarity of the visor-helmets has already been alluded to. In Britain the Ribchester helmet has hitherto been the sole representative of the class, and complete examples from the Continent are almost as scarce, although the number of visor-masks is greater.³ The most perfect specimen of head-piece and visor together is that already mentioned as

1 Reinach, Art. 'Galea,' Daremberg and Saglio, *Dictionnaire des Antiquités*, fig. 3410.

2 Donner von Richter, 'Die Hedderheimer Helme,' *Mittheilungen über römische Funde in Hedderheim*, Heft 1. p. 50.

3 A list of helmets and of visor-masks corresponding to those found at Newstead, which have been discovered throughout Europe, will be found appended to this chapter.

having been found at Bettenberge. It is made of bronze, and has been overlaid with silver. A head-piece, which has evidently undergone alteration in barbarian hands, was discovered at Thorsbjerg, in Schleswig. Of the masks, some fifteen in all are known. Hitherto none of the finds have been made in circumstances which rendered it possible to fix the exact period to which this type of helmet belongs. Dr. Donner von Richter,¹ whose treatise on the subject is one of the most recent, places the Ribchester and Nikopolis helmets at the beginning of the third century. Now, however, the unmistakable association with first-century pottery has furnished a new and valuable clue. The Newstead helmets must have been deposited in their resting-places prior to 100 A.D. The probability is that both the Ribchester and the Nikopolis helmets belong to the same period. At Ribchester, certainly, the pottery shows that the fort is old enough for a first century helmet to be lost in it.

Their use

The exact purpose for which the visor-helmets were intended is somewhat uncertain. It seems clear that in battle they would be cumbersome and of little service. Benndorf, who made an elaborate study of the group, came to the conclusion that they were not part of the Roman soldier's equipment, but were really parade armour, destined to figure in certain ceremonies, and especially to be used as death-masks, laid upon the face of the body when it was deposited in the grave. It is an undoubted fact that such masks have occurred as grave furniture. A case in point is the recent discovery of a mask of hammered iron at Chassenard, in France.² At the same time, it is impossible to suppose that the Newstead helmets, with their woollen padding, and with their visor-masks showing signs of repair and of alteration, had no other purpose than to be laid on a dead soldier's face. A passage from Arrian's *Τεχνη Τακτικη*, cited by Benndorf, probably furnishes us with the true explanation, although Benndorf himself seems hardly to have appreciated the full importance of his quotation. The *Τεχνη Τακτικη* was written in the twentieth year of the reign of Hadrian,—that is, in 136 A.D. The last ten or twelve chapters are devoted to a description of the sports or exercises indulged in by the Roman cavalry. The author apologises at the outset for the difficulty he feels in making the necessary explanations. In many cases, he says, there is not even a Latin equivalent for the technical terms, some of which are Iberian, and some

1 Donner von Richter, *Op. cit.* pp. 40 and 41.

2 Déchelette, 'La Sepulture de Chassenard,' *Revue Archéologique*, 1903, tome i. p. 235.



PLATE XXX. BRASS VISOR MASK
Pit LVII

Celtic, the whole institution having been borrowed by the Romans from the Celtic horsemen who formed so important an element in their mounted force.

A Passage from Arrian

After telling how the ground was specially selected and prepared, he proceeds: 'Then those of them who are conspicuous for rank or for skill in horsemanship ride into the lists armed with helmets made of iron or brass and covered with gilding to attract the particular attention of the spectators. Unlike the helmets made for real battle, these helmets do more than serve as a protection to the head and cheeks; they are made to correspond in every way to the faces of the horsemen, with openings at the eyes large enough to admit of a clear view and yet sufficiently small not to involve exposure. They have yellow plumes attached to them, not to serve any useful purpose, but rather for display. If there be but a slight wind, then when the horses gallop in the charges, the plumes make a brave show, waving in the air 'under the influence of the breeze. And the horsemen carry oblong shields, not like shields for real battle but lighter in weight—the object of the exercises being smartness and display—and gaily decorated. Instead of breast-plates, they wear tunics, made just like real breast-plates, sometimes scarlet, sometimes purple, sometimes parti-coloured. And they have hose, not loose like those in fashion among the Parthians and Armenians, but fitting closely to the limbs. Their horses are most carefully protected by frontlets, but do not require any side armour, for the javelins they use for exercise are of wood without any metal. Even so they might injure the eyes of the horses, but they fall harmlessly on their flanks, particularly as these are for the most part protected by trappings.'¹

Arrian then describes at length the sort of exercises for which these preparations were intended. The horsemen rode in squadrons headed by a standard-bearer. Some carried ordinary Roman ensigns. Others had Scythian pennons made of bright-coloured cloth stitched together in the form of a serpent, which filled as it was borne swiftly through the air. The evolutions performed were of a most complex character, requiring great skill in horsemanship. As the rider dashed on, showers of wooden spears were discharged with great rapidity. These gave place to more serious exercises in which blunted spears were employed. But the latter were levelled against the opponent's shield, never against the helmet, which was not strong enough to withstand a thrust.

1 C. 34. I am indebted to Mr. George Macdonald for supplying this passage.

Phalerae

So far, the nature of the various objects described has been sufficiently obvious. In the case of some of those that follow, the difficulties of interpretation are more serious. Thus, in Pit XXII there were found, in association with the helmets, nine discs of thin bronze (Plate XXXI.). Eight of these are circular, and the remaining one may be described as lenticular or kidney shaped. The measurements of the circular pieces are as follows: four of them are 4 inches in diameter; one $3\frac{3}{8}$ inches, one $4\frac{1}{2}$ inches, and two $3\frac{7}{8}$ inches. The greatest length of the kidney-shaped pieces is $3\frac{1}{4}$ inches, its greatest width 2 inches. That all were intended to be worn together seems certain from the circumstance that each has inscribed upon it the name of a man—DOMETIUS or probably DOMITIUS ATTICUS—whose dress they doubtless adorned. Nomen and cognomen have been scratched in two lines in cursive characters, ownership being indicated by the use of the genitive case—DOMETI ATTICI. On one of the discs the nomen DOMETI stands alone. On another the spelling is DMETI, while on yet another the cognomen appears as ATICI. All of the discs are furnished with small bronze rivets which were evidently used to fasten them to leather. At one end of the rivet is a small round washer, whose purpose has clearly been to prevent the rivet slipping out of its place. The larger discs have six rivets, the two smaller only four. The kidney-shaped piece has five.

Names on the back

With one exception the name of the owner is inscribed on the same side as that on which the washers are, and therefore on the back next the leather. In the case of the exception—one of the two smaller discs—the holes appear to have been altered, while the position of the rivets (which are somewhat longer) has been reversed so that the name appears on the other side from the washers. The occurrence of these names is an interesting illustration of a well-known custom. Vegetius tells us that the Roman soldier used to inscribe his name together with that of his cohort or century on the back of his shield.¹ The same pit provided another series of objects which exemplified this practice even more fully.

What purpose did the bronze discs we have been describing serve? Their number and shape at once recall the phalerae of the monuments. The phalerae were a series of round metal plates worn on the breast on a light framework of leather. In the representations which have survived they are sometimes highly decorated and sometimes plain. They were classed among

¹ Praeterea et in averso scuto uniusculusque militis litteris erat nomen adscriptum, addito et ex qua esset cohorte quave centuria. Vegetius, *Epit. rei milit.* ii. 18

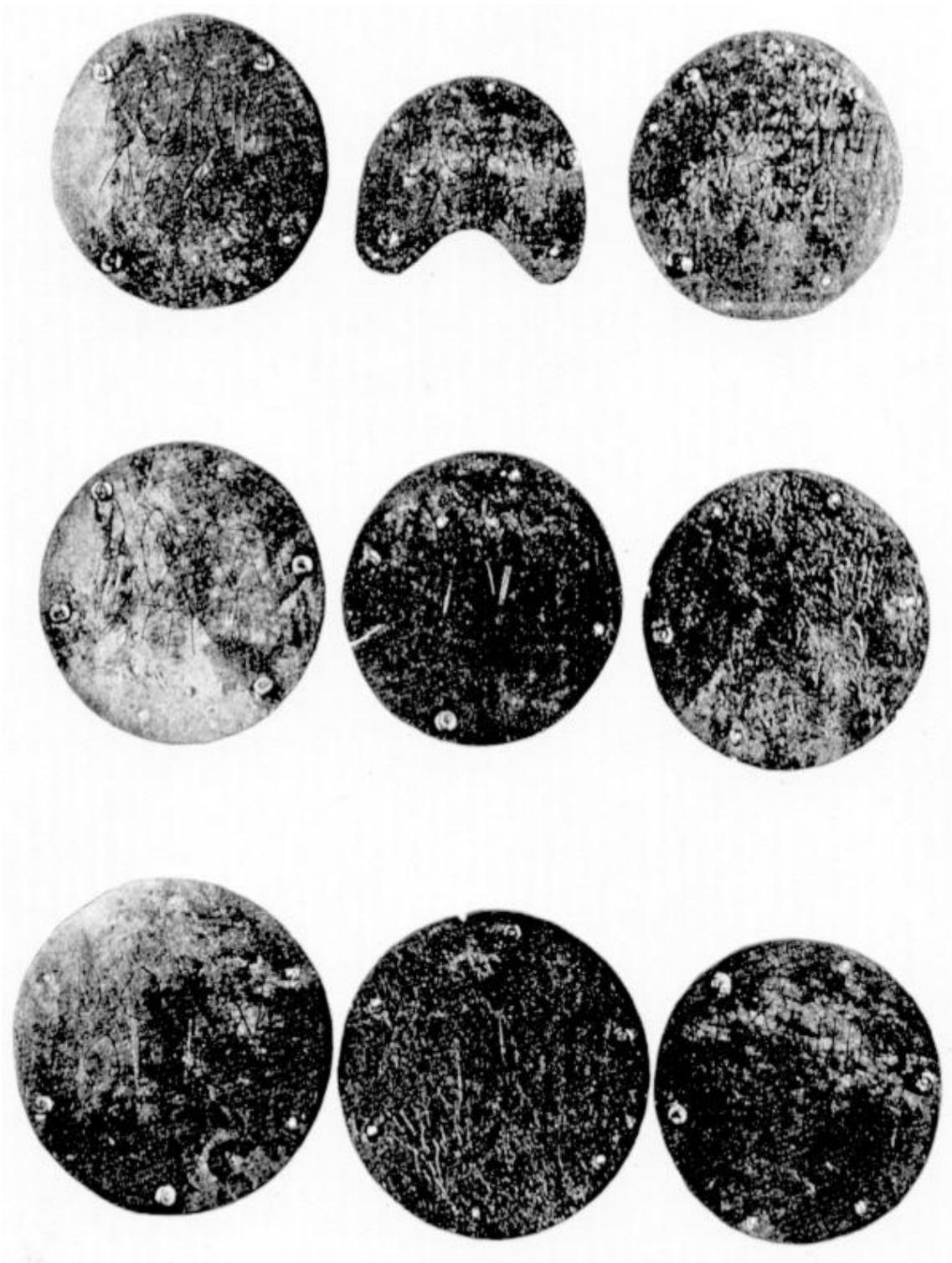


PLATE XXXI. INSCRIBED BRONZE PHALERAE
Pit XXII

the *dona militaria*, and were worn as a badge of military distinction with the *torques* and the *corona muralis*. They appear to be always grouped in unequal numbers, and very commonly in sets of nine. There is no doubt that many of these objects are very closely related to the phalerae employed to decorate harness. The form and decoration must have been very similar. But, when used on harness, phalerae were placed at the points of junction of straps, and were furnished on the back with strong loops sufficient to withstand a considerable strain. This is a function which the light rivets of the discs we are discussing would have been ill-fitted to perform. They are much more suited for fastening the metal plates to a leather tunic or on bands of some strong material, to be worn over the breast on ceremonial occasions.

Phalerae on Monuments

Probably the best known monument illustrating the wearing of such military decorations is that of the centurion Marcus Caelius, found at Xanten on the Rhine and now preserved at Bonn. It dates from the early first century. On the breast of the effigy are five phalerae ornamented heads in high relief. Similarly, with Gnaeus Musius, the standard-bearer of the Fourteenth Legion, whose tombstone, illustrated in Fig. 16, is in the Museum at Mainz, wears nine plain circular phalerae, while the centurion Q. Sertorius Festus at Verona has likewise nine phalerae decorated with a Gorgon, Bacchic heads, an eagle, and a horse. So far as can be seen, the selection of designs was purely arbitrary, but possibly the more elaborate forms belonged to the officers of highest rank. Not infrequently the phalerae on their leather framework appear in a panel on a tombstone. Thus they can be seen, nine in number, displayed on the monument of the horseman Caius Marius at Bonn.



FIG. 16. TOMBSTONE OF GNAEUS MUSIUS

The following additional representations of sets of phalerae may be noted: on the tombstone of the centurion C. Allius of the Thirteenth Legion, from Vindonissa, nine plain phalerae in three rows; on a tombstone found at Boppard, nine plain phalerae; on a tombstone at Mainz, with other trophies, nine plain phalerae; on the tombstone of C. Vettius and Q. Vettius from Magdalenenberg, near Zollfeld in Carinthia, nine plain phalerae; on the tombstone of M. Pompeius at Tusculum, nine phalerae with heads in relief; on the tombstone of the centurion L. Blattius of the Fourth Legion at Fregose, in Venetia, nine phalerae.¹

The Lauersfort Phalerae

Coming now to actual examples, we may note the well-known set found at Lauersfort,² near Crefeld, Rhenish Prussia, in 1858. This is preserved at Berlin. It consists of ten bronze discs, covered with thin plates of hammered silver, nine being circular, with a diameter of 4¼ inches, and one crescent-shaped. On the back of each are three small loops for fastenings. The circular pieces are decorated with heads in high relief,—Jupiter, Cupid; a Gorgon, a lion, and so on. On the face of one of them is punctured the name G. FLAVI FESTI, while each plate has the name MEDAMI punctured on the back. The crescent-shaped piece bears the figure of a double sphinx, whose position shows that the disc had been worn with the horns of the crescent pointing downwards. If we may judge from the inscription, the same must have been the case with the crescentic disc belonging to DOMITIUS ATTICUS. A find from Novaesium may also be cited as presumably analogous.³ It consists of six discs, each, however, with a segment cut out of the circle so as to produce a form approaching a crescent. They are plates of thin strong bronze from 3 to 3¾ inches broad, with either three, four, or five rivets for fastening them to leather. In one of them the rivets are replaced by rings.

Between the Newstead discs and such decorated phalerae as the Lauersfort find, the difference is doubtless considerable. But all the evidence available seems to indicate that the former were worn on the breast, like the phalerae of the monuments. They were a set bearing the name of one man. Numerically they correspond to those represented on more than one Roman tombstone. In size they closely resemble the Lauersfort pieces, while both sets include a more or less crescent-shaped piece worn with

1 Hofmann, *Römische Militärgrabsteine der Donauländer*. Wien, 1905.

2 Jahn, *Die Lauersforter Phalerae*. Bonn, 1860.

3 Lehner, 'Die Einzelfunde von Novaesium,' *Bonner Jahrbücher*, Heft 111–112, p. 367, and Taf. XXX. A, Fig. 48.

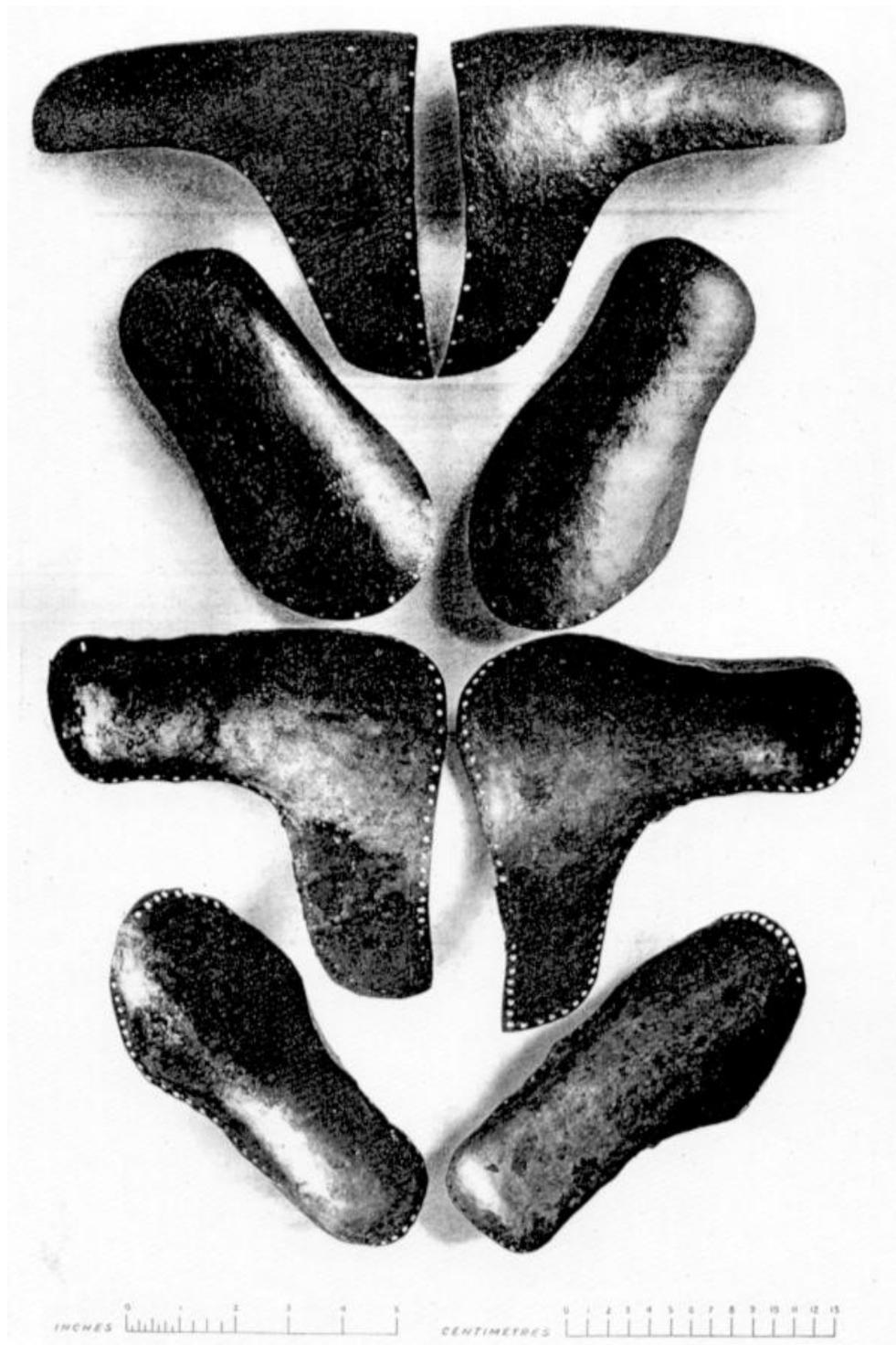


PLATE XXXII. BRONZE OBJECTS OF UNKNOWN USE.
Pit XXII and Pit XXVII

the horns downwards. Is it possible that in the Newstead pieces we have the decoration of one of those Cimbrian tunics mentioned by Arrian—discs that glittered and shone as the horseman rode in mimic warfare? Or were they, rather, the pieces of a breast-plate of simple pattern which, in a decorated form, became symbols of distinction?

Bronze Objects of Unknown Use

The group of bronze objects which follows should probably be classed as armour (Plate XXXII.). That is the inference suggested by their shape as well as by the circumstances in which they were discovered. They were found twice, each time in a set of four. The first set was taken, like certain of the helmets, from Pit XXII. The second set came from Pit XXVII, where it was associated with the mountings of the military belt already described. At first sight they look like shoulder-pieces. Two of the members of each set seem arranged, one for the right, the other for the left side, each of them being furnished with a depending peak at one end. Along the line of the top they measure $7\frac{7}{8}$ inches, and from the top line to the end of the peak 7 inches. The two smaller members of each set are without the depending peaks. Holes have been punched at regular distances round the edge of each of the eight, obviously for attaching leather.

In the set found in Pit XXII, each piece was marked with a number and a name. One of the larger pieces has the number XV punctured upon it, followed by the name SENECEO, scratched with a knife-point in cursive letters, while below this name, and turned the reverse way, a second name has been scratched with a blunter point and much more irregularly. The latter is read by Professor Haverfield as CRESCES. On each of the other three pieces is punctured the number XII, followed by the name SENECEONIS, scratched as before. The members of the set found in Pit XXVII hardly differed from the others in their dimensions. But the holes punched in the edge were much more numerous, while the fragments still adhering made it

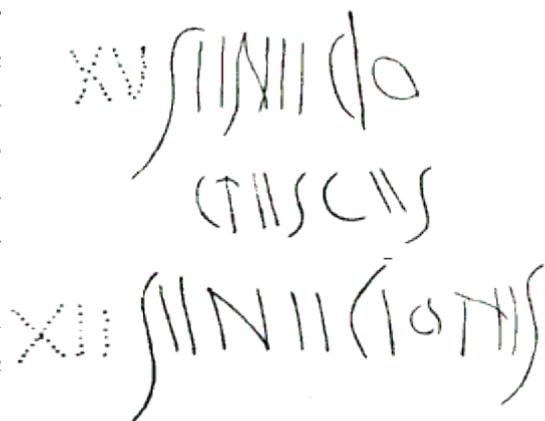


FIG. 17. NAMES INSCRIBED UPON THE BRONZE OBJECTS FROM PIT XXII

evident that the whole four pieces had been completely covered with leather on the outside. Where the leather remained on the depending peaks, it seemed to have been turned back inside for a distance of $\frac{3}{8}$ of an inch.

Objects of this character do not appear to have been met with before on any Roman site in Britain. Abroad they have occurred at least twice,—once in the early fort of Haltern, where a single piece corresponding to one of the smaller members of the set has been found, and again at Novaesium, where two pieces corresponding to the smaller size and a fragment of a depending peak, which had evidently belonged to a piece of the larger size, came to light in one of the buildings identified as cavalry barracks. It should be noted that they were associated with the bronze discs already mentioned. There is nothing in the monuments that throws any light on the purpose of these curious objects, on which *SENECIO* has marked his name. But it seems just possible that it is to the idea of tournament armour that we must look for an explanation of them as well as of two curious circular discs of bronze, one of which, like them, was found along with the helmets, while another came from Pit XCII (Plates XXXIII. and LIV., Fig. 5). These discs measure $9\frac{1}{4}$ inches and $9\frac{7}{8}$ inches in diameter respectively. The edges of the metal, which is thin, are turned back as though the discs had been fastened to wood or leather, while on the back of each of them are three metal loops, as if for lacing them to the backing. These loops will be seen in Fig. 18 p. 181), which shows the back of the disc reproduced in Plate XXXIII. In the disc found with the helmets in Pit XXII (Plate LIV., Fig 5) there rises in the centre the outline of a human head and shoulders. Surrounding the head, as though to bring it into higher relief, is a halo-like concavity. In the example from Pit XCII (Plate XXXIII.) the central feature of the design takes a less definite form, but the surface of the concave band which surrounds it is broken by a series of raised lines radiating from the centre and giving a fan-like appearance to the whole. The discs do not appear to be substantial enough for shield bosses of the ordinary character. Were they, like the helmets, destined to figure on parade? In the description from Arrian, already quoted, we are told that above the horsemen, as they rode, were borne Roman standards and Scythian pennons. Just as the smaller bronze discs resemble in form the phalerae of the monuments, but yet differ from them in their absence of decoration, so these larger embossed plates, on one of which we have a clear suggestion of the *imago clypeata*, recall the discs that, decorated with imperial heads in high relief, formed part of a Roman standard.



PLATE XXXIII. BRONZE DISC
Pit XCII

I. ROMAN VISOR HELMETS WITH MASKS

PLACE OF FIND.	MATERIAL.	WHERE PRESERVED.	WHERE ILLUSTRATED.
GERMANY.			
1. Bettenberge, Wurtemberg	Bronze, silver plated	Royal Antiquarium, Stuttgart	Benndorf, <i>Op. cit.</i> Plates VII. and VIII.
2. Heddernheim, Hesse	Bronze with white metal plating	Historical Museum, Frankfort-on-M.	<i>Mittheilungen über Heddernheim</i> , I. Taf. IV.
3. Thorsbjerg, Schleswig	Silver	Museum vaterländischer Alterthümer, Kiel	Benndorf, <i>Op. cit.</i> Taf. XV. 3 a.
GREAT BRITAIN.			
4. Ribchester, Lancashire	Bronze	British Museum	<i>Vetusta Monumenta</i> , Vol. IV. Pl. I. Benndorf, <i>Antike Gesichtshelme und Sepukralkmasken</i> , Plates IV. V. and VI. Page 168, <i>supra</i> .
5. Newstead, Roxburghshire	Iron	National Museum, Edinburgh	
SERVIA.			
6. Semendria,	Bronze	Museum of Belgrade	Benndorf, <i>Op. cit.</i> Taf. I. 1a and 1b.

II. MASKS WHICH HAVE BEEN ATTACHED TO HELMETS

PLACE OF FIND.	MATERIAL.	WHERE PRESERVED.	WHERE ILLUSTRATED.
FRANCE AND ALGERIA.			
1. Chassenard - -	Iron	Museum of Saint Germain-en-Laye	<i>Revue Archéologique</i> , 1903, Tom. I. p. 235.
2. El Grimidi - -	Bronze	Museum of Algiers	Doublet, <i>Musée d'Alger</i> , P1. XVI
3. Rodez - - -	Bronze	Museum of Rodez	de Laurier, <i>Un casque de Gladiateur Musée Archéologique</i> , Paris, 1879. Reinach, <i>Bronzes figurés de la Gaule romaine</i> , p.346.
GERMANY.			
4. Cologne	Iron, bronze plated	Royal Museum, Berlin	Benndorf, <i>Op. cit.</i> Taf. XLV. 3.
5. Gräfenhausen	Bronze, gold and silver plated	Royal Museum, Stuttgart	Lindenschmit, <i>Alterthümer</i> , Bd. IV. Taf. 39.2.
6. Mainz	Iron	K. K. Antikencabinet, Vienna	Benndorf, <i>Op. cit.</i> Taf. XII. 2 a.
7. Weissenburg	Bronze	Museum of Weissenburg	Lindenschmit, <i>Op. cit.</i> Bd. IV. Taf. 39.3.
8. Thorsbjerg	Silver	Museum vaterländischer Alterthümer, Kiel	Engelhardt, <i>Denmark in the Early Iron Age</i> , Plate 5.
GREAT BRITAIN.			
9. Newstead	Brass	National Museum, Edinburgh	Page 170, <i>supra</i> .
HOLLAND.			
Vechten	Iron gilt	Royal Museum, Leyden	Benndorf, <i>Op. cit.</i> Taf. XIII. 1 a.
Nymwegen - -	Bronze	The Gildemeister Collection, Amsterdam	von Lipperheide, <i>Antike Helmen</i> , p. 323.

PLACE OF FIND.	MATERIAL.	WHERE PRESERVED.	WHERE ILLUSTRATED.
ITALY.			
12. Nola - - -	Bronze	British Museum	Benndorf, <i>Op. cit.</i> Taf. III.
LUXEMBURG.			
13. Hellingen- -	Bronze	Museum of Luxemburg	Benndorf, <i>Op. cit.</i> Taf. XII. 1 a.
ROUMANIA.			
14. River Olt near Rieska -	Bronze	Museum für Künst und Industrie, Vienna	Benndorf, <i>Op. cit.</i> Taf. X.
15. ?	?	Museum of Bucharest	Cited by Reinach in Daremberg et Saglio, <i>Dictionnaire des Antiquités, Art. Galea.</i>

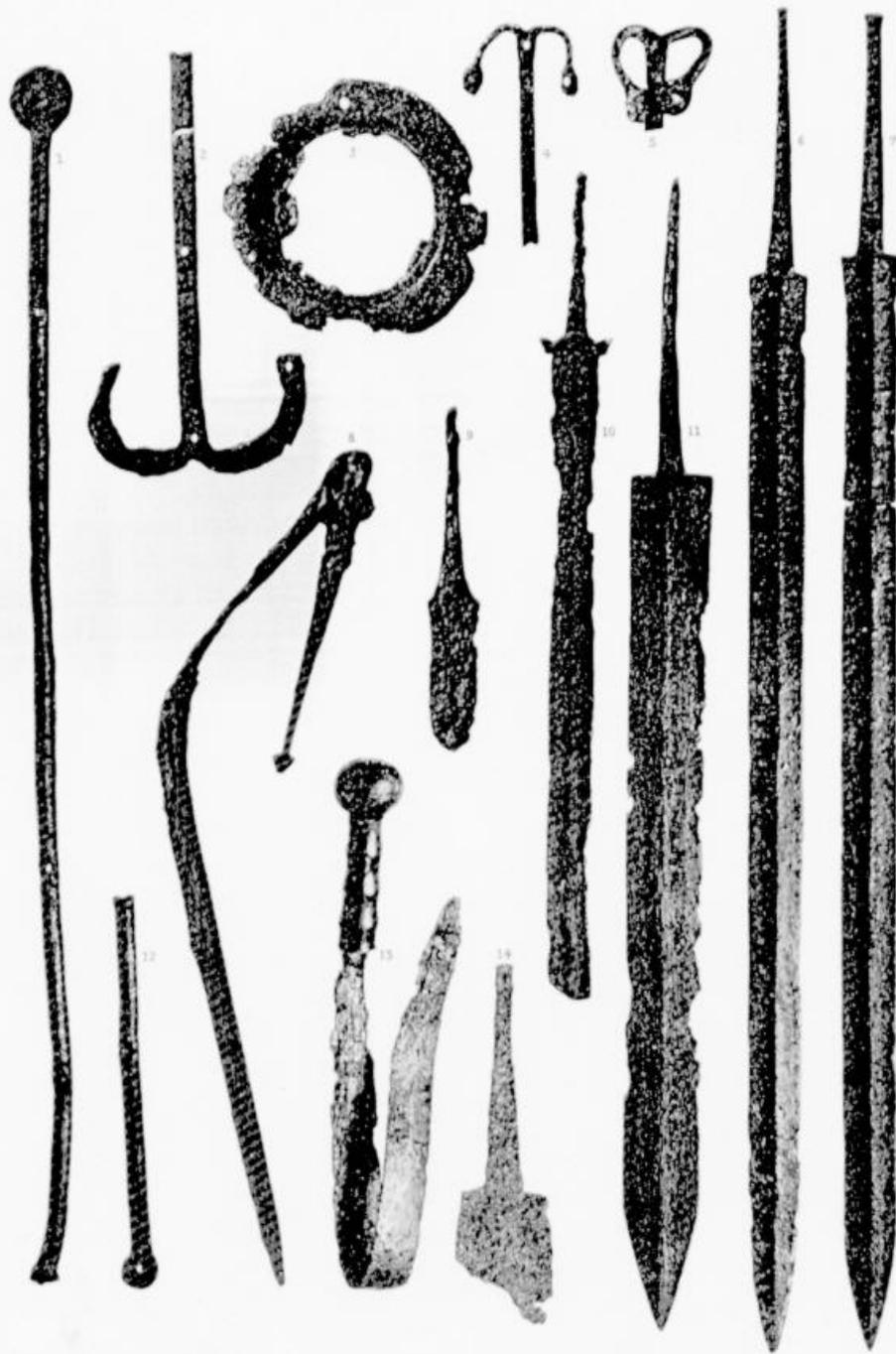
III. DECORATED HELMETS TO WHICH VISOR-MASKS WERE PROBABLY AT ONE TIME ATTACHED

PLACE OF FIND.	MATERIAL.	WHERE PRESERVED.	WHERE ILLUSTRATED.
AUSTRIA- HUNGARY.			
1. Szekely-Koosard -	Bronze	Museum of Nagy- Engel (Siebenburgen)	von Lipperheide, <i>Op. cit.</i> p.343.
2. Iron Gates, The Danube	—	In a private collection, Vienna	von Lipperheide, <i>Op. cit.</i> p.315.
BULGARIA.			
3. Nikopolis - - -	Bronze gilt	Antikencabinet, Vienna	Benndorf, <i>Op. cit.</i> P1. XII. Fig. 3 a.
EGYPT.			
4. Antinopolis - -	—	Royal Museum, Berlin	von Lipperheide, <i>Op. cit.</i> p. 339.
GERMANY.			
5. ?	Bronze	Royal Museum, Berlin	<i>Jahrbuch des K. Deutschen Inst.</i> Band XX. p. 21, Fig. 8.
6. Thorsbjerg - -	Bronze	Museum vaterländischer Alterthümer, Kiel	Engelhardt, <i>Denmark in the Early Iron Age</i> , P1. 5.
7. Wurtemberg - -	Iron	Royal Museum, Stuttgart	
GREAT BRITAIN.			
8. Newstead, Roxburghs hire	Brass	National Museum, Edinburgh	Page 166, supra.
9. Guisborough, Yorkshire	Bronze	British Museum	von Lipperheide, <i>Op. cit.</i> Fig. 343.
PALESTINE.			
10. Bed of the Jordan ? -		Royal Museum, Berlin	<i>Jahrbuch des K. Deutschen Inst.</i> Band XX. p. 21, Fig. 8.

PLATE XXXIV. SWORDS AND SHIELD MOUNTINGS

	PAGE
1. Shield mounting. Pit XVI.	181
2. Mounting, perhaps intended for a shield. Pit XVI.	181
3. Shield boss. Pit I.	180
4. Shield mounting. Ditch of early fort.	181
5. Shield mounting. Ditch of early fort.	181
6. Sword (<i>spatha</i>). Pit XIV.	183
7. Sword. Pit XVI.	183
8. Sword iron, with bronze hilt mountings. Pit LVIII.	185
9. Dagger or knife.	188
10. Sword iron, with brass mount. Pit LVII.	185
11. Sword (<i>gladius</i>). Pit LVII.	183
12. Shield mounting. Ditch of early fort.	181
13. Sword, with bone hilt. Pit LVII.	184
14. Portion of sword. Pit LVII.	183

All of the objects figured are of iron.



INCHES 0 1 2 3 4 5 6 7

CENTIMETRES 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18