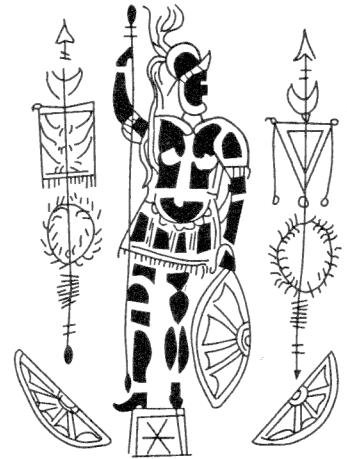


# Arma

## Newsletter of the Roman Military Equipment Conference

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### CVSTOS ARMORVM

In order to keep you all on your toes, and as a token gesture to the speed of change in The Age of Information Technology, *Arma* now has its very own email address, and this is one that should not change:

custos.armorum@pobox.com

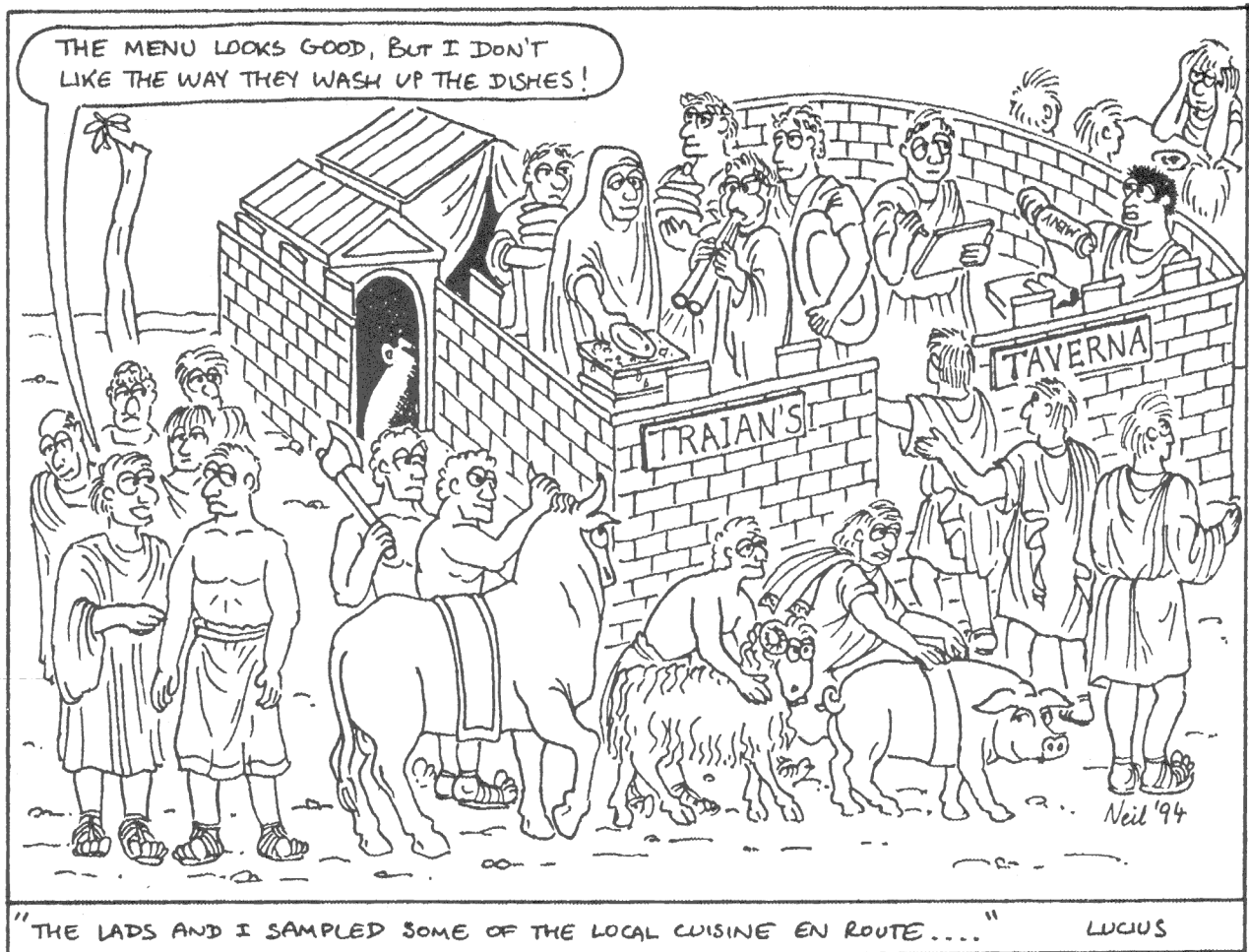
You can also find *Arma's* very own page on the World Wide Web and the URL for this is:

<http://pobox.com/~jrmes/arma.htm>

where you will find up-to-date details of how to subscribe and contribute to the newsletter, as well as a contents list for all issues so far published. This will be updated as soon as a newsletter is published, so if it isn't here, it isn't in print yet! In a similar fashion, the *Journal of Roman Military Equipment Studies* (the email address of which is now [jrmes@pobox.com](mailto:jrmes@pobox.com)) and ROMEC have their own Web pages – more details can be found in Roman Military Equipment on the Internet, below.

Over the years, although brief notices of new works have appeared in these pages, I have steered well clear of carrying academic reviews in *Arma*. This is mainly a result of my own particular (possibly even peculiar) dislike of the academic review as such. In my experience, most appear too late to be of any value in assisting a decision about purchasing a book; moreover, they appear to me to belong to a particularly stagnant backwater of the groves of academe, reeking heavily of personal revenge and pointless pedantry. However it has now been suggested to me more than once that *Arma* should review(!) its policy in this regard. So what are *your* feelings about this: should *Arma* carry reviews? If there is sufficient feeling in favour then let us know and we will do something about it. Speak, write, email, or semaphor to me.

Finally, a taste of things to come: this issue of *Arma* contains details about ARMAMENTARIVM, the new Internet resource for Roman military equipment studies which includes a bibliography incorporating all the *Arma* bibliography entries to date and, as they say, much much more.



## NEW PUBLICATIONS...

Prof Speidel's long-awaited corpus of the tombstones of the *equites singulares* is now available. At the time of writing, your editor has not yet seen a copy, but my spies (who saw proofs) drooled convincingly.

M.P. Speidel, *Die Denkmäler der Kaiserreiter. Die Equites Singulari Augusti*, Bonner Jahrbücher Beiheft 50, RheinlandVerlag GmbH: Köln/Bonn, 1994  
ISBN: 3-7927-1189-3

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## A FRAGMENT OF RING-MAIL FROM CHESTERS

A.T. Croom & W.B. Griffiths

The piece is a small lump of folded ring-mail made of 7mm exterior diameter links of 1mm circular cross-section iron wire. Most of the links are in a poor condition and there is no surviving evidence of the manner in which the links were originally closed. Broken links on several sides show the fragment was originally larger.

The find was recovered from unstratified top soil clearance during excavations in 1991 on the west abutment of the Roman Bridge across the North Tyne, adjacent to the fort.<sup>1</sup> Activity on the site appeared broadly continuous from the Hadrianic period onward.

Surprisingly little ring-mail has been recovered from Hadrian's Wall and its environs (see Table 1). This must partially be due to the fact that small corroded lumps may not always be recognised but also because of the mechanics of loss, since unlike scale armour, small sections of ring-mail are unlikely to fall off suits whilst being worn. Single or small runs of scales, being attached by thin copper alloy wire and thread can be torn off, but the characteristics of ring-mail – each link of 1mm thick wire being attached to four others 1mm thick, and often rivetted shut – means that while on occasion single damaged links might drop out, a suit has to suffer major damage for a whole line of links to fail. The reasonably large lumps of ring-mail surviving suggests suits cut up for some form of reuse.

MacGregor mentions a piece of ring-mail from Chester, but gives no details of the find.<sup>2</sup> Ring-mail from the area of Hadrian's Wall, includes two fragments from South Shields,<sup>3</sup> pieces from Halton Chesters,<sup>4</sup> Corbridge,<sup>5</sup> and apparently a complete suit from Housesteads<sup>6</sup> as well as two pieces of unknown provenance in the Museum of Antiquities, Newcastle upon Tyne.<sup>7</sup> At Carlisle there are some loose links possibly from ring-mail, ranging in diameter from 7–11mm external.<sup>8</sup>

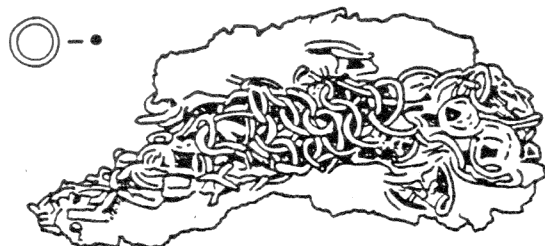


Table 1: dimensions of ring-mail (mainly taken from drawings). Measurements in mm.

Site	D ext.	D wire	reference
Chesters	7	1	finds number CH1.56
South Shields	7	1	A-J & M 5.74
	7	2	A-J & M 5.75
Corbridge	8		B & D fig 91, no 20
Halton Chesters	8	1.5	M fig 14, no 49
	7	1	M fig 14, no 50
Unprovenanced	8	1.5	M fig 14, no 48

### Notes

1. BIDWELL & GRIFFITHS, forthcoming.
2. MACGREGOR, 1962, 28.
3. ALLASON-JONES & MIKET, 1984, 5.74-5.
4. MANNING, 1976, no 49-50.
5. BISHOP & DORE, 1988 fig 91, no. 20.
6. ROBINSON, 1975, 17.
7. MANNING, 1976, nos 47-8.
8. PADLEY, 1991, nos 461, 466, 468.

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## MILITARIA DE GAULE MERIDIONALE,

### 1. NARBONNE (AUDE): FOURREAU EN BOIS D'UN GLAIVE PRECOCE

#### M. Feugere \*

A l'occasion de travaux de terrassements effectués en 1988 à Port-la-Nautique, site du port antique de Narbonne, un fourreau en bois pratiquement intact (fig. 1) a été mis au jour au milieu d'un abondant mobilier d'époque romaine. D'abord recueilli par l'entrepreneur G. Lavoy, il a été donné peu après à J.-L. Fabre (Port-la-Nouvelle), chez lequel j'ai pu récemment l'examiner. Le fourreau a été imprégné d'huile de un, ce qui a probablement limité,

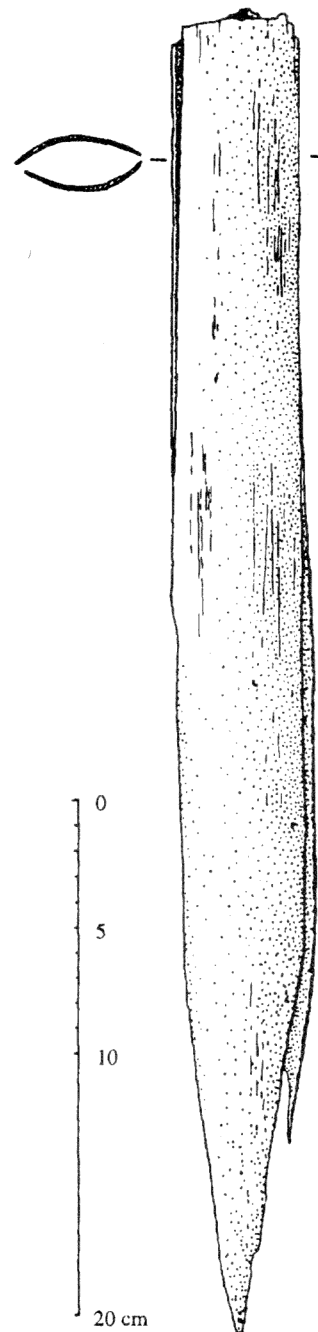


Fig. 1 Fourreau en bois d'un glaive précoce Narbonne (F, Aude).

sans les empêcher tout à fait, les retraits et déformations qui se produisent inévitablement lors de la dessiccation d'un bois gorgé d'eau. Compte tenu des circonstances de la découverte, aucun autre mobilier, permettant notamment de dater l'enfouissement du fourreau, ne peut être associé à la trouvaille.

L'objet se présente sous la forme de deux planchettes allongées presque identiques, à bords parallèles, dessinant une pointe à une extrémité. Grandes de 53mm, Tongues (pour la mieux conservée) de 520mm, épaisses de 2 à 2,5mm dans leur état actuel, ces planchettes ont été dégagées dans le sens du fil, sans qu'on puisse dire aujourd'hui si cette mise en forme résulte d'un fendage ou

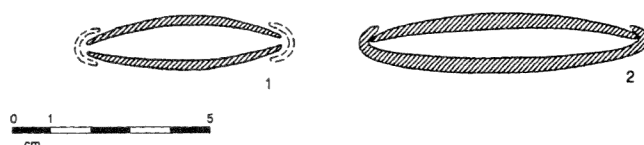


Fig. 2 Sections de deux fourreaux en bois de glaives précoces: 1, Narbonne (les deux faces replacées en position d'origine sont néanmoins réduites du fait de la dessiccation; les gouttières latérales en bronze sont restitués); 2, Porto-Vecchio. Ech. 1/1.

d'un sciage; dans les deux cas, on peut supposer un polissage ultérieur, car les surfaces visibles sont actuellement très lisses. Les deux parties sont fortement bombées vers l'extérieur, mouvement probablement accentué par la dessiccation, ce qui n'exclut pas que l'artisan ait cherché à bénéficier de ce mouvement naturel pour obtenir le vide interne destiné au logement de la lame. Dans ce cas, on aurait volontairement utilisé des planchettes extraites de la portion externe du tronc, en les retournant l'une contre l'autre au montage.

On ne distingue aucune trace des appliques métalliques qui assuraient la cohésion du fourreau, et aucun élément de ce type n'a été recueilli dans le secteur; il est donc possible, sans qu'on puisse le démontrer avec certitude compte tenu de la difficulté d'observation de l'épiderme du bois, que le fourreau ait été abandonné alors qu'il était en cours de fabrication. La forme appartient cependant, de manière indubitable, à un glaive de type Mayence, modèle utilisé entre Auguste et le milieu du I<sup>er</sup> s.<sup>2</sup>

La présence d'un fourreau de glaive à Narbonne autour du changement d'ère ne saurait surprendre. Utilisé principalement à des fins commerciales sous le Principat, le port de Narbonne voyait également passer de nombreux militaires, qu'il s'agisse de soldats isolés ou de troupes entières. Les navires de commerce accueillaient également des voyageurs qui pouvaient, le cas échéant, appartenir à l'armée ou être accompagnés de soldats c'est du moins ce que semble indiquer la présence, sur de nombreuses épaves de Méditerranée nord-occidentale, d'armes isolées typiquement romaines.<sup>3</sup>

En tant que telle, la découverte d'un fourreau en bois bien conservé est très exceptionnelle. Quelques glaives ont conservé des traces, généralement réduites, de leur fourreau en bois, mais il semble qu'on ne dispose nulle part ailleurs d'éléments de ce type aussi bien conservés: la forme du fourreau de glaive précoce (type Mainz) nous est surtout connue jusqu'à présent par les exemplaires à placage de tôle métallique. Sur ces objets, la cohésion du fourreau dépend principalement des gouttières latérales et barrettes métalliques qui maintiennent les deux faces en position constante (fig. 2, 1).

La découverte récente de Porto-Vecchio (Corse)<sup>4</sup> nous permet d'observer directement le montage de l'un des premiers glaives de type Pompei que l'on connaisse. Sur cet autre fourreau, sans doute un peu plus tardif que le celui de Narbonne, la face arrière forme sur ses côtés deux

gouttières entre lesquelles vient se glisser la face antérieure, plus mince. Ce nouveau système n'a pas besoin d'une armature métallique maintenant le fourreau sur toute sa longueur, comme c'est le cas à Narbonne (fig. 2, 2). On peut donc supposer qu'on est passé d'un modèle de fourreau à simples planchettes reliées par des gouttières métalliques à un montage dont les parties ligneuses s'emboîtent pour former un étui étanche, dans lequel la lame du glaive est beaucoup mieux protégée. Seule la multiplication de trouvailles datées nous permettra de dire si cette évolution correspond, comme je le suppose, à un phénomène général intervenu dans les années 30/40 de notre ère.

## Notes

\* UMR 154 du CNRS, CDAR, 390 Av. de Pérols, F 34970 Lattes.

1. Je remercie M. J.-L. Fabre (Domaine de Jugnes, F - 11210 Port-la-Nouvelle), d'avoir bien voulu m'autoriser à étudier et publier cette trouvaille exceptionnelle. La détermination du bois est actuellement en cours par L. Chabal (USTL, Montpellier).
2. V. en dernier lieu M.C. Bishop, J.C.N. Coulston, Roman military equipment, London 1993, 69-74; M. Feugère, Les armes des Romains, de la République à l'Antiquité tardive, Paris 1993, 137-146.
3. M. Feugère, Les armes des Romains, 266.
4. «Epave des marbres» de Porto-Vecchio-Sud, fouille et rens. J. Chiapetti, étude en cours. Voir en attendant, le dessin reproduit par M. Feugère, L'armement du Haut-Empire, in M. Reddé (dir.), L'armée romaine en Gaule, Paris 1996, fig. p.127.

## MILITARIA DE GAULE MÉRIDIONALE,

### 2. APPLIQUE DE MORS

#### D'ESPONDEILHAN (HÉRAULT)

M. Feugère \*

Les appliques latérales de mors sont souvent, à l'époque romaine, des objets très décorés, mais les découvertes effectuées à ce jour sur le littoral languedocien se signalent jusqu'à présent par leur extrême sobriété.<sup>1</sup> Il n'est donc pas sans intérêt de signaler ici une belle applique à décor ajouré, trouvée anciennement sur le

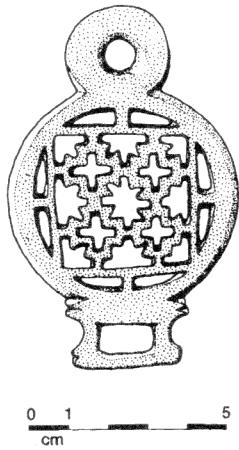


Fig. 1 Applique laterale de mors d'Espondeilhan (ech. 2/3).

territoire de la commune d'Espondeilhan (Hérault), bien que les circonstances de la découverte et le contexte nous demeurent inconnus.<sup>2</sup>

Il s'agit d'une pièce de bronze coulé, longue de 93 mm, composée d'un disque de 57 mm de diamètre et pourvue de deux pièces latérales perforées, un robuste anneau et une attache quadrangulaire à côtés concaves: la première devait recevoir l'axe du mors (dont le frottement a occasionné d'un côté une usure bien visible), tandis que la seconde servait à fixer l'extrémité des rênes. Le disque central est soigneusement ajouré; dans un carré inscrit se détachent quatre motifs cruciformes dont les contours découpés dessinent une alternance de contours crénelés et d'ajours.

Il semble difficile de trouver à cet objet des parallèles exacts. Un certain nombre de mors à appliques ajourées, comme celui d'Eichstätter Wald,<sup>3</sup> daté du III<sup>e</sup> s., jouent de la même manière sur la juxtaposition de motifs simples dessinant des figures géométriques. On peut ainsi proposer de dater l'applique d'Espondeilhan, de manière toute provisoire, des environs du III<sup>e</sup> s. de notre ère.

#### Notes

1. V. par exemple les trois appliques d'Ambrussum, datées des années 180–230 ap. J.-C. FEUGERE & TENDILLE, 1989, 160, fig. 115, n°337–339.
2. Je remercie M.J. Tastet (Béziers), d'avoir bien voulu me signaler cet objet actuellement conservé dans une collection privée.
3. GARBSCH, 1992, 93.

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UMR 154 du CNRS, CDAR, 390 Av. de Perols, F 34970 Lattes.

## A SCABBARD MOUNT WITH RUNIC INSCRIPTION FROM BERGAKKER, THE NETHERLANDS

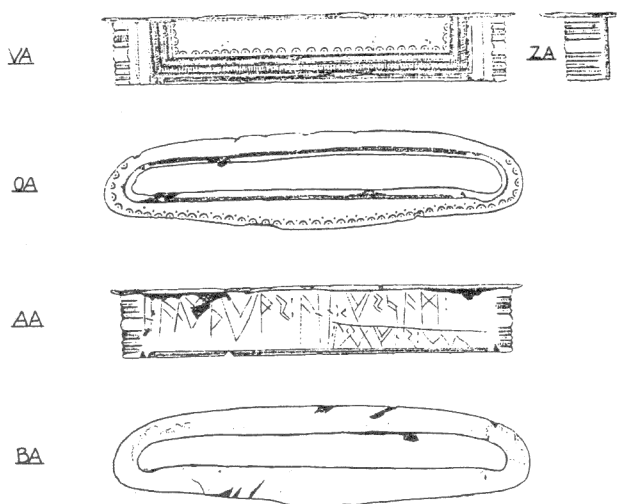
A.V.A.J. Bosman

#### Archaeological context

On the 12th of April 1996 a spectacular find was reported. The site of Bergakker, near Tiel, where it was found, is well-known for its metal finds. Also a Roman altarstone was found at the site when a part was levelled in the 1950s. The stone was dedicated to the indigenous (Batavian) goddess Hurstrga, dating in the second half of the 2nd or first half of the 3rd c. AD. The toponym 'Bergakker' suggests that the site is higher than its surroundings. This may have been caused by riverine deposits. These grounds are in this region inhabited from the Iron Age well into medieval times. After a slit was dug on the former orchard early in 1996, several amateur archaeologists collected metal finds using metal detectors. It seems that on the site a large concentration of metal, mainly bronze, is available. Most of it can be described as scrap. It contains broken or damaged objects such as fibulae and cut off rim fragments of bronze vessels. Also some large lumps of melted bronze were discovered. One fibula fragment is also melted. All finds indicate that scrap metal was collected and reused at this site. Pottery or building material have not been found. The oldest metal objects can be dated to the early Roman period: coins, of which one with an illegible countermark and Aucissa fibulae. Also finds from the middle and late Roman period occur. The latest finds are two early medieval 'vijfknoppenfibulae' dating around AD 500. The most spectacular find is a scabbard mount in gilded silver. Its measurements are: length: 83 mm; width: 19 mm (top); 10 mm (bottom); height: 14 mm; weight: 33.9 gr. Also this piece can be described as scrap, for no other scabbard mounts were discovered which could have belonged to the same sword. The top part of the mount is missing, another decorated piece may have been welded on the plate. Underneath this plate is a decoration of half circles and points. The same decoration can be found on the front as the most inner line of a decoration with mainly ridges and grooves. The sides are decorated with larger ridges and grooves ('astralagiert'). Parallels for this type of decoration occur on late Roman girdle mounts such as from Gennep (Netherlands), dating in the second half of the 4th c. AD. The Gennep finds are considered to be produced in Lower Germany. On the undecorated back a runic inscription. This part of the mount is not gilded. Except for the top and two cuts of the opening on the bottom no traces of wear are visible (the mount was cleaned electrolytic). Parallels for the mount are hard to find. In general, late Roman weapons are scarce, only small parts are found in fortresses. Very seldom weapons occur in cemeteries.

#### The runic inscription

The inscription is as usual at the undecorated back of



the mount. The runes are neatly cut with a sharp instrument. The transliteration is: **hatethewas:ann:kesjam:logens:**, which can be interpreted as: '(Of) Hatethewas Ann. (this) shining Gallic sword' (interpretation by Mrs. T. Looijenga, Univ. Groningen, the Netherlands). It is interesting that the text is a combination of a Germanic praenomen and possibly an abbreviation of a Roman gens Annius. The last two words, describing and naming the sword, are both derived from Latin: Cesa (Gallic sword) and Lucere (to shine, to flame). Such an amalgamation is not surprising in this period in this area of the former Limes. In the turbulence following the Roman withdrawal the region was occupied by Germanic tribes, such as the Chatti, Franks, Saxons and Frisians. The name Hatethewas could refer to the Chatti.

#### Interpretation

The site could have functioned as a ritual site during the Roman period. Metal votive objects could have

accumulated on it. The site could have been dedicated to Hurstrga. A parallel can be found at the temple site of Empel (Netherlands), which was dedicated to the Batavian god Hercules- Magusanus. Large quantities of metal were also found at Empel.

At Bergakker, scrap metal was collected and reused. Also material from further away may have been transported to Bergakker. The collection may have taken place in early medieval times (end of the 5th–first half of the 6th c. AD), based on the date of the fibulae. The smelting was probably done within or near a settlement. The scabbard mount must have arrived at the site as a fragment or the scabbard was dismantled at the site. The absence of later finds indicate that the runic inscription can be dated in the late Roman or early medieval period (AD 400–550) and can not be considered a later addition to the mount.

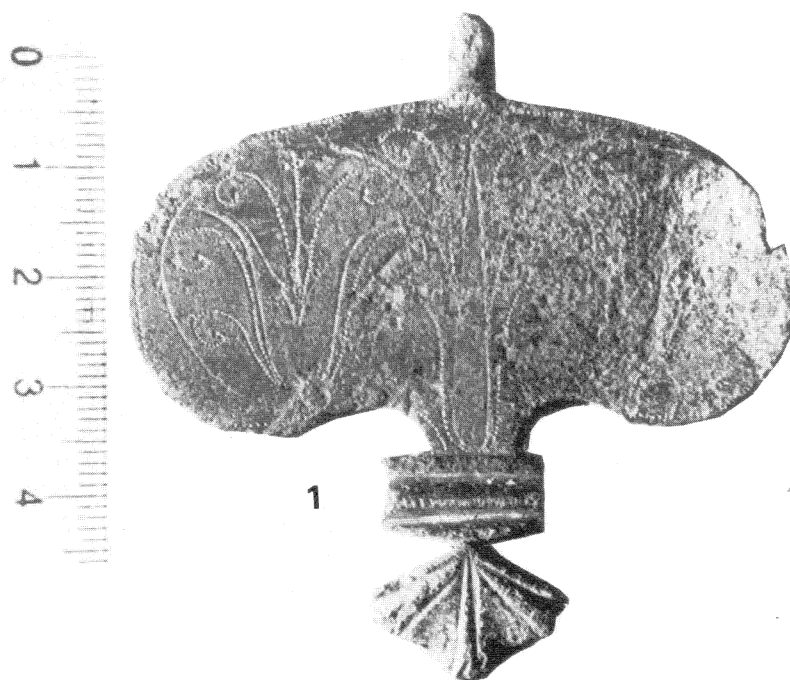
*ROB Kerkstraat 1 3811 CV Amersfoort*

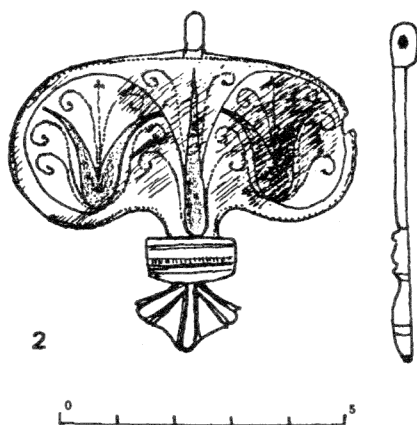
## A CAVALRY PENDANT FROM GUIMPS (CHARENTE, FRANCE)

*Jean-Louis Tilhard*

This object (Fig.1) was discovered in 1995 during field walking<sup>1</sup> on a Gallo-Roman site in the commune of Guimps (Barbezieux canton, Charente, France);<sup>2</sup> it seemed important to bring it to the attention of specialists through the medium of *Arma*.

It concerns a decorative silvered bronze pendant (probably suspended from a phalera, adorning the breast or flanks of a horse) of type 2a in the classification of M.C. Bishop;<sup>4</sup> in 1988, it was represented by 18 examples from the Rhine limes, Britain, Mauretania, and Alesia, where the manufacture of such objects was attested.<sup>5</sup> If some comparable objects discovered since this publication are





included,<sup>6</sup> it appears that such pieces are rare amongst archaeological small finds and generally associated with a military context.

The main surface of this pendant, covered with a plating of silver foil, bordered by granulations of small indentations, bearing a decoration consisting of a central petal and two florets with volutes, which are easily distinguishable despite the corrosion on the object (the right-hand side, more corroded, damaged by a blow, can be reconstructed by symmetry);<sup>7</sup> the petals have not been silvered and were intended to be nielloed as was generally the case with such ornaments (here the niello has disappeared).

The rear of the decorated face is flat; only a perforated tongue protrudes; the hole is occupied by a fragment of heavily oxidized iron (the remains of the system of attachment to the phalera decorating the harness strap).

In the absence of an archaeological context for the discovery, this pendant could not be dated except by comparison with other elements of the same type, from the second half of the 1st century<sup>8</sup> (it may perhaps be pre-Flavian); moreover, it is known that hinged pendants replaced those with hooks at the end of the Claudio-Neronian period.<sup>9</sup>

The site of Guimps is located in the southern part of the territory of Santons (*Civitas Santonum*). Several parallels for this type of object exist in Saintes,<sup>10</sup> but a systematic investigation could not be made in the museums or stores of the region to look for other elements for eventual comparison; therefore with these reservations, this pendant actually appears exceptional in western Aquitaine. It is difficult to explain its presence on a rural site since it would be a principal part of the military equipment of Roman auxiliary cavalry troops. If one cannot exclude the accidental loss of the pendant by a passing soldier (the legionary base of Aulnay, situated in the northern confines of the city of Santons, occupied

during the first half of the 1st century), it is possible to envisage that it belonged to an inhabitant of that site, originally recruited into an auxiliary cavalry unit who had kept part of his equipment,<sup>11</sup> or simply a civilian who had obtained a harness of military origin in a manner unknown to us; in this last case, its presence at Guimps would constitute evidence for the integration of Roman practice amongst the local population.

## Notes

1. By Madame Dominique Boutillier, living in the commune, whom we thank for having informed us about this object. It was briefly noted in a local review (TILHARD, 1995).
2. VERNOU, 1993, 66 No.66.
3. We thank M. Feugère and M.C. Bishop for information which they kindly supplied.
4. BISHOP, 1988, 145, Fig.44, 146; type 2b, represented by five examples is very close. See also FEUGÈRE, 1993, especially 175–80.
5. RABEISEN & MENU, 1985, 156, Fig.5, No.27; RABEISEN, 1990, 85, Fig.8, with some fragments of mold and a pendant of our type with casting traces.
6. At Augst, for example, with decoration using the same vegetal inspiration, but rougher: DESCHLER-ERB *et al.*, 1991, 67, Fig.44, No.63.
7. Comparable elements at Doorwerth: BROUWER, 1982, 145–99; the pendant from Cirencester (type 2b) is likewise formed of three florets connected by curves, but laid out in a different way: WACHER & McWHIRR, 1982, 108, Fig.35, No.97.
8. BISHOP *op cit.*, 96; at Alesia, the moulds of these objects come from deposits dating to the 60s.
9. FEUGÈRE *op cit.*, 180.
10. A pendant with an ovoid body and floral and geometrical inscribed decoration; two others without decoration, in the municipal workshop and at my home, are unpublished; they are not, however, of the same type as ours.
11. Military careers of this type are known, in particular at saintes at the beginning of the 1st century: the best example is that of the notable Satonian Caius Julius Macer, who commanded an auxiliary *ala*; his *cursus* is detailed by an inscription from Saintes, probably of the Tiberian period: cf. MAURIN, 1994, No.14, 110–19.

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- BROUWER 1982: M. Brouwer, 'Römische Phalerae und anderer Lederbeschlag aus dem Rhein', *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden to Leiden* (nieuwe reeks) 63
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*continued on p.13*



# ARMAMENTARIVM

*ARMAMENTARIVM* is a new experimental site on the World Wide Web. To introduce and explain it, here is an updated version of a paper first given at ROMEC X at Montpellier, in September 1996.

## HOW DO YOU FOLLOW THAT? THE RUSSELL ROBINSON ARCHIVE AND THE FUTURE OF ROMAN MILITARY EQUIPMENT STUDIES

M.C. Bishop

Some years ago, Peter Connolly gave me four box files of material that used to belong to Russell Robinson; I think the idea was that I would know what to do with it. Naturally, I did: I looked through it carefully, then put it on a shelf. Every so often I would think 'I really ought to do something constructive with it', but since quite what that something might be was not clear, I would quickly forget about it again; and so the box files remained. Until quite recently, when I suddenly realised what I was supposed to do with it.

The files contained the source material for Robinson's three best-known books: *The Armour of Imperial Rome* (1975), *What the Soldiers Wore on Hadrian's Wall* (1976), and (with Ronald Embleton) *The Armour of the Roman Legions* (1978, although the book itself carries no date of publication). There were photocopies of finds, articles, sketches and notes by Robinson himself, and – arguably most importantly – large numbers of black and white photographic prints, a considerable proportion of which were by Robinson himself and not published in any of the original books, some offering a range of views of the same object. The collection also reflects an intention that Robinson clearly held upon the completion of *Armour of Imperial Rome*: that there should be a companion volume dealing with weaponry, and he said as much in a letter (now in the Corbridge Archive) to Dr David Smith of the Museum of Antiquities at Newcastle upon Tyne. Thus the files do not only contain material relating to helmets and armour, but also swords, daggers, spears, missiles, and many photographs of sculptural sources.

It was clear that the material had to go to a home where it could not only be cared for and have a secure future, but also where it would have a context, and the Museum of the Society of Antiquaries and the University of Newcastle upon Tyne, to which some of Robinson's papers had already been donated, and which holds many of

his replica helmets and items of body armour, provided just such a context. To this end I applied for, and received, grants from the Roman Research Trust and the Society of Antiquaries of Newcastle upon Tyne to fund the cataloguing project. The papers already held by the museum were to be included in the exercise.

The decision to catalogue the material and present it to the museum coincided with some other ideas I had been pondering for a while. Jon Coulston and I had long ago bemoaned the fact that Robinson's seminal *Armour of Imperial Rome* was no longer in print (*but see news item later on – Ed.*) and that, even if it was available, would be out-of-date. The military equipment conferences had shown just how much new material was being found, as well as old material re-examined, to the extent that any new edition of Robinson's volume would have to be more than just a reworking of the text and illustrations. In fact, we felt that it could plausibly be argued that no one scholar is now in a position to undertake such a task, and that it would best be handled as a multi-author work, drawing upon the knowledge of the many specialists now working in the field. The difficulties of coordinating such a work and ensuring that all contributions were of an equal worth are obvious, but the most overwhelming obstacle was going to be the built-in redundancy of such a book.

As soon as such a new edition were completed it would, like Robinson's original volume, inevitably be overtaken rapidly by new discoveries and revised theories. Moreover, at a very fundamental level (but nevertheless an important consideration in these money-conscious days) the financial viability of such a project is questionable. The amount of money any one author can expect to earn from an archaeological book is, with very few exceptions, unlikely to repay the effort invested; for a multi-author work, the most the contributors could probably expect would be a free copy of the book. Moreover, given the likely production costs, what would the customer end up paying for the finished product? Whilst Robinson's book cost £12 in 1975, inflation alone would have ensured a cost for the same book of about £35 in 1985, and perhaps as much as £90 in 1995. A thicker tome would cost more.

Thus, whilst a replacement for Robinson's book was sorely needed, paradoxically it appeared to be difficult to achieve conventionally. All was not lost however, for the subject matter possessed a number of innate qualities that made it possible to envisage its realisation in an alternative, more modern medium: a digital book. If we could not have a book in its traditional form, why not redefine what we mean by a book?

The development of what is prosaically termed multimedia over the past decade has led to new ways of looking at textual and graphical information and has been adding new resources (such as moving images or sound)

that, whilst of no obviously immediate relevance to our concerns, have led to a revolution in the way information is distributed to and perceived by an audience. Although the techniques have been available for some time, they have only become widely available with the advent of CD-ROM technology. Current CD-ROMs, basically the same physically as an audio CD, permit the storage of up to 650 megabytes (Mb) of information, normally in a read-only format. Since the text for a book, even a very big one, is unlikely to occupy more than 1 Mb, there is obviously plenty of scope for including illustrative material (which is notoriously uneconomical in storage terms). One of the most interesting features of multimedia is hypertext, where sections of text within the same document, or even in completely different documents, can be dynamically linked, allowing the reader to jump around as their interest dictates. It also introduces an endearingly anarchic aspect into the whole business of reading and writing, in that the actual process of reading is no longer strictly linear. Even referring to footnotes in a paper book, most readers will start at the beginning and progress to the end of a section of text. In hypertext, the greater freedom of movement permitted makes it very easy to get sidetracked. Nevertheless, the potential for cross-referencing is one of the most powerful aspects of hypertext and multimedia.

In 1991, CD-ROM technology was joined by a new medium for the conveyance of multimedia: the World Wide Web. This, probably the most familiar aspect of the Internet, originated as a means of rapid publishing of academic papers for scientists working at CERN, but was made publicly available in 1992. Using the Internet, itself a development of the United States' old Arpanet defence computer network, this now permits more than 36 million people to access information provided in the appropriate multimedia format. The Web uses Hypertext Markup Language (HTML) within ordinary textfiles to provide the hyperlinks and instructions for layout that make hypertext work. The best part about it is that HTML, and Web technology in general, is platform independent and highly portable, which means it will work on any computer with software that can deal with it. Graphical images are available in two forms at the moment, GIFs which are best suited to pictures with a limited number of colours, and JPEGs, which are designed for photographic images and incorporate a variable degree of file compression (although the greater the amount of compression, the greater the loss of data).

The Internet provides other facilities, such as electronic mail and file transferral, which make it possible to consider it as the infrastructure that would allow for the administration of a multi-author project.

Thus the electronic medium offers a means of both publishing and maintaining a reference book with a degree of accessibility that is far higher than could ever be hoped for with a paper publication. There are, however, other advantages which, in my opinion, are even more potent arguments in favour of it. Once a paper book has been published, it rapidly becomes out-of-date as we have seen. In scientific disciplines, this has to be remedied by the

frequent production of new editions. In these areas, the academic market will support such ventures, but in archaeology, even the most popular textbook has had nothing like the number of editions that well-known medical textbooks have enjoyed. In some rapidly developing subject fields (like the Internet, to take an apposite example) developments are so swift that books are lucky to enjoy a shelf-life of a year; many are as good as redundant in six months.

An electronic book is, by definition, dynamic. It can be added to or amended at any time. In fact, it does not even have to be complete before it is first made available. When the bulk of the work is done, it is still possible to add new information as it is acquired, or correct mistakes in what is already present. The Internet provides an obvious means of widespread access, but CD-ROMs allow the possibility of 'snapshots' being produced, stand-alone versions of the database that can be used on any computer with access to a CD-ROM drive.

I therefore decided that ideas such as these needed a practical trial to test the validity of the idea. Could an electronic replacement for Robinson be implemented? I have mentioned the anticipated advantages, but what were the drawbacks that would be encountered? Many complex issues, such as copyright, needed investigation before a proper project could be initiated. To this end, during 1996, with the help of Angel Internet Ltd who provided me with 10Mb of free space on their World Wide Web server, and Savcom Ltd. who donated the appropriate computer equipment, I created a trial version, called *ARMAMENTARIVM*. In January 1997, it moved to a permanent home on the Museum of Antiquities' Web site, which is where it can now be found.

*ARMAMENTARIVM* is a dynamic book which will serve to demonstrate the potential of this resource to anybody who can get access to the Internet. It is not yet, and will not be for a long time, a replacement for *Armour of Imperial Rome*, but I hope it points the way to the way in which we can achieve such a goal. Clearly, any attempt at such a complex work needs to overcome issues of redundancy of hardware and software and be able to adapt to whatever foreseeable and unforeseen advances that will be made over the next few years. Current developments in software make it very likely that, before the end of this decade, the Internet will be seamlessly integrated into all desktop pcs, so much so that Microsoft's next operating system will be focused on browser technology and accessing a computer on the other side of the world will be no different from accessing one's own hard disc.

Let us undertake a brief tour of *ARMAMENTARIVM* and see how it is organised and what is available. Given that it is primarily a presentation of the source matter for the study of military equipment, the **Contents** page provides access to the bulk of material currently available. This falls within four broad categories: artefactual, iconographic, textual, and reconstruction. A hierarchy of headings and sub-menus then leads the researcher to their eventual goal. Normally, the practise so far in the artefact, iconography, and reconstruction sections has been to

include small 'thumbnail' images on pages of text that then link to larger versions of the image, accompanied by a textual description. This last is very important because it has to be remembered that the Web is an important source of information for the visually handicapped, who use special software to 'speak' Web pages to them; just placing an image on a page is therefore of little help to them. With textual sources, the original language quotation is accompanied by an English translation.

For the artefact and iconography sections, photographs will be the primary form of illustrating the site, since line illustration is currently harder to implement, although this may change with new developments in file formats and it is already feasible to download Postscript files of suitably adapted drawings. In the reconstruction category, it is hoped that not only physical replicas of equipment will be included, but also examples of the work of reconstruction artists, and even three-dimensional models of equipment using Virtual Reality Modelling Language (VRML – I hope to have a '*lorica segmentata*' model written in VRML available in the near future).

In all cases, it has been made a fundamental principle that no new page will bring an unannounced large illustration that might require a long time to download. Wherever possible, access is offered for such illustrations via smaller, thumbnail images. If we take as an example the tombstone of Flavoleius Cordus from Mainz, we will see that once the reader has reached it, they are initially presented with a page of text with only thumbnail sized illustrations (again a measure to prevent downloading large graphics unexpectedly). Selecting the illustration of the tombstone takes the reader to a larger image which is in fact an image map, which means it is context sensitive to the position of the users pointer. Thus, pointing at and selecting Cordus' dagger leads to a detailed close-up of the figure's sidearm. In this way it is possible to explore many different details, using a central graphical reference — the main picture of Cordus — as a guide. In the case of the Adamclisi metopes, a series of thumbnail images allows the reader to select their subject, which then leads to a larger illustration with descriptive text.

Navigation is achieved by a series of menus dependent upon the main **Contents** page. This is designed to be flexible: helmets are currently accessed by means of a geographically-orientated page, but there is no reason why a listing of Imperial-Gallic, Weisenau, or any other classification should not be implemented. The classifications, after all, should not affect the basic data that the reader wants to view.

There are subsidiary areas that provide an **Introduction** to the aims and the working of the project, a **Glossary** of terms which may not be familiar to all who visit the site, a list of **Abbreviations** and a **Bibliography** of works on military equipment, a section of **General Information**, where the researcher can find the addresses of relevant museums, reenactment groups, armourers, and of course links to any appropriate Web sites or email addresses.

The **Bibliography** is derived from that in Bishop and Coulston, supplemented by material appearing in and cited

by *Arma* and *JRMES*, and a few additional sources. It is here, indeed, that the strengths of hypertext become readily apparent. A reference on a page somewhere can be linked to the **Bibliography**, should the reader desire to see it; if the work is a paper within a larger volume of proceedings or something similar, the full reference for that can be likewise linked to and inspected. Naturally, using cut and paste techniques, the reader can make their own copy of the reference and store it on their computer for later use. Judicious use of the 'Back' button on the browser then allows the reader to return to their original location. In this form, the **Bibliography** can in fact be added to simply be emailing new references to the Webmaster (who, for the purposes of this exercise, is of course a *curator operis armamentarii*). If nothing else, **ARMAMENTARIVM** now provides the raw material for a common bibliography of military equipment studies. It can be taken further, however: separate subject bibliographies are being constructed, linked directly to the references within the bibliography pages. In this way, lists of references could be constructed for, say, essential beginners' guides; all reports that include pieces of '*lorica segmentata*'; works relating to cavalry helmets; or even geographical listings. Such lists can contain comments on the works, assessments of their relevance or, more importantly perhaps, their availability. For those who wish to download the bibliography for their own use, a single-file version will be made available (the current version is divided over eight pages with a ninth containing the list of abbreviations — a measure to reduce the loading time for those using slow links to the Internet).

There is an **Index** for the project which is a simple alphabetical listing at the moment, with links to the appropriate pages (each page within **ARMAMENTARIVM** has a unique reference code). The next stage of development will introduce a dedicated search engine allowing complex searches to be made on the contents of the site, returning the results as links with an assessment of their relevance to the chosen enquiry. Provision will also be made for a point-and-click map to allow for the graphical selection of geographical areas of interest. Finally, since we can anticipate that the site may well be visited by casual 'surfers', as well as those with a genuine interest, provision has been made for the eventual inclusion of a basic **Beginner's Guide** to military equipment studies. The mention of casual visitors also raises the question of making each page self-explanatory and self-contained; the big search engines, like AltaVista, which are the indexes of the World Wide Web, can point a researcher at any part of a Web site, not necessarily the main menu, so provision must be made a) to make it plain what is going on at any one page and b) 'catch' the visitor and direct them into the rest of the site, hence a recurring set of links at the bottom of each page leading to the main features of the site.

Whilst the bulk of the trial site is currently stored in one place, there is no reason why some portions should not be stored on remote sites, for the principles of hypertext mean that links can serve to join two pages of information regardless of their location within the Internet — always

assuming that the appropriate links are actually active. In fact, certain core information can also be carried on the disks of participating pcs, but for the time being that avenue remains unexplored.

The structure of the site is obviously of great importance, but one of the strengths of hypertext is the flexibility it allows. Thus we might present a contents page for helmets that is purely geographical and ignores any typological information. It could be paralleled by an Imperial-Gallic etc classification page, a Weisenau etc classification page, in fact any classification that exists or might be devised can be accommodated in this way. My own views on the shortcomings of typologies are well-known, but there is no reason why such traditions cannot be included within the site.

A structure for the management of the project is of course also essential. Just as we might anticipate there will be many contributors, there will need to be a number of editors working within specific subject groupings, concentrating on checking style and content. Overall coordination of the project, ensuring the marking up of text for presentation as Web pages and the procurement of appropriate images. The core of the site can fairly quickly be formed around the images contained in the Robinson Archive.

The nature of the form of the dynamic book means that 'snapshots' of it could be downloaded onto CD-ROM should it be required. The technology for actually writing CD-ROMs on the desktop is getting ever cheaper and, whereas a few years ago several hundred had to be pressed to make production viable, it is now feasible to think of requests for CD-ROMs being produced on a one-off basis. Nor do we even have to think in terms of the book being limited to CD-ROMs or the Internet. Large self-contained segments could be stored and used on a desktop or laptop computer's hard disc, and smaller sections even on a floppy disc. This would make it very easy for contributors to work on whole sections, preparing them for transmission to their editors and eventual posting to the main site.

We cannot finish without passing some comment on the problems of language. The Internet is predominantly English-based at the moment, but there are moves afoot to remedy this and software is already available that will produce 'draft-quality' translations of Web pages. The issue of whether any future development of *ARMAMENTARIVM* should have other-language versions available is therefore likely to be overtaken by progress in natural-language processing that will make it unnecessary to worry about in exactly which language any one bit should be written.

There may be protests from those who do not feel comfortable with computers that they find it difficult to read information on a computer screen. This is demonstrably true, in fact, but can to some degree be circumvented by careful writing and page design, and there is of course nothing to stop the reader saving mater-

ial to their own disc or even printing it out to read in the leisure of their own bath. The revolution in information delivery can no longer be thought about in terms of replacing paper, but rather in refining the ways in which the information is delivered to that sheet of paper. The printing process is moving from an industrial base to a home environment, thanks to cheap laser and inkjet printers, and you effectively get to compile your own book. Why buy a book full of helmets if you are only interested in body armour?

*ARMAMENTARIVM* is now freely available for at least two years, but if the project is to be taken any further there are a number of factors that have to be taken into consideration. First there is cost. Web space itself is comparatively cheap and is likely to grow ever cheaper, but a major financial burden is likely to be the cost of reproduction fees, particularly for institutional copyright owners. In the preparation of the Bishop and Coulston volume (for which we had a very limited illustrations budget, hence the large number of drawings), we were at one stage asked for DM100 to reproduce one photograph (needless to say we did not use it), so funding the reproduction rights question alone could quite easily take several thousand pounds. Attitudes vary amongst institutional and private owners, many only too happy to allow use providing due credit is given, whilst others (notably a major UK institution) have not even decided if they will allow their copyrighted images to be used on the Internet. How, then, can such a project be funded? Charging a flat-rate subscription and providing password access to the site is one way, but it has been repeatedly demonstrated that this seriously restricts the numbers of visitors, many of whom take the line that there is so much that is free on the Web, why should they actually pay for something? Ask yourself, how much would *you* be willing to pay to use a resource like this? Carrying advertising is another possibility, but a site like *ARMAMENTARIVM* is unlikely to generate the sort of numbers of visitors that will attract advertisers willing to provide the necessary funds.

For the time being, we have generously been allocated Web space on the University of Newcastle's server; our next task is to start raising the funds to cover reproduction fees. In the meantime, if you wish to examine *ARMAMENTARIVM* but do not have access to the Internet, you could always try an Internet cafe (they are springing up in all the major towns), a telecottage, or even a library.

It may sound pompous to entitle a paper 'the future of Roman military equipment studies', but I firmly believe that until the raw data is easily accessible, it remains more difficult than is strictly necessary to draw useful conclusions about any aspect of Roman military equipment studies. Making the information more widely – and more easily – available is, I suggest, the key to the future of Roman military equipment studies. The means to undertake such a project are now easily available: I believe that this is an opportunity we cannot afford to miss.

**ARMAMENTARIVM: The Book of Roman Arms and Armour**

<http://www.ncl.ac.uk/~nantiq/arma/>

- in der Kaiseraugst Unterstadt, Forschungen in Augst 12  
FEUGÈRE 1993: M. Feugère, *Les armes des Romains*, Paris  
MAURIN 1994: L. Maurin, *Inscriptions latines d'Aquitaine (I.L.A.)*, Santons  
RABEISEN 1990: E. Rabeisen, 'Équipement militaire du Ier siècle, productions à Alesia', *JRMES* 1, □-□  
RABEISEN & MENU 1985: E. Rabeisen & M. Menu, 'Métaux et alliages des bronziers d'Alesia', *Recherches gallo-romaines* 1  
TILHARD 1995: J.-L. Tilhard, 'Quelques objets gallo-romains trouvés récemment aux environs de Barbezieux', *Bulletin de la Société Archéologique Historique et Littéraire de Barbezieux et du Sud Charente* XXXVII  
VERNOU 1993: Ch. Vernou, *Carte archéologique de la Gaule, la Charente*  
WACHER & McWHIRR 1982: J. Wacher & A. McWhirr, *Early Roman Occupation at Cirencester. Cirencester Excavations* 1

## A FIND IN THE NORTH

H.J.P. Arnold (Chairman, Legio Secunda Augusta)

During the 1995 'season' much of my centurion's equipment – helmet, sword and scabbard, belts and phalerae – was stolen.\* One fortunate aspect of this regrettable experience was to establish contact subsequently with Mr Brian Stobbs who in my view must be regarded as one of the most accomplished armourers making Roman period reproduction military equipment in this country. He lives in the Newcastle area and after service in the RAF he became the custodian of one of the English Heritage administered forts on Hadrian's Wall. Not surprisingly, his knowledge of the Wall and nearby areas, as well as that of Roman military equipment, is extensive. Once I had established contact with Mr Stobbs after the loss of my equipment we agreed a replacement

programme which went ahead with speed.

A first replacement belt featured the well known *lupercal* theme and the second was due to be based on the equally well known subject of the *cornucopiae*. However this has now been set aside in favour of something much more exciting. Mr Stobbs has the land owners' permission to use a metal detector in various areas near the Wall and shortly before Christmas he was doing so close by Nether Denton on the Stanegate. Situated between Chesterholm and Carlisle, Nether Denton has not been excavated but aerial survey and other evidence<sup>1</sup> dates its establishment to the late first century – with extensive modifications taking place probably during the reign of Trajan.

The area in which Stobbs has done his detecting is not on the site of the fort itself but in two pastures to the south. The drainage of these pastures used to be so poor that they were in fact water meadows. Improvement work took place not long after the Second World War and at that time there were finds of pottery and other items. During his pre-Christmas detecting, Stobbs found a military belt buckle with a half belt plate still attached. A photograph and a drawing of the find are reproduced here (Figure 1). The general appearance of the buckle is not unlike one from Oberstimm reproduced in Bishop and Coulston<sup>2</sup> but is more elaborate, having three small knobs on each of the two leading comers. The plate, which was tinned, is of the normal narrow width with a pattern of straight lines and curves punched in the original bronze. The amount of work that must have been involved in working plates in this way leads Stobbs to question whether the Romans took a cast or casts of original designs and reproduced the belt plates in quantity from those.

Be that as it may, within days of the find he had reproduced the buckle and several examples of the plates which are shown here as Figure B. He is now modifying these reproductions since further research revealed, for example, that only the plate ends fixed to the buckle and frogs of a belt usually had the bar feature which appears at

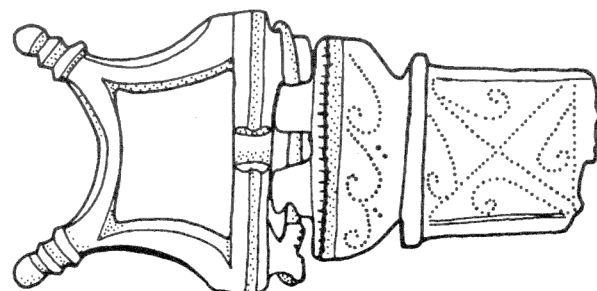
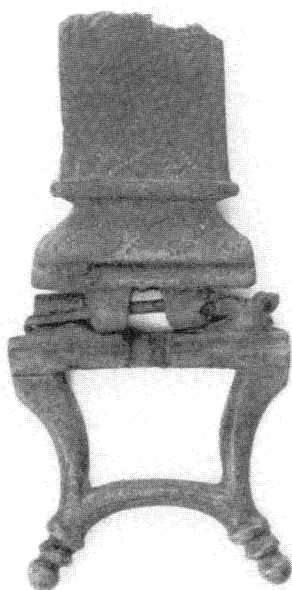


Fig.1: the Nether Denton belt plate and buckle (scale 1:1)

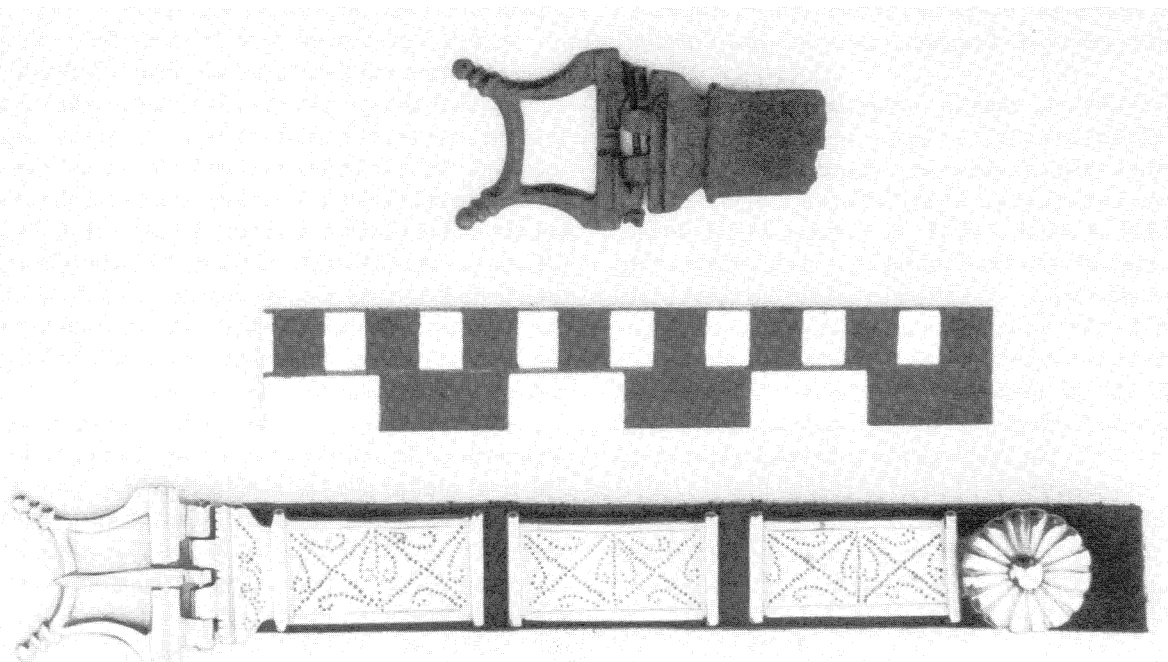


Fig.2: the Nether Denton belt plate and buckle and the reconstruction.

the end of all of the reproduction plates shown here – that part of the original find being missing, of course. When a final design has been arrived at, a master cast will be made from which plates will be produced in bronze. When everything has been assembled, we will have the pleasure of knowing that the belt – composed of elements which at the moment we think may be unique – is based on an original found in a British site at a date which fits well into our chosen Leg II Aug period.

It is probable that the original belt belonged to an auxiliary (Mr Stobbs also found lead slingshot and well as what looks like the chape of a spatha at the same time) but units from the Second Augusta saw considerable service in the north in the early second century so it is not entirely fanciful to think that maybe my new belt mirrors one that might have been worn by a member of the legion that we seek to recreate in 1996.

For Brian Stobbs there is one aspect of his metal detecting and reproduction work which is always present and that is hoping to find major artefacts which are worked in a manner which suggests to his master craftsman's eye that they were made by the same armourer or workshop almost two thousand years ago.

## Notes

\* The equipment was covered by insurance and payment was made with commendable speed. The loss adjuster said that the theft of my reproduction Roman armour and weapons was quite the most unusual and interesting case he had ever come across!

1. David J. Breeze, *The Northern Frontiers of Roman Britain*, Batsford, pps 68–9.
2. M.C. Bishop & J.C.N Coulston, *Roman Military Equipment*, Batsford, pps 96–8.

## 'PLUMBUM COLLO PORTARE.' IDENTITY PLATES IN THE ROMAN ARMY?

Aitor Iriarte

When reading the chapter that A.H.M. Jones devoted to the army in his monumental work about the Late Roman Empire, one is immediately struck by some widely unknown features described there. It is about one of these that I am going to discuss – or, more properly, to pose questions about.

Prof. Jones stated that the recruit was 'issued his lead identification disc, which he henceforth wore round his neck'.<sup>1</sup> As his only source, he cites the Act of one Tetrarchic Age Christian martyr who declared himself to be a conscientious objector, one Maximillianus. Even if I must confess in advance that I have not been able to read the *Acta Maximiliani*, I can nevertheless tell that Prof. Jones did not clearly establish that the object in question was really a disc, because our man (Maximillianus, of course) only says: 'I am a Christian, it is not allowed for me to wear the lead on my neck'.<sup>2</sup>

It is quite evocative, envisaging Late Roman officers (but, where are we told that this was only a Late Roman practice?) returning to headquarters after some action with the plates of their deceased men. Unfortunately, even the ubiquitous epitomator Vegetius fails to mention the lead discs as much as the iconographical sources do.<sup>3</sup> What Vegetius does register twice is the more widely attested feature of branding or tattooing the recruits – surely on one arm – which, unlike lead discs, is very unlikely to



Fig.1: Lead plate from Steinkastell Hofheim (after NUBER, 1986, Avbb.3.1).

leave any trace in the archaeological record.

So we arrive at the final and more important question: being made of a relatively stable material like lead, should not some of these identification plates have survived to our times? I have been able to find only one possible contender: it is a fairly irregular, trapezoidal – not round – lead plate with a hole in one end (Fig. 1). It is inscribed on both sides with the name of a soldier – IVSTINVS – and his ‘grade’ – SCORPIONARI<sup>4</sup> – and there is no mention of the unit in which he served. The piece was recovered in the Roman fort of Hofheim, not very far from Mainz (Germany).<sup>5</sup> Naturally, the object could be just a label for some box, sack or the like and, moreover, it dates from the end of the first century AD, very far from being Late Roman. Does anybody know of similar or more closely matching lead pieces which could fill the gap? In that case, please write me or, better still, send a note to *Arma*.

#### Notes

1. JONES 1964, II 617.
2. *Acta Maximiliani* II 6. In JONES, 1964, III 186 footnote 20 to Chap. XVII.
3. The solid golden necklaces holding a disklike feature at the front which are worn by the imperial guards in the base of the Theodosius obelisk (Istanbul) and the Justinianean St. Vitale mosaic (Ravenna) are most likely to be just torques.
4. He is thus supposed to have handled a small catapult.
5. NUBER, 1986, 229 Abb. 3.1.

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- NUBER 1986: H.U. Nuber, ‘Das Steinkastell Hofheim (Main-Taunus-Kreis)’, in C. Unz (ed.), *Studien zu den Militärgrenzen Roms III*, Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg Band 20, Stuttgart 226–34

## CHIP-CARVED FITTINGS IN LATE ROMAN HISPANIA

Joaquin Aurrecoechea Fernandez <joaquin@bblcat.bbl.uma.es>

Military archaeology of Late Roman Hispania is a complex world.<sup>1</sup> On the one hand, funerary contexts from a local culture so-called ‘Necropolis from the Douro river culture’, confirms a fusion of military and civil communities similar to the *Mischzivilisation* from northern France and the Rhineland.<sup>2</sup> Such burial sites frequently contain belts, tableware, equine equipment, etc., which were considered as high-status grave goods. On the other hand, some *cingula militae* found in Spain are of foreign origin. Britanian buckles with horses heads, ‘propeller’ belt-stiffeners, openwork plates with loops decorated with dolphin’s heads (types *Sissy/Sagvar*, *Champdolent*) and a lot more besides, prove that regular or private troops visited Hispania during the second half of the fourth to the middle half of the fifth centuries.<sup>3</sup> Within this last group, chip-carved fittings are a most interesting find.

These bronzes were first used at the time of Valentinian I (364–75) surviving until Honorius’ reign (393–423), but this (period of maximum use – period of splendour) was the last third of the fourth century. Belts belonging to types A and B of *Böhme* are typical of this period. ‘*Kerbschnittgarnituren*’ have been discovered in abundance along the Rhine and Upper Danube, in northern Gaul, south-east England and northern Yugoslavia; areas where Late Roman Archaeology is more developed than in others imperial provinces (Fig.2).<sup>4</sup> Comparatively few finds occur beyond the war-zones (Germania I and II, Gallia *Lugdunensis*, Belgica I/II and *Illyricum*), which is contrary to what we find in North Africa. However, recent Spanish excavations have provided some examples of these items, and hence the reason for this paper. The finds of chip-carved fittings from Hispania are chiefly of interest because of what they tell us about the presence of *Dominate* troops in the last phases of the Roman Empire. A total of eight fittings have been found, mainly distributed in the northern Spanish meseta.<sup>5</sup> All are composed of cupric alloy metal with no visible traces of plating or gilding.

From La Olmeda (Palencia) there are two examples:<sup>6</sup> a triangular belt mount and a retouched circular plate (Fig.1, 1 and 2), both appear to belong to the A form of *Böhme*.<sup>7</sup> Similar items are known from France –11–, Germany –7–, Holland –1–, Great Britain –1–, Norway –1–, Austria –3–, Yugoslavia –2–, Switzerland –1–, Morocco –1–, Algeria –1– and other sites. La Olmeda was a sumptuously palatial villa, where foreign military bronzes and many others imported articles have been found.

Recent excavations in Pamplona cathedral (Roman *Pompaelo*) have produced another example of chip-carved fitting (Fig.1, 3). This is a rare case of a burial site inside the city. The tomb contained several objects, including a gold ring and a belt mount belonging to type B.<sup>8</sup> *Pompaelo* was a Roman city with *comitatensis* troops in the early fifth century, confirmed thanks to a reference made

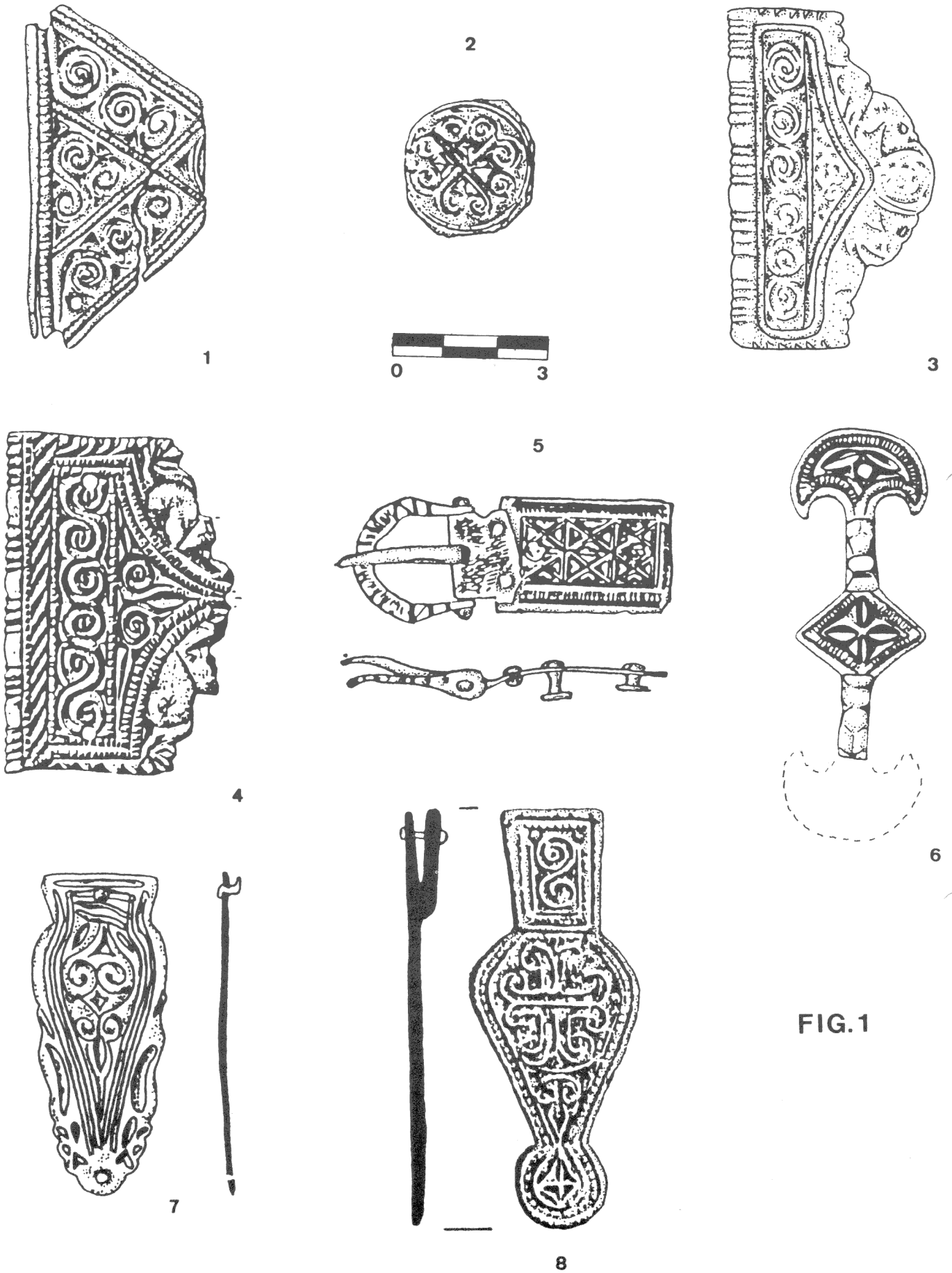
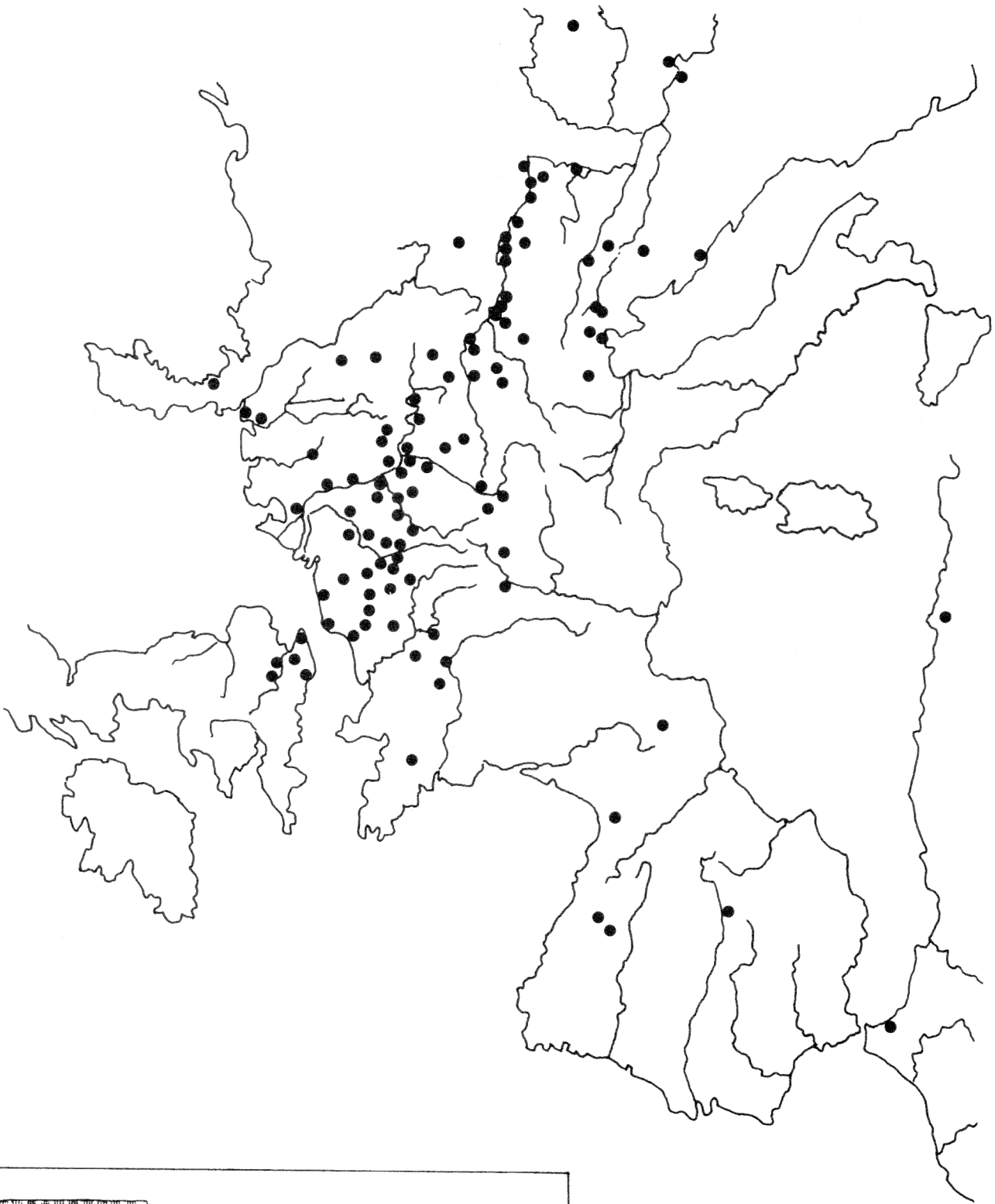
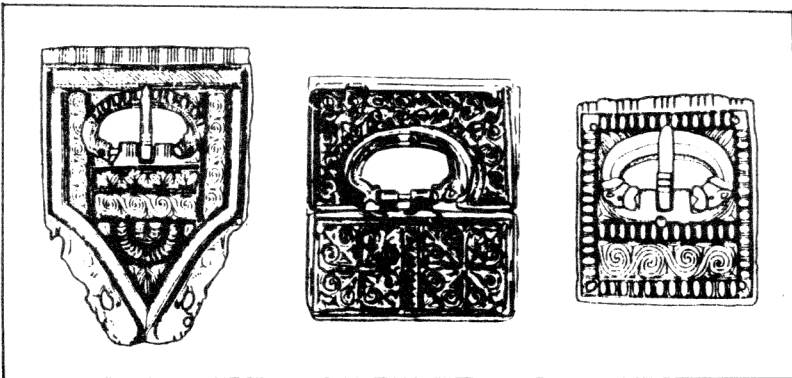


Fig.1: Chip-carved fittings from Hispania. Nos.3 and 6 not to scale.





*Fig.2: Distribution map of chip-carved fittings.*



to them in Honorius' letter.

Figure 1, 4 illustrates a belt mount from La Morterona (Palencia),<sup>9</sup> that definitely seems to fit into a variant of Type B found predominantly in Illyricum.<sup>10</sup> Parallels come from Yugoslavia -4-, Italy -3-, Austria -2-, Romania -2-, Hungary -2- and Belgium -1-. Present excavations in La Morterona (Saldania in Roman times) discovered a cemetery from the 'Necropolis from the Douro river culture'.

Discovered in a burial deposit of Hornillos del Camino (Burgos) cemetery<sup>11</sup> is one reused plate (Fig.1, 5). Hornillos is one of the most typical sites of the 'Necropolis from the Douro river culture'. This plate could come from a fitting of type Vieuxville, but this is not certain.

In Puig de Sant Vicenç d'Enclar fortress in Andorra<sup>12</sup> one belt loop appeared (Fig.1, 6). Pelta shaped fittings of this kind are associated with Type A belts and context dated in the second half of the fourth and early decades of the fifth centuries.<sup>13</sup> For the moment, nothing has been found from the second half of the fifth century.<sup>14</sup> Some parallels are a bronze from Richborough<sup>15</sup> and another from Vermand.<sup>16</sup>

Coming from Villarrubia de Santiago (Toledo) is a strap-terminal (Fig.1, 7),<sup>17</sup> conforming to Form B, type c, variant 1b of Sommer<sup>18</sup> or type V.A of Chadwick.<sup>19</sup> Böhme dates spear-shaped strap-ends about 400.<sup>20</sup> Similar parallels in relation to ornamental composition can be identified from Abbeville,<sup>21</sup> Trier,<sup>22</sup> Lambaesis,<sup>23</sup> Oudenburg<sup>24</sup> and Leicester.<sup>25</sup> However the closest parallel comes from Annaba (Tunis).<sup>26</sup>

Figure 1, 8 illustrates another strap-terminal with no known provenance other than its probable origin was the Bética province. This object is deposited in the Römisch-Germanisches Zentralmuseums Mainz.<sup>27</sup> Also pertaining to type V.A of Chadwick and the same Form of Sommer, it is very similar in appearance to the bronze-terminal from Ixworth (Suffolk).<sup>28</sup> Another parallel that can be cited comes from Hochfelden.<sup>29</sup>

We must ask ourselves the reason for the appearance of these military bronzes in a zone so far from the areas of military interest at that time. The idea of a *limes hispanicus*, long forgotten due to a lack of archaeological and historic proof to back it up,<sup>30</sup> cannot be used to justify the presence of these *cingula militae*. The direct relationship between these military accessories and the armed contingent mentioned by the *Notitia* is not clear as their appearance does not coincide with the exact location of these military settlements, except perhaps in the case of the garrison from Pompaelo. However, we must take into account that the character of the *comitatensis* troops implied them great mobility, something which could explain the great dispersion of the finds. That only leaves us with the traditional hypothesis, first put forward by Böhme, that interprets the finds of these pieces as a result of regular troop movements. Then the bronze chip carved fittings found in Hispania could have been brought here by the *honoriaci* of Gerontius during the civil war at the time of Constantine III (407-11). This last hypothesis, however, also cannot be confirmed as the spread of the

finds of these 'Kerbschnittgarnituren' is much greater than the presumed battle zone: the Lusitania and the *campi palantini*. Finally, the activities of the landowners, their families, workers and private forces is another factor to be considered when interpreting the appearance of these military bronzes, as noted by Black for some British *villae*.<sup>31</sup> Along these lines Spanish villa owners or their staff, as in the case of La Olmeda, could have been officials (both civil and military officials) who either wore the *cingulum* as part of their professional uniform or brought them back as souvenirs from the war zones. We must not forget the new social role obtained by the *cingulum* in Dominate times, a period in which it became an essential part of the uniform of a military society and a symbol of social rank, equally for soldiers and civil servants, something which could justify, although only partially, the finds of these bronzes in civilian settlements.<sup>32</sup>

## NOTES

- 1 I am grateful to J. Nash for correcting my English. Thanks are due to M.C. Bishop, who revised the ultimate text for me.
- 2 This *Mischcivilisation* society is dealt with in detail in: AURRECOECHEA, 1995.
- 3 Military items dating from the early fourth century have not yet been found in Spain.
- 4 I have not included northern Italy in the map, because in several cases 'Italian' items are attributed to this area.
- 5 A circular plate from Conimbriga (ALARÇAO *et alii*, 1979, 96, fig. 20, 59) is not included, because the decoration is embossed and not chip-carved.
- 6 PÉREZ, 1991, 83-84.
- 7 BÖHME, 1974, 55-6, Karte 11, Fundliste 11; SOMMER 1984, 10, Karte 4, Liste LXV.
- 8 MEZQUÍRIZ, 1994, 113-31.
- 9 PÉREZ, 1991, 84.
- 10 BÖHME, 1974, 57-61, Karte 11, Fundliste 11; SOMMER, 1984, Karte 5, Liste XVIIa.
- 11 PALOL, 1969, 144-5, fig. 24, 5.
- 12 CANTURRI *et alii*, 1985, 65-8.
- 13 BULLINGER, 1969, fig. 7, 5.
- 14 BÖHME, 1986, 476.
- 15 BÖHME, 1986, fig. 6, 7.
- 16 BULLINGER, 1969, fig. 69, 9.
- 17 AURRECOECHEA, 1995, fig. 1, 8.
- 18 SOMMER, 1984, 52, fig. 20.
- 19 CHADWICK, 1961, 63-4, fig. 23.
- 20 BÖHME, 1986, 473.
- 21 BULLINGER, 1969b, 149-59, fig. 4 y 8.
- 22 SOMMER, 1984, fig. 20, 11.
- 23 BISHOP & COULSTON, 1993, fig. 128, 3 & 9.
- 24 BULLINGER, 1969a, fig. 24, 2, fig. 28, 2.
- 25 CHADWICK, 1961, 63, fig. 23, a.
- 26 SOMMER, 1984, fig. 20, 9.
- 27 RIPOLL, 1993, 594, 15.
- 28 CHADWICK, 1961, 65, fig. 23, 8.
- 29 SOMMER, 1984, fig. 20, 8.

- 30 The recent work of Novo Guisán can be consulted regarding the evolutionary bibliography of the supposed limes.
- 31 BLACK, 1994, 99–109.
- 32 HAWKES (1974, 393) noted that chip-carved fittings were even very occasionally worn by women on the Continent.

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## ROMAN MILITARY EQUIPMENT ON THE INTERNET

First and foremost in this issue (no bias here) is *ARMAMENTARIVM: The Book of Roman Arms and Armour*, which is now available at

<http://www.ncl.ac.uk/~nantiq/arma/>

Related to *ARMAMENTARIVM*, but also of more general interest, is a new mailing list, *ArmaList* which is designed for the discussion of all issues relating to military equipment studies, but with special reference to the Web site. There is a Web page giving more details of the list at

<http://pobox.com/~jrmes/armalist.htm>

but you can subscribe by sending an email to [armamentarium@poboxes.com](mailto:armamentarium@poboxes.com) with the subject field of 'ArmaList' and a message reading 'subscribe ArmaList yourname@yourplace' (substituting your own email address, naturally).

Since the last volume of *Arma*, a number of Roman re-enactment groups have appeared on the Web. Here is a select handlist of these newcomers:

Cohors V Gallorum (GB):

<http://www.shef.ac.uk/misc/personal/cs1jwh/quinta/>

Ermine Street Guard (GB):

<http://www.nlc.ac.uk/~nmc3/groups/esg.htm>

Legio II Augusta (GB):

<http://www.nlc.ac.uk/~nmc3/groups/legiavg.htm>

Legio IX Hispana (US):

<http://www.inetworld.net/~cian/legioix.html>

Legio XX Valeria Victrix (US):

<http://www.geocities.com/Yosemite/3761/ROM.HTM>

#### JRMES on the Web

The *Journal of Roman Military Equipment Studies* now has its own Web site which, in the four months it has been running, has had well over two thousand visitors. This currently contains details of how to obtain the journal, instructions for contributors (together with downloadable page templates for illustrations), and a complete list of contents (including those for volume 6, which is due out in the first few months of 1997). *JRMES* has also inaugurated a policy of 'enhancements' on the Web: this means that whilst the paper journal will continue to be produced and will thereby satisfy most readers, those who would like additional information may find it on the Web site. The first enhancement is a consolidated index for volumes 1–6, which will be added to as each new volume appears. Next we will be posting colour photographs to supplement articles in volume 6, the first of these being illustrations of the sports helmet face mask and 'lorica segmentata' breastplate from the Varus disaster site at Kalkriese in Germany. You can find *JRMES* on the Web at:

<http://pobox.com/~jrmes/jrmes.htm>

## ROMECS on the Web

Following the success of its trial Web page in the run-up to ROMEC X, The Roman Military Equipment Conference now has a permanent Web page, where the very latest details of forthcoming conferences can be found (the very latest information, at the time of writing, is that ROMEC XI will be in Germany in 1998, ROMEC XII in Britain in 1999, and ROMEC XIII in Switzerland in 2001 – more details in the next issue of *Arma*). Useful things (!) like the names and contact addresses of the ROMEC committee are there, as well as the dates and locations of past ROMECs. In the near future, we hope to add the actual programmes for each conference (as opposed to the advertised programmes – the two were seldom identical!). You can find ROMEC on the Web at: <http://pobox.com/~jrmes/romec.htm>

## NEW FACE MASK FROM CORBULO'S CANAL

Excavations to the east of Leiden, at Roomburg – on the site of the canal dug by Roman troops under the command of the notorious general Corbulo – have produced a striking new example of a 2nd century A.D. copper alloy face mask from a cavalry sports helmet. Those with Internet access will find a stunning colour photograph at: <http://www.archis.nl/rob/htdocs/masker.html>

## STOP PRESS: ROMAN MILITARY EQUIPMENT AT DELFT

The exhibition of military equipment in the Legermuseum at Delft, the Netherlands, has been extended until April 1997. It includes two of the 'hairy' helmets from Nijmegen, a metal example from Vechten, and a 'groin guard' (well, that's what it says here!) from Valkenburg, along with lots of other material. Perhaps an *Arma* reader who has visited it might send us a review?

## MILITARIA DE GAULE MÉRIDIONALE, 3. HYÈRES (VAR): NOUVEAU CASQUE DE TYPE ÉTRUSCO-ITALIQUE

*M. Feugere\**

Il y a quelques années, dans la rade d'Hyères (Var), un pêcheur ramenait dans ses filets un casque en bronze recouvert de concrétions. Voulant nettoyer immédiatement sa trouvaille, il se saisit d'un marteau et fit sauter ce qu'il croyait être la gangue recouvrant le casque, sans s'apercevoir qu'il détruisait en même temps le timbre fragilisé par son séjour dans l'eau de mer. Il s'arrêta fort heureusement

en cours d'opération; après ce traitement quelque peu brutal, toute la partie supérieure, y compris le bouton sommital, n'est conservée que sous la forme d'un moulage interne, naturel, qui permet néanmoins de connaître le profil du casque et de faire quelques observations sur sa technique de fabrication.<sup>1</sup>

De la base au sommet (intérieur du bouton!), le casque mesure actuellement 204 mm de haut, et sa longueur maximale est de 249 mm; l'épaisseur du timbre, mesurée au-dessus du couvre-nuque à l'endroit où cette partie apparaît en section, est de 3 mm. Les dimensions du moule interne du bouton sont les suivantes: diamètre 18 à 7,5 mm; hauteur 10 mm. Le Musée d'Hyères a pu faire l'acquisition de ce casque, ce qui nous a permis d'en effectuer l'étude «en l'état».

Cet exemplaire peu connu,<sup>2</sup> et très dégradé, se rattache clairement au modèle étrusco-italique à bouton sommital («konische Helme mit Scheitelknäuf»), modèle bien étudié, en dernier lieu, par U. Schaaff (1988). Ce type de casque est relativement bien diffusé en Gaule méridionale, mais à quelques exceptions près, il ne pénètre guère en Gaule interne:<sup>3</sup> c'est l'un des arguments qui permet de le considérer comme antérieur au modèle simplement arrondi (type Coolus-Mannheim), qui l'aurait remplacé entre l'époque de Marius et celle de César. Les contextes disponibles semblent montrer que quelques exemplaires du type à bouton sommital ont été utilisés jusque dans le premier quart du Ier s. av. notre ère,<sup>4</sup> mais l'essentiel des découvertes effectuées sur le littoral gaulois doit dater du IIe s., plutôt sans doute de la deuxième moitié du IIe s. av. n. ère. C'est la date qu'on peut vraisemblablement retenir pour cet exemplaire, avec toutes les incertitudes qu'imposent les circonstances de la découverte et la mauvaise conservation de l'objet.

Contrairement à d'autres casques de même type trouvés en Gaule ou en Italie, cet exemplaire adopte un profil relativement conique; la signification de cette particularité nous échappe cependant, aucun critère fiable ne permettant de classer les représentants de cette longue production dont les origines remontent, en Italie, aux débuts du IVe s. av. n. ère. On peut seulement dire que le bouton sommital du casque d'Hyères était creux, comme l'atteste le moulage naturel qui en a parfaitement épousé la forme. À la base du casque, bien que l'objet soit ici mieux conservé, la présence d'épaisses concrétions nous empêche d'observer le décor ciselé qui, très probablement, ornait le couvre-nuque et le cordon renforçant la base. À la base du casque, dans sa partie la plus étroite, on peut observer une plaque, large de 29 mm, qui servait probablement à l'articulation d'une paragnathide.

Sur la partie supérieure du casque, dont les concrétions fournissent heureusement un bon moulage interne, on observe distinctement, sous la forme d'alignements d'impacts ovales, les traces de martelage laissées par le processus de fabrication du casque: il s'agit en effet, comme on l'a remarqué à plusieurs reprises,<sup>5</sup> de casques martelés à partir d'une ébauche coulée.

Des armes romaines, fréquemment des casques (mais ces objets résistent sans doute mieux à la corrosion marine

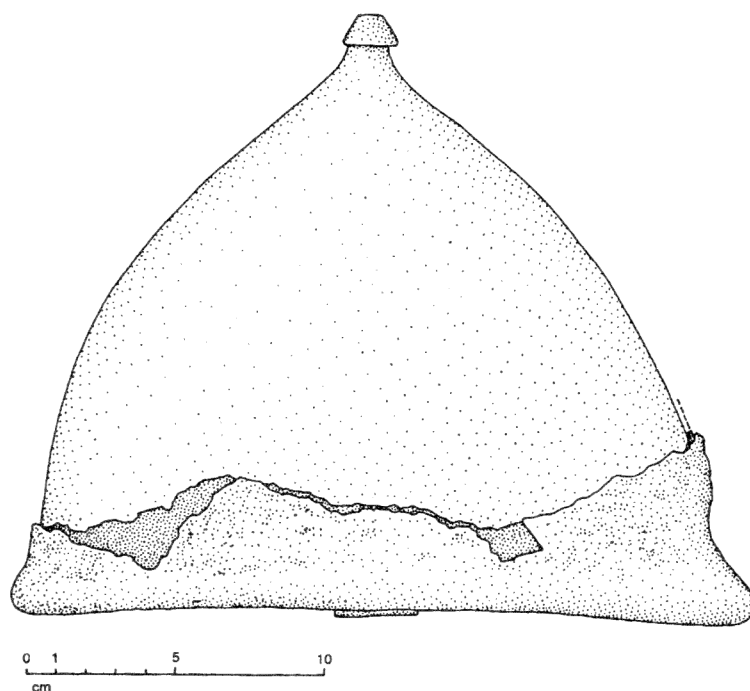


Fig. 1: Casque étrusco-italique trouvé dans la rade d'Hyères (éch 1:4)

que les épées en fer ou les pila) se retrouvent actuellement sur une dizaine d'épaves du littoral celto-ligure. L'interprétation de ces découvertes varie selon les auteurs: on a supposé qu'elles pouvaient aider l'équipage à assurer une certaine protection contre les pirates, très actifs dans les eaux ligures au Ier s. av. notre ère.<sup>6</sup> Mais cette interprétation suppose résolue la question, encore très discutée, de la propriété des armes dans la société romaine de la fin de la République et du Haut-Empire. De plus, la découverte récente, dans l'épave de Porto-Vecchio, d'un glaive accompagné de son ceinturon en argent s'accorde mal avec cette hypothèse, une telle suspension étant plus propre à exciter la convoitise des pirates qu'à l'éloigner. Il semble bien que la présence d'armes sur certains navires de commerce romains doit être mise en relations avec celle de soldats en mission, qu'il s'agisse de courriers ou de l'escorte de personnages importants voyageant à l'occasion sur de tels navires.<sup>7</sup>

La découverte du casque d'Hyères vient donc enrichir un dossier sensible, que compléteront sans nul doute les fouilles en cours sur des navires marchands des IIe et Ier s. av. n. ère en Méditerranée occidentale.

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1. Je dois à M. Bats d'avoir eu connaissance de cette découverte; grâce à son intermédiaire, Mme C. Nicolai, conservateur du Musée d'Hyères, a bien voulu me confier l'objet quelque temps pour étude. Le casque a été notamment apporté au Römisch-Germanisches Zentralmuseum de Mayence, dans l'espoir d'un traitement chimique ou mécanique permettant de retrouver les restes d'un éventuel décor, mais la démarche s'est avérée impossible. A ce jour, l'objet est

donc conservé au Musée d'Hyères en l'état, sans avoir subi aucun traitement depuis son acquisition par le Musée.

2. Simples mentions dans FEUGÈRE, 1993, tableau p.266; FEUGÈRE, 1994b, 18 et 20, n°10.
3. Carte de repartiflon, en dernier lieu: FEUGÈRE, 1994b, 11, fig. 8.
4. Par exemple l'épave de la Madrague de Giens, coulée vers 75/70 (FEUGÈRE, 1994a, 43).
5. En dernier lieu BORN, 1991.
6. GIANFROTTA, 1981.
7. FEUGÈRE, 1993, 267.

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