FOREWARD

Archaeologists excavate and from these excavations, they produce finds of ancient artefacts, sometimes complete but often only fragmentary. This is where the fun starts. These finds have to be compared to others, from known contexts, with a view to understanding their function and establishing their dates. This involves searching through previous publications, in learned journals that are not always easy to obtain. When this happens, it is very useful to be able to make use of a 'one-stop' volume – a catalogue in fact – where there are many examples listed, together with the main facts about them. This is precisely what Marco Saliola and Fabrizio Caprini have produced here for the Roman 'small-arms' weapon, the *pugio*.

Were this all they had produced, it would still be a valuable addition to the archaeologist's set of tools. They have, however, gone much further than this. They have examined the history of the weapon, its construction, its strengths and weaknesses as a weapon, its likely use, its artistic representation and they have structured the catalogue around a useful typology.

In short, I would suggest that they have produced as complete an examination of the *pugio* as it is possible to achieve.

Mike Thomas
Newport, Monmouthshire,

March, 2012

Cover:

Title:		citation by Nonius Marcellus, “De Compendiosa Doctrina”, Book 19;
Image:	*in the foreground:*	photo of a pugio from a private collection (photo by the author);
	in the background:	photo of a pugio from the collection of the Romisch-Germanisches Zentralmuseum (Mainz-Germania) (photo by the author);
	further in the background:	photo of a pugio from a private collection (photo by the author);
	in the far background:	detail from the stele of Annaius Daverzua, presently in the collection of the Sclossparkmuseum (Bad Kreuznach – Germania).

CONTENTS

INTRODUCTION

"*The Romans were victorious over all peoples thanks only to the execution of their arms. In fact, we can see that it is by no other means that the Roman people conquered the world other than by the execution of their arms, their discipline on the field, and their military experience*."[1]

Rome has been a reference point in history for many reasons: for its organisation of the State, for its Art and Culture, for its Law and much more; to the point of leaving a profound and permanent mark on both the ancient and modern western world. However, "*if it was capable of building a vast and lasting empire, it was evidently able to achieve this thanks to its troops*"[2], and these troops were victorious over the people of the time also thanks to their weapons.

The aim of this book is to examine in depth one of these weapons, the PUGIO

The pugio (pl. pugiones) is a short weapon of offence of the Roman army, also famous for being the weapon with which Julius Caesar was killed, and it represents in the collective imagination a characteristic weapon of the Roman legionary. Its rich decoration and the use of precious metals have given it a legendary air, which has been favoured by a scarcity of literary sources and the lack of a clear explanation of its function or the specific use soldiers made of it.

Due to a lack of in-depth studies which would lead to an adequate placement of the weapon, the lack of information regarding the pugio has been filled to this day by simple deductions on the part of modern authors, which are frequently no more than personal assumptions.

The persistent presence of pugiones in the Roman infantryman's panoply over an uninterrupted period of almost four centuries, which goes from the Republic (end of II century B.C) to the crisis of The Empire (mid III century A.D.) is proof of the importance of this dagger. Such evidence, however, contrasts with the limited diffusion of the weapon in a precise territorial context - that of the "*Limes* (border) of the Rhine and high Danube" - rendering the pugio a far from indispensible weapon in comparison with the gladius, whose use is observed throughout the Roman world.

The latin term "Pugio" derives from the verb "*pungo*" and corresponds with the Greek term "ἐγχειρίδιον". The root of the word is "*pug*" which belongs to a group of terms with the meaning shock, and in the case of pugio means "physical blow, given by a sharp point". It must be distinguished from the etymology of dagger ("*pugnale*" in Italian) which rather derives from "*pugnus*", with the meaning of fist ("*pugno*" in Italian): the way in which the weapon was held. In both meanings, pugio and dagger (in Italian the translation of "dagger" is *pugnale*), the type of combat implied is that of "*pugna*", that is to say combat where physical contact is expected between the two rivals: so-called "hand-to-hand" combat. The word derives from the Indo-European root "-peu^g", which means "dagger-club"[3], which is proof that the name given to this dagger is much older than the weapon as we perceive it today, possibly implying that there are precursors to it unknown to us at present. The pugio is a unique weapon of its kind, doubtlessly part of the Roman military culture (apart from some early models whose Celtiberian origin makes it difficult to assign the most ancient of them with any precision: the similarity in form of the daggers and the sharing of territories of the two peoples raising doubts for many archaeological finds). It has an unusual handle, with two pommels, the first of which is at the top and the other in the centre of the grip, which, despite the technological changes incurred over the course of four centuries, makes it easily distinguishable even by a non-expert in this weapon. It doesn't have a prominent guard, which excludes a priori a duel-type purpose, whereas the blade is often waisted, in the shape of a Weeping Willow leaf, with a variation in the form which has over time more or less emphasized its characteristics, often reflecting the evolution of the

Fig.1: tombstone s by Annaius Daverzus, auxiliary foot soldier of IV Choors Delmatarum, shows us with great clarity the weapon which is the object of this book, hanging from a beautiful cingulum on the left side of the legionary.

gladius. In fact, the symbiosis between the pugio and the gladius was almost always very close, so much so that we can state that "*Pugio est gladius brevis"*[4].

The best sources of information leading to our knowledge and understanding of this weapon are represented by archaeological finds, iconography and literary documentation, upon which this book has been based in an attempt to understand its symbolic role and meaning in antiquity. Known exemplars constitute an exhaustive object of study and give us quite a complete range of the various types of construction and places of origin, suggesting the places where these weapons were most widely used. The cenotaphs - sepulchral monuments which did not contain mortal remains - contribute enormously to our present knowledge, with their detailed representations of the *Miles*[5]. The Romans were not actually accustomed to entomb their dead soldiers with all their weapons, as was typical for some peoples, such as the Etruscans and Celts, and this behaviour has deprived us of an enormous potential source of finds. In any case, the military tombstones partly compensate for this loss of information, by depicting details of clothing and equipment belonging to the deceased, as well as relating to us by means of the surviving epitaphs where the Miles was stationed, his name, and the military corps he belonged to.

Finally, great help has been given to us by way of classical literature, whose references go from the first century BC until approximately the XII-XIII century AD. Attentive study of this allows us to identify precious information and indications. There are numerous classics authors who speak about the weapon in question, however, it is unfortunate that they never give detailed descriptions of the pugiones and rarely of a fact relating to war in which the battle technique and the specific use of the weapon are narrated. This is hardly surprising as the classics authors never stop to describe any weapon in detail, whether it an offensive weapon, such as the pugio or the gladius, or a defensive one, such as the helmet or *lorica*. Instead, they go into greater detail regarding the tactical aspect, the military formation or organisation of the army. Ancient literary works were, in fact, addressed to high social classes where, during banquets and in cultural circles (such as the *Club of Scipions*), aristocratic and imperialistic ideology was elaborated, and where discussion was based on an explanation for Roman superiority over the rest of the population, or the so-called barbarians. This predominance was described in heroic feats which made Rome great, as for example in Polybius's[6] exaltation of the war strategy used in various punic wars (even if this was by means of betrayal and lack of respect for signed treaties), the realisation of impossible deeds and feats, such as the construction of the bridge over the Rhine, the siege of Alesia and the conquest of Britannia[7], or the storming of the city of Jerusalem and the fortress of Masada[8]. In the detailed description of the feat there can be no room for a description of the weapons and their use because these were the subject matter of discourse among soldiers, and not of interest within a literary circle or in a military treaty, such as those written by Polybius, Josephus Flavius and Publius Flavius Vegetius.

Regarding the literary sources of the time, the phenomenon is summed up by the quotation that "*in the endless biographies on the Roman army, its organisation, social, cultural and economic aspects, very few studies have been dedicated to the type of weapons used and their production*"[9]. Furthermore, military coverage is mainly in the form of Anglo Saxon and German studies, as if the most enthusiastic experts in the subject came from those nations which paradoxically housed the Roman Limes and, therefore, the greatest number of legions, and in some ways were subjected to Roman dominance. In any case, not many authors have decided to study our weapon in more depth, generally preferring to concentrate on other components of the Roman panoply or the study of the army in general.

The essence of this work is in its proposal to fill this gap, attempting to base its finds exclusively on indisputable data and sources and avoiding personal considerations which could easily mislead a correct evaluation. Essentially the Pugio, as the subject of our study, will lead us through the history and evolution of the Roman army. It will accompany us on our way to a discovery and deeper knowledge of many aspects - sometimes not well known but certainly important - in order to understand better the characteristics and the mentality of this extraordinary, ancient army.

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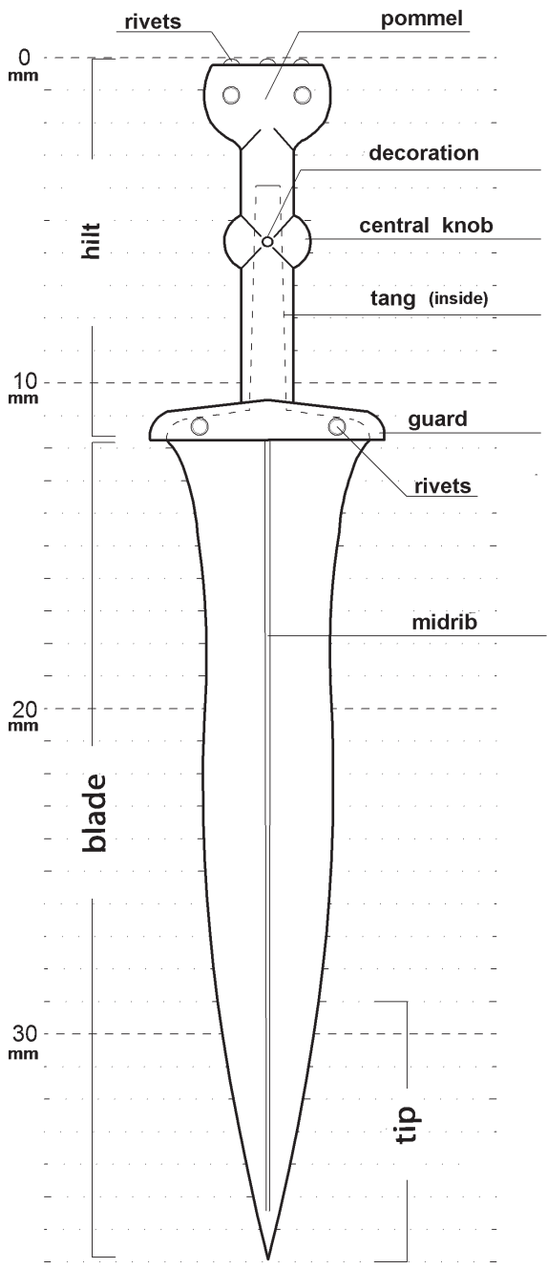
1 Vegetius, "Epitoma rei militaris", book I
2 Yann Le Bohec, "L'esercito romano", ed. Carocci
3 G. Köbler, "Indogermanisches Wörterbuch", München, 1981;
4 Nonius Marcellus, "De compendiosa Doctrina" LLA 615, book 19, meaning "the pugio is a short gladius";
5 basic foot soldier in Latin ;
6 in his work "*Historiae*";
7 Julius Caesar,"*De Bello Gallico"*;
8 Josephus Flavius, "De Bello Judaico";
9 Vincenzo Aiello,"Le armi nel mondo tardo antico";

CHAPTER I
ORIGINS, EVOLUTION AND CLASSIFICATION



"*One of the greatest problems in the academic debate is that terminology identifies groups which do not actually exist as such. The modern historian needs to group together different civilisations.*" [1]

Classification is a fundamental concept in the chronological research of a weapon. However, as I cannot but agree with the above-mentioned concept, the classification proposed here is consequently based on three main types, all possessing real and evident characteristics. That is to say that it only considers well-defined evolutionary differences and is not the fruit of the almost certainly differing styles and civilisations of the armourers who created the weapons.

This notwithstanding, as with every classification, its quality is in its explanation - in this case of the evolution of the weapon over time - but it is inevitably limited by a potentially excessive simplification and rigidity which does not always mirror the precise historical reality of each single object.

This chapter, furthermore, aims to follow the evolution of the weapon over the centuries, from its first appearance in the panoply of the Roman legion until its final disappearance, without neglecting to investigate its genesis.

Let us, therefore, use this as our starting point.

When there is a lack of indisputable historical sources, the origins of an ancient weapon are very difficult to identify. Therefore, we will reconstruct them, beginning with the archaeological and historical evidence at hand.

There is no doubt that the origins are to be sought for within the Hispanic culture and, more precisely, there is no doubt that the Roman pugio derives directly from the biglobular Celtiberian dagger[2]. Short edge weapons coming from Italic and central European territories, instead, are of no particular influence. This appears to be quite a surprising anomaly, in fact, one might wonder why the Romans did not emulate the use of short edge weapons by the great peoples who lived at close quarters with them, rather than competing with the Celtiberians[3], as for example the Samnites, the Etruscans, and the Celts of the Italic territories, etc.

In actual fact, the explanation is quite plausible, and is to be found not in the craftsmanship of the weapon or in the construction techniques, but rather in the use that was it was intended for. The fundamental difference is that in the period of the Roman Republic the dagger was a weapon purely used for battle purposes on the Iberian peninsula[4], whereas in the Hellenic, Italic and central European territories it was intended rather as a symbolic object.

From a military point of view, it is connected with the tactical method of combat.

The Romans and Iberians were very similar from this point of view and followed a sort of "western" tradition[5], with the use of units that did not lack a large dose of flexibility[6] (the maniples, in the case of the Romans). Against this, the Hellenic populations, and consequently the Italic populations who were greatly influenced by the former, used arms appropriate to a phalanx formation (including the long spear) and hence the dagger was not present in their panoply – being totally useless. It was, instead, often used as a symbolic object of a votive, cultural or funerary character[7]. Similarly in the Celtic civilisation the dagger had a totally unimportant tactical value. In fact, very occasionally the odd single-edged knife has been found in warriors' tombs (for example those in Casalandri and

)09;
a Esferas de los Libros
e middle of the iberian peninsula;
g techniques and battle tactics";

ulino;
re della Basilicata antica", ed. De Luca;

ISBN: 9781407309996

S. Maria di Zevio), but never daggers, whose military function is not even certain[8].

If we add to this that the Celtiberi were exceptional soldiers, particularly ready for hand-to-hand combat and equally as attached to their weapons as to their lives[9] - those weapons serving them in a purposefully efficient manner - we can understand why the Romans made use those self-same weapons without hesitation. In fact, their pragmatism from this point of view is very well known, as they never failed readily to assimilate any enemy weapon that was considered valid. This was their method dating back to the most ancient times, as Polybius testifies: "*The Romans, in fact, are more able than any other peoples to learn new customs and imitate the best of what they see*."[10]

Hence, the Celtiberian weapons, once they had fallen into a similar tactical context to that of the Romans, could be used 'tout court' – as, in fact, they were. During the II Punic War, when the contact between the two armies was no longer sporadic, the Roman army was re-supplied with weapons not only by the mother country, but also and above-all by the local production centres, using specialised local skilled-labour[11].

The Celtiberian biglobular dagger appears on the scene already from the end of the IV century B.C. in the Meseta area, particularly concentrated in the part inhabited by the Celtiberians, even if the presence of some specimens has been noted in Catalonia in the Valencia area. The Hispanic weapon, "de frontòn type I"[12], also from the V-IV century BC, descends in turn from the above-mentioned dagger. Its exterior appearance, in the same way as both its very unusual construction technique and size, are all identical to the first Roman pugiones, so much so that if they are taken out of context it appears impossible to distinguish the one from the other.

Classical sources which confirm its Celtiberian origins are almost completely inexistent, however, one seems to move in this direction. Martial[13] tells us: "*Pugio, quem curva signat brevis orbita vena. Stridentem gelidis hunc Salo tinxit acquis*[14]" where Salo is the name of the river (Saone) Jalòn at the time,, which flowed in Celtiberian territory.

Having completed this brief dissertation on the genesis of the Roman pugio, let us move on to the subject which interests us most: its evolution and classification.

In order to have an immediate basic reference, I feel it is useful to give a brief description of the three main areas treated:

1) Typology of the "First (or Republican) Period": this goes from the first appearance of the pugiones until the end of the I century B.C., hence coinciding approximately with the Republican period – beginning of the Julio-Claudian dynasty[15], and including roughly the first and part of the second century B.C.
2) Typology of the "Second (or Imperial) Period": this coincides more or less with the I century;
3) Typology of the "Third (or Final) Period": this goes from the beginning of the II century to the moment in which the pugiones disappear from the Roman panoply, towards the first half of the III century.

• First Period (or Republican Period):

It is not possible to identify the precise moment when the *pugio* appears among the weapons of the Roman soldier as it is diluted over time. This could not be otherwise considering that ancient weapons were always the fruit of a slow evolution.

With the defeat of the Carthaginians in 206 B.C., the slow process of conquering the Hispanic territories began for the Romans, during which they soon realised that the native populations were far from willing to enter pacifically into the Roman orbit[16]. Fighting continued until 180 B.C. when agreements were made which brought relative peace until 150 B.C.. The second part of the century was, however, characterised by a fresh outbreak of fighting, which culminated in the war instigated by the Romans against the Celtiberians and the Lusitanians[17], a very proud and bellicose people, dedicated by tradition to war and plundering. It was precisely the need to prevent their raids which brought on a series of encounters which blew up into one of the most difficult wars Rome ever had to face[18].

Within this war scenario, the most difficult moments were caused by the so-called Numantin wars, whose name comes from the fortified city by the same name: Numantia[19]. This city became the setting for bloody battles for many years to come, the first of which was fought from 153 to 151 B.C. by Quintus Fulvius Nobiliores and Marcus Claudius Marcellus, whereas the second took place from 143-133 B.C. and was terminated by the efforts of Scipio Emilianus, assisted by Gaius Marius[20].

Simple deduction may lead us to believe that the first contact between the Roman army and the Celtiberian biglobular dagger goes back to the times of heavy fighting with Hannibal, seeing as he used Celtiberian mercenaries, however, more probably it goes back to the encounters of M. Portius Cato in 195 B.C. right in Celtiberia[21]. Nevertheless, this remains a hypothesis, as there are no

[8] Giovanni Banfi, "L'armamento dei Celti", ed. Il Cerchio;
[9] Tito livio "Ab Urbe condita 34,17" talk that consul Cato wondered knowing some hispanic soldiers killed themselves because had been unarmed by Romans, because their life doesn't worth longer without own weapons;
[10] Historiae, book VI, 25;
[11] Fernando Quesada Sanz, ibid.;
[12] Eduardo K. De Prado, " El puñal bidiscoidal peninsular: tipologia y relaciòn con el puñal militar Romano", Galdius XXVIII 2008;
[13] "Epigrams", libro XIV-33
[14] "the pugio, thinly and roundly grooved, has been squeaking tempered by the ice cold water of the Saon river";
[15] from Augustus (27 B.C.) to the death of Nero in the 69s, the so called "years of the four emperors". From that time onwards flavian dynasty started ;
[16] Javier Arce, "Hispania Romana", ed. Electa;
[17] Javier Arce, ibid.
[18] Giovanni Brizzi, "Il guerriero, l'oplita, il legionario" ed. Il Mulino;
[19] Important celtiberian town, near today's Soria, builted in the IV cent. B.C., towards which several Roman expeditions had been stopped;
[20] Javier Arce, "Hispania Romana", ed. Electa;
[21] Eduardo K. De Prado, ibid.;

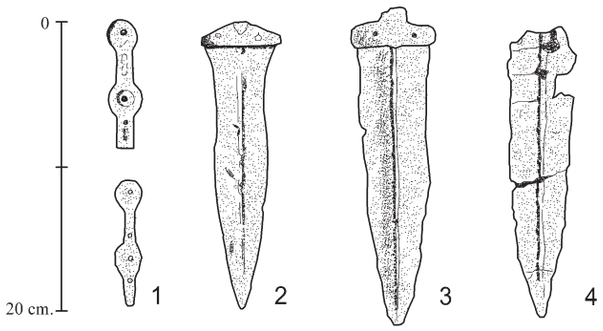


fig. I/1: some of the most archaic examples of pugiones retraceable to a Roman context (drawing by the author based on graphical information from "El punal bidiscoidal peninsular: tipologia y relacion con el punal militar Romano, " Galdius XXVIII 2008);

1. **Fragments of grips from the Field of Renieblas (Soria, Spain) dated between 195 and 133 B.C.**
2. **Blade from the field of Castillejo (Soria, Spain) dated between 152 and 133 B.C.**
3. **Blade from the city of La Caridad (Teruel, Spain) dated between 133 and 75 B.C.**
4. **Blade from the archaeological site of La Azucarera (La Rioja, Spain) dated end II century B.C., discovered together with other weapons whose Roman origin is quite certain.**

archaeological discoveries to confirm it. What could be the most ancient finds of a pugio of Roman origin comes from the Roman fields of Castillejo and La Atalaya de Renieblas, both near Numantia[22]. An important element of doubt nevertheless remains, considering that during this period there is still substantial similarity between the Roman and the Celtiberian weapon, and, therefore, it cannot be excluded with certainty that these specimens belong to Celtiberian defectors or that they were war booty. In this case we are (above-all regarding the field of La Atalaya de Renieblas) in a historical context which goes back to the beginning of the II century B.C.[23]

It has been useful to study an specimen from La Azucarera (La Rioja), dating back to the end of the II century/ beginning I century B.C.[24] and of certain Roman origin as it was found together with a 'Montefortino'-style helmet and a dagger which is almost certainly a "gladius hispaniensis"[25], a typical Roman weapon of the time.

If we make a summary of the most ancient specimens of pugio that can be traced back with sufficient certainty to a Roman context, we have[26]:

- Handle from the field of Renieblas (Soria) dated between 195 and 133 B.C. However, it must admitted that the date 195 is not very certain and should most probably be deferred to 153 B.C., during one of the Numantine wars;
- 4 specimens from the field of Castilejo (Soria), dated between 153 and 133 B.C. near Numantia;
- a specimen from the Roman city of La Caridad (Teruel), dated between 133 and 75 B.C.
- a specimen from La Azucarera (La Rioja), found with other Roman weapons, dated end II century-beginning I century B.C.

To conclude, we can, therefore, reasonably place the moment the pugio was adopted by the Romans as between mid and end II century B.C., possibly more precisely in the final decades during the conflict with the Celtiberians.

Another fact which confirms the improbability of earlier dating is that Polybius, the well-known greek historian, never mentions the pugio in his writing[27] despite the accuracy of his descriptions of Roman weapons. It is also highly improbable that he intentionally omitted their description if they were notably widely spread.

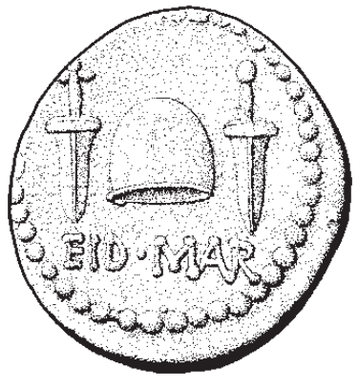
Following this, the weapon seems to remain confined to the iberian territories for many years without interesting other provinces, as is proven by the archaeological finds, which are always localized to this area.

We have to wait until 52 B.C. in order to find traces outside the territories of origin, specifically in the archaeological context of Alesia (France)[28], home to the notorious battle promoted by Julius Caesar against the Gallic coalition led by Vercingetorix. Excavations have brought 5 specimens to light, one of which has an astonishing similarity with the already-mentioned specimen from the citadel of La Caridad (Teruel)[29]. It has been hypothesised that they could be of Celtic origin, but considering that they were found together with a large quantity of Roman material, and also considering the lack of similar weapons in areas typical of the Celtic civilisation, this hypothesis appears rather improbable[30].

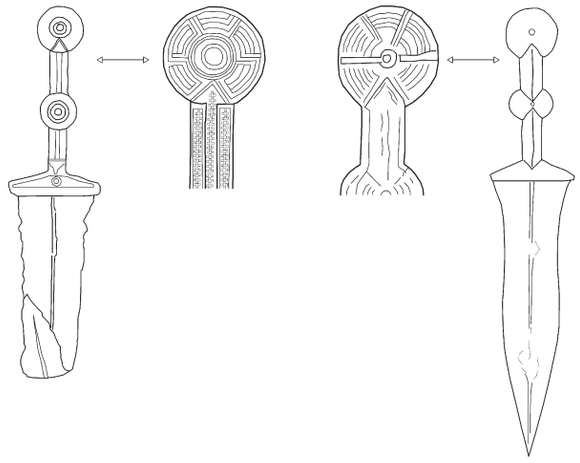
From this moment onwards we start to find accounts of the weapon in various parts of the Roman dominion, one of the most evocative being the gravestone of Minicius Lorarius. Unfortunately, the epigraph on it has been badly preserved, but one might reasonably hypothesis that the soldier belonged to the "Legio Martia"[31]. This legion was enrolled by Caesar in 49 B.C. and had a short life as it was destroyed during the civil war between Ottavianus and Mark Anthony in 42 B.C.[32], so the dating of the finding is quite precise. The soldier figured on it apparently also shows a pugio from Period I among his weaponry, even if the pommel on the handle is lost[33].

Another coeval reference of great importance is the commemoration coin of Caesar's assassination, coined in 44 B.C.[34] (fig. 1/2). On it two daggers are figured, which evidently represent the murder weapon, the one on the

[22] Eduardo K. De Prado, ibid.;
[23] Eduardo K. De Prado, ibid.;
[24] Eduardo K. De Prado, ibid.;
[25] Iliarte,Gil,Filloy 1999, pag 233-250;
[26] from Eduardo K. De Prado, ibid.;
[27] Polibio, "Storie", see above all book VI;
[28] Michel Fèugere, "Weapons of the Romans", ed. Tempus. Precisely, had been found 5 specimens, plus 38 *pila*, 11 swords and scabbards (among those some are from celtic culture) and many arrow and spear points;
[29] Eduardo K. De Prado, op. cit;
[30] Eduardo K. De Prado, ibid.;
[31] L'iscrizione recita: *(Mi)nucio T.f. Lorario c(e)ntuur(ioni) in [leg(ione)?] (M?)artia terti(a?) .....*
[32] J.R.Gonzalez, "Historia del las legiones Romanas", Madrid 2003;
[33] Claudio Franzoni, "Habitus atque Habitudo Militis", ed. "L'Erma" di Bretschneider;
[34] Eduardo K. De Prado, ibid. Sear 1439, Crawfrod 508/3;



Pic. I/2: coin in commemoration of the assassination of Julius Caesar, coined in 44 B.C. The dagger on the right seems unmistakably like a pugio from the Republican period (from "Roman Military Equipment", by M.C. Bishop & J.C.N. Coulston).



pic. 1/3: On the left: specimen of biglobular dagger from the necropolis of La Osera (Spain) dating to III century B.C. On the right: pugio of I Roman type, from Oberaden (Germany), dating between 11 and 7 B.C. Even though separated by many centuries, the handles are decorated with a very special pattern and are almost identical (drawing by author from "El punal bidiscoidal peninsular: tipologia relacion con el punal miltar Romano", Galdius XXVIII 2008).

right indisputably like a pugio from Period I. From this two things can be deduced: the first is that this is a weapon that has deeply penetrated Roman tissue, and secondly, seeing that whoever coined it intended it to represent the instrument, almost symbolically, which permitted the patriotic act of being freed from a tyrant[35], it is unthinkable that the icon pictured on it is less than the icon of Roman civilisation. All this suggests that at the time there was no weapon more typically Celtiberian but also completely Roman. It also bears noting that the specimen on the left instead shows a rather rare type of handle, with very few similar extant specimens, one of which having been found in Taranto (southern Italy) still in its sheath and whose handle presents a cross-shaped pommel but no central knob[36].

One of the last specimen from Period I which is reasonably easy to date, but whose place of origin unfortunately has not been possible to identify, can be placed in the Augustan period in virtue of some decorative fragments on the handle which, under metallographic examination[37], were found to be in Orichalcum.

This alloy[38] (from the greek ορειχαλκοζ) was introduced to Roman use at the end of the Republican Period or at the beginning of the Augustan Period[39], mainly due to a need to mint some coins (sesterces, duponds and semi-axes)[40]. The techniques the Romans used are still not accurately known, even if some fleeting mention by Pliny[41] leads us to hypothesis that it was not obtained by directly adding zinc to copper, but rather by cementation[42]. In any case, the composition of the alloy was not a constant percentage over time[43] and this is often a valid clue for quite reliable dating. As a general rule the quantity of copper tends to diminish quickly in comparison with zinc. At the end of the Republic and at the beginning of the reign of Augustus, 92-93% of copper and 5-6% of zinc are recorded, together with small percentages of tin and lead (which can at times be completely missing), but already at the start of Tiberius' reign the quantity of copper has diminished to 76-77% and that of zinc increased instead to 22-23%[44]. Never in all the duration of The Empire – and while orichalcum was used – were such high quantities of copper recorded as towards the end of the Republic/early Empire. In the case of the tested pugio we have the following percentages: copper 93.2%, zinc 5.8% and lead 0.99%, which are compatible with those used at the end of the Republican Period, which confirms the above-mentioned dating.

The decorative element of this material is of particular importance in so far that we will see it used very frequently in the pugiones of the following period, which allows us to consider this specimen as almost a connecting link between the two types.

In any case, these last two pugiones permit us to mark the end of the I century B.C. as the historic moment in which the transition of the weapons from period I to period II occurred.

[35] Eduardo K. De Prado, ibid.;
[36] M.C. Bishop & J.C.N. Coulston, ibid.
[37] Investigation made with XRF technique (x rays fluorescens);
[38] alloy made above all with copper, zinc and little quantity of tin and lead. In late times we see a gradual decreasing of the zinc and an a contemporaneous increasing of the lead.
[39] C. Giardino, "I metalli nel mondo antico", 1998
[40] F. Catalli., "La monetazione Romana republicana", IPZS, 2001;
[41] Plinio, "Historia Naturalis", XXXIV, 4
[42] Metallurgical process during which some ore of zinc (carbonate or oxide), dust of copper and coal are putted inside a close melting pot. Temperature must be over 908° but less than 1083°;
[43] C. Giardino, ibid.;
[44] Caley E.R., "Orichalcum ad related ancient alloys";
[45] Oberaden camp has been used during a short period, from 11th to 7th B.C.
[46] F. Quesada, n. cat. 5997;
[47] Eduardo K. De Prado, ibid. dated on the basis of the spot of the grave, which is datable to the III cent. B.C.;

Pic. I/4: typical specimen of Roman pugio from Period 1. It is worth noticing the characteristic handle with almost circular pommel and knob, a direct result of the Celtiberian biglobular dagger. The midrib of the blade and the rather long point are also clearly visible. The similarity with Celtiberian arms is decidedly marked, so much so as to render them often identical. (Photo by the author).

Pic. I/5: blade presenting a well-preserved tang in flat form for the attachment of the handle. The circular expansion positioned at a third of its length is quite visible. The civilisation of origin is not certain, but it is more probably Celtiberian than Roman, but this does not lessen its explanatory worth. (photo by the author).

However, before we continue our temporal investigation, this is an appropriate moment to move a few steps back in time and reflect on the motivation which urged the Romans to include the pugio in their panoply. It obviously cannot have been a random act, but was certainly dictated by specific needs.

We have just seen that the period in which the weapon was adopted is to be placed between 130 and 100 B.C. during the clashes with the Celtiberian population, and we have also seen how combative and terrible the latter were in hand-to-hand combat. Rome's reaction was that of originally attempting to avoid this type of combat but, where this was not possible, to put the legionary in the best possible conditions for survival[48]. The consequence was twofold: the creation of a new formation which was more compact than the maniples and capable of preventing the enemy from penetrating it, but at the same time sufficiently agile and autonomous to keep the enemy under pressure; and the improving of individual weaponry together with rigorous training of the legionary[49].

This new type of formation (much as it may appear to have been inspired by the ancient phalanx formation) will be the one to be adopted successfully by every legion of The Empire: the coht. This formation, probably initially conceived by Scipio Africanus on Iberian land, was already well known from the III century B.C. onwards, but was only used sporadically until the reform by Caius Marius at the end of the II century B.C.[50]; and only within this backdrop of war without any significant spread over the rest of the Roman territory. With the beginning of the I century B.C. it began to be established in the rest of the army. Marius was also one of the greatest supporters of the necessity for rigorous training of the legionaries and, among the various innovations, his reform foresaw the above-quoted improving of individual weaponry in order to increase the efficiency of the soldiers in direct combat[51]. We have also seen that this important figure trained as a soldier right on Spanish soil around 140-130 B.C. without, however, forgetting that the importance given to individual weaponry was certainly not confined to those times: still in the III century A.D., Herodian of Antioch claims that the superiority of Rome on the military field was based above-all on the quality of the individual weaponry of each soldier[52].

All this allows us to put forward the hypothesis that the pugio was established on hispanic land as a weapon of completion for the offensive armament of each individual legionary as a response to the necessity to maximise efficiency in hand-to-hand combat within the cohtal legion. Following this, its use spread in turn to other parts of territory controlled by the Republic.

In this period, however, the weapon is still far from being as widely spread as it will be in the following century. If we analyse all the specimens together that are known to us to this day (or at least those it has been possible to trace – see Chapter IX) out of 217 weapons (excluding the empty sheaths) only 24 can be traced back to Period I, which is only 11%. This data is confirmed by the study of the *stelae* (tombstones; see chapter VII of this book) from which we can see that only 1 out of 29 reports the presence of a pugio.

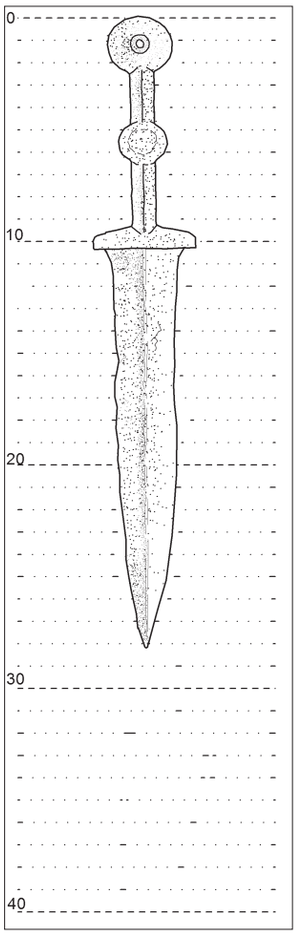
At the beginning the pugio was borrowed directly from the Celtiberian, biglobular dagger without the Romans feeling the need to make any relevant alterations, and so the two weapons are often practically identical in appearance during the Republican Period (*diagram I/1, inset A1*).

They are distinguishable in this particular case by the handle, which shows a typical pommel and a knob (*diagram I/1, inset B1*) both with a circular trend – from which the name "biglobular" or rather "bidiscoidal" derives[53]. The first pommel is always bigger than the second, which is placed in the centre of the grip, and both can include simple decorations. All direct trace has been lost of these as no specimen has reached us with its decorations intact, but on the grips which we have been able to study some decorative engraved patterns have been noticed[54] - even if this is a characteristic frequently present in weapons originating from a Celtiberian context[55]. In some less frequent cases it is possible to find small,

[48] G. Brizzi, "Il guerriero,l'oplita, il legionario", ed. Il Mulino;
[49] G. Brizzi, ibid.;
[50] R. D'Amato e G. Sumner,"Arms and Armour of the Roman imperial soldier" ed. Frontline books;
[51] G. Brizzi, ibid.;
[52] Erodiano, "Storia dell'Impero dalla morte di Marco", III,4,9;
[53] "biglobular" definition is the most commonly used although "bidiscoidal", suggested by K. De Prado, is indeed closer to the real appearance of the object;
[54] Carmelo Fernandez Ibanez, "Las dagas del ejército altoimperial en Hispania", Gladius XXVIII, 2008;
[55] citiamo gli esemplari dalla necropoli di Carratiermes, dal campo di Gormàz y Ciruelos, e l'impugnatura dal campo di Càceres el Viejo;

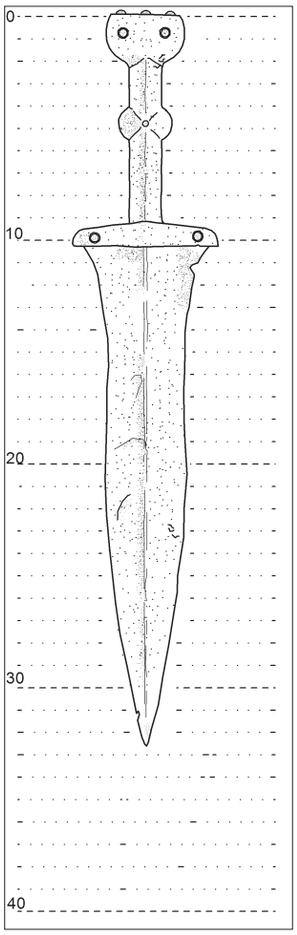
GENERAL SHAPE AND SIZE (A)

period I (or Republican)
II-I cent. B.C.



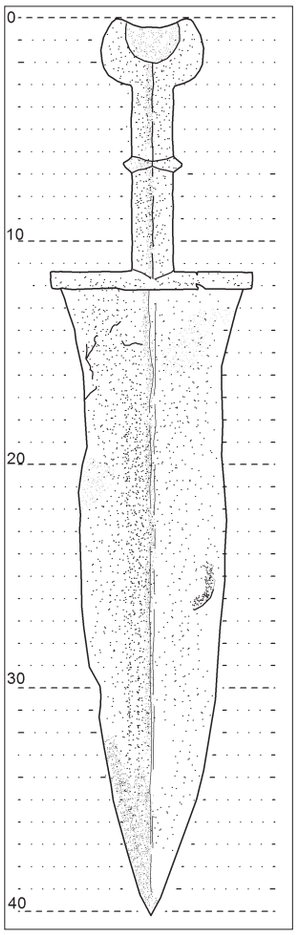
A1
- *Small size*
- *Very simple decorations*

period II (or Imperial)
end I cent. B.C.- beginning II cent. a.D.



A2
- *The size in crease slowly*
- *Elegant weapon, often very coloured*

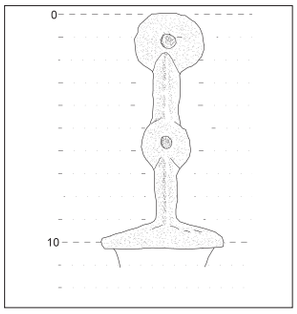
period III (or Final)
beginning II cent. - end III cent. a.D.



A3
- *Considerable size, up to 45 cm and more*
- *Plain appearance, no decorations*

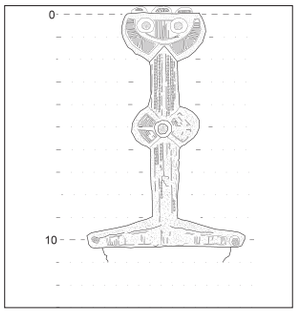
HANDLE (B)

period I



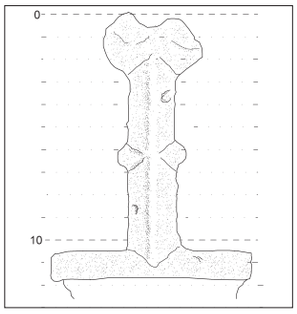
B1
- *Handle with pommel and knob in somewhat circular shape*
- *Made with composite technique*

period II



B2
- *handle with semi-circular pommel (flat upper size)*
- *made both with composite and framing technique*
- *frequent presence of rivets on the top of the pommel*
- *often prominent and rich decorations*

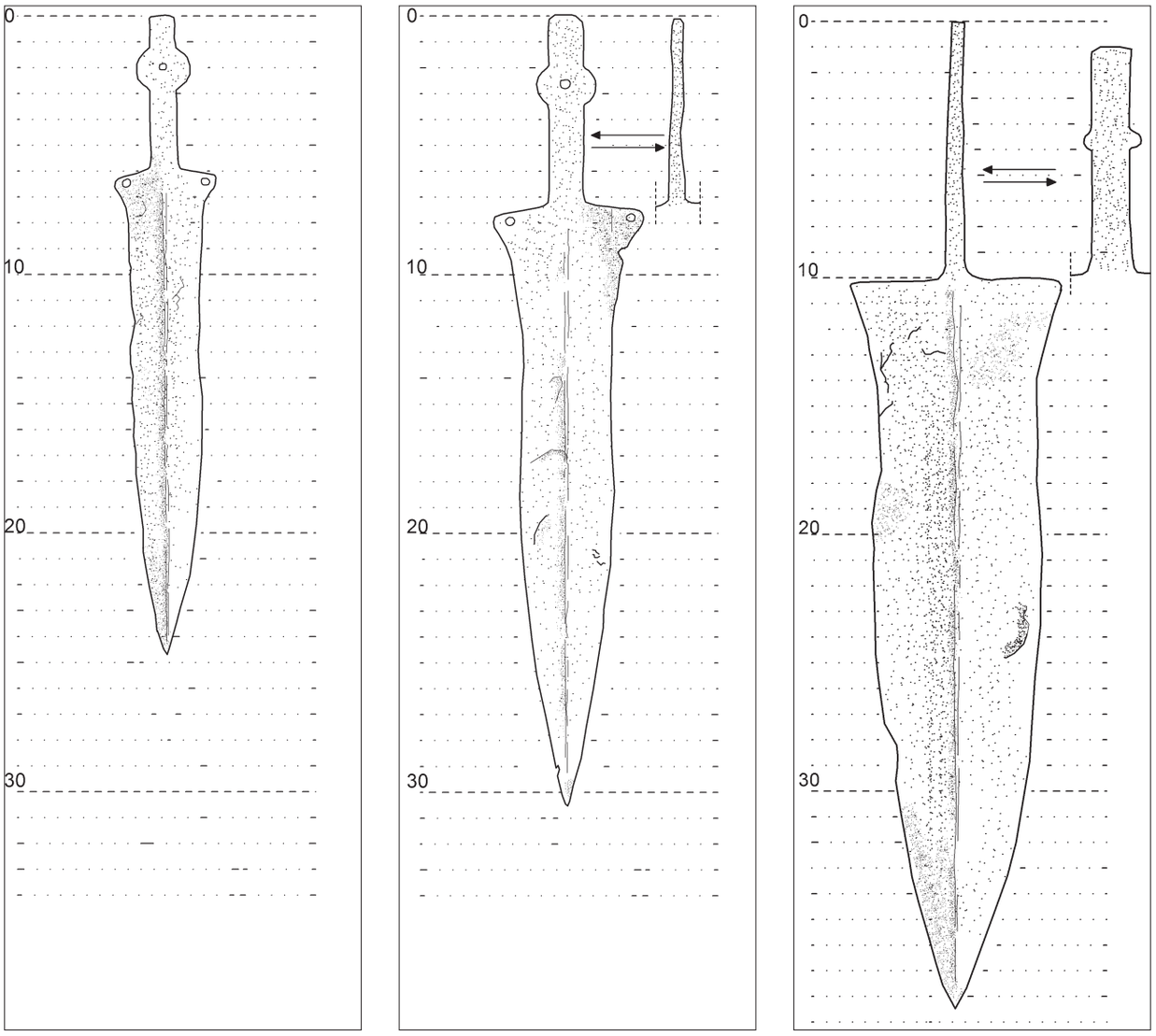
period III



B3
- *handle with bi-lobed pommel*
- *small knob, often just noticeable*
- *made both with composite and framing technique*

BLADE (C)

period I (or Republican) *II-I cent. B.C.*	period II (or Imperial) *end I cent. B.C.- beginning II cent. a.D.*	period III (or Final) *beginning II cent. - end III cent. a.D.*

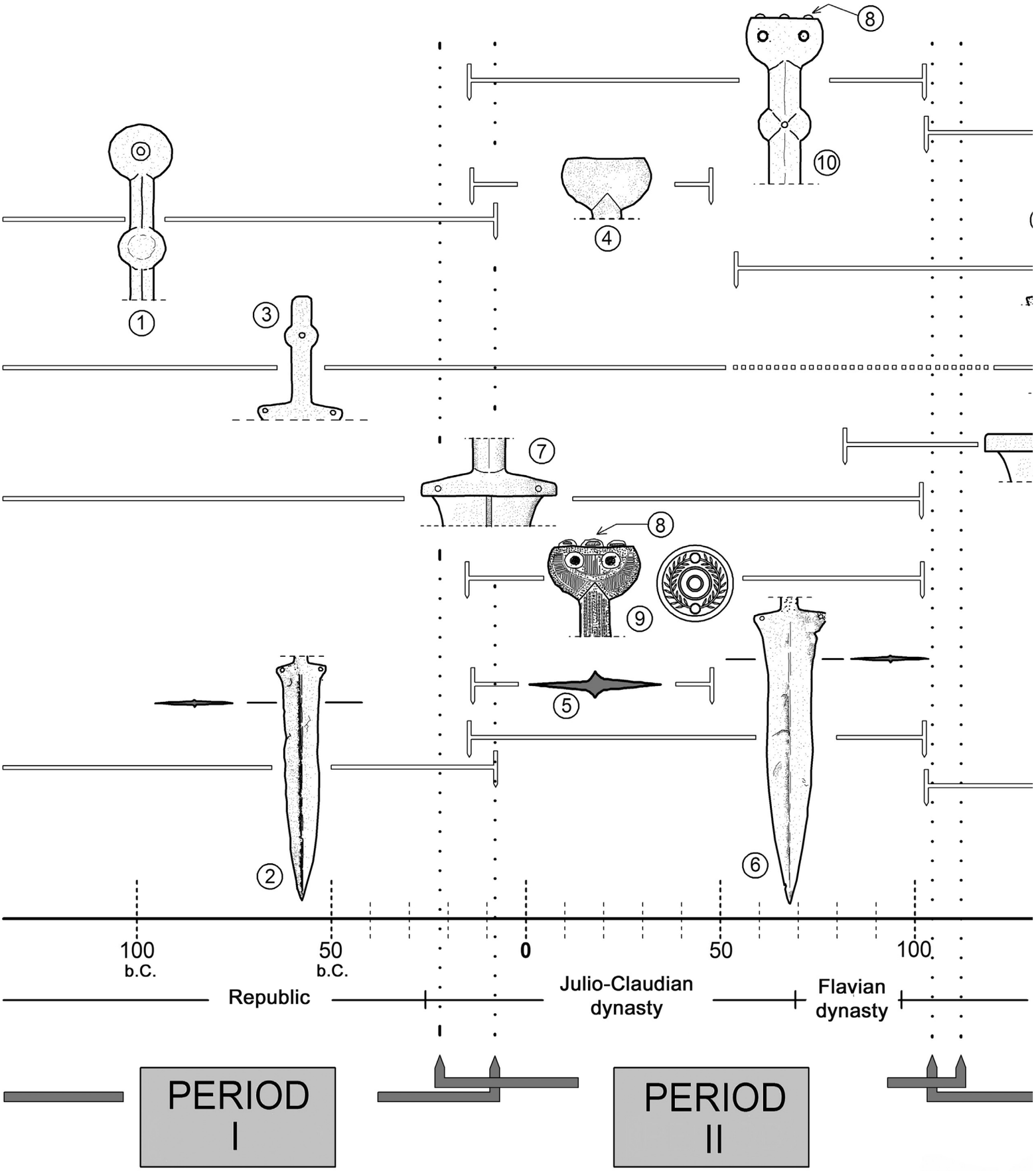


C1
- *Length: 17-22 cm*
- *width: 3-3,5 cm*
- *Ratio: 5.5 -7/1*
- *Slender general shape, almost no waisted*
- *Midrib always present*
- *Tang always flat*

C2
- *Lenght:18-25 cm*
- *width: 3,0-4,0 cm*
- *Ratio: 6,0 -6,3*
- *Midrib occasionally not present*
- *Often waisted*
- *Tang both flat and with rod shape*

C3
- *Length of the blade: 30-35 cm*
- *Very wide blade, up to 7 cm*
- *Ratio: 3,7-5,0*
- *Squat and very waisted*
- *Midrib, if present, often with side channels*
- *Tang both flat and with rod shape"*

Diagram I/1 : summary of the most important features of the pugiones during the three different periods. (drawing by the author)



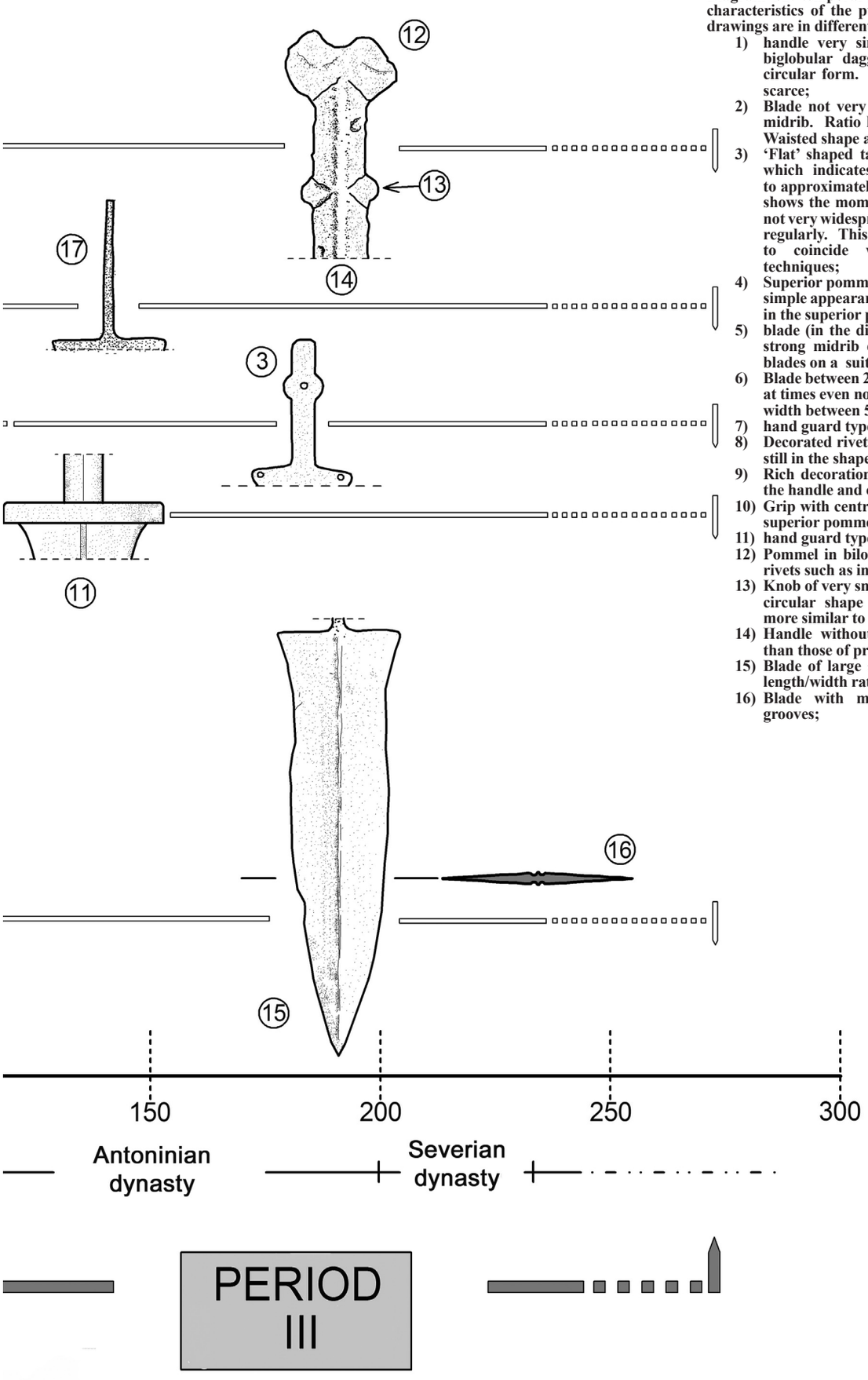


Diagram I/2: temporal placement of the most significant characteristics of the pugiones in the three periods (the drawings are in different scales)

1) **handle very similar to that of the Celtiberian biglobular dagger, with pommel and knob in circular form. Decorations often absent or very scarce;**
2) **Blade not very big, about 17-22cm in size, with midrib. Ratio length/width between 5.5 and 7.0. Waisted shape almost totally absent;**
3) **'Flat' shaped tang. The dotted part of the line which indicates its distribution (corresponding to approximately the second half of the I century) shows the moment in which this characteristic is not very widespread, after which it reappears quite regularly. This characteristic may be considered to coincide with "composite" construction techniques;**
4) **Superior pommel in the shape an inverted "D", of simple appearance, without decorations and rivets in the superior part;**
5) **blade (in the diagram seen in cross-section) with strong midrib deriving from a soldering of the blades on a suitable central rib;**
6) **Blade between 20 and 25cm long, possibly waisted, at times even noticeably so. Ratio between length/ width between 5.5 and 7.0;**
7) **hand guard type "B";**
8) **Decorated rivets placed at the top of the pommel, still in the shape of an inverted "D";**
9) **Rich decorations, damascened and in enamel on the handle and on the sheaths;**
10) **Grip with central knob, more or less circular and superior pommel in the shape of an inverted "D";**
11) **hand guard type "C";**
12) **Pommel in bilobal shape, still without decorated rivets such as in point 8);**
13) **Knob of very small size, without the characteristic circular shape of previous periods, but rather more similar to two small bulges;**
14) **Handle without any type of decoration, larger than those of previous periods;**
15) **Blade of large size and often very waisted, with length/width ratio values up to 3.7;**
16) **Blade with midrib often defined by lateral grooves;**

(drawings by the author)

Pic. I/6; on the left: pugio handle from Period II which shows the classic "D" shape of the pommel, with three rivets on the top. On the right: handle with pommel always in a "D" shape, but without the rivets. This one, originating from an imprecise locality in Germany, is very similar to the one from camp no. I in Hedemünden (Germany), dated in the last decade of I century B.C. (photo by the author).

embedded gem stones or enamels. We are, however, a far cry from the quantity of decorations which will characterise the pugiones of the following period, yet to be studied in this work.

The blades are never exceptionally large, generally being rather limited in size, (*diagram I/1, inset C1*), on average between 17 and 22 cm long and 3-4 cm wide. If we consider the ratio between these two sizes (the width being measured at the utmost point excluding where the handle is attached, which is usually hardly significant), we are left with figures between approximately 5.5 and 7.0: that is to say substantially narrow blades[56] if compared to those that appear later on.

They are unfailingly endowed with a midrib (*diagram I/1, inset C1*), another characteristic directly derived from the Celtiberian daggers[57], which are provided with this element in practically every case[58]. However characteristic it may be, this element alone is not very useful to distinguish the specimens from Period 1 from those pertaining to the periods thereafter. This is due to the fact that it is also present – even if not always – in the later periods.

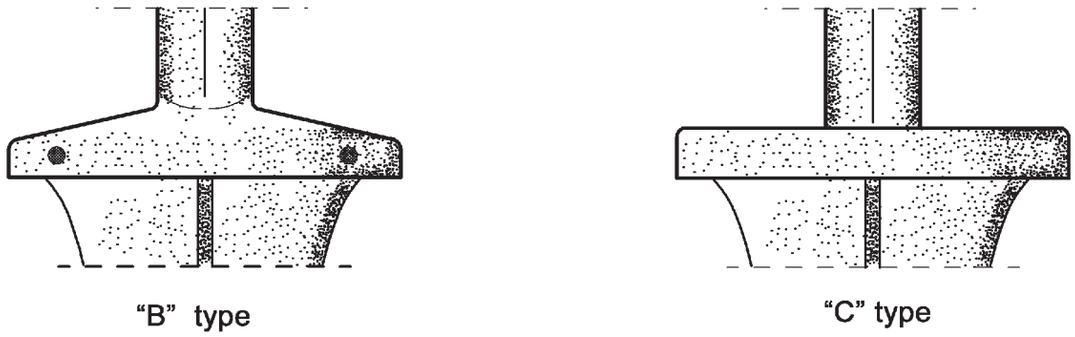
It may possibly be more useful to consider, vice-versa, that the absence of the midrib is quite a certain indication that the weapon is not from Period I. Grooves on the sides of the midrib are as yet never noted: we will have to wait approximately another century for their appearance.

Another fact that deserves attention is that the characteristic 'waisted form' of the blade, which is very accentuated in future years, is hardly ever very observed yet (*diagram I/1, inset C1*) and, indeed, there are many specimens in which it is only barely noticeable and where the sides of the blade are almost parallel. In this case the Celtiberian tradition does not appear to have been followed meticulously seeing as we can find various Celtiberian specimens with waisted blades already dating from III century B.C.[59], as for example the specimens from Osma (III century B.C.), Ucero (previous to the II century B.C.) and Quintanas de Gormaz. (111 century B.C.), even if we can obviously find just as many, and possibly even more, with the blade shape not presenting this characteristic. Finally, the point of the blade is normally quite long and slim[60].

The assembly technique used to attach the handle onto the blade was invariably the "composite technique", which I will not describe in detail now as it is dealt with in-depth in the appropriate chapter on construction techniques at a later point in this book. For the moment one should only bear in mind the fact that there is nothing which points to the use of other techniques.

• Second Period (Or Imperial Period)

Now let us return to the end of the I century B.C., a moment of transition from the first type of arms to the second, in order to continue our evolutionary study. We come to what was certainly the golden age, in which the pugiones, having lost any characteristics in common with the Celtiberian culture, have become typically Roman. They reach the point of becoming such unusual weapons that they have no equals either in previous times or in those to come[61]. This change is accompanied by a decisive increase in their distribution among soldiers (despite the geographical and grouping limitations which we will see later), as is confirmed by the statistics of archaeological



pic. I/7: two main types of hand guards: type "B" with sloping upper edge, and type "C" with both edges horizontal and parallel. (Drawings by the author).

[56] as much the value of the ratio is high as the blade looks slender;
[57] truly such feature is also present in some bronze swords from X cent., although among those is not common but rather discontinuous;
[58] Eduardo K. De Prado, ibid. Precisely, 94% of the biglobular daggers examined by the author show a midrib;
[59] Eduardo K. De Prado, ibid.
[60] M.C. Bishop & J.C.N. Coulston, ibid.
[61] Carmelo Fernandez Ibanez, ibid.;

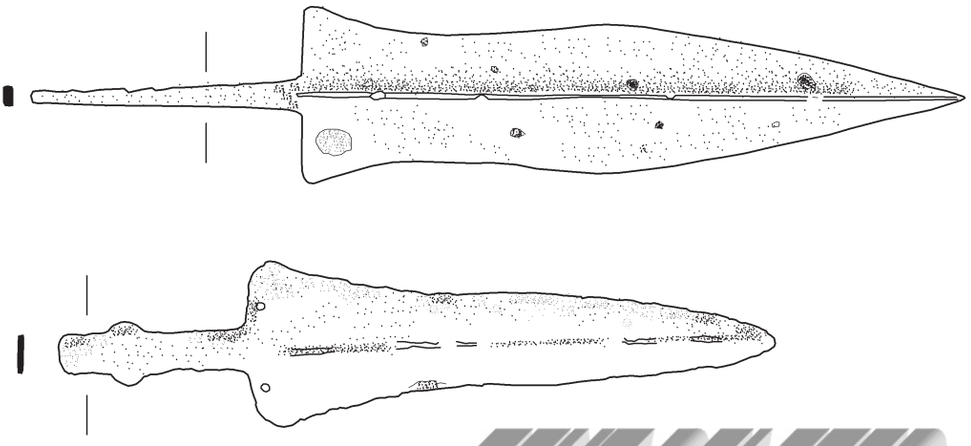


fig. I/8: on the top, pugio with "rod" type tang. On the bottom, pugio with "flat" type tang. (Drawings by the author).

finds which show a greater concentration precisely in type II specimens.

The Imperial Period coincides roughly with the I century A.D., and goes more precisely from the last decade of the I century B.C. to the last decade of the I century A.D. (drawing I/2)

One of the first known specimen comes from Titelberg[62] (Luxemburg), dated between 30 and 12 B.C.[63], and, therefore, contemporary with the last Republican specimens mentioned above, which is proof that at this moment of transition both typologies co-existed[64]. The specimen is not exceptionally long[65] and introduces us to the characteristics of Period II, which we will immediately examine.

Certainly the most characteristic element is the handle, which distinguishes it both from the previous specimens and from those which follow as it presents some very peculiar details (*diagram I/1, inset B2*). One of the most noticeable is the shape of the superior pommel which, having abandoned the traditional circular shape, is now presented is an unfailingly semi-circular or "inverted D" shape[66]. This is undeniably a peculiar characteristic belonging only to weapons of this period, but it is nevertheless necessary to point out that some other rare examples have been noted previously. I am referring to the handles, often fragmented, that have been discovered at the excavations in Numancia (Spain), particularly those carried out by J.R. Mèlida and by A. Schulten[67], which, as we have seen, could be dated between 153 and 133 B.C. Nothing, however, in comparison with what occurred during the Imperial Period, when practically no pugio existed without such a pommel.

They also presented another important typical characteristic: the presence of some rivets on the upper edge (*diagram I/1, inset C1*). Their function is often only decorative[68], not contributing in any manner to the strength of the handle and even weakening it in some ways[69]. Only in some rare specimens do they seem to have the function of fixing the upper part[70].

ISBN: 9781407309996

A lack of rivets was quite rare and seems to be limited to the first part of the period, roughly within the first decade of the I century (*diagram I/2, detail 4*). We note their presence, for example, in the pugio found in camp no. 1 in Hedemünden (Germany), which was used for a brief period (11-7 B.C. approx.) by Drusus for his campaigns in Germania against the Chatti and the Cherusici[71]. In this context numerous other finds have been discovered – coins among others - which allow us to have reliable dating.

Also in the museum of Zagreb (Croatia), where various pugiones are preserved, it is possible to find one without rivets in splendid condition, datable between I century B.C. and I A.D[72].

Another specimen from the same collection, very similar to the previous one and with the same dating, presents instead only one rivet. Further confirmation is found in an specimen preserved in the LWL Romermuseum (Haltern, Germany), which not only has no rivets but also presents various analogies with specimens from Period I, confirming its early dating. It originates from the camp of Oberaden (Germania) and, therefore, can be placed in the final decade of the I century. as this camp was used roughly from 11 to 7 B.C., when it was abandoned in favour of Haltern[73]. In any case, there are plenty of exceptions and, in fact, the above-mentioned specimen from Titelberg, even though it is the most ancient, shows all three rivets on its pommel.

We can, therefore, say that the absence of rivets is a probable indication for early dating, between the end of the I century B.C. and the beginning of the I A.D., but the opposite, that is to say their presence, does not necessarily mean that the specimen is from a later period.

[62] Carmelo Fernandez Ibanez, ibid.;
[63] L. Venden Berghe & M. Simkins, " construction and recostruction of the Titelberg dagger", JRMES 12/13, 2001;
[64] Carmelo Fernandez Ibanez, ibid.;
[65] tot. length = 314 mm, length of the handle = 108 mm., width of the blade near the guard= 61,7 mm.;
[66] Carmelo Fernandez Ibanez, ibid.;
[67] Luik 2002, Abb. 53,4;
[68] Carmelo Fernandez Ibanez, ibid.;
[69] Herbert Westphal, "Ein römischer Prunkdolch aus Haltern";
[70] See cap. V- building techniques -. An example of such purpose is a specimen in the Haltern Museum (Ge);
[71] Klaus Grote, "Römerlager Hedemünden", Hann-Münden 2005;
[72] R. D'Amato e G. Sumner," ibid.;
[73] Cassio Dione Cocceiano, "Storia Romana", LIV, 33;

pic. I/9: Blade with cutting edges soldered by "boiling" to the central rib. Notice the generous size of the latter. (Photo by author).

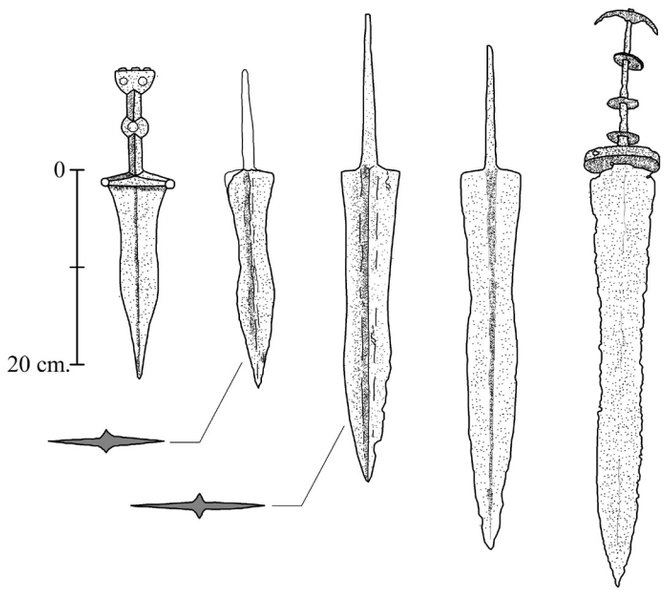


fig. I/10; comparison between two pugio blades (first two from the left) and three gladi, all dated between the last part of the I century B.C. and the first half of the I century. The pugio blades seem like reproductions on a smaller scale of those of the gladi, especially the two specimens whose cross-section is practically identical. (Drawings by author).

As far as the central pommel is concerned, we find its initially circular, classic shape substantially unaltered (*diagram I/1, inset B2*), so this is not of great use for dating purposes.

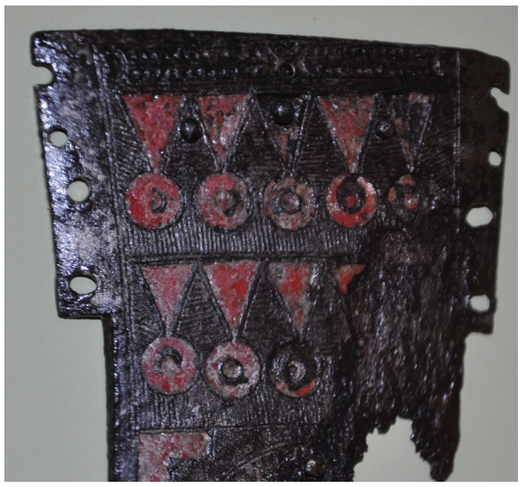
The same can be said for the hand guard, which does not move far from the shape it had in the previous century, being in almost every case a trapezoid shape, that is to say with the lower side (towards the blade) horizontal, and the upper side (towards the grip) slightly inclined. Only towards the end of the Period, or the last quarter of the I century (*diagram I/2, detail 11*) do some specimens begin to appear in the shape which will become common in Period III, tending towards a parallelepiped, with parallel upper and lower sides. Edoardo Kavanagh De Prado[74] gives us a simple definition, well worth repeating, defining type "B" as the first type, and type "C" as the second (fig. I/7), reserving type "A" as most probably the Celtiberian handle, which lies outside our present scope. In the collection in the museum of Vindonissa (Switzerland) numerous handles of the "C" type[75] are preserved dating back to the Flavian Period[76], which confirms the fact that this detail in an specimen from Period II could place it towards the end of the I century.

Both handles were fixed onto the tang of the blade by both "composite" techniques and "framing" techniques (described in detail from a technical point of view in the later chapter "5-construction techniques"), but now we will concentrate on their chronological evolution temporarily leaving the construction for later. It is useful to point out that each handle is strictly associated with a precise type of tang, which obviously followed the same evolution. A wide, flat tang, with a larger central part corresponding with the pommel, accompanies the "composite" technique, whereas the "framing" technique is accompanied by a tang in the shape of a simple rivet. The former we will call the "flat" type, and the latter the "rod" type, (fig. I/8). It is certain that the pugiones were first made using the "flat" type of tang, once again derived from Celtiberian biglobular daggers, which were unfailingly made in this manner[77].

This type was constantly used by the Romans for a long period of time until the appearance of the "rod" type around mid I century A.D., that is to say approximately between the end of the reign of Claudius and the beginning of Nero's[78] (*diagram I/2, detail 17*). The first datable specimen which shows this characteristic originated in the excavations of Usk, Great Britain (see fig. 196 appendix 2), found in the context of The Neronian Age[79]. There are two other specimens which could, nevertheless, be considerably antecedent to this one, but which, unfortunately, cannot be dated with any certainty, originating from Kingsholm (Great Britain)[80] and from Augsburg-Oberhausen (Germany)[81].

The appearance of the second type of tang virtually caused the withdrawal of the first – or rather, the suspension of its use, as we will see later on. The "rod" tang is decisively predominant in the second half of the I century, enough so to consider it a specific characteristic and a valid aid for placing the daggers in a temporal context. In any case, some rare weapons leave room to believe that the "flat" type was never completely abandoned. One of these is preserved in the museum of Wales, originating from the legionary camp of Isca (Caerleon, Great Britain) which

[74] Eduardo K. De Prado, ibid.;
[75] C. und. E. Deschler-Erb," Katalog der militaria aus Vindonissa". Precisely, in the museum's collection there are 15 handles (some fragmented), of which 7 having a type "C" guard, 3 having a type "B", and 5 remaining not having at all, because very damaged;
[76] Ulbert, 1962, n. 6. Ian R. Scott, "First Century military dagger and the manufacture and supply of the weapons for the Roman army", B.A.R. n. 275, 1985;
[77] Eduardo K. De Prado, ibid.;
[78] Ian R. Scott, ibid.;
[79] Evan M. Chapman, "A catalogue of Roman military equipment in the national museum of Wales" BAR, 2005;
[80] Ian R. Scott, ibid.;
[81] Wells, 1970;



pic. I/11: Fragment of sheath with coloured background in black and decorations in red enamel (museum of Vindonissa, Switzerland). (Photo by author).

was founded in 74-75 A.D. and allocated to the II Augusta Legion. There is, furthermore, a fragment of a tang, still of the flat type, originating from Camp Leucarum (Loughor, Great Britain), which was in use from 73/80 to 115/120.

It is obviously possible that these specimens had been constructed in previous decades and were still in use, but it is, nevertheless, true that the "flat" tang was drastically reduced in quantity in the II half of the I century without, however, ever being completely abandoned.

On the other hand, it is also true that the Romans already knew this type of technique since the late Republic, having come across it in some – rare – Iberian specimens[82], such as those preserved in the museum of Burgos (Spain).

Despite the ever-present exceptions, we can still conclude that the presence of a "rod" tang indicates a dating to the second half of the I century, whereas the presence of the "flat" type probably dates to the first half - even if the second half cannot be excluded a priori (*diagram I/2, detail 3-17*).

In the II Period the size of weapons begins to increase on average in comparison with the previous period (*diagram I/1, inset A2*). In graph 1 the blade lengths of 94 weapons are noted -wherever it was possible to obtain reliable data – belonging to all three periods, from which we can deduce the following average lengths:

	period I	period II	period III
Average total length	19, 4 cm	22, 0 cm.	31, 1 cm.

The width develops in a substantially proportional manner and, therefore, also undergoes an average increase. It is clear that it is always possible to find specimens which move away, even significantly, from the average data, but this does not diminish the fact that a certain increase in the geometrical size of the pugiones is recorded, even if it is not very noticeable.

During the Period in question there do not seem to be particular connections between the blade size and dating. However, it is worth noting that all the specimens from Vindonissa, dating to the Flavian Period, as we have already seen, have rather slim blades and are limited in size on the whole[83].

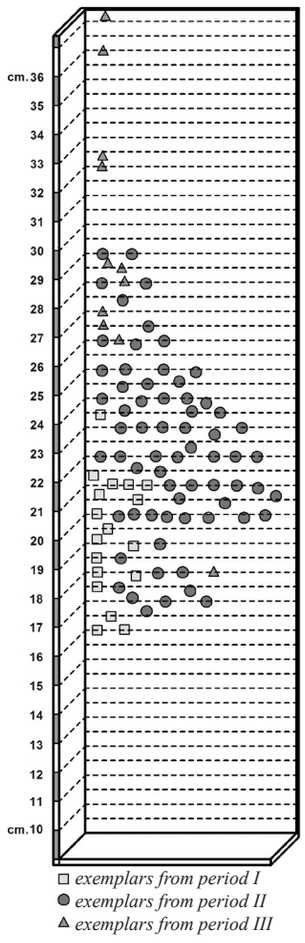
One aspect that must be kept in mind during the evolution of the blade, is the presence or lack of holes for fixing the handle, which are always placed in the upper part (*diagram I/1, inset C2*). Their presence is connected to the requirements of "composite" construction techniques, which necessitate a blade with holes for the rivets to pass through. Most often there are only two holes, but sometimes there are four (specimen from Dangstetten (Germany), dating between 15 and 10 B.C.[84] On the other hand, in the case of handles made by "framing" technique, this is no longer necessary and, therefore, the blades have practically no holes. Consequently the chronological reference is the same: blades with holes near the upper part may belong to the first part of the period, until the end of the reign of Claudius, whereas those which have no holes belong to the second part of the I century. Obviously, there are exceptions to this rule, among which is an specimen from Rißtissen[85], dating back to not before the end of the reign of Claudius, and possibly later (55-60 A.D.), which, despite its rod tang, has two holes at the top of the blade, confirming the fact that certain rules can always be broken.

Also the mid-rib can give us useful indications – all being not decisive - for the dating of a blade. In some from Haltern[86], from the Augustan Period, one notices a characteristic which, above-all in the first part of this period, (*diagram I/2, detail 5*) seems to be just as present in the gladius as in some pugiones; this characteristic is the presence of a strong central rib, onto which the cutting edges were applied by means of a soldering technique called "boiling"[87]. This technique involved a sufficiently wide and strong central rib, which gave it its very unusual appearance (fig. I/9) - quite different from those normally found in specimens not made using this technique - and also a greater weight. To this regard, we must consider that blades of this type can weigh up to and around 100 g, whereas those of a similar size from the Flavian Period (with grooves) weighed about 60-80 g.

Whether the midrib is soldered by "boiling" or by normal forging techniques, its presence, especially if very noticeable, indicates quite an early dating, up until the end of Tiberius' reign[88] (therefore until the third/fourth decade of the I century) and it is never accompanied by parallel grooves on both sides, which are, instead, not at all rare in the second part of that period. The grooves appear for the first time on the pugio from Auerberg, which also presents a flat tang and could be dated between the end of Tiberius' reign and the beginning of Claudius' (35-45 A.D.)[89]. It is interesting to note that in the collection of the museum of Vindonissa practically all the specimens are equipped with this peculiarity, which can once and for all be considered a characteristic of the second part of the Imperial Period, often together with a barely-noticeable midrib. To conclude, there is a net difference between the size of the solid central rib of the specimens from the Augustan Period, with soldered cutting edges, and the almost inexistent rib of the pugiones of the Flavian Period.

We cannot help but recall that never more than in this

[82] Ludwig V. Berghe, " some Roman military equipment of the first three centuries AD in Belgian museums", J.R.M.E.S. 7,1996;
[83] C. und. E. Deschler-Erb, op. cit;
[84] Ian R. Scott, op. cit;
[85] Ulbert, 1970, n. 259
[86] (WmfA Münster, inv. N. 56,67,68,85,267);
[87] for the description of this technique, see chapter V "building techniques";
[88] Ivan Radman-Livaja, "Militaria Siscensia", Musei archeologici Zagrabiensis Catalogi et monographiae;
[89] Ian R. Scott, op. cit;

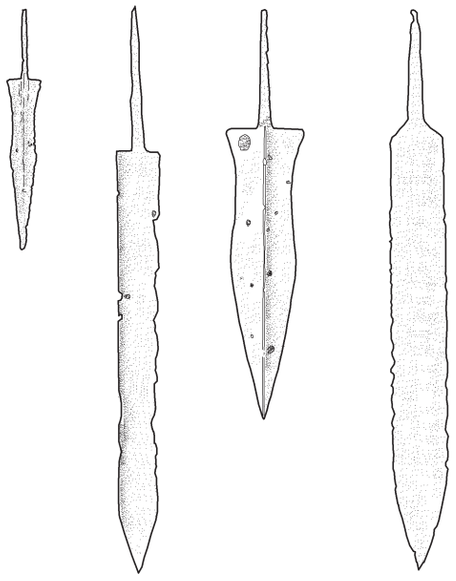


Graph.1: (scale in centimetres) shows the lengths of blades with sufficiently reliable data regarding sizes. When in presence of incomplete blades, the supposed original length is shown where hypothesis is sufficiently reliable. (Drawing by author).

area are exceptions possible, hence we find an specimen from Nijmegen, found together with earthenware from the Flavian Period (69-96 A.D.), which presents both a flat tang and a midrib without lateral grooves[90]. It is possible, however that it had been produced in previous decades and, in fact, also the author of the publication on this weapon manifests a doubt that it could be previously dated to the Claudian or Neronian Period (45-65 A.D. approx.)[91].

We said that the blade moderately increases in size in comparison with the Republican Period, and at first it sometimes assumes the marked waisted outline indicatively in the Augustan Period. It is to be noted that this characteristic is peculiar to the pugiones in all ages, but now it appears particularly prominent. This outline is not very surprising considering that in that period it was very common even in gladi (so-called "hispaniensis"), and very rooted in Roman usage. It will be abandoned for good only towards mid I century with the arrival of the so-called "*pompei*" gladius.

At this point a slight digression is called for in order to consider on a peculiarity which emerges from the comparison between the pugiones and the gladi, which generically lasts for all the period, but in particular for the first half of the I century. The morphology of the blades is often very similar, so much so that the former blades seem like a reproduction on a smaller scale of the latter. Fig. I/10 shows five blades, the first two from the left are from pugiones, and the rest are gladi. They are all from the above-mentioned period, and a comparison between them shows this concept clearly. The cross-section of two specimens is also highlighted, as not only are both morphologically very similar, but they are almost identical, having been both created using the "boiling" soldering technique. No example shows better how one is a smaller copy of the other.



pic. I/12: this drawing shows us at a glance the size of third-type pugiones. From the left:
- **pugio from Period II (Vindonissa, Flavian Age, length 276mm, average width 25mm) blade size ratio=7.8/1**
- **gladius from Newstead, mid I century A.D., (length 663mm., max width 49mm), blade size ratio=9.7/1;**
- **pugio from Period III (private collection, length 640mm., width 60mm) blade size ratio=8.3/1; this weapon has a distinctly anomalous width.**

It is worth noticing how the two weapons from the I century (on the left) are distinctly narrower than those of the II century (on the right) (drawings by the author).

Returning to the waisted "willow leaf" profile from the Augustan Period, it is undeniable that it can cause some confusion seeing that this characteristic decisively reappears – as we will see – in the following Period III, but with the ratio blade length/width very different.

In late Republican blades, this ratio is around 6/1, whereas in Period III it is approximately 3.5-3.7/1, that is to say that the latter, even though they have the same very sinusoidal line, they are definitely stubbier, the width visibly predominates the length.

Some examples of such weapons are the already-cited specimens from Hedemunden and Haltern, but obviously in the same period specimens existed with blades without this characteristic being so marked. The Flavian Period seems, instead, to be the exact opposite with an almost total absence of "willow leaf" edges and rather narrow blades, which we could consider a typical element of the Period[92].

Also the shoulders of the blades[93] had a quite defined evolution. During the first part of the Imperial Period they are almost always oblique, as they were during the Republican Period, but as decades passed, ostensibly in conjunction with the arrival of the "rod" tang, towards mid I century, the use of straight backs begins to be established, which remains unchanged also in the following and final Period III[94]. (diagram I/2, detail 17).

[90] Ian R. Scott, op. cit
[91] Brailsford, 1962;
[92] Ian R. Scott, op. cit
[93] Upper portion of the blade, near the tang;
[94] Carmelo Fernandez Ibanez, ibid.;

fig. I/13: pugio of type III. The generous size of the weapon is evident, decidedly closer to a short gladius than to a pugio from Period I, despite the blade being noticeably waisted. (photo by the author).

One final important aspect to be taken into consideration is the decorations (*diagram I/1, inset B2*). Almost entirely absent in the Republican Period, they become very rich and elegant (*diagram I/2, detail 9*), often of an excellent artistic level, to the extent that they form a fundamental characteristic of this century. They are given much more importance on the sheaths than on the handles[95], and for the moment we will concentrate only on the latter, leaving a deeper study of the sheaths to the appropriate chapter.

In the Period II we can find simple handles without any decoration at all in proximity to handles which are very rich in decoration. Both the surface of the handle and the heads of the various rivets could be found decorated. Normally the former was decorated using the 'damascening' technique, whereas the latter were coloured with enamel[96], frequently of a red colour. In some specimens this seems to be substituted by *pietre dure,* in particular the use of amber[97]. Damascening, instead, was very often in silver, but the presence of orichalcum is also possible[98]. It is interesting to notice that, as with the sheaths, very often only one of the two faces of the handle was decorated, whereas the other was not at all or much less so, obviously for economic reasons. This determines the presence of a main face, visibly exposed, and a second one, which was turned towards the body of the wearer and, therefore, not visible.

The fact that damascening was often in silver on a base material such as iron leads us to deduce that it is quite improbable that the iron was left in its natural colour. The two materials have such a similar chromatism that the expensive decorations in silver are almost invisible and useless, and hence it is reasonable to suppose that the iron on the base was coloured either black or blue[99]. This is not surprising as the coating of metallic surfaces was well known since very ancient times, and it was frequently used also by the Romans[100]. In this context the hypothesis holds – and is even re-enforced - that also the material inside the grip in bone or horn, and quite visible on the sides, was coloured green by using copper oxide[101]. We can imagine that these weapons were rich in colour – the red of the rivet heads, the brilliant ageminature on a black or blue background, the sides green – of a very bright appearance, far from what our imagination might conjure up and also far from the more sober specimens from the previous period. Archaeological evidence confirming this bold colouring is rather rare. Unfortunately, no handle has reached us today with all its colourings still visible. Only the rivets sometimes show some evident traces. In any case, numerous sheaths still preserve some of their coloured parts, and these help us to imagine what the original appearance must have been like (*fig. I/11*).

The decorations on the handle can be useful for dating the weapon even if they do not guarantee absolute certainty. It is certain that the polychrome handles in damascening and enamel can be dated up to the Neronian Period, after which monochrome handles in damascening enter in use, such as those visible in the museum of Vindonissa[102]. An specimen found in 1967 during a drainage operation of the Danube dates back to the Tiberius/Claudius Period and is perhaps the most representative of the passage from polychrome to monochrome[103].

A total lack of decoration, instead, leads one to think of the first part of the Period, from the end of the Republic to the beginning of Tiberius' reign. This is inferable only statistically by analysing the datable specimens where we, in fact, notice that almost all the handles of sober appearance can be placed in this lapse of time. Among the various ones found we mention the specimens from Titelberg (30-12 B.C, already mentioned), from Lorenzenberg (10 B.C. – 30 A.D.)[104], from Sisak (20 B.C.-20 A.D.)[105], from Limburg[106] (beg. I century), from the camp of Hedemunden (11-7 B.C.)[107], from Haltern (11-7 B.C.) and others. Nevertheless, next to them we find some rich in decoration, among which some stand out, such as those made by damascening in fine silver strips, with both linear and entwined patterns which from a kind of simple braid (see figure VI/13 Chapter "Sheaths").

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[95] see chapter VI "sheaths";
[96] On regards techniques to make decorations, see chapter VI "sheaths;
[97] We thank dr. Tanzilli for all the informations about a pugio having decorations made from that material;
[98] Herbert Westphal, op. cit
[99] Herbert Westphal, ibid.;
[100] C. Giardino, ibid.;
[101] Herbert Westphal, ibid.;
[102] Edit B. Thomas, "Helme, schiude, dolche", Akademiai Kiado, Budapest;
[103] Edit B. Thomas, ibid.;
[104] Ian R. Scott, ibid.;
[105] Ivan Radman-Livaja, ibid.;
[106] Ludwig V. Berghe, ibid.;
[107] Klaus Grote, ibid.;

This suggests that, even if it is true that a handle completely void of decoration makes us think of the Augustan/Tiberian Period, it is not to be taken for granted that a decorated handle belongs to the period following it.

• Third Period (or Final Period)

The transition to the final period occurs quite suddenly at the beginning of the II century; our knowledge at present does not allow us to be more precise. One of the first pieces of evidence for this change comes in the form of an specimen found in the auxiliary camp of the I Coh Augusta luterearorum (Buciumi, Romania) dating to 106-115 A.D.[108], which already presents characteristics typical of this period. A slightly later specimen is also quite interesting, not so much for its features - as there is very little of the handle - but more due to the fact that its dating is quite certain as it was found together with some Antoninus Pius coins dating to 140-144[109].

Now let us see how the weapon immediately changed and which characteristics marked this period.

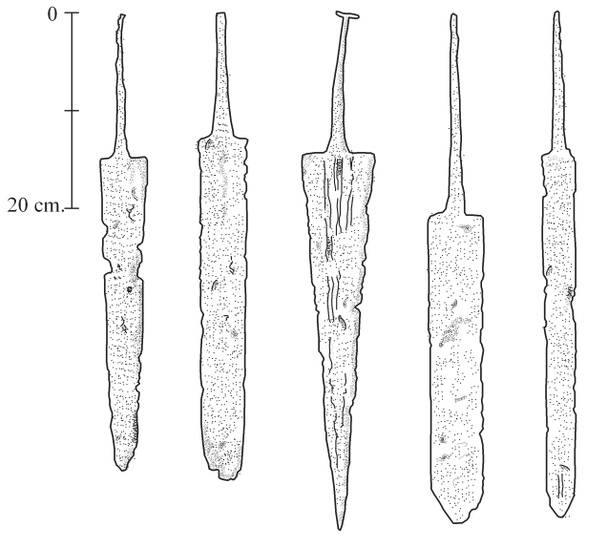
That which hits the eye at first glance is the general size of the weapon (*diagram I/1, inset C3*). If a certain increase is noted between Periods I and II, now, instead, things change noticeably. The pugiones become decidedly longer than in the past, with specimens reaching 45cm and more.

The width increases similarly, arriving up to 8cm, which is wider than the gladi. A gladius of the "pompei"[110] type was around 3.5-4.5 cm wide, whereas later, wider specimens reach a maximum width of 5.5-6cm. In the pugiones the length/width ratio can be up to 3.7/1. Ultimately blades took on a decisively bulky look with their width visibly overriding length.

We are now far from the short specimens seen in the Republican Period, to the extent as to render the definition of dagger inappropriate. There is the possibility that the Latin term "semispatha", in use from the II century onwards, could be referring exactly to these longer versions.

The increase in size and particularly in width is not surprising as we know that the gladi become wider[111] under Antoninus Pius, and the pugiones, being closely connected to these, cannot but follow their evolution.

Fig. I/12 gives us an immediate idea of the proportions that the type III pugiones can assume in comparison with other Roman weapons. It is interesting to think that the gladius on the left (from Newstead) is of average size, whereas the one on the right (private collection) is distinctly over average regarding weight and width. It is also interesting to compare the pugio from Period II (first on the left, from Vindonissa) to the that of Period III (third from the left, private collection) Even if they are potentially separated by few decades[112], the difference in size is impressive. This characteristic is carried on to another one which is just as typical, that is to say the increasing waisted profile of the blade (*diagram I/1, inset C3*). We have seen that blades were waisted to a certain degree – if not always – even in the specimens from the previous period, less in the Republican Period, and now distinctly and unfailingly to a greater degree. It is very rare to find side arms of this sort: which leads us to consider this detail wholly Roman. Strangely enough there do not seem to be any predecessors to this type nor do there appear to be any like them made by other future civilisations. The only exception that is worth mentioning is a marble relief preserved in the museo Nacional de Arte Romano (Mérida, Spain), depicting a victorious horseman over a barbarian who has fallen to the ground, grasping a blade whose size and proportions are very close to those of the pugio from Period III.



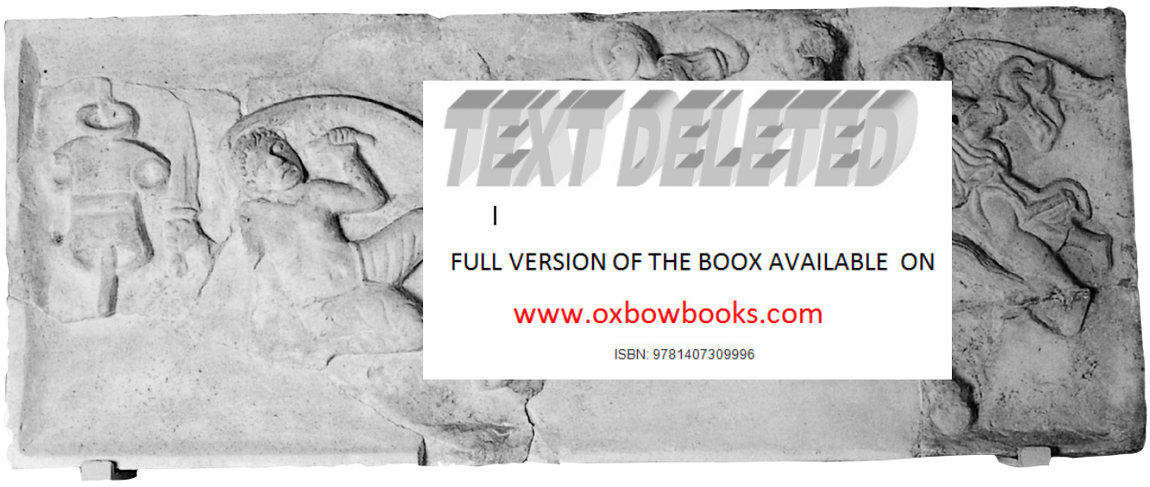
pic. I/14: blades coming from the finds at Kunzing (Germany), which could be those which Vegezio is referring to with the term "semispathae". This type of weapon could have replaced the pugiones towards the end of the III century. (Drawings by the author).

The horseman is probably Constantine II[113] (reign from 337 to 340), and the work of art could commemorate his victory over the Germanians or over the Sarmatians, even if in all truth other sources believe that Maximianus[114] (reign from 286 to 305) is depicted. Whoever it is, the period is, however, very late, so we are certainly not looking at a weapon the Romans aspired towards, but on the contrary, it is a weapon which traces the very particular geometry of a type III pugio.

Similar to the previous specimens, the blade may or may not have a midrib, but in addition we might find two grooves on each side[115] (diagram I/2, detail 16), which were rarer previously and should not be confused with the simple lines present in some blades from the end of the I century[116].

The final characteristic of the blade that is worth considering is with regards to the shoulders, which are now unfailingly flat (diagram I/1, inset C3), the oblique types having gone from the scene[117]. We have seen these already present in the final part of Period II, so they are not an absolute novelty, but the essential fact is that they now become a constant.

[108] Carmelo Fernandez Ibanez, ibid.;
[109] Carmelo Fernandez Ibanez, ibid.;
[110] galdius type risen on the half of the I cent. A.C., with parallel edges of the blade;
[111] Arriano,"*ars Tactica*", IV; Yan Le Boehc, "*L'esercito Romano*", ed. Carocci;
[112] specimen of III type is de-contextualized, thus is not possible to date it surely, although is almost sure it is from the middle and the end of the II century;
[113] Javier Arce, ibid.
[114] Arce Martínez, "un relieve triunfal de Maximiano Hercúleo en augusta emerita y el pistras";
[115] Carmelo Fernandez Ibanez, ibid.;
[116] Carmelo Fernandez Ibanez, ibid. See also specimens in the Vindonissa museum;
[117] R. D'Amato e G. Sumner,"Arms and Armour of the Roman imperial soldier" ed. Frontline books;



Pic. I/15: marble relief preserved in the Museo National de Arte Romano (Merida, Spain) showing Constantine II victorious on top of a barbarian. Notice that the weapon in the grip of the latter is very similar to a pugio from Period III.

In this period the flat type of tang comes back in use[118] – which we saw falling into disuse in the second half of the previous period – often together with the 'rod' type (*diagram I/2, detail 3-17*). Whereas until mid I century the flat type was dominant, with a virtual absence of the 'rod' one, and then during the second half of the century the situation was the contrary; now, instead, both types are equally in use.

There are significant innovations even in the handle. The guard is no longer of the "B" type, oblique, but rather always of the "C" type. Furthermore, in order to accommodate the width of the blade, it is also significantly larger, possibly up to 10cm against an average of 5 in previous periods.

Also the pommel on the handle is worthy of attention, which, having abandoned the afore-seen "inverted D" shape, is now typically bilobed (*diagram I/1, inset B3*), that is to say with the upper part convex. The enamelled rivets which were so frequently present in the past are also no longer to be found (*diagram I/2, detail 12*). There is no mention of other weapons the Romans could have been inspired by in order to create such an unusual shape apart from a vague similarity with the Iberian so-called "de-antenas" weapons[119] (with the pommel of the handle in the shape of antennas), whose pommel on the handle had two bulges which made it take on a vaguely similar shape. In any case, it is to be considered a definite characteristic of the pugiones of Period III.

Also the knob noticeably undergoes a distinct evolution, leaving behind its circular shape which characterised it for centuries, becoming significantly smaller and taking on the shape of two small rivets on the sides (*diagram I/1, inset B3*).

We may conclude our description of the changes incurred during this final Period by examining the decoration. Having been very flashy up until recently, we might expect to find it still present. Instead, it is noticeably absent. It disappears almost unexpectedly, leaving the weapon and its sheath with a simple, sober appearance, in some ways just as austere as those during the Republican Period. There is no archaeological evidence that the decorations were more than very elementary, whether they were a simple incision or decorative rivets. In the same way, no space was given for the colour play of Period II. We can find some exceptions in some sheaths which have simple linear punching[120]. This is not without a precise reason, which we will explain in detail in the chapter on sheaths, considering that decoration was far more important on the sheaths than the weapons themselves.

It is necessary at this point to quote an extract from the classics which seems to present us with an exception. Herodian in "History of the Empire after Marcus Aurelius" (II, 12, 10), which is about the history of Rome from 180 to 238, describes a scene in which the Pretorians are deprived by other soldiers of what are described as "ceremonial daggers"[121]. Modern literature often tends to identify these weapons as the pugio. However, in my opinion, this is not at all certain considering that in Greek there was no specific term for the pugio. I believe it is possible that these are another type of dagger with very little in common with the pugio, which would explain the anomalous abundance of decoration.

All the above-mentioned characteristics do not vary significantly for the whole of Period III, during which the weapon tends to remain substantially unchanged until it leaves the Roman panoply.

Unfortunately, there are not many specimens that have survived from this period, and a good part of those which have appear to be out of context and, therefore, difficult to date. Nevertheless, we can follow the traces of the pugio without any hitches during the second century. One specimen, which is particularly well known (no. 209 appendix 2), comes from Tuchyna (Slovakia, Northern part of the Danube), which probably derives from the Marcomannic Wars[122] and is, therefore, dated approximately between 168 and 188. We also have access to interesting information from an specimen (no. 40 appendix 2) found together with a 'spatha' of the so-called

[118] M.C. Bishop & J.C.N. Coulston, ibid.;
[119] F. Quesada Sanz, "El armamento ibérico. Estudio tipológico, geográfico, funcional, social y simbólico de las armas en la Cultura Ibérica (siglos VI-I A.C.)"
[120] I.P. Sthepenshon, "Roman Infantry Equipment, The later Empire", ed. Tempus;
[121] " *as soon as such orders had been given, soldiers from Illyricum jumped forwards and tore away from Pretorians their short ceremonial daggers, inlaid with gold and silver. Then deprived them of their belts , of the uniforms and of the standards and threw them naked*";
[122] M.C. Bishop & J.C.N. Coulston, ibid.;

Pic. I/16: comparison between the pugio for each of the three periods (on the left: Republican Period, in the centre Imperial Period, on the right Final Period). Besides the evident variation of their sizes, each one clearly shows all the characteristics mentioned in the text, making it possible at a glance to see the evolution of the weapon. (photo by the author)

'ring-pommel' type[123], which allows us to have a temporal reference.

Based on the morphological characteristics of the blade and handle, and analogies with another specimen from Krupice (Poland) it can, in fact, be placed at roughly the second half of the II century[124]. Slightly later, an specimen (no.59 appendix 2) found together with a spatha, a sword butt and two pelta-shaped decorations (perhaps from the sheath) all dating to the end of the II century or the beginning of the third.

It is much more complicated to identify the moment when the use of the pugio ended.

The last temporal reference we know of for certain is an important finding of an entire deposit of 51 blades and 29 sheaths in Kunzing (Germany) dating to approximately 250 thanks to some coins found with them, the latest of which coming from Emperor Gordian (238-244). These are often linked to the fall of the Limes in 259-260, even if some experts believe that is could be the storage of obsolete weapons[125]. What is important is that there are no finds of pugiones beyond this date even if it is possible that a modest use was made of them up until well into the III century.

The reason for their disappearance could be connected to tactical changes under Alexander Severus (reign from 222 to 235) among which a return to the phalanx grouping, in which an important number of legions fought in close order[126]; and an important use of armoured auxiliary cavalry (clibanarii)[127]. It is evident that in formations of this type the short weapon was of little use, as a complimentary weapon to the gladius, and this most likely caused its gradual abandonment.

However, the finds at Kunzing on the one hand attest the existence of pugiones still halfway through the III century, but at the same time they confirm that their end was now on its way. In fact, together with them there were also 14 daggers with blades between 231 and 389mm, of varied shapes, some with parallel edges and other triangular. In any case, there is no certainty. They could be the weapons which Vegetius notes for the first time "…… *those who fought in front of the banners and also those in the first row were called 'principes' (first level), that is to say the ordinary ones, and the others were the officials. They made up the heavy forces as they wore helmets, armour, greaves, shields, bigger swords called spathae and other smaller ones called semispathae, five lead javelins attached to the shields to be flung at the first assault ... (omissis)"*[128], and then *"after all the rows the triarii were placed with their shields, armour and helmets, greaves, swords and semi-swords, with lead javelins and two launching weapons …"*[129] This work, written towards the end of the IV century, shows us that there were short edge weapons (semi-swords) which must have been very similar to the longer spatha, considering that their name was derived from this, and that they must probably have been in use for a long period of time as they were distributed as a normal part of the Roman panoply.

All this leads us to assert that the final moment of the pugiones is to be placed roughly between mid III century, possibly partly substituted by the semispathae, just as the gladi had already been substituted by the spathae.

Let us conclude our investigation with a thought: just as the birth of the pugio is a consequence of the necessity to satisfy precise tactical requirements, in the same way its end is connected to the suspension of these requirements; this being a clear, ulterior confirmation of the pragmatism of the Roman army.

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[123] such spatha, also known as "ringknaufschwerter", appeared on the half of the II century a.C;
[124] Marcin Birboski, "Typologie und chronologie der ringknaufschwerter";
[125] T. Fisher, "'Zwei neue Metallsammelfunde aus Künzing/Quintana" in Spurensuche;
[126] Annamaria Liberati e Francesco Silverio, "*Organizzazione militare, esercito*", vol. 5 del Museo della Civiltà Romana,1988;
[127] Yann Le Bohec, "L'esercito Romano", ed. Carocci;
[128] Epitoma Rei Militaris, II, XV: "Sed ante signa et circa signa nec non etiam in prima acie dimicantes princeps uocabantur , hoc est ordinarii ceterique principales. Haec erat graius armatura, quia habebant cassides catafractas ocreas scuta gladios maiores , quos spathas uocant et alios minores , quos semispathia nominant, plumbatas quinas peritas in scutisquas primo impetu iaciunt…"
[129] Epitoma Rei Militaris, II, XVI: "Post omnes autem acies trarii cum scutis , catafractis et galeis ocreati cum gladiis semispathiis plumbatis binis missilibus locabantur …."

CHAPTER II
GEOGRAPHICAL DISTRIBUTION

As the pugio was a military weapon, we would expect to find its distribution in all the areas of the Empire, wherever the Roman soldier was present, on a level with the gladius or the helmet (even in their variants), but reality, instead, is different. Its distribution is not homogeneous, and, contrary to expectations, archaeological evidence suggests that there was a considerable concentration in some areas and a virtual absence in others.

Let us analyse the sources which bring us to this deduction in order.

Archaeological Finds

While confronting archaeological finds the expert must be more cautious than ever, because "*ignorance of the circumstances in which they were lost in those places can lead to a false vision of reality*"[1]. Nevertheless, it cannot be denied that they are the primary source for in-depth investigation on the subject of this chapter. Among the many daggers that have been analysed, we will only take into consideration those where the locality of the finding has been adequately identified. We will leave out all those which are out of context; those which consist of fragments which are too small; and those which raise excessive doubts as to their genuine association with the Roman army. From this rigid selection it has been possible to study and localise about 170. The numeric results have been synthesised on table 1, on which both the number of exemplars found for each province and their percentage of the total finds has been reported. Furthermore, in fig. II/1 and its three enlargements we can have a quick and intuitive glance at the localisation of the various finds within the territory of the Empire, with an emphasis on the areas where we note an elevated number of finds (maximum concentration); an inferior number; a considerable number (average concentration); and finally the isolated exemplars. From the enlargements we can, then, obtain some detailed information on the localisation of single exemplars and which historical period they belong to.

The list of exemplars this data is based upon can be consulted in Chapter IX.

A very uneven distribution can be noticed, with a net concentration of exemplars on the limes of the Rhine and High Danube, against a total absence in many other areas.

If we consider the entirety of the provinces which gravitate around these areas (Germania superior, Germania inferior, Raetia, Noricum, north-west Pannonia) over half the finds are to be found in this zone. The only other two provinces with a significant number of finds are Hispania and Britain. One must bear in mind that those found in the latter state are almost all concentrated in the southern part of the country, whereas those in Hispania are mainly on Celtiberian territory and predominantly from Period I.

Unfortunately, in many other provinces either no trace of any exemplars has been found or too meagre a number to be representative. The list of these provinces is the following: all the provinces of Africa (including Egypt), Italy, all the Middle East provinces (Palestine, Syria, Cappadoccia, Galitia, Asia, Pontus, etc.), all the Hellenic provinces (Achaia, Macedonia, Thracia), and Moesia, Dacia and Pannonia.

The patchy nature of this distribution is too obvious to be purely due to chance: it can only be the consequence of a parallel, original distribution, concentrated in some areas only.

One might also hypothesise that the lack of finds in these provinces is simply caused by an unsuitable environment for the conservation of metallic finds or by the scarcity of scientific research.

In actual fact, there is evidence of widespread and productive investigations in all of these regions, including those carried out in Morocco (Mauretania), which have brought to light a noteworthy quantity of finds including numerous parts of gladius, helmets and spathae etc., but no trace of pugiones[2]. Those carried out in Arycanda (Lycia) have only brought a large quantity of offensive weapons to light[3]. Even among the 600 finds of Dura Europos (Syria) there is only a small and particularly deteriorated fragment of 125mm, which could possibly have originated from a pugio from Period III[4]; but this is too little to testify a significant presence of pugiones in that area. Regarding this last place, it is worth noting that the finds most probably date towards the middle of the III century A.D.[5], that is to say towards the end of the period that pugiones existed.

TABLE 1

Distribution of the finds within the provinces of the Roman Empire

a) numerical distribution (on all specimens **whose finding spot is known)**

	Hispania	Gaul	Britain	Germany	Italy	Raetia	Noricum
specimen	24	10	20	71	1(?)	26	4

	Pannonia	Moesia	Dalmatia	Greece	Asia	Africa	Dacia
specimen	1	1	9	0	0	0	2

N.B.: As regards the single exemplar found in Italy, more precisely in Hercolaneum, there are doubts as to whether it can be classified as a pugio due to its anomalous features.

1 M.C. Bishop & J.C.N. Coulston, "Roman Military Equipment – from the punic war to the fall of Rome";
2 Christiane Boube-Piccot, "Les Bronze antique du Maroc", ed. ERC;
3 Alptekin Oransay, "Roman military equipment at Arycanda", J.R.M.E.S. n. 12713, ed. Armatura Press;
4 Simon James, "The excavations at Dura-Europos conducted by yale University and the French Academy of Inscriptions and Letters from 1928 to 1937", British Museum Press
5 Simon Timothy James, "The arms and armour from Dura Europos, Syria

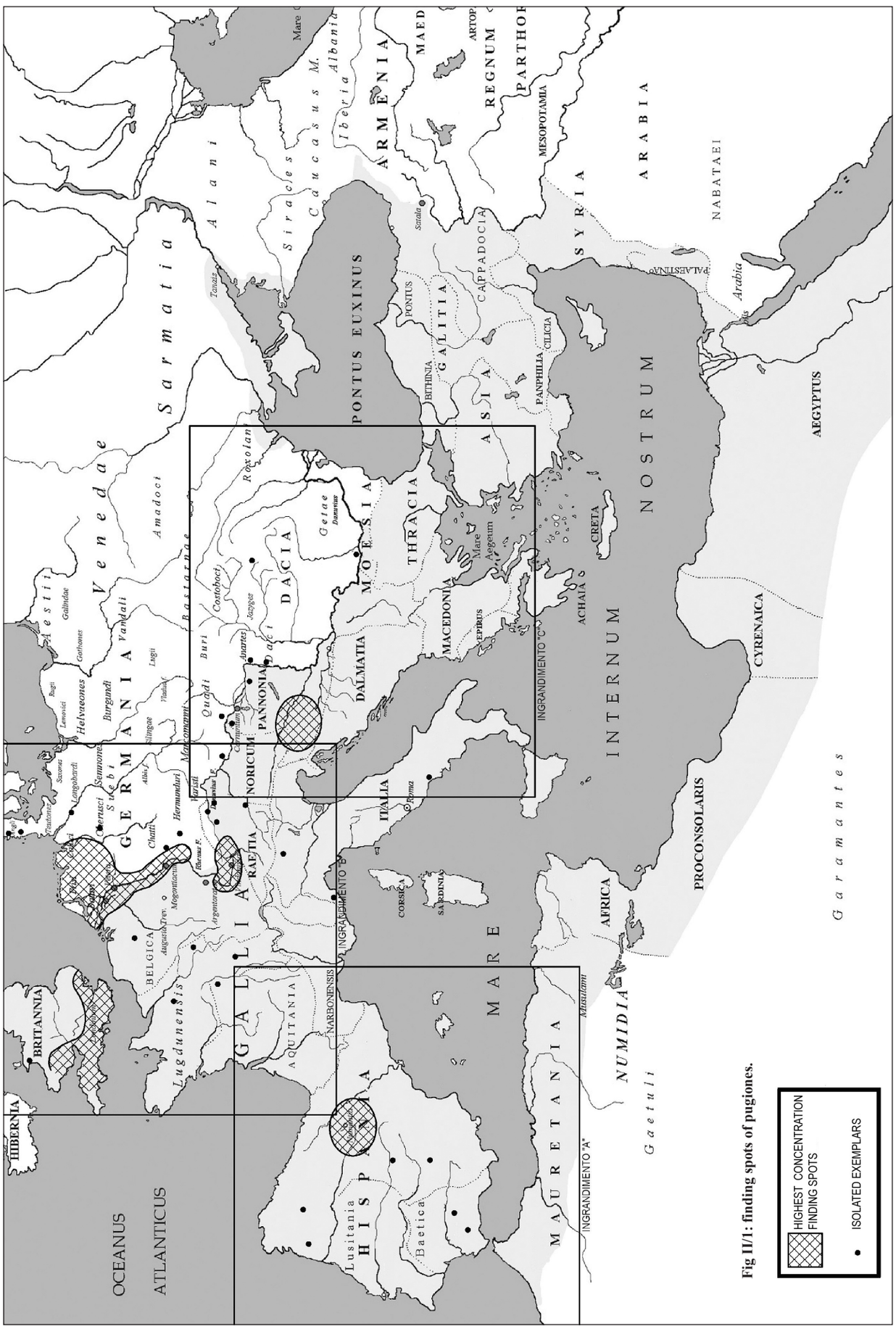
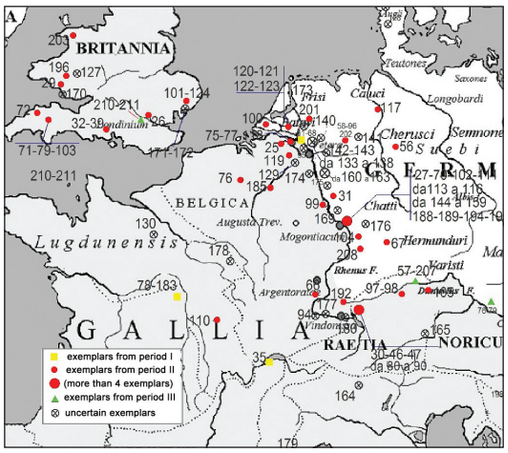


Fig II/1: finding spots of pugiones.

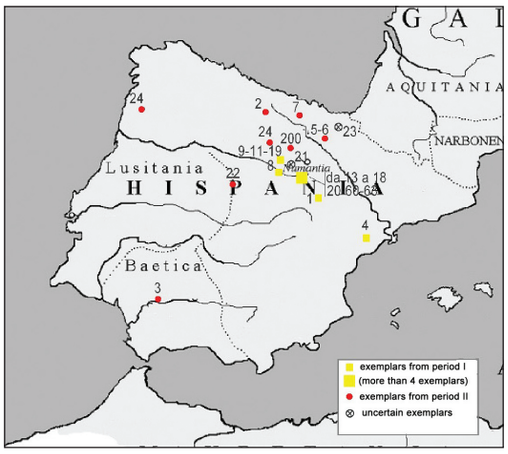
Fig II/1: finding spots of pugiones.



ENLARGMENT A

- Britain, Gaul, Rhine limes and high Danube-

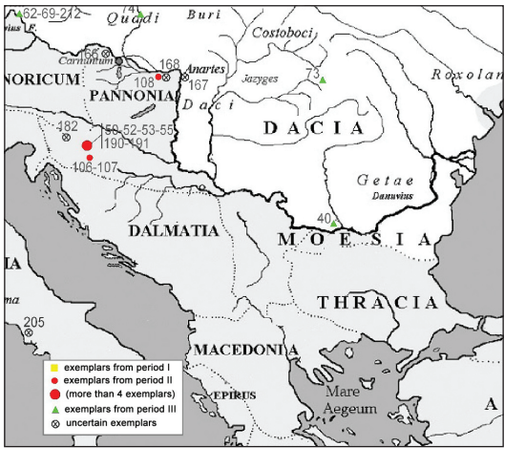
we can record in these areas most of found exemplars, above all near the Rhine river, almost all from the period II.



ENLARGMENT B

- Hispania -

in this area most of exemplars are localized in celtiberian area and coming from period I



ENLARGMENT C

- Italy, Illyricum, Moesia, Dacia -

in these provinces there are not many findings, except for area of Sisak (Croatia). Note some exemplars from period III

Fig. II/2 map of The Roman Empire showing the localisation of the *stelae* with both pugio and gladius present.

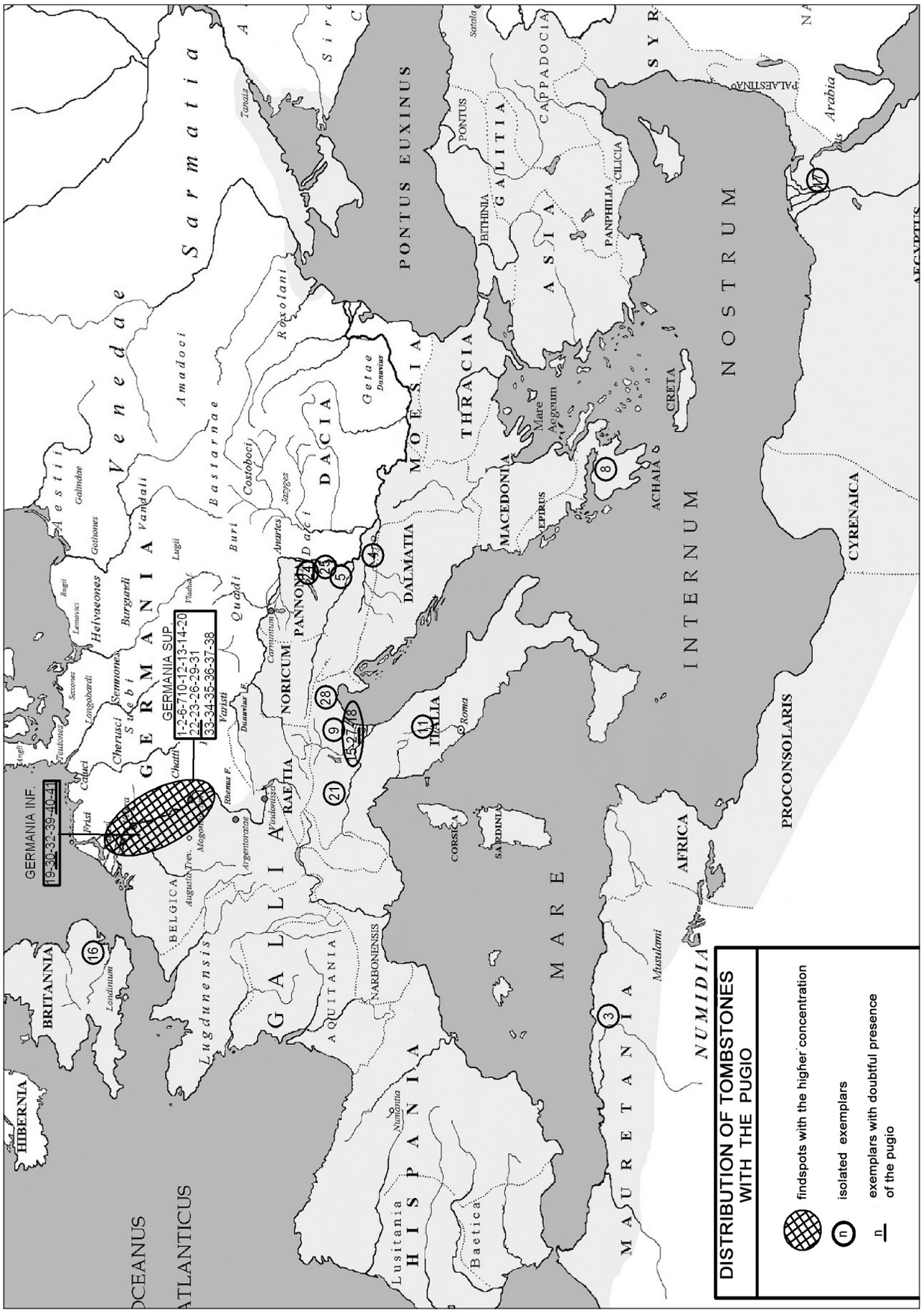
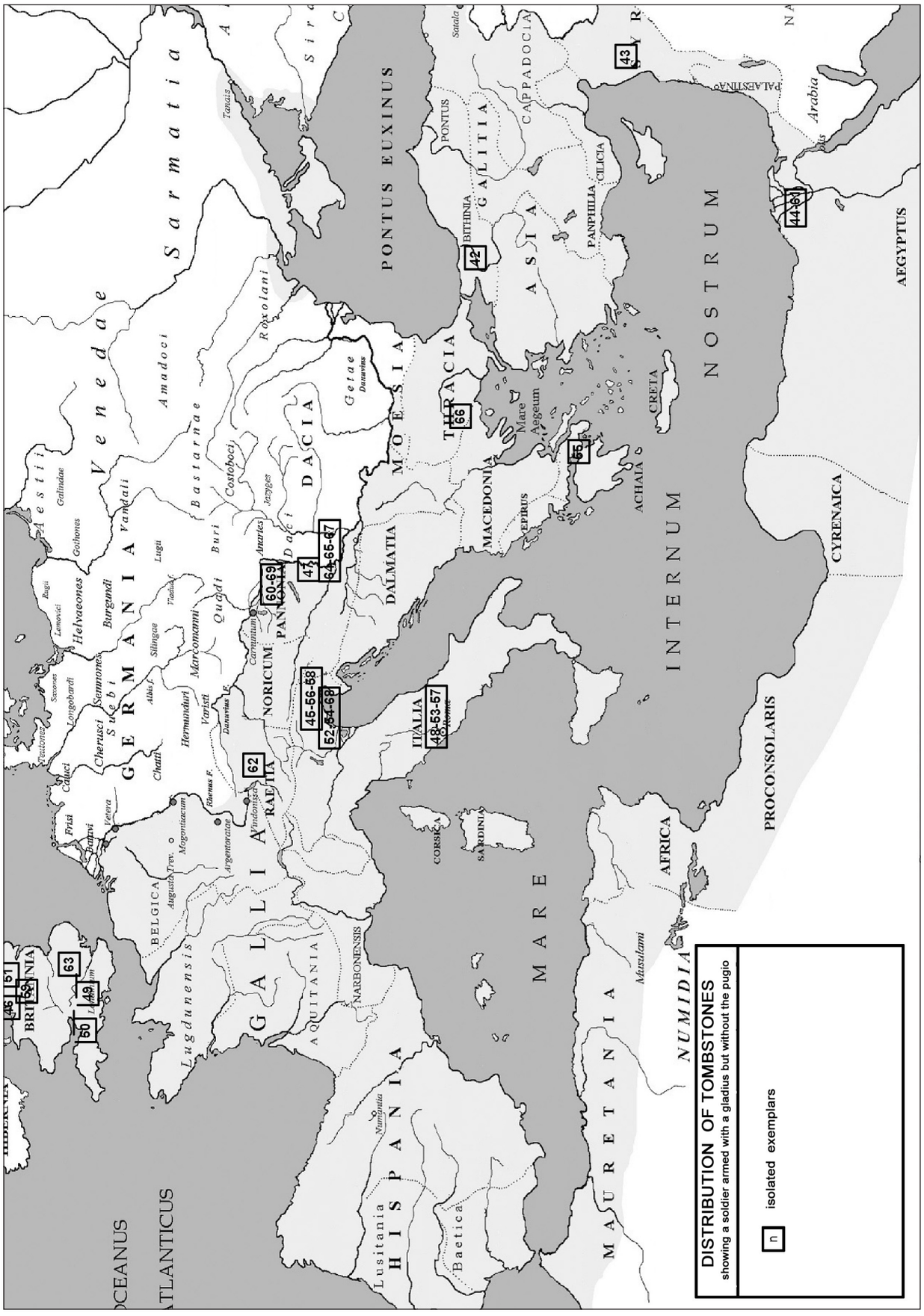


Fig. II/3: Map of The Roman Empire showing the localization of the funerary stelae representing a soldier clearly in procintus, armed with his gladius and often also with the javelin, but without his pugio. The number of stelae are marked within the related fields (see Chap. VII – iconographic sources) in the Roman Province where the funerary stone was found.



Iconography

Funeral tombstones (*stelae*):

Identifying the station of the Legions or Cohorts which the stelae belonged to is not always possible due to the frequent incomplete state of the epitaphs. In most cases the place where the monument was found coincides with the area where the soldier in question was stationed, even if there do exist various exceptions where this is not true.

It has been possible to examine over 200 *stelae* of soldiers[6]. Of those depicting a representation of the pugio, 70.7% (29 monuments out of 41) are pinpointed to the Rhine-Danube Limes. Germania Superior, with its 20 finds (48.7%) is the Roman province where the greatest number of *stelae* have been discovered with representations of dragons. It included partially the territories of what are now Switzerland, Germany and France, and for all the I century A.D. it hosted four legions, which were reduced to two following the conquest of Dacia. It must be remembered that as well as the legions there were numerous auxiliary units (cohorts of infantrymen and Ala cavalry), and the sites where they were quartered are mainly to be found in Mogontiacum and Argentoratae.

Germania Inferior is the second region hosting the most *stelae* with pugiones (6 finds, 14.6%), the exact location now corresponding with modern-day Netherlands and western Germany.

The main fields were those of Castra Vetera and Mogontiacum, from which all expeditions left in order to conquer the Germanic territories.

After the defeat of Teotoburg in 9 A.D. four legions were deployed there, which then became three under Domitian and then two under Trajan. Pannonia, which was divided into upper and lower by Traianus in 103, was a province including the western part of what is now Hungary, a part of Austria, the northern region of Croatia and a part of Slovenia. In this province, together with Damatia, we have the location of the finds of four *stelae* (9.7%).

A further concentration of monuments with a sculpted pugio can be found in Italy, shown by 7 finds (16.6% of the total), six of which were discovered in the northern part of the country. In other Roman provinces we only find four isolated *stelae*: Britannia, Acaia, Egypt and Mauretania.

For some, the presence of the pugio is uncertain due to the far from optimal state of preservation of the finds. As regards the localization, for some finds incongruities are reported: (Stela no.8) the funerary slab of Caius Valerius Valens, Legionary of the Legio VIII Augusta, dating back to the second half of the I century A.D., was discovered in Corinth, Greece, but the Legion was never in that area during that period. In fact, it is found to be working under Nero in the clashes against the Sarmatians and Dacians; following this, in Germania from 70 to 74, involved both in squashing the Batavian revolt and in building an important road. From 83 to 89 under Emperor Claudius, it fought against the Chatti, a Germanic people stationed near Mogontiacum. From this period onwards we find it posted in Argentoratum.

The military connection with Greece, therefore, appears completely unrelated to the original historical context.

-Stela no. 17): Marcus Lucillius Germanus was a standarbearer who served in the II Legion Adiutrix. This unit began its career in 70 A.D., suppressing the Batavian revolt in Germania Inferior, after which it moved to Britannia, Dacia and was finally stationed in Aquinqum (modern-day Budapest). Its presence is never recorded in Egypt, in which case it is possible that the tombstone was in Alessandria for reasons other than the military activity of the soldier. The only *stela* whose localization seems to be completely anomalous and almost solitary is no. 2 positioned in Mauretania.

It is useful to note that some of the tombstones localized on the Germanic Limes belong to soldiers serving in a legion which was deployed over time in other imperial provinces, but the only trace of the pugio is in those territories

Let us cite as an example the XIV Gemina Martia Vitrix which the soldiers from stelae no. 7, 20 and 22 belonged to, and where the symbol "●" indicates the only point where stelae were found with the pugio: in 28-13 A.D. the Legion was moved to Gallia on the Spanish border; following this it was moved to the Lingoni territories (Gallia), from 13 A.D. to 16 A.D. to Mogontiacum (Germania) (●) in 43 to Britannia; in 60 to Gallia Narbonensis,; in 89-92 to Germania Superior; in 92 to Pannonia; in 198 to the

TABLE 2

Province	Tombstones with Pugio and Gladius	Tombstones with only the Gladius
Britain	16	29 – 44 – 46 – 48 – 51 – 82 – 129 – 132 – 136 – 179 – 203
Germania Inferior	19-30-32-39-40-41	104 – 125 – 145 – 161 – 162 – 193
Germania Superior	1-2-6-7-10-12-13-14-20-22-23-26-29-31-33-34-35-36-37-38	7–9–39–41–107–112– 118
Raetia		202
Noricum		214
Pannonia/Dalmatia	5-4-24-25	4–154–180–189–191– 200–208–209–210– 218
Thracia		10–211
Cilicia		149
Achaia	8	77–87–122
Italy	9-11-15-18-21-27-28	
Mauretania	3	
Siria		23
Aegyptus	17	24?–181
Indefinite spots		1–15

Table 2: distribution of the stelae per province, distinguishing between those in which only the gladius is present and those in which there is the co-presence of both gladius and pugio (for numeration see Chap. VII – iconographic sources).

[6] On regards numeration of the stelae, see charter VII - iconographic sources-;

countryside against the Parthians. The *stela* where a dagger is depicted are traceable to the Germanic Limes, whereas in all the other numerous places touched by this Legion there is no sign of the pugio.

If the monuments we have just looked at provide us with very useful information, it is just as important to analyse those in which the pugio is not present, but where we find ourselves in the presence of the representation of a figure armed with the gladius. It appears evident that it was the sculptor's intention to depict the deceased in procintus, with all his panoply in so far as this was a source of prestige, but it did not include the pugio.

Consequently, if we can understand from the former ones in which areas the pugio was widely used, from the latter ones, instead, we can realise where it was probably not used, because otherwise it would most likely have been depicted.

In this case the distribution of *stelae* seems to be reversed (fig. II/3) in comparison with the former in so far as it has a conspicuous total absence of exemplars in Germania and by contrast a wide-spread distribution in almost all the other provinces of The Empire.

A comparison between the two situations we have just described can be more easily made by consulting the following table no. 3.

The data referring to Germany stands out as having the greatest number of *stelae* with pugio; as do those referring to the Greek provinces, for having a large number of soldiers depicted with a gladius but without a pugio.

Regarding the 7 *stelae* localized in Italy, it is worth noting that two belonged to praetorians, well-known as the normally stationed force steadily stationed on Italic territory, but above-all that they come from Cisalpin Gaul. The legions stationed on the Rhine front during the first imperial age normally originated from the self-same land[7], so it may be hypothesised that the deceased soldier served in Germania, but that he was then commemorated in his native land.

In this case, despite evidence apparently suggesting and confirming a very precise territorial localization for the presence of the pugio, the data should be observed with greater caution than for that which is collected from archaeological finds: the high concentration of *stelae* on the Rhine-Danube Limes and in northern Italy can also be due to "*stehenden Soldaten*"[8] being a creative typology of this area[9].

Different Works:

The very famous Trajan column (Rome) and the monument of Adamclisi (Romania) were both created in order to commemorate the victories of Trajan in Dacia, and they depict detailed scenes of soldiers in combat. Among these the presence of a pugio cannot be spotted. I must point out that the Trajan column is of top artistic quality: all the scenes are reproduced with great care, craftsmanship and abundance of details, even if the sculptor seems to yield to artistic requirements in some places moving away from the constraints imposed by a rigorous reproduction of reality. This level of quality is excellently expressed by Ranuccio Bianchi Bandinelli[10] *"…. form is reached in a supreme way, the artist abundantly creates everything he wants to: patches of courage with great consequence; heavy drapery composed like architecture; drapery waving in the impetus of the struggle, participating in the same energy as the figures ….*" The monument of Adamclisi is not of the same artistic level, but it cannot be said that it lacks the ability to communicate details of equipment. The absence of any representation of the pugio, therefore, may reasonably be interpreted as an absence within the panoply of the army that fought in Dacia.

Also the column of Marcus Aurelius (Rome) does not depict any pugiones. It was erected in commemoration of the Emperor's wars during the so-called Marcomannic wars, mainly localized at the middle course of the Danube, during which the Romans often fought against the lazigian Sarmatians.

TABLE 3

number of stelae for each province, in wich the presence or absence of the pugio is certain

	Hispania	Gaul	Britain	Germany	Italy	Raetia	Noricum
in procintus, with pugio				20	2	0	0
in procintus, w.out pugio				0	3	0	1

	:e, onia :ia	Asia	Africa	Dacia
in procintus, with pugio	)	0	1	0
in procintus, w.out pugio		2	1	1

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N.B:
- **In the stelae without pugio the subject is still visibly depicted as armed with a gladius and other weapons.**
- **The exemplar in Greece marked with a "?" is the stela no.8, for which doubts exist regarding the compatibility of its place of finding with its original position.**
- **In Britain, the exemplar in the line "in procintus with pugio" is positioned in the south, whereas the two in the line "in procintus without pugio" are both in the north.**

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7 Sergio Rinaldi Tufi, "Militari Romani sul Reno", ed. Giorgio Bretschneider;
8 literally "standing soldiers", term coming from german literature, which deeply studied the Roman military tombstones;
9 Sergio Rinaldi Tufi, op.cit.;
10 "il maestro delle imprese di Traiano", Electa, 2003;
11 "Historiae", libro IV, 29;

Classics Literature:

Classics literature is the third and last source of information. In most extracts the various authors describe scenes out of military context, but, fortunately, there are still some useful references:

- Tacitus[11] skilfully describes a savage war scene during the Batavian revolt of Julilus Civilis in 69-70 A.D.. In this particular case the action takes place during a siege of the fortified outpost of Duren, placed on the Rhine between Cologne and Aquisgràn, hence well within Germania Inferior.
- Tacitus[12] again brings us back to Germania Inferior in the year 47 A.D., more precisely on the Rhine where Domitius Corbulo distinguished himself in the battle against the Chauci and the Frisians (Germanic peoples stationed in the north of the country) led by Gennascus.
- Cassius Dionysius[13] cites the use of the pugio on the part of the legions of Julius Caesar in the battle against Ariovistus, which took place near the Rhine on the 10th September 58 A.D.

These are the only existing quotations in classics literature which refer to precise war actions in easily identifiable settings[14].

Another extract by Tacitus must be mentioned[15], in which the action takes place, not in a war scenario as such, but at a dramatic moment of civil war in 69. The author describes the assassination of Galba and Piso, which took place in Rome by Otho's followers.

The centurion who clasps the pugio, however, is not a legion, but rather a praetorian from one of Galba's praetorian cohorts, which at that moment was responsible for Piso's safety.

The setting is, therefore, in Rome, in a scenario of civil war, not intended as a fight between organised armies as could, for example, occur at Pharsalus between the legions of Caesar and Pompeius, but rather as a moment in a violent, armed brawl, with no precise war action, nor even civil action, but only the confused movements of masses of soldiers in prey to their rage and desire to kill.

To this we may add two solitary clues, which indicate the presence of the pugio in 'abnormal' places – if we may call them so.

The first is Josephus Flavius, who, in his work set in Jewish land[16], describing the equipment of the Roman soldiers, says: "*Then they start moving, all marching in silence and in an orderly manner, each one of them in their place, as in battle, the foot soldiers covered in armour and helmets and with a sword hanging on each side, the one on the left quite long, whereas the one on the right is no more than a span*.[17]" This data, therefore, appears to contrast with what has been pointed out up to now; in any case, it must be noted that the extract seems to contain another unusual fact when the author ascertains that the gladius was carried on the left instead of on the right as was custom in that period. This repeats itself a few lines later "…… *the horsemen are carrying a big sword on their right side* …", when it is well known that they carried their swords on the left. It is worth considering that even if this work is describing the Jewish war, at this point Flavius is describing the Roman army in general instead of making a precise reference to the troops stationed in that land.

The second is a fragment of papyrus found in Egypt from 27 A.D., which relates an anecdote worth mentioning. It is a notarial deed which describes a money loan to L. Caecilius Secundus from the cavalry Corps Ala Paullini, which offers a helmet, a silver phalera and the front of a sheath, decorated in silver and ivory as security[18].

The result of archaeological finds shows that the maximum concentration of the Pugio is on the Germanic Limes and on the high Danube. In Britannia there is a slightly inferior but still considerable number, and there is almost nothing in the rest of the areas of The Empire apart from in Spain, which deserves being remarked on separately. In fact, almost all the Spanish exemplars are on Celtiberian territory, which, as we know, is the cradle of the Roman pugio. Furthermore, most of the exemplars belong to Period I, the most archaic, which means that some of them may undeniably have belonged to Celtiberian auxiliaries.

From iconography we have a very similar picture; once

TABLE 4

	6 A.D.	23 A.D.	80 A.D. ca.	100-110 a,D. ca.
Spain	4	3	1	1
Rhine Limes	5	8	7	4
Rhetia	2	/	/	/
Dacia	/	/	9	14
Moesia	3	2	4	7
Africa	5	2	1	1
Aegyptus		2	2	1
Orient	4	4	6	6
Pannonia	5	2	1	4
Dalmatia		2	2	/
Britain	/	/	4	3
Rome and Italy	9 praetorian cohorts	3 praetorian cohorts	16 praetorian cohorts	10 praetorian cohorts

Table 4: quantity of legions (cohorts in the case of Italy) in the various provinces of The Empire in approx I century A.D.

[12] "Annales, libro XI, 18, 3;
[13] "Storia Romana" libro XXXVII,49;
[14] for the whole texts of these passages, see also chapter VIII – classic bibliography;
[15] "Historiae", libro I, 43;
[16] De Bello Judaico, libr. III, [93] Ἔπειτα προϊόντες ὁδεύουσιν ἡσυχῇ καὶ μετὰ κόσμου πάντες, ὥσπερ ἐν πολέμῳ τὴν ἰδίαν τάξιν ἕκαστος φυλάσσων, οἱ μὲν πεζοὶ θώραξιν πεφραγμένοι καὶ κράνεσιν καὶ μαχαιροφοροῦντες ἀμφοτέρωθεν. [94] μακρότερον δ' αὐτῶν τὸ λαιὸν ξίφος πολλῷ: τὸ γὰρ κατὰ τὸ δεξιὸν σπιθαμῆς οὐ πλέον ἔχει τὸ μῆκος;
[17] translation by Giovanni Viticci, ed. Oscar Mondadori;

again a net concentration on the Germanic Limes, modest traces on the Danube, some exemplars in Italy, often connected to Praetorian cohorts rather than regular military corps, and almost nothing in the rest of The Empire.

Finally, three pieces of information, derived from classics literature, are directly connected to geographically identifiable war scenes which bring us once again back to the Rhine. The exceptions consist in one situation, which might be related to Italy, regarding a Praetorian, even if not in a precisely war context, and two others, connected respectively to Egypt and Judaea.

The phenomenon which stands out from this is that from a geographical point of view the pugio was not a weapon equally distributed among all the military departments of the Roman army, as probably was the gladius and obviously the helmet, but it was almost the exclusive privilege of the troops on the limes of the Rhine and the high Danube and low Britannia.

There is also another aspect underlining the peculiarity of this situation; wherever this weapon was distributed it was done so in massive quantities, so that almost no soldier belonging to a certain corps was without one. On the contrary, however, in the rest of the areas it was almost totally unused.

A further more in-depth study takes the form of an analysis of the geographical distribution of the pugiones distinguishing between the various historical periods the pugiones belonged to.

From figure 1, and in particular from the three enlargements which focalise the areas of greatest interest, as well as from the statistics available in Chapter IX – exemplar data base - we can see how at the beginning of their distribution (Period I) the pugiones are almost all concentrated on Hispanic territory, and Celtiberian in particular. The archaic specimens are practically absent in all the rest of The Empire with the sole exception of some sporadic finds in Gallia, which can be connected to Caesar's campaigns for the conquest of that country. As stated earlier, it is possible that these were partly connected to the Celtiberian auxiliaries operating within the Roman army.

Following this, with the advent of Period II and the beginning of the moment of maximum distribution of the weapon, the Limes of the Rhine and in low Britannia become the most involved areas. The specimens found deeply within Germanic territory could be war booty or part of arms trade, probably illegal, with the local population. On this note, it is worth noting exemplar no. 199 (see Chapter IX), found in tomb No. A4103 belonging to a male subject of Germanic stock, which was part of a vast necropolis in Hedegard (peninsular of Jutland[19]) together with other objects of Roman origin. It is perhaps possible that he served as an auxiliary at the Limes, but the remarkable distance of these territories, many placed outside the Roman provinces and on full barbarian territory, makes it probable to hypothesise that the dagger was war booty.

The only exception to this geographical concentration is the locality of the legionary base Siscia (modern day Sisak, Croatia), attacked during a revolt in 6 A.D. by the Pannonians and the Dalmatians, and which is not at all close to the Rhine.

The passage of time has, therefore, generated a decisive movement of the barycentre of the areas of distribution of the pugio, moving from Spanish territory to those which bordered on central Europe; and this phenomenon continues with the advent of the third and last Period. Even if it is in a less pronounced manner, we experience a further geographic displacement, in this case towards the most central part of the Danubian Limes. As we know, the distribution in these zones was decidedly more modest, but the information regarding the later exemplars all focuses on south-eastern European territories along the Danube. In this case we must, unfortunately, record a lack of information, caused by the decontextualization of a relevant number of available exemplars from Period III.

The motivation for the uneven distribution of the daggers cannot be simply explained away with the proportional presence of troops in a certain territory, seeing as the facts show the contrary. If we analyse the stationing of the legions corresponding to Period II (as pictured on table 4) excluding, for the sake of simplicity, the various cohorts and *vexilla*, we can notice that on the Germanic front the number of legions never exceeds roughly a third of the total forces. This means that most of the legionaries were stationed in the zones where the use of the pugio was not distributed, which thus explains the lack of a direct and proportional relationship between the presence of troops and geographical distribution of the weapon.

Territories also existed where there was an elevated concentration of soldiers because they were the stage for war backgrounds. However, also in this case, if we exclude a few single cases, such as Alesia, where the presence of the pugio can be connected to the famous siege of Caesar, most war backdrops sustained by Rome do not seem to have any direct connection with the presence of pugiones.

It is most important to note that in those territories where civil war took place, and Roman armies confronted each other, there is no record of pugiones.

We may remember important war backdrops characterised by the absence of the dagger. As far as Judaea is concerned, Josephus Flavius[20] tells us that in the years of the Judean wars, there was at first only the legion X Fretensis, but then from 67 to 70 A.D., when the rebellion transformed into a true and proper war, the V Macedonia and the XV Apolinnaris joined. We also know that from 132 A.D. onwards two legions were permanently stationed there. We, therefore, have a war backdrop with a violent war and a good 3 legions involved, to which we add the auxiliary corps, but no trace of the pugio. The only exception being a one-off mention by the same above-mentioned Flavius.

In Dacia, instead, the first battles began already from the penultimate decade B.C. when the Romans defeated king Citiso. Once again we have an area, which for over two centuries was the stage of great conflict, constantly garrisoned by a large number of soldiers, but where the presence of the pugio is quite modest.

The first of Trajan's Dacian wars (101-102) was fought with a good 14 legions plus auxiliaries, with a total of 150,000 soldiers[21], during which 7 important battles can be counted. The backdrop was so turbulent that between 102 and 105 twenty-six Roman garrisons are recorded.

The second Dacian war (105-106 A.D.) was fought with a possibly larger number of soldiers; it is thought that there were up to 16 legions. Then, after the end of the wars and the subjection of Dacia as a province up until the time of

[18] Sergio Daris, "Zeitschrift für papirologie und Epigraphik "78, 1989, 149-152; P. Vindob, L135;
[19] Peter S. Wells, "la parola ai barbari", ed. il Saggiatore;
[20] "De bello Judaico";
[21] Radu Ardevan and Livio Zerbini, op. cit.;

Mark Aurelius, that is for 150 years, at least two legions were permanently positioned there together with 27 cohorts and an imprecise number of still unknown units. Towards 169 A.D. on the occasion of the reorganisation of the army in Dacia, the total number of forces permanently based there reached 55,000 soldiers[22].

We may add to this that Trajan, leader of the victory over Dacia, had previously been governor of *Germania Superior* and, therefore, certainly knew the pugiones and their distribution in that area well, but nevertheless did not equip his own legions, who fought in Dacia, with this weapon.

Once having reflected upon the inexplicable, anomalous geographical distribution of the pugio, there is nothing left to do but examine the most significant matter: the reason for this uneven geographic distribution.

The answer is closely connected to the function of the weapon, which, being of prime importance, we will go into in more depth in the appropriate chapter IV – Function and Use.

[22] Radu Ardevan and Livio Zerbini, op. cit.;

CHAPTER III
DISTRIBUTION WITHIN THE ARMY

Information on the military corps who were equipped with the pugio can be obtained largely from funerary tombstones and literary sources; whereas nothing can be deduced from the exemplars which have been found, as it is not possible to make any kind of connection to a specific corps or a military title from the symbols present on the weapons or their relative sheaths (with the single exception of no. 195). The pugiones certainly do not appear to have been used by all the corps of the Roman army, but, based on evidence from the analyzed *stelae*, it seems possible to assign them with certainty only to some: those which we are going to look at closely now.

Legionary and auxiliary infantrymen

Between the Legionary Soldier and the Auxiliary there was an important difference. The historian, Vegetius, defines this when he states *that "the infantry is made up of two parts:" the auxiliary troops and the legions. The auxiliary troops were supplied with allies and federates; the Roman power is, instead to be seen above-all in the organization of the Legion."* [1] This difference was not, however, merely limited to the soldiers' place of origin, but was also to be found in the fighting technique. In fact, as Vegetius explains to us again, *"the auxiliaries, when led into battle, come from different regions and different units; they have nothing in common as regards their training, type of knowledge, or aptitudes. Their traditions are varied; their experience in arms is varied .....the Legion, instead ……. is complete in every part, without the need for any external ancillary troops, and in this way is usually superior to any number of enemies."* [2] Despite this fundamental difference in weaponry and fighting techniques, both types of infantrymen were equipped with the pugio (in the *stelae* the legionaries presenting the pugio make up 7.46% of the total, whereas the Auxiliaries 42.85%). In the quotations no distinction is made between Legionaries and Auxiliaries, and the use of the pugio is broadly described both when the heavy weaponry of the infantrymen is listed as: *"helmets, armour, greaves, shields, bigger swords called spathae, and other smaller ones called semispathae, five lead javelins attached to the shields ready to be thrown at the first attack;"*[3] and when facts of military life are described: referring to how the sentinels were armed[4], as well as in a battle episode on the betterments of a fort.[5]

However, it is Vegetius himself, as he continues writing, who leads us to make a distinction between heavy infantry and light infantry, when we read: *"after them came the ferentarii and the light troops, who we nowadays call advance guards and armatura, and the soldiers with their shields who carry leaded javelins, swords and launching weapons, in the way that almost all soldiers are armed these days. There were also archers equipped with helmets, armours, swords, bows and arrows; there were slingers who threw stones with slings and catapults, and the trangulari who shot arrows with ballistic weapons,"* [6] and still *"once the conflict had begun, the first and the second rows remained immobile and even the triari remained still. Instead, the ferentari, the armatura, the advance guards, the archers and the slingers, that is to say all the light troops, provoked the adversary, by placing themselves in front of the array. If they managed to make the enemy flee, they followed it closely. If, instead, they were forced back by its power or number, they would return towards their companions and position themselves behind them. The battle was then taken up by the heavy troops who erected a type of iron wall, so to speak, and led the battle not only with javelins but also with hand-to-hand combat using swords"* [7], and finally *" ... at the back behind all the rows the triari were placed, with their shields, armour and helmets, greaves, swords, semispathae, with lead javelins and the two launching weapons ..."*. [8]

Vegetius, therefore, tells us quite clearly that the heavy troops were equipped with a dagger, whereas the light ones were without. This appears to be consistent with the subdivision of the roles in combat; in fact, the heavy infantry were not assigned to following the enemy, but rather to supporting direct combat - even hand-to-hand - whereas the light infantry had to carry out faster displacements, and they were not expected to carry out battle at close quarters. It is evident, therefore, that the pugio would not have been any use to the latter, and might even have been a hindrance, causing supplementary weight and encumbrance; whereas, we can see that it was fundamental for the troops who would possibly have to face direct combat.

Centurions

The definition of this figure as "petty officer" derives from modern military jargon - more from a necessity to understand than as a specific historical reference.

The centurions were placed in command of the centuries: basic units of the legion normally composed of 80-100 men, which in groups of two in the Republican age formed a maniple. Following this, in the Imperial Age, in groups of six they formed a cohort.

The centurions each had varying ranks, the most prestigious of which being the so-called *primipilus* or *primus pilus*, who was in charge of the first order of the first cohort.

Their role was particularly sought after because of the honour attached to it, despite it being often necessary to demonstrate an out-of-the-ordinary degree of competence and courage. On this line, we recall a powerful episode narrated by Julius Caesar[9], where the two protagonists were centurions, Titus Pullo and Lucius Vorenus, who *"vied with each other with fierce rivalry for promotion each year."*

The centurion's weaponry was very similar to that of the legionaries he commanded over, except for the helmet, which was provided with a transverse crest, to distinguish him and make him easy to detect by the soldiers. This

[1] Vegetius, "Epitoma Rei Militaris", book II, ch.1;
[2] Vegetius, op. cit, book II ch. 2;
[3] Vegetius, op. cit., book II, ch. XV;
[4] Tacitus, "Annales", book ch. IX;
[5] Tacitus, Historiae, book ch. IV;
[6] Vegetius, op. cit., book II, ch. XV;
[7] Vegetius, op. cit., book II, ch. XVII;
[8] Vegetius, op. cit., book II, ch. XVI;
[9] Julius Caesar "De Bello Gallico", book V, ch. 44;

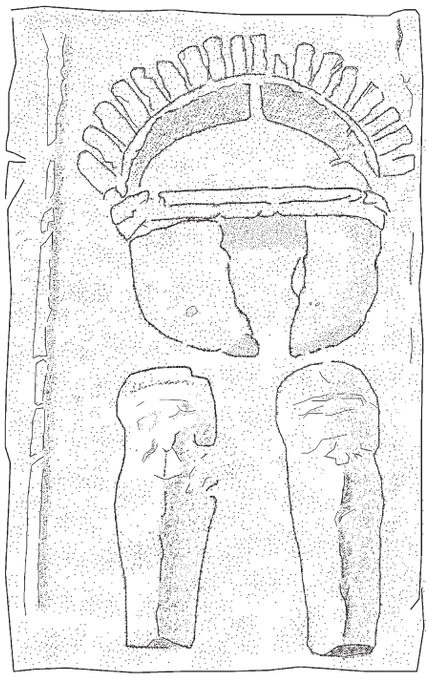

Fig. III/1: a detail from the tombstone of the centurion Titus Calidius Severus; one can note the helmet with the transverse crest. (drawing by the author).

characteristic consequently meant that also the enemy could identify him with the same ease, and in fact, the centurion's mortality rate was higher than the legionaries' themselves. The centurions also had the characteristic of carrying the pugio on their right and the gladius on their left, the opposite to the legionaries.

It has been possible to examine 14 centurions' *stelae*, 5 of which are illegible (either due to a bad state of preservation or because they were originally made without any images), 6 show the subject without his weapon or at most with just his lorica and helmet, and finally 3 present the subject with his weapons, 2 of which are with a sculpted pugio. When the centurion is presented with his complete panoply, we see the pugio always appears together with the gladius. Unfortunately, memorials in ancient Rome served the function of accentuating the prestige the deceased had reached in life, for which reason we frequently find only the elements which best represented the military rank sculpted on the *stelae*; for the centurion these were his grapevine baton and his helmet with the traverse crest – which compromises comprehensive information on his weaponry. However, we can assume that the centurion was armed in the same way as his own soldiers, as can be inferred from the various *stelae* depicting the panoply; and since he was a miles of the first line, there is no reason for him to possess weaponry dissimilar to the legionaries he commanded.

The *optiones* collaborated with the centurions, but their role is less clear. Rather than true assistants to the centurion, they may have had the function of substituting them when they were put out of action (which may explain their name optio = option)[10]. There are only 3 *stelae* to be looked at closely without highlighting the presence of the pugio.

Standard bearers (*signiferi*)

"Signifer" is the Latin term which was generally used to indicate the standard bearer whose function in battle was of utmost importance, as they represented the visual reference point for all the soldiers of a given unit. Vegetius explains to us that *"nothing is more useful for victory than the obedience of orders given in the form of signals. In fact, seeing that it is impossible in the tumult of battle to command an army by voice alone, and that, according to the urgency of the situation, there are many orders to be given and followed immediately, a procedure was historically established in all nations where everything which seemed opportune to the general could be acknowledged and followed by means of signals on the part of the whole army. The types of signals are generally three: vocal, semi-vocal and silent ... Silent signals are instead in the shape of eagles, dragons, banners, red flags, plumes; wherever the commanding officer has decided to have them brought, that is the place where the soldiers who are following those banners must head."* [11]

The importance of the hidden role of the *Signifer* is exemplified in the account by Julius Caesar where the *Aquilifer*, on the disembarkation of the Roman troops on the Britannic coasts represents the gathering point and the symbol of the Legion to be protected at the cost of life itself. [12]

The *standard bearers*, as a reference point for all those belonging to the corps, were normally placed in the first row in front of everyone, and at the centurion's side, from whom they took orders. Since his duty consisted in holding the banner with both hands, his role was not of only that of a warrior, and this was reflected in his unusual weaponry. The standard bearers were protected by helmets, by the *lorica*, by a small, round shield (*parmula*) and, symbolically by the hide of a lion or bear, whose winning power against the enemy the Legion personified. [13] We also notice from the *stelae* that the offensive weapons depicted were the gladius, and the pugio in 29.41% of the representations, but never the pilum or the lance. Of the 5 *stelae* originating from Germanic territory we must point out that they all depicted both the gladius and the pugio. We then have 2 *stelae* in which the soldier appears armed with a gladius but without the pugio; one, which was found in Italy, dates to the III century, and one was found in Egypt. None of the pictures of standard bearers on horses - at times armed with a spatha and sometimes completely unarmed – allow us a glimpse of the presence of a pugio.

Cavalrymen

The role of the cavalryman was in contrast to the type of close combat action in war where the pugio was useful. In fact, the cavalrymen used the lance or the spatha as an offensive weapon: long weapons, therefore more appropriate for slashing the target at a distance.

No tombstone presents an image that is incontrovertibly a pugio. All the images depict both the horseman and the horse from the right, and the hypothesis that the pugio could be on the left-hand side, the side which is not visible on the *stelae*, is disproved when we observe Cusides' *stela*: the only cavalryman depicted on his left side and belonging to the auxiliary corps. This observation is consistent with

[10] Vegetius op. cit. book II, ch. VII, 4
[11] Vegetius op. cit., book III, ch. V;
[12] Julius Caesar, "De Bello Gallico" book IV, ch. 25;
[13] A. Cattabiani e M.C. Fuentes, "Bestiario di Roma", ed.Newton Compton nota VII/33; C. Sighinolfi, "I guerrieri lupo nell'Europa arcaica. Aspetti della funzione guerriera e metamorfosi rituali presso gli indoeuropei", Rimini 2004;

the description of the Roman Cavalry made by Flavius Josephus where, on the occasion of the Judaic war, he describes the weaponry of the cavalrymen in detail: *"the cavalrymen carry a big sword on their right and grasp a long spear, the shield is held across the flank of the horse and in a quiver there are three or more darts with long points, not shorter than the spears; the helmet and the armour are the same as those of all the infantrymen."*[14] The war function of a cavalryman is quite different from that of the infantryman seeing that, having to fight from the horse's saddle, he needed long weapons (the spatha, the spear) or throwing weapons (javelins or arrows). A pugio would have been logical only if the cavalrymen had been a military corps made to face ground combat. There is a passage by Tacitus[15] where hand-to-hand combat is mentioned between cavalrymen and barbarians, but use of the pugio is not.

The only exceptions to what has been said may be found on a stela and quotation. The remark on the cenotaph of Respectus, an explorer belonging to the auxiliary cavalry, gives us a possible exception, consistent with his own war activity. On his right, instead of a spatha we can catch a glimpse of what might be a semispatha, or in any case a short weapon, as well as two javelins and a shield held with his left hand. In any rate, the state of preservation of the finding is, unfortunately, not at all good and does not allow us any certainty.

In the quoted fragment of an Egyptian papyrus dating 27 B.C., we find a notarial deed which describes a money loan to L. Caecilius Secundus from the cavalry corps Ala Paullini, who offers as a guarantee the front of a sheath embellished with silver and ivory.[16] The fact that a cavalryman was in possession of such an object could be explained in two ways: the first is that he had this weapon as part of his battle equipment; the second is that he possessed it only as a precious object, its value being proven by the fact that it was used as a means of security.

Praetorians

The Praetorian corps were always an elite corps, and until the end of the I century A.D. it only recruited individuals of Italic origin, even if subsequently Dalmatians and Pannonians became a part of it. [17] This military unit had the duty of being bodyguard to the Emperor, even if they were not infrequently taken to the front, especially during the civil wars. Already from mid I century A.D. they began to acquire great power in appointing new emperors, and they held a fundamental role in the election of Claudius after the killing of Caligula. This power decreased during the period of Flavian's dynasty until the election of Commodus in 181.

Unlike the legionaries, posted along the borders of The Empire, they possessed the enormous privilege of having their *castra praetoria* (the Praetorian camp) right in the capital between the Viminal and the Esquilin, just outside the city walls.

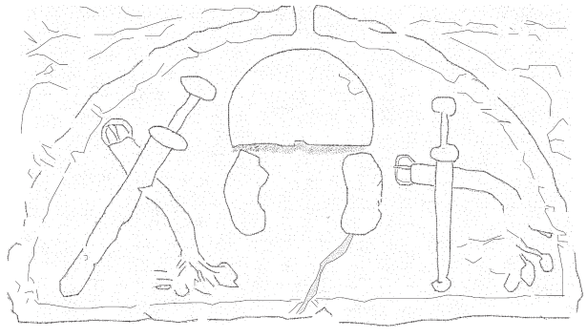

Fig. III/3: detail from the *stela* of Caius Ottiedius Attianus, dating to the III century, in which appear what are almost certainly a spatha and a semispatha. (drawings by the author).

From the 10 tombstones of Pretorians examined, three show the image of a pugio.

- the *stela* of Lucius Marius Vernus, without an image of the deceased, was found on the territory of the ancient city of Tabula Mutuesca (modern-day Monteleone Sabino, Rieti) near Rome;
- the *stela* of Firmidius Rufus, dating to the I century;

the *stela* of Caius Ottiedius Attianus, also without an image of the deceased, pictures a probable spatha and a semispatha, temporarily consistent with the dating of the find to the III century

Finally we have five quotations which mention the pugio on the part of the Praetorians.

Tacitus [18], describing the disorder in Rome during the civil war of 69 A.D., tells us that *"Sempronius Densus, centurion of the Praetorian cohort, died by a pugio while defending Piso, the adoptive son of Galba."*

The *Scriptores Historiae Augustae* report two facts. The first is described by *Aelius Spartianus* [19], who narrates the killing by pugio of the Emperor Caracalla by Martial, an imperial guard; whereas the second is described by *Aelius Lampridius* [20], who reports news about a pugio, not as a weapon but as a nickname given to a freedman after his having been appointed Praetorian prefect.

Finally, S. Aurelius Victor [21] relates an account of the symbolic value of command given to the pugio: *"So, trusting honesty, he often reprimanded Suburanus, prefect with the title of Praetorian, while he was handing over the pugio, symbol of power, according to tradition : 'I entrust you with this for my defence, if you act correctly; but if you behave differently, it would rather be used against me': therefore, may he who is the advisor of all be permitted to make least mistakes."*

Officials, figures of high rank and Emperors

The important figures belonging to elevated ranks do not

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[14] Flavius Josephus, "The Jewish war", III, 5,5, 94-9;
[15] Tacitus, "Agricola", 37;
[16] P. Vindob. L135. Gilliam, 1981: 277-280;
[17] Yann Le Bohec, "L'esercito romano", ed. Carocci;
[18] Tacitus, "Historiae,", book I, ch. 43;
[19] Scriptores Historiae Augustae, book XIII Antoninus Caracallus, ch. 7;
[20] Scriptores Historiae Augustae, book VII Commodus Antoninus, ch. 6;
[21] S. Aurelius Victor "Historiae abbreviatae - vulgo: Liber de Caesaribus" – Ch.13;

for the development of their political career, the so-called "Cursus Honorum", during which the mixture of power and military and political tasks was considerable, in fact *"no one is allowed to take up public office without having served ten years in military service first."* [22]

There are two quotations in which two military officers are reported to have used the pugio. The first is reported by S. Julius Frontinus [23], in which he narrates that General Sertorius used a pugio to kill a messenger who had brought onto the battle field news of the death of his commander; the second handed down by M. Tullius Cicero [24], where he tells about Galba, Julius Caesar's lieutenant, who wore a pugio which he used when he participated in the dictator's assassination.

More than 60 senators took part in the conspiracy against Julius Caesar, among which was Caius Cassius, *praetor peregrinus*, and Marcus Brutus, *praetor urbanus*. Also some caesarians joined the conspiracy, among whom was Decimus Brutus, designated consul for the following year, and Trebonius, one of Caesar's best generals destined for the consulate in 42 B.C.

The ancient authors who described the assassination, quoting the use of the dagger on the part of the senators, are M. Tullius Cicero [25], C. Sutenoius Tranquillus [26], Orosius [27], Frechulfus Lexouiensis [28], Iohannes Sarisberiensis [29] and Rodericus Ximenius de Rada [30]. There are also other quotations which narrate the connection between the pugio and men with political posts as reported by Valerio Massimo [31]who writes about Publius Clodius Pulcher who "in attaching his pugio to Fulvia's robe, tamed his soldier's pride, and subjected himself to the power of a woman;" by Granius Licinianus [32], who relates the story of Papirius Mutilius who, on the occasion of the Sillian proscriptions lists, escaped from the Sicarians by defending himself with a dagger; by Tacitus [33] who describes the conspiracy of Senator Scevinus against Nero; and finally Ammianus Marcellinus[34], who relates the wounding of Emperor Commodus by Senator Quinzianus.

On the theme of the use of the pugio by emperors, there are numerous quotations which confirm this practice. Augustus used one before he became Emperor [35]; Caligola exploited the lethal meaning of the weapon which he listed in his booklet entitled "Pugio", enemies to be eliminated [36]. Nero first used his own pugio to falsely accuse his mother's slave of her attempted assassination, which he himself had engineered [37], and then he used the dagger to attempt vainly to commit suicide [38]. Servant Sulpicius Galba used it as a symbol of power [39], Marcus Salvius Otho used it to commit suicide [40]; Aulo Vitellius, just like Otho, used it as a symbol of power, life and death [41]; Domiziano, instead, attempted to defend himself from his assassin with this weapon [42]; whereas Adriano attempted suicide; and finally Flavius Claudius Julianus committed suicide with a pugio [43].

We can, therefore, conclude that the pugio was not homogeneously distributed within all the various troops of the army.

It is certainly most frequently recorded in the heavy infantry (hence the geographical limitations seen) both legionary and auxiliary, whereas the light infantry does not seem to have been equipped with it. The same is true for the centurions, having an active role within the heavy infantry, and also for the standard bearers - however, within the limits of the infantry stationed in Germany.

Among cavalrymen no significant presence is recorded.

For the Praetorians the picture is less clear; it is certain that they could have used the pugio, but probably not constantly as the heavy infantry did. While awaiting new evidence which might help us understand more, it is now only possible to assume that within this corps its use was connected to bizarre historical moments or unusual duties which single units were assigned to.

Finally, it was also used by individuals of high rank, who, by means of their "*Cursus Honorum*"[44] had had the opportunity to get to know it and learn how to use it. Literary sources show us how important figures, such as officials, senators and emperors only used it for "civil" purposes outside the battle context: using it as a means for suicide; a symbol of death or power; the main weapon for assaults and attacks - evidently appreciating it for its lethality and the ease with which it could be hidden among the folds of the toga.

In this way we have confirmation of the "where" of our weapon - seen in the previous chapter - and we anticipate the "why" - which will be dealt with in depth in the following chapter: we see it only being used by whoever really needed to [45], and in the war backdrops where this was probably the case [46].

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[22] Polibio, "Historiae", VI 19;
[23] "Strategemata" - book: 2, ch. 7;
[24] "M. Antonium orationes Philippicae", Oratio: 13, ch.: 33;
[25] " M. Antonium orationes Philippicae" Oratio: 2, par.: 28 e 30;"Epistulae ad Atticum", "Liber: 2, epist.: 24, par.2, 3» ;
[26] "De vita caesarum Divus Iulis", ch. 82 e 89;
[27] "Historiarum adversum paganois», libri vii Cl. 0571, vol. II, lib.: 6, cap.: 17 ;
[28] «Historiarum » libri XII - pars : 1, liber : 7, cap. 9
[29] «Policraticus, tom. II, lib.:8, cap.15 e 19;
[30] «Policraticus» tom. II, lib.:8, cap.:15 e 19;
[31] «Facta et dicta memorabilia», book 3 ch. 5;
[32] «Operis historici fragmenta codice rescripto servata», book: 36,10
[33] «Annales», Liber XV – ch. 54;
[34] «Rerum gestarum libri qui supersunt «, book: 29, ch.: 1 ;
[35] Seneca , "De Clementia" - book 1 ch. 9;
[36] Svetonius, "De Vita Caesarum – Caligola", ch. 49;
[37] Tacitus, "Historiae", book III, ch. 68;
[38] Svetonius, "De vita Caesarum – Nero", ch. 49;
[39] Svetonius, "De Vita Caesarum – Galba" ch. 11, 1;
[40] Tacitus, "Historiae", book II, ch. 49; Svetonius, "De vita Caesraum - Otho", 11;
[41] C. Svetonius Tranquillus, « De vita Caesarum, Vitellius », ch.15,.4;
[42] Svetonius, «De Vita Caesarum – Domitianus», ch. 17;
[43] Aurelius Victor, «pseudo-Libellus de uita et moribus imperatorum breuiatus - Epitome de Caesaribus», Ch.: 39 ;
[44] Whole of political and military offices, to be compulsorily made by who was aspiring to political offices ;
[45] See chapt. "IV – function and use"
[46] See chapt. "II- geographical distribution"

CHAPTER IV
FUNCTION AND USE

No precise historical definition exists for the real function of the Pugio because Latin quotations and archaeological finds (both of the weapons themselves and of images of them) are often found to be incomplete and hence insufficient for an exhaustive reconstruction. This fact has caused numerous modern authors often to make claims dictated more by intuitive logic rather than real confirmation. We cite some of these definitions below:

- "…for a soldier to carry a dagger was more an issue of prestige than a real necessity, so that in the production of such an artefact greater attention was given to tradition. To be sure, a dagger could come in handy in a fight, but it was not the main weapon and it was unsheathed only when a soldier lost both the sword and the spear. Apart from providing a means of defend in extreme need, it appears to have primarily served as a status symbol…"[1].
- "The study of daggers and their scabbards is complex, but no aspect of this is of particularly helpful in telling us what the weapon was used for. With blade of between 250 and 350mm, it was clearly a formidable weapon to have as a back-up should the sword be lost or damaged, and we need not view it solely as a "boy-scout" knife used for eating meals or whittling wood."[2]
- "This lack of development in dagger design is the result of the Roman attitude to these weapon, which they regarded as prestige items rather than as part of their fighting equipment…The dagger was primarily the outward display of its wearer's power, though it remained an effective fighting weapon. "[3]
- "The pugio was used in hand-to-hand fighting, probably as a spare weapon."[4]
- "Reserve weapon; Additional weapon, perhaps used above-all in activities carried out every day during a campaign."[5]
- "Supplementary or reserve weapon; Over time it assumes the character of a simple ornament, without an effective war function." [6]
- "The craftsmanship is far too refined, to the point that it was kept more as an ornament than as a fighting weapon." [7]
- The pugio was not part of the military standard equipment of the legionary …. but a distinguishing element and for military parades. Due to the rich decoration that it sometimes exhibited, we can say that in the tombstones it assumes a symbolic meaning for the equipment, as there is no image of soldiers using the pugio. In any case, it could also have been used for other functions, such as cutting food or branches, peeling branches; used as a final weapon defence, as its capacity to harm in combat was very modest." [8]

None of these statements are verifiable: they are no more than simple – at times imaginative - deductions on the part of each author on how the Roman dagger could have been used.

With this exposition we will attempt to supply some answers based on historical and archaeological evidence and, when this is not possible, we will limit ourselves to stating that which this weapon certainly was not. In fact, as Flavio Russo states: "however reductive it may appear, a historical investigation cannot demonstrate the truthfulness of a hypothesis, but only the contrary. Using a comparison: we are not in a position to establish the owner of a pair of shoes size 41, which were fortuitously found, but only to exclude those who, wearing another size, cannot be the owner." [9]

As seen in the previous chapters, the Celtiberian origin of the Pugio is certain, and for this population it had both a symbolic and practical function as a military weapon. In Celtic populations, as also in the Etruscan ones, the possession of a weapon was, in fact, related to the social status of the warrior and, therefore, the free man, and its presence in the tombs served to bear witness to this social condition.[10] From the I century B.C. onwards the association of the Pugio with the Roman army is certified once and for all, and also in this context it held both the function of symbol and weapon. In fact, as we have already pointed out in the chapter on Latin quotations, the dagger is frequently associated with a symbol of power, "*cum insigne potestatis*"[11], with the power of life or death over citizens "*lus necis vitaeque civium*"[12], but always in the context of imperial figures (Galba, Vitellius, Trajan). In an account by S. Julius Frontinus[13], the use of the Pugio by a general is described: *"Quntius Sertorius, while he was fighting on the battle field, used his pugio to stab the foreigner who had brought him news of Irtuleius' death, so that he wouldn't pass it on to others and weaken their spirit with this fact."* It was a personal action on the part of General Sertorius towards a messenger who had informed him of the death of his lieutenant Irtuleius by the hands of the enemy army commanded by Metellus. Even if this killing occurs during battle, it would seem that the assassination took place during an interview, which does not prove nor even disprove that the weapon was a normal part of an official's equipment. However, we need to make some clarifications which contradict what has been stated so far. First of all, the pugio is not the only military object with a symbolic value for the army, as there are also other objects which define the status of the Roman soldier: the *cingulum*[14], the *caligae*[15] and the *padulamentum*[16]. Besides, the use of the Pugio has been certified only on the *stelae* of soldiers and non commissioned officers (centurions), whereas it is absent from the statues and sarcophaguses belonging to imperial figures or military figures of high

1 Ivan Radman-Livaja, "Militaria Siscensia", Musei Archaeologici Zagrabiensis Catalogi et monographiae vol. 1 pp 47;
2 M.C. Bishop & J.C.N.," Coulston, Roman military equipment – from the punic war to the fall of Rome", pp 85;
3 Michel Feugere, "Weapons of the Romans"pp 126;
4 R. D'Amato and G. Sumner,"Arms and Armour of the Roman imperial soldier" ed. Frontline books, pp 96;
5 Adrian Goldsworthy, "Storia completa dell'esercito Romano", Ed. Logos;
6 Giuseppe Cascarino, "L'esercito Romano – armamento e organizzazione", Ed. Il Cerchio;
7 Flavio Russo "Sotto l'Insegna dell'Aquila, storia dell'esercito Romano dalla Repubblica all'Impero", Ed. Stato Maggiore dell'Esercito;
8 Carmelo Fernandez Ibanez: "Equipamiento armamentistico del legionario altoimperial";
9 Flavio Russo and Ferruccio Russo, "Indagine sulle Forche Caudine", ed. Rivista Militare;
10 Eugenio Polito, "Carri da guerra e principi etruschi", exhibition catalogue, Ed. L'Erma di Bretschneider;
11 S. Aurelius Victor "Historiae abbreviate", ch. 13;
12 Tacitus, Historiae , book III, ch. 68;
13 "Strategmata"- book 2 ch. 7;
14 Iuvenalis, "Satire", 16.48. He told that, to punish some soldiers, they had been prevented to use it;
15 Flavio Giuseppe "Guerre giudaiche", 6.85; Svetonio, "De vita Caesarum *Caligulae vita,* IX"; Petronius, "Satyricon" XI, 82;
16 Svetonio , "Galba", XI;

Fig. IV/1: decoration on the sheath of a gladius from the Roman Vindonissa-Museum (Switzerland). It shows a barbarian prisoner in a state of submission, and can be found completely identical on many other sheaths, which implies mass production despite the quality, destined for a significant number of soldiers. (photo by the author).

rank, thus creating a dichotomy between that which is narrated by ancient writers and what can be noticed on funeral reliefs.

The symbolic value of the Pugio has been considered by many modern authors as the predominant element of this weapon, basing their conviction on the presence of decoration and precious metals which were used to make these daggers and their sheaths. For example, B. Thomas from the university of Kiadò (Budapest), taking up a concept already expressed by Gonzeback, states that the pugio *"was awarded to officials as a prize for victory or a battle"*, whereas Herbert Westphal[17] expresses the concept that even if *" its luxurious and ornamental character prevails ... this does not mean that its capacity as a weapon is in any way devaluated"*.

First of all, it is necessary to notice the fact that the evolutionary history of the Pugio passes from a type I dagger, whose sheath and handle are without decoration and not embellished with precious metals, and then develops into type II, with the characteristic luxurious and ornamental decoration, to finally arrive at type III, which seems to be a regression with its ornamental features and materials reminiscent of style I. This fact is incompatible with an object that was born and used exclusively as a symbolic element. We can add to this the fact that, while we know types of weapons that essentially have a symbolic meaning beyond their actual use in war, such as the "Parma" (the round shield for the cavalry, symbol of the Equestrian Order), the *lorica muscolata* and the greaves (which by definition were the officers' armour), the *Hasta Pura*[18], the *Clipeus Virtutis*[19], etc. nothing of this kind has been bequeathed to us regarding the Pugio. Expatiating on the *Dona Militaria*[20] (as pugiones were hypothesised to be a military decoration by some modern authors): these were recompenses for valour, and simple soldiers could obtain them in the form of medallions, *armillae*, *Torcs*, etc. Svetonius describes that Augustus *"conferred decorations very easily, the necklaces and all the other emblems in gold or silver as well as obsidian and mural crowns, whose value was purely honorary."*[21] From this quotation we can deduce that the Pugiones in style I and III, if they had been *dona*, given the simplicity of the materials with which they were made, they could have been considered a prize for valour and consequently, as explained by Svetonius, aimed at the soldiers.

The explanation that the Pugio should be considered a *donum*, contrasts with numerous pieces of evidence. It is strange that a *donum*, as a prize for worthy military action, could be so widespread among soldiers (see the number of archaeological finds and presentations on the *stelae*) and also that it was not awarded to the soldiers in all the Empire but only those who were fighting in certain provinces. It is also difficult to believe that the meaning/symbolic value of the Pugio changed over time, and that it only acquired an importance of economic value in the I century A.D., in comparison with the Pugiones in style I and III. Not to mention the last and possibly most important consideration that this dagger has never been quoted by the ancient writers as a *donum*.

Regarding the observation on the part of many modern authors that such a preciously decorated dagger could be incompatible with a war weapon, it must be noted that contemporary weapons to the pugiones from Period II (I century A.D.) were also richly decorated and embellished, which removes from the dagger the unique sophistication and luxury normally upheld by modern literature and which, from a modern-day point of view, expresses a concept in antithesis with the war spirit. It can be noted, for example, that in the I century A.D. the sheaths of *gladi* - being the same typology of weapon – matched the sheaths of the pugiones best, as they also had numerous, precious fittings (which were embossed or applied) - and this was a case of mass production for all the simple soldiers and not only the officials.

The decorations on some contemporary helmets are no less, despite their belonging to simple soldiers, and having been made with such sophistication that one could hardly associate them with the brutal figure of a soldier.

Also Christian Koepfer in "The Legionary Equipment"[22], describing the equipment during the Augustan Age, confirms this concept: *" the helmet of Haltern has a bronze skull tending towards red with the "brow guard" tending towards yellow (an alloy of copper, tin and zinc) ... In some cases the decorative bosses of these helmets have red coral or enamel inlays, and an analogous characteristic can be found in the pugiones and their sheaths ..."*.

Finally, if we observe the appliqués which decorate the soldiers' belts, we see that these are also extremely decorated, precious and sophisticated. There are many representations of these, and there is no lack of pictures of only roses and palms, typical also of the pugiones sheaths[23].

For the Pugio, therefore, as the symbolic function is not predominant (just like all the other issued weapons) the

[17] in "Ein römischer Prunkdolch aus Haltern";
[18] gift for the most brave soldiers;
[19] Eugenio Polito, op. cit.;
[20] awards for meritorius soldiers;
[21] Svetonius, "Augustus", XXV, 3-4;
[22] "Ancient Warfare" 2009;
[23] on this matter, see chapter "VI- sheaths ";

practical function must be favoured; that is to say as a war dagger. In order to understand its functions better, we will try to describe its structure and shape, examining the single parts it is made of.

HANDLE. A metal handle, mainly with an irregular surface, inducing a high level of friction with the skin of the hand, thus easily causing the appearance of wounds, which is enhanced by sweat not being absorbed by a porous material, such as wood or bone. Consequently, this weapon was conceived for short activity, as prolonged use would be harmful for the owner's hand.

GUARD. The absence of a guard excludes this dagger from possibly having been used for double-edged fencing, as in the medieval period, as it would not have been able to counter the attack. The pugio, in fact, just like the gladius, is a weapon of attack, made for stabbing with its point. The defensive action against the adversaries' blows was meant for the shield.

BLADE. Examining the type of wound that it could cause, it is clearly a lethal weapon. In fact, it is a dagger made to stab with its point and not to cut. The willow-leaf shape of the blade causes an enlargement of the wound as the blow is deepened. Besides this, whether the weapon is gripped as a "hammer" or a "screwdriver", it undergoes a rotation during its extraction, which, due to the double-purpose blade, induces a further laceration of the tissues, the size of which leaves little possibility for haemostasis[24]. That the Pugio was considered the lethal weapon par excellence, which left no escape for whoever it struck, can be inferred from the ancient writers: both when they used the rhetorical expression "leaden pugio" meaning the antithesis of an efficient action; and also when religious writers describe it as a means to the divine and to purification with no way out, as for example in the biblical account of the killing of the Midianites, where the pugio is even mythologized - seeing as the account is written in historical and geographical contexts which are incompatible with its existence.

As already pointed out, the ancient writers do not give us an exhaustive description of what the real function of this weapon was. Only in three quotations do we find its use described in a war context. On the other hand, it is frequently cited in connection with bloody acts in non-war situations, that is to say: 5 assassinations and 10 suicides. This observation brings us to hypothesize that killers frequently used this weapon for their murders, most probably due to its capacity to harm and its ability to be easily hidden under the folds of a toga (remember the conspirators against Caesar who hid the weapon under their togas; and how it was used by Augustus in his adolescence, who, as is shown in an account by Seneca, also hid it between the folds of his toga; or carried under the robe as S. Crispus relates). The hypothesis that the pugio was a dagger which was widespread even out of a war context is a known fact, but we must accept with caution the idea that its use was also civil. The "*Lex Iulia de vi publica et privata*" which was issued in 17 B.C. by Augustus in order to re-discipline the *crimen vis*, forbade the use of arms, except for hunting or during journeys. This law was respected, and the confirmation for this is verifiable in the observation reported by A. Angela in "Viaggio di Roma seguendo una moneta" Ed. Mondadori,

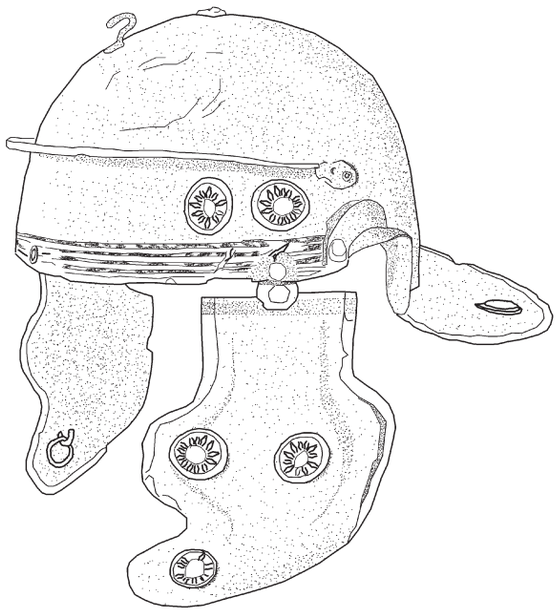


Fig.IV/2: Helmet from the end of I century A.D. preserved in the Roman Museum in Worms (Germany). Notice the decorative appliqués and the band on the front in orichalcum. (drawing by the author).

where she confirms that out of approximately 300 dead bodies discovered in Herculaneum (Italy), only one was found in possession of a weapon, a legionary together with his gladius. The civil use of any weapon, and hence of the Pugio, was not permitted, and there is no portrayal in any pictorial or sculptural representation that is not military. Furthermore, examining the ancient quotations connected with murders and suicides in the relative chapter, it appears that most people who committed a deadly action with a dagger belonged to or were connected with their own "*Cursus Honorum*" to the military world. We deduce from this that the Pugio could be a weapon for military service, as appears from the *stelae*, and that its civil use was the consequence of an acquired military experience carried on after discharge.

We are doubtful about the hypothesis of some modern writers that the Pugio could have had a use as a "Boy Scout knife", or as a kitchen utensil, due to the weapon's intrinsic characteristics. By definition, a knife made for everyday use is of small size -one only needs to think of the Swiss multi-use knife – which is totally incompatible with the type III, whose characteristics are that of a semispatha. Also the double-sided blade makes the pugio unmanageable for carving wood, and its wide blade is not appropriate for cutting food. These considerations lead us to discard this suggested hypothesis until documented proof stating the contrary is available.

The observations we have already made are corroborated by I.P. Stephenson, who writes that *"although the Roman soldiers could have used (the pugio) for non-military objectives, this must not distract us from its main use"*, that is a weapon of war.[25]

The use of a dagger in battle suggests hand-to-hand combat, where the two combatants are involved in fight at very close distance, as Vergilius Maro Gammaticus[26] describes, for whom a "Pugna" is when two fighters (pugiles) lash out at each other with their pugiones. Many

[24] the process to stop a haemorrhage;
[25] "Roman Infantry Equipment, The later Empire";

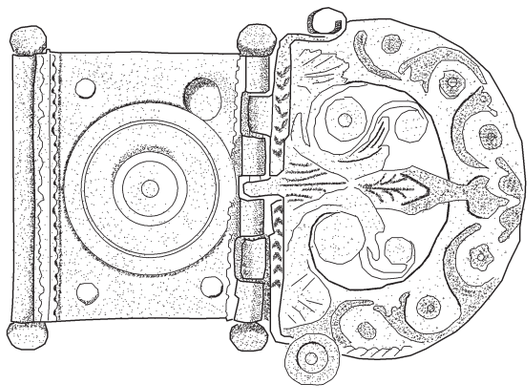


Fig. IV/3: buckle in silver with a plate to attach to the belt, dated to the second half of the I century A.D. (Narodni Murzej – Belgrade-YU). (Drawing by the author)

modern authors relate the hypothesis that it was a reserve weapon for the gladius[27], and it certainly was an accessory weapon, just as can be deduced from Tacitus'[28] account when he describes some war action which broke out in Germania Inferior. against the Chauci, led by Gannascus: an auxiliary and deserter, originating from the tribe of the Canninefati. The commander, Gnaeus Domitus Corbulo, *"brought back to the ancient discipline the legions who were intolerant of occupation and suffering, who only found pleasure in pillaging. He ordered that no one should abandon his troop and go into battle without having received orders; furthermore, the sentinels and all the military forces had to be composed of armed men both by day and at night; they narrate that a soldier who was digging a trench unarmed, and another, who was only armed with a pugio, were both punished with death."* Hence the gladius is defined as essential weapon in the armament, not so the Pugio.

Tacitus[29] describes a nocturnal attack on a Roman fortress by the Germans under the command of Gaius Julius Civilis, head of the Batavians, who fought against the Romans during the year of the four Emperors. *"The Germans were transported by rash fury; the Romans, with their experience of danger, threw iron-covered rods and heavy boulders not in a random manner. When the noise of the assailants or of the drawbridge, meant the enemy was close, they sent it back by banging their shields against them, and overwhelming them with their 'pila', and many who had climbed up on top of the rampart were pierced by slashes of pugiones":* From this account it can be inferred that the Romans used pugiones on the betterments in hand-to-hand combat, which made the use of long weapons, such as gladi, useless, given the restricted nature of the place of combat. Probably the dark of the night favoured the assault and such close combat. Also the "Military art of Training", published in 1622, when referring to the *coltellus* - a large dagger in use from the XI to the XIV century exclusively by the infantry - claims that the dagger has a big advantage over the sword in close combat, and as a weapon for killing the wounded[30]. However, if this type of combat is the *"conditio sine qua non"* for the use of a dagger, and hence of the pugio, we read in the description by the Ancient Writers how this type of combat might have taken place and consequently what its true use may have been. The description given to us be Tacitus[31] is fundamental. *"The first fight was fought from far, while the Britannians calmly and skilfully diverted our launching weapons with their long swords and avoided them with their small leather shields. They then covered ours with a rainfall of darts until Agricola ordered four Batavian cohorts and two Tungrian ones to begin hand-to-hand combat with their swords, seeing as they, having had long-term experience with weapons, were experts at this type of combat. The enemy, instead, who had small shields and enormous swords, were not in a position to defend themselves from such an assault. The swords of the Britannians were, in fact, without points and did not allow the weapons to meet or to fight in a restricted space."* The lack of adequate space is, therefore, a limit for the Celtic warriors to brandish their own weapons, but not for the legionaries who, as Vegetius[32] tells us *"the Romans not only won against those who fought to cut, but they also made fools of them. In fact, strikes which cut, however powerful they may be, are rarely fatal, seeing as the vital organs remain protected by the armour and bones; instead, stabbing with the point of a weapon which penetrates by two inches is fatal: in effect, in order to kill it is necessary that any thing which is plunged into the body penetrates the vital organs. Furthermore, whenever a strike cuts, the right arm and side remain unprotected; whereas a strike by the point is inflicted on a protected body and the enemy is wounded before he realises it ."* Striking with the point of a weapon also implies a need for less space in comparison with when striking to cut. Therefore, in the situation in which the fight prevents the use of the gladius, for example when the warriors found themselves locked in combat, what better solution could there have been than using the pugio, being a weapon of limited size? Nonius Marcellus[33] claims that "*Pugio est gladius brevis*", implying with this definition that the shape and probably the use of the two side arms was very similar. That the Pugio was a miniature Gladius is stated also by Vegetius[34] when he explains that the legionaries were armed with *"gladiis et semispathiis"*, which translated literally would be a gladius and a dagger half the length of a sword, or more precisely a sword and a miniature sword.

Basing ourselves on this theory, we also understand better the symbolic meaning of *"power of life and death"*[35] which is connected to this dagger. The real subject which the ancients refer to is most probably the Gladius, because the Pugio would have been used as if it was its representation in miniature. With this key to reading the classics, also Galba's behaviour, for example, appears clearer when, just crowned Emperor, he hung the Pugio around his neck[36]; in actual fact he was exhibiting the "gladius in miniature", thus taking advantage of the true meaning of the weapon.

Ultimately, the pugio can be considered not so much a reserve weapon for the gladius but rather its complementary weapon, finding its ideal use in combat that was so close-at-arms that it made the main weapon seem too cumbersome.

[26] "Epitomae" ch. 4;
[27] among those: M.C. Bishop, Adrian Goldsworthy, Raffaele D'Amato;
[28] "Annales", book XI, ch. 18-3;
[29] "Historiae", book IV, ch. 29;
[30] Theory also from I.P. Sthepenshon, "Roman Infantry Equipment, The later Empire";
[31] "Agricola", XXXVI e XXXVII, I;
[32] "Epitoma Rei Militaris", book 1, ch. XII;
[33] "De compendiosa doctrina", book 19;
[34] Vegetius, op. cit., book II, ch. XVII;
[35] About this topic, see chap. " VIII – classic bibliography";
[36] Svetonio, "De vitae Caesarum", ch. 11;

The confirmation for what we have stated so far comes from an account by Cassius Dio[37], when he describes a fight between legionary troops belonging to Julius Caesar and the Germans, describing in detail the technique used by the Romans to beat physically stronger warriors. The Roman attack *"happened in a rush and with shouting (preventing the barbarians) from thrusting their javelins, which was their main strength. They came so close that the barbarians couldn't use either their spears or swords, which were longer than those of the Romans"*. The development of a very close situation between two armies imposes hand-to-hand combat, which neutralises the enemy's method of fighting. In fact, *"the Romans, by forcing their presence on the barbarians were their equals thanks to their armour and their ability to fight. As this fighting dragged on for a long time, in the end, when the day was over, the Romans won. The fact was that they had a very valid aid in the form of their daggers, which were shorter than those of the Galls, and they had iron points; on top of which, being used to exertion, they resisted better than the barbarians, in whom the force of resistance was not on a par with the vehemence of the attacks."* The tight formation of the Roman army gave rise to a wall of shields, and it was due to this that the soldiers *"standing so upright, were impossible to attack because they were joined so tightly together, and impossible to move because of their consistency. In this way they neither made nor suffered any damage."* Having made the barbarians so harmless as they could not fight from the moment they were blocked by the compact nature of the fight, and they remained *"still in the same place ... (and) ... immobile like inside towers ...(the Roman foot soldiers) ... threw away also their shields and cast themselves, some with a short run and others from close up, and they so-to-speak jumped on top of the enemies and struck them all over"*. At this point the fatal attack came from above, from soldiers who threw themselves on top of the fight and struck the barbarians on the jugular, *"because they used to fight bare headed ... for which reason many fell immediately, because only one strike was enough to kill them; many died even before they fell, because the compact nature of the group meant that even the dead remained standing."*

Besides this confirmation from a literary source we can find another from an archaeological one. It is well known how the Romans used wooden weapons for drills, which were often weighted down with lead to make them heavier than were the actual weapons[38]; and some of these have survived to our day. In particular, two of these are kept in the Roman Army Museum of Vindolanda (GB): one is a replica of a gladius and one of a pugio; whereas in the LWL Romermuseum (Haltern am See, Germany) we find one similar to a pugio with a curved blade. Regarding the first pair it is to be pointed out that it is the opinion of the Director of "The Vindolanda Trust" that both weapons are toy weapons, whereas the LWL Romermuseum is of the opinion that theirs is a drill weapon. Personally, I am inclined to believe that both are drill weapons, both because of their coarse features, decidedly too unrefined even for the plainest toy, and above-all because the grip sizes are suitable for the hand of an adult and not of a child. Regarding those from Vindolanda, this would correspond with the fact that there were cohorts *peditate* in the fortress, whom we know were equipped with the pugio.

If our supposition is correct, it would mean a clear further claim that the pugio was a weapon with tactical objectives, for whose use the soldiers needed, just as for the other weapons, the right drilling.

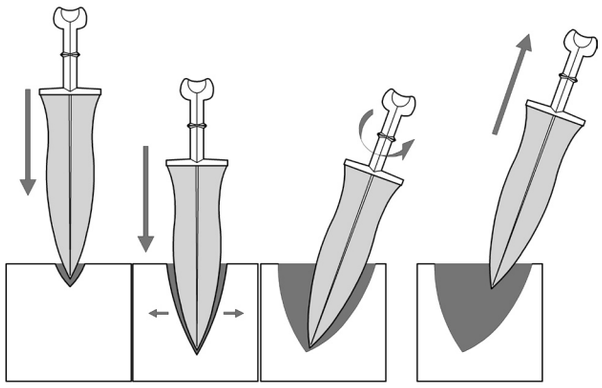


Fig.IV/4: schematization of the wounding capacity of the pugio. Its ability to produce a very serious wound is evident. (drawing by the author)

Hand-to-hand combat is a phase of a certain type of combat which is not characteristic of all peoples or of all the historical periods in which we meet the Roman army. This statement is reinforced by the observation that the geographical distribution of the archaeological finds of the Pugiones is not equal in all The Empire, but limited to very precise areas[39].

Finally, if we examine the statistics of the regions where the target corps were the *pugio* struck the body - which can be deduced from quotations from the classics[40] - we have further confirmation of the fact that the pugio was mostly used in very close combat and prevalently to strike victims from above. In fact, wounds on the upper zones (neck and heart) make up 92.85% of the total.

We have seen that the archaeological finds of the Pugiones almost totally coincide with the provinces of Britannia, Hispania, Gaul, Germania Inferior (the most numerous), Germania Superior, Raetia, Noricum, Pannonia and Dalmatia, whereas they are almost completely absent in the provinces of southern Europe, the Middle East and on the African continent. Michel Kazanski[41] explains that for the ancient writers it was very simple and practical to use the military tradition of a people as an ethnographic index rather than using other characteristics. In fact, for the barbarians war held an essential role, and the high militarization of funerary contexts is proof of this, added to the fact that the first confrontation/conflict between the Romans and a barbarian population was essentially of a military type. Whereas territories, idioms, civil and commercial activities of the various groups were so vague and fragmented that they did not allow a real and useful distinction, the knowledge of how a people fought made it possible to understand how to prepare oneself to face it in a practical manner. This historical and ethnographic distinction corresponds with archaeological finds. Indeed, according to the archaeological finds of different types of weaponries, we can distinguish two main groups of populations located in two well-defined areas. The area of central and western Europe, which was inhabited by geographically stable populations, represented by the Germans, the Celts (including Geto-Dacians), the Baltic and Finnish people on the banks of the Baltic Sea, whereas the area of central/southern and eastern Europe (Scythia or Sarmatia of the ancient written sources), which were represented by Indo-Iranian nomads such as the Sarmatians

[37] Storia Romana, book XXXVIII, par. 49;
[38] Marco Scardigli, "la lancia, il gladio, il cavallo";
[39] see chapter "II- geographical distribution";
[40] About this topic, see chap. " VIII – classic bibliography";
[41] "Roma e i Barbari, la nascita di un nuovo mondo", capther "Le armi dei barbari dal I al IV secolo d.C." p. 140 author di Jean-Jacques Aillagon. ;

(Roxolani, Aorsians, Siracians etc.) and Alans.

Studying the funerary context of these populations during the Roman age, we can deduce that there were two completely different battle settings: that of the Germanic-Celts and that of the Indo-Iranian.

The Germanic-Celts wore weapons belonging to the La Tène culture (the last centuries B.C.). Spear heads in the shape of flames and leaves have been found, javelin heads with a double hinge, wooden shields in a round shape with umbo and a semi-spherical calotte (made to protect from launching weapons) or in fishbone (for hand-to-hand combat), asymmetrical axes and finally short swords. Defensive weapons, excluding the shields, is rare and reserved for the heads. It consisted in armour in scales and thin plate, and helmets. For these warriors the infantrymen's role was the most important, whereas the role of the cavalry was not very important, left to supervisory functions, the pursuing of fugitives, and as a means to transport the cavalrymen to the place of battle (where they would descend from their horses to fight as infantry). It is necessary, however, to remember that where the Thracians lived on the Danube frontier numerous tombs of *catafractarii* have been discovered (cavalrymen with heavy armour).

The Indo-Iranian populations, at least until the II century B.C., were exclusively horsemen, they did not use shields but often armour. Weapons for long-distance combat were predominant, such as the bow with tri-lobed arrowheads. The swords were long and pointed (the most ancient had a pommel in the shape of a ring) and were worn attached to their belt, in contrast with the Roman cavalrymen, who generally carried them on a baldric over the shoulder. On the other hand, daggers were very widely used and worn secured to the legs. The defensive equipment consisted of helmets in thin plate, scales armour and ring mail. The description made by Plutarch of Crasso's defeat in the battle of Carrhae in 53 B.C.[42] is very helpful in understanding the Indo-Iranian nomadic people's combat techniques. *"*The enemies deployed the armoured cavalry in front against the Romans, who were surrounded by other cavalrymen. The sand on the ground was churned up and rose into the air creating a dust storm. *The Romans could no longer see nor make sounds. Gathered into a small space, they were struck and they fell one on top of the other, slowly dying: racked by unbearable pain they rolled onto the darts, which broke off into their wounds. In an effort to pull out the heads, which had penetrated into the nerves and veins, and bent over like hooks, they ended up destroying themselves and tearing themselves to pieces by themselves. In this way many died, whereas the survivors had exhausted all their strength..."* In battle against the cavalry there is no contact, not even hand-to-hand, making the gladius totally useless, and even more so the pugio.

This analysis gives us an explanation as to why there are archaeological finds of the pugiones distributed in territories where Germanic-Celts existed, whose combat was based on infantrymen and the desire for physical contact, whereas, where there were populations with a different war set-up, the archaeological remains of pugiones are not present. Also in this case, we have proof of the great adaptability of the Roman army, both in we s flexil st

advantageous manner. Vegetius explains that *"in every battle it is not so much the great number and inexpert courage to secure the victory as the refining of technique and practice ... In fact, how could a few Romans have won against the horde of Gauls? What on earth made them dare to move against the Germans, being so short themselves?"*

The II-III century A.D. is a crucial period in history for our study in order to understand the end of the use of this weapon since it coincides with the decline of the infantry, which was more and more deficient both in numbers and in the quality of military preparation, and the full development of the cavalry. The reason for this was, while the conflicts in the high Empire were of a "regional" nature against individual barbarian tribes (where the only exception was the battle of Teutoburg in which an ample coalition of clans developed), after the end of the II century A.D. the strategic and military set-up of the barbarian populations changed. As Claus von Carnap-Bornheim states "*the pacific contacts and the armed conflicts with the armed Empire, as well as the processes such as the formation of solid regional alliances and between large tribes, determined the very rapid development in the military field; this concerns the equipment and the logistics, but also the tactics and strategy."*[44] In fact, under the pressure of the Eastern Germans (Goths) entire Germanic populations, Marcomannians and Quadi in the first place, joined forces and began to crowd on the Rhine-Danube limes. The strategy of imperial safety, which reached its highest level of efficiency under Hadrian with the creation of the fortified limes, defended by immobile military forces (infantry), was efficient against the barbaric infiltrations of a low and average intensity. These barriers, which were continued to form the Limes, were later completely inadequate against large scale attacks. The use of *"concentrated, mobile troops, sent in reconnaissance to intercept or deactivate enemy attacks"*[45] was useful in confronting these invasions. The fundamental instrument in this type of defence was represented by the cavalry, a completely mobile military corps, which was established – or at least strengthened – by Emperor Gallienus (218-268 A.D.). The strategic advantage of the mobility (displacements of approximately 80 kilometres a day) favoured the predominance of a tactic of launching weapons and the appearance of a cavalry equipped with striking weapons such as the Ala I Ulpia Contariorum Miliaria, established by Traianus, and the Ala I Gallorum et Pannoniorum Catafracta created under Hadrian. These strategies, however, were to the detriment of tactical advantage which the legionary infantry had over the barbarians, and, ultimately the reason for the decline in the use of the Pugio.

Furthermore, as Vegetius[46] testifies, the late-Roman formation was mainly based on defence. In fact, the late imperial units behaved more like a Greek phalanx than as a classical Roman legion, deploying themselves with a wall of shields while waiting for the enemy to strike, thus giving a further logical explanation for the end of the use of the Pugio. A lack of men and training prompted an avoidance of complicated manoeuvres which would have provoked imbalance or asymmetry in the deployment, favouring a predominant use of both flung weapons and spears, the latter were not thrown but thrust towards the enemy in order to stop their rush, as well as the adoption of the "fulcum"[47], a type of *testudo* with shields placed

[42] "lif
[43] Veg
[44] Cla
exp
[45] Edv
[46] Veg
[47] Mai

pag 137, "Roma e i Barbari, la nascita di un nuovo mondo". Catalog of the

a Ed. BUR 1997.

ISBN: 9781407309996

obliquely on the front part, fit to handle the charge of the cavalry. The use of longer swords also implies that their use was for cutting and that there was a loss of the compact nature of the formation during battle[48].

The Ancient Latin Writers unfortunately have not passed anything down regarding the technique of use of this weapon, also if the fencing teacher Francesco Antonio Marcelli, in his treatise "Fencing Rules" from 1686, lets us know that Gaius Aurelius Scaurus wrote a treatise on fencing which unfortunately has been lost. Valerius Maximus[49] relates in an indirect piece of news on this author: *"The consul, Publius Rutilius, in order to train the soldiers better to manage their weapons went to call for the instructors from the school of gladiators of Gaius Aurelius Scaurus. In this way our legions have learnt a more rational technique for defence and offence. I believe that is right. Courage is not enough; it must be completed with more thorough training. Those who fight in the arena, precisely due to the job they have, know very well how to fight hand-to-hand"*. We can deduce from this that right from the Roman Age an *ars duellarum* has existed, which has been handed down on treatises which have not survived to our day, and which by tradition could presumably be found in subsequent combat manuals. The oldest treatise that has survived to our day is that of Messer Fiore of the Liberi from 1409, entitled "Flos duellatorum". The usefulness of examining these manuals is not in defining if the Roman combat technique has survived for thousands of years, passing untouched through the Medieval Age, but in attempting to understand by means of the most ancient sources what the use of the dagger might have been and if this could be compatible with the Roman Age. In this manual the use of a dagger is related, which *"cum cuntos superem qui possunt bellica mecum/Poli minibus fractis ornatos porto lacertos"* indicates by means of verses, the ability to defeat adversaries with this weapon. The blows are distinguished in "overhand" (landed from above to below) and "underhand" (launched from below to above), describing moves and counter moves. There are 66 actions described between someone armed with a dagger and an unarmed fighter, whereas there are 11 moves between two duellists both armed with daggers, and there are 8 actions described between a duellist with a dagger and the other with a sword.

Modern commentators of the treatise allow themselves to stress that the overhand strikes are more useful against an enemy wearing armour due to the force of the blow, which makes it possible to break the rings on a lorica hamata or to enter between the plates of a scale lorica. It is a fatal blow and quick, but easily fended off, preferably used by hit-men to commit an assassination or to eliminate a sentinel. The anatomical region of the target is the hollow between the neck and the collar bone, frequently fatal.

The underhand blows, instead, being less powerful, are preferable against enemies without armour, and are useful in war, in a fray situation, or against an assault of betrayal. As they are very quick, they are difficult to see and therefore to fend off. They can be inflicted at a greater distance from the enemy in comparison with the overhand blow.

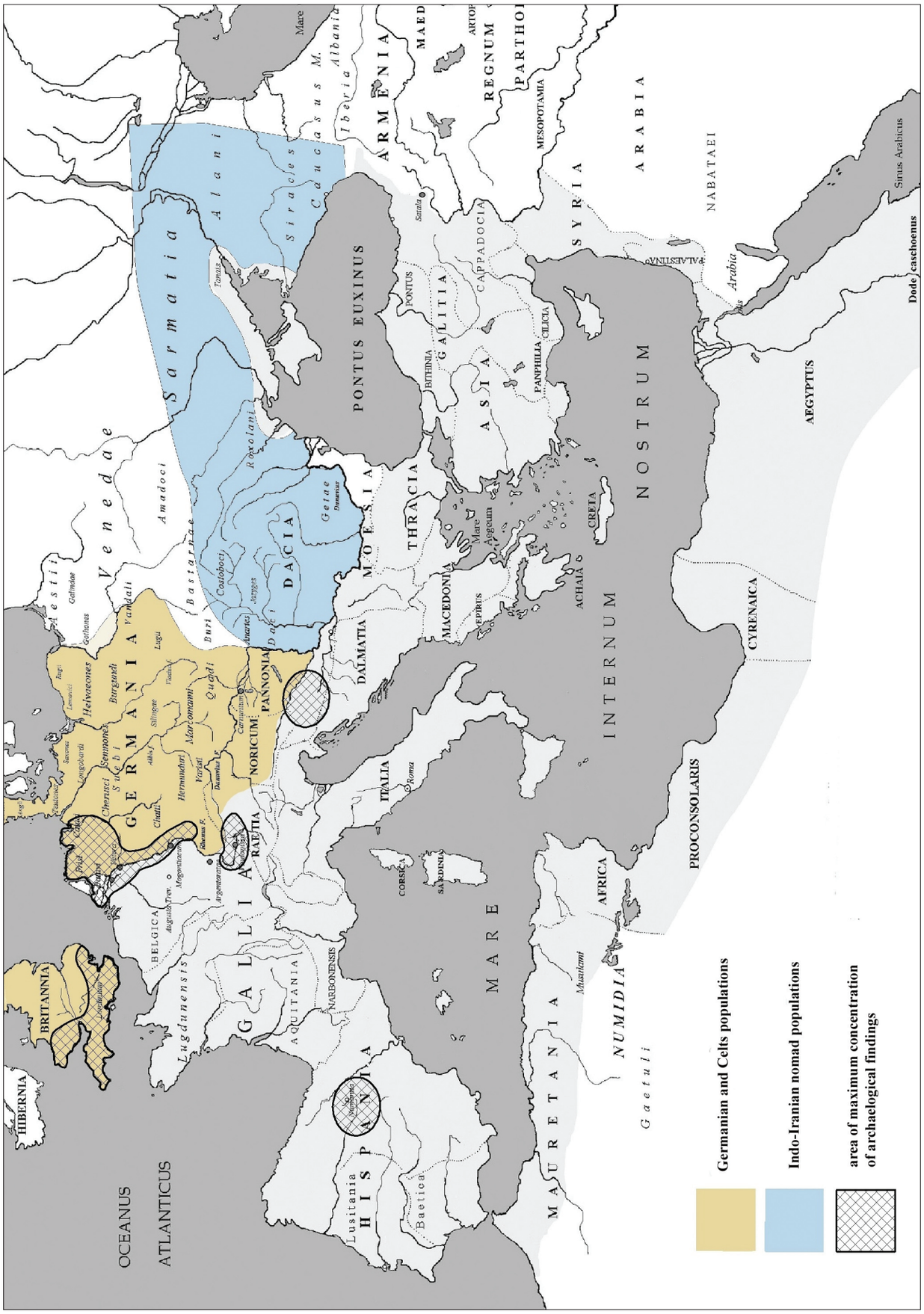
The authors of this work point out *"the danger of the short, side weapon in comparison with the long one, since, whereas it is possible to leave a duel with swords unharmed thanks to superior athletics, it is very difficult not to be wounded in combat with a dagger, even if you win, and it is very frequent to have a doubly fatal outcome due to the short distance of combat and consequently the rapidity of the actions"*.

This analysis of a treatise from the Renaissance under certain aspects is a cultural digression from the context of analysis of the Roman weapon, but it is useful in helping all those who do not know the action of a dagger just how dangerous it is, by using references as close as possible to the Period of Ancient Rome.

[48] Andrea Freidiani, "L'ultima battaglia dell'impero Romano – l'esercito del V secolo e la disfatta finale contro i vandali", Ed. Universale Storica Newton;

[49] "Factorum et dictorum memorabilium", II, 3, 2;

Fig. IV/5: geographical distribution of the populations of Germanic/Celtic and Indo-Iranian origin, and localization of the areas in which there is the greatest concentration of archaeological finds. It is easy to notice the geographical coincidence between the latter and the Germanic Celts.



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CHAPTER V
CONSTRUCTION TECHNOLOGY

In this chapter we examine the pugio from a purely technological prospective, looking closely at its various components, construction techniques and materials used. It is important, however, to keep in mind that we are studying ancient weapons which are subject to variations in construction typical of that world and, therefore, we can always find exemplars which are not perfectly covered here.

From the examination of archaeological findings we know that the pugiones varied a lot in size, from a minimum lenght of about 28 cm to a maximum of ca. 45 cm, with rare exceptions going beyond this limit. In any case, within each individual period they seem to be homogenous, so that most differences are noted in moving from one type to another, and in particular – as previously seen – in the change to type III, the final one.

Generally speaking, the blades had an average length of 18 to 30 cm, and a width of 3.5 to 7 cm. The hilt was normally smaller than that of the gladius, varying from10-11 cm long in total, and made in a shape which was definitely less appropriate for demanding and prolonged use than that of the gladius.

Up until the end of the Imperial Age the average weight did not exceed 140-160 grams - even if there is no lack of even lighter exemplars, as for example some blades preserved in the museum of Vindonissa (Brugg, Switzerland) with a weight of approximately 65-66 grams[1]. We find decidedly heavier weights in the great exemplars of the final period, which could arrive at a weight of 350-400 grams, which should be considered as maximum limit for our weapon.

Finally, metallographic analysis has emphasized the Roman smiths' thorough knowledge of metals; they were able to work and combine both the hardest metals (with characteristics similar to steel) as well as the softest ones. In fact, use of the former meant being able to obtain and

As with all cutting weapons, the pugiones are also composed of two main parts, the blade and the hilt, whose construction characteristics we will now look at.

Blade: the metallographic examinations carried out recently on Roman weapons[2] give us important information on the technical ability of the Roman blacksmiths. It is important to remember that the iron they used often had qualities similar to those of steel as charcoal was used in the fusion as a reductant, so forming mild steel. Pliny tells us with surprise of the result of the fusion of iron-bearing minerals with coal as they acquire the consistency of a liquid almost similar to water (*"mirumque quum excoquatur vena, acquae modo liquari ferrum"* [3]). In general, right from the earliest times their technology enabled them to produce carbon steel, to solder it, submit it to annealing and make damascened blades[4]. This technique is particularly advanced and consists in the fusing layers of pure iron with others of mild steel, which is harder, by means of hammering the forged packet at around 1250°C. The bar obtained in this manner is then folded over and hammered to the original thickness again. By repeating this process even just a few times, a bar having many alternating layers is formed. This type of processing not only increases the carbon content of the wrought iron but it also makes it react well to the tempering; and the alternate metal layering also improves the mechanical characteristics as well as giving a pleasant decorative effect to the surface of the object.

With the final polishing the various layers become noticeable, thus obtaining the so-called damascening effect.[5] Despite the fact that it was already known to the Etruscans from the IV century B.C.[6], it is evident that this process was the privilege only of the most qualified workers who had advanced metallurgic knowledge; but already from the times of the Republic we find many

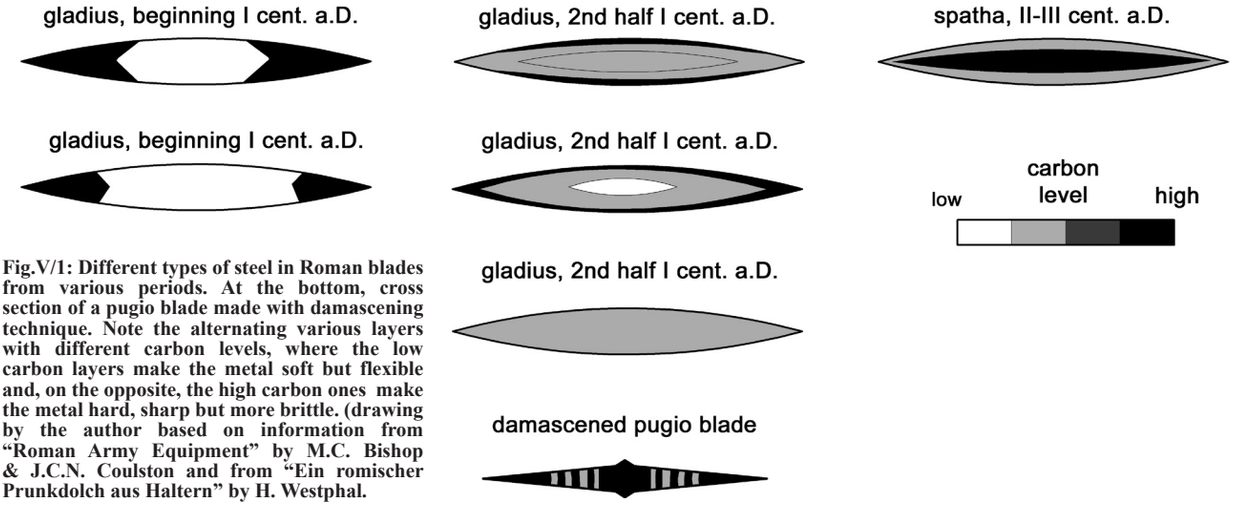

Fig.V/1: Different types of steel in Roman blades from various periods. At the bottom, cross section of a pugio blade made with damascening technique. Note the alternating various layers with different carbon levels, where the low carbon layers make the metal soft but flexible and, on the opposite, the high carbon ones make the metal hard, sharp but more brittle. (drawing by the author based on information from "Roman Army Equipment" by M.C. Bishop & J.C.N. Coulston and from "Ein romischer Prunkdolch aus Haltern" by H. Westphal.

1 Unz C., E. Deschler-Erb," *Katalog der militaria aus Vindonissa*";
2 Among them we mention those made with advanced techniques by dr. D. Horstamann;
3 Plinio, "Nauralis Historia", XXXIV, 146
4 M.C. Bishop & J.C.N. Coulston, "*Roman Army Equipment*", Oxbow books;
5 M. Sachse, "*Damaszenerstahl*", 1989;
6 Claudio Giardino, "*I metalli nel mondo antico*", Ed. Laterza;

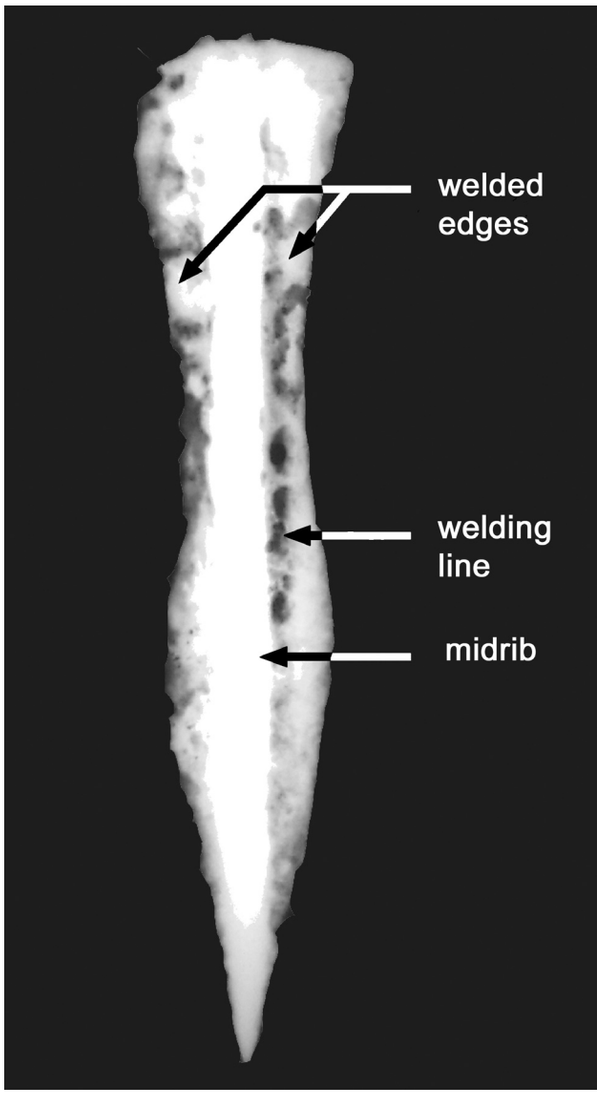

Fig. V/2 X-ray of a blade which was made by soldering its two edges to the central core by the technique of boiling. We can clearly see the soldering lines, which are inevitably uneven. Where the colour tends towards white are the points of better quality, and vice versa, in the darker areas the resistance of the soldering is not so high. The white colour of the central core demonstrates its resistance and width. (x-ray by the author).

weapons made by this technique. For this purpose we cite a gladius dating to the end of the III-beginning II century B.C., produced with a very similar technique[7]. As far as the pugiones are concerned, instead, we find many exemplars made in this manner from the time of Augustus. Among these, one of the most representative comes from Haltern, whose edges are each made of five layers of differing

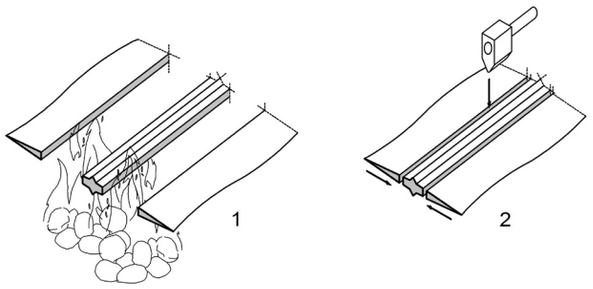

Fig. V/3: illustration of the jointing of two metallic pieces by the technique of boiling: 1) heating of the pieces up to a doughy condition 2) followed by fusion using high pressure and/or beating (drawing by the author).

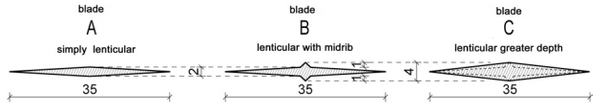

Fig. V/4: shows three types of cross-section. "A" is simply in a lenticular shape; "B" is the same size as the first but with a reinforcing midrib on both sides; and the last one "C" has a lenticular shape but with greater depth, and the same total as "B". The first two are frequent in pugiones, the third is only theoretical to support our calculations. Values in m.m. (drawings by the author).

composition (three of iron and two of mild steel)". There are at least two other blades known from the same area with similar characteristics[8] In the second half of the I century this fascinating but complex technique seems to have been partially set aside in favour of a simpler methodology, as it has been possible to deduce from an analysis of the metals of gladi and spathae from various periods, to then return in fashion towards the second half of the II century onwards (fig. V/7). In fact, the blades of the pugiones from the final period, especially those from the III century, are frequently made not from a single bar of iron but by means of damascening[9].

The blades, whether made from an even bar of iron or from a packet of different layers, were created by means of forging[10] the entire piece or by the sophisticated technique of "boiling".

Boiling, used to solder two pieces of iron inextricably together, has been known since the XIV century B.C. and consists in heating the two elements to a pasty state and then uniting them by means of great pressure or beating[11]. Weapons made in this manner have quite a solid central element of generous size, onto which the two lateral edges are soldered. The resistance of the material was guaranteed by tempering, known to the Romans since the earliest times[12].

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[7] D. Kmetič, J. Horvat, F. Vodopivec, "Metallographic examinations of the roman Republican weapons from the hoard from Grad near Šmihel", 2004;

[8] WmfA Münster, n. inventario 56/267 e 68NS;

[9] M.C. Bishop & J.C.N. Coulston, op. cit.;

[10] also called "forging", exploits the physical characteristics of the metals which, if exposed to heat, tend to soften, allowing the shape to be formed with considerably less effort. It was carried out in the forge, a furnace equipped with a forced ventilation system made up of a large bellows inside which the iron was heated to 800 and 900 °C. At this temperature it assumes a red, orange-red colour until it becomes white. Following this, by means of skilful and vigorous strikes of a hammer on the anvil, the smith shaped the piece by making it thinner, folding it, modelling it in all ways. The logic of forging is that the metal, when it is pressed between the head of the hammer and the anvil, changes its shape, making it become thinner and expand laterally in volume. Each time the metal bar became cold, the process had to be repeated. The experience of the smith allowed him to know exactly when the colour of the metal meant it was at the right temperature to be hammered (for this reason many of them worked in the dark or in dimly-lit environments) estimating how the hammer bounced back from the sound it made and from the extent to which the metal bent under each strike. The use of mallets, a large type of mechanical hammer, which were made to move by the force of water in mills from the earliest times, was typical of the richer smiths and of structures which were organised to produce at an industrial level. The mallet permitted the initial piece of metal to be shaped roughly and more rapidly and so finishing the weapon quicker.

[11] Claudio Giardino, "*I metalli del mondo antico*", ed. Laterza;

[12] Marziale, "Epigrammi", XIV-32;

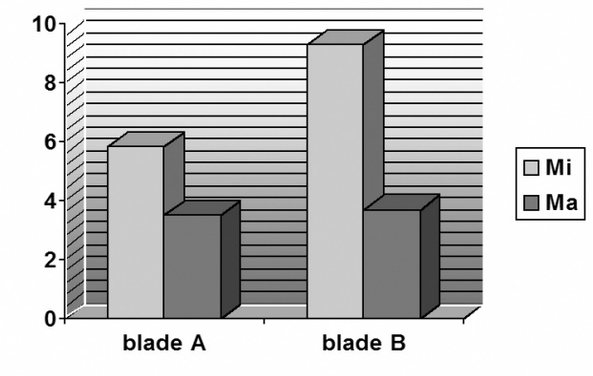

Fig. V/5: graph showing as, despite slight increase of the mass (MA), the moment of inertia (Mi) of the blade – therefore its resistance to bending – has a significant increase (for the cross sections "A" and "B" see fig. V/4). For graphical reasons the value of the mass is in a scale of 1/10. (drawing by the author).

The **blade** is always double-edged, straight, symmetrical in comparison with the longitudinal axis, and never with parallel edges, consisting of the blade itself and the tang, the latter to create the hilt.

It is almost always endowed with a **midrib** (lack of this would be exceptional), not a very apparent element but which is very important from a technological point of view. Its main purpose was to improve the mechanical performance of the blades themselves. In order to verify whether and how far this may be true, some blades have been subjected to a mid section for structural testing[13], and the results are surprising.

At first it (blade A) was considered a blade with a simple cross-section -lenticular and with measurements typical for the pugio, without any type of stiffening - and the moment of inertia was calculated (Mi), which in our case determines – from a practical point of view – the capacity to resist force. The result was that *Mi* = 5.83 mm^4 against a mass *Ma* (in this case coinciding with the area) of 35 mm².

Following this we proceeded to test a blade with a cross section that was reinforced by the midrib (section "B"), for which we obtain the result *Mi*=9.32 mm^4 and *Ma*=37 mm².

It is easy to deduce that the midrib is capable of increasing the resistance of the weapon by a more-than-significant percentage: about 60% in comparison with the simple cross section (fig. V/5); a decisive contribution at the expense of a negligible increase in mass, which equals only about 5% approx, and, therefore, does not affect the weight of the weapon. This means that also the consumption of ferrous material does not increase and, therefore, neither

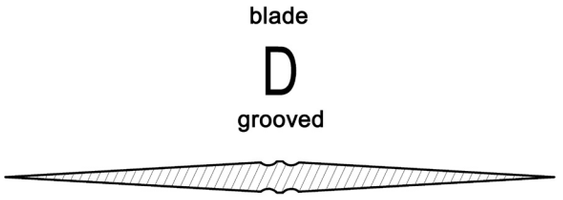

Fig. V/6: blade made with a central groove for the removal of material. This shape does not contribute to the mechanical resistance of the blade. (drawing by the author).

do the production costs, in addition the manageability of the weapon remains unaltered. The case of cross section "C", with a simple, lenticular cross section but an increase in depth, was only analysed in order to understand why the Romans (and the ancients in general) had to create an element like the midrib, which is not difficult to make but certainly not quick, when it would have been simpler for them to increase the depth of the blade.

In this case it emerges that the inertia Mi increases greatly until reaching even 46.6 mm^4, but the mass undergoes an excessive increase, arriving at a value of 70 mm^2, double that of section "B"[14]. The practical consequence of this is that a weapon is too heavy and, therefore, too expensive and heavy both for use, and logistic reasons including transport, movement of cargo and storage.

We notice that solution "B" is ultimately extremely intelligent from a technological point of view, capable of optimizing the mechanical characteristics of the weapon practically without contraindications. This advantage is of fundamental importance because a blade is subjected to considerable bending forces both when it penetrates and is extracted from a body, due to the inevitably irregular path it follows, with probable consequent bending if it is not strong enough. This is particularly true when the blade is rather fine, such as that of the pugio, which could easily become irremediably damaged. This also explains why the midrib is such a common technological element in the pugiones while it is so absent in the gladi; the latter, in fact, have a decidedly wider and thicker blade, strong enough in itself not to have similar problems. The pugiones, instead, had very narrow and fine blades, often too delicate to do without this precious aid.

A version of this type of rib is that of type "D" (fi.g V/5) which from a technological point of view is decidedly more efficient. Typical of the later period, it has been made without an increase in depth of the cross section, but by removing material from the sides. In this case, the moment of inertia not only does not increase, but, instead, it undergoes a slight reduction.

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[13] technical consulting by dr. F. Colicigno;

[14] Let us calculate the moment of inertia of the three figures A,B, and C. They can be considered with enough precision as a group of triangles, despite the actual sections of the original blades obviously being of a less regular shape, but this allows us to simplify the calculations by far, making them accessible even to lesser experts.
Given the moments of inertia of a triangle according to its base is *Mib*= bh^3/12
And related to its centre of mass *Mic*= bh^3/36, we have
- section A: *Mib*= [(35 x 1^3)/12] +[(35 x 1^3)/12] = 5,83 mm^4
- section B: *Mib*= *Mib*1 + *Mib*2 where *Mib*1 = moment of inertia of the lenticular part of the section and *Mib2*= the moment of inertia of the ribs on each side of the blade, and therefore

*Mib*1 = [(35 x 1^3)/12] +[(35 x 1^3)/12] = 5,83 mm^4
*Mib*2 = 2x [(2 x1^3)/36 + ((2x1)/2 x 1,3^2)] = 3,49 mm^4
from which *Mib*=5.83 + 3.49=9.32 mm^4
- section C: [(35 x 2^3)/12] +[(35 x 2^3)/12] = 46,66 mm^4

Let's now calculate the mass *Ma* for the three sections, which in this case is directly proportional to the area:
- section A: *Ma*= 2 x [(35x1)/2] = 35 mm²
- section B : 2 x [(35x1)/2] + 2x [(2x1)/2] = 35 + 2 = 37 mm²
- section C : 2 x [(35x2)/2] = 70 mm²

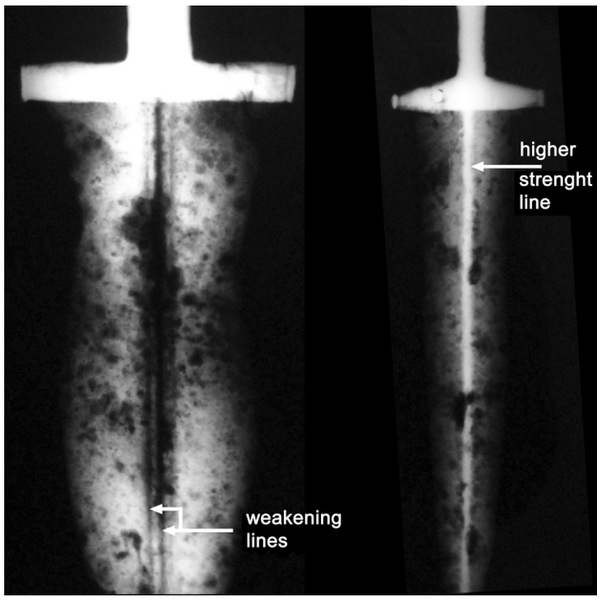


Fig. V/7: X-rays of two pugio blades made with different types of midribs. The one on the left has a "D" type cross section, whereas the one on the right is a "B" type. The dark parts indicate where the resistance of the metal is at its lowest, whereas the light parts where it is at its maximum. (X-ray by the author).

The practical confirmation for the above-mentioned calculations is found in X-rays of two pugiones. The darker parts are where the blade resistance is less (in many places as a consequence of material loss by oxidation), whereas the lighter parts show the opposite, or rather where the resistance is greater. The more the colour tends towards white, the greater the resistance. The exemplar on the left, dating to approximately mid II century, has a "D" type midrib, and it can be noticed how its colour appears to be of the same gradation of white as the surrounding areas, which means it does not have any increase in resistance. Instead, two dark lines of weakness appear where the grooves have been made. In the blade on the right, instead, made with a midrib of the "B" type, a white line of maximum resistance is quite evident, which corresponds with the midrib, and is much lighter than the surrounding area. The increase in resistance which this blade receives from it is more than evident.

These grooves could be of two types: in the first they appear as little more than longitudinal lineations, variable in number and generally rather rare. With the sole exception of the Vindonissa area, in which they are curiously present in all findings (14 exemplars out of 14[15]). We cannot help but notice the analogy with similar elements present on a Celtiberian exemplar form the III century B.C. originating from the necropolis of Eras del Bosque (Palencia, Spain)[16] and a Roman one from Oberaden (Germany) from the end of the I century B.C.[17] The latter also has a "B" type midrib.

The second type, instead, is more specifically the above-described "D" type (fig. V/6), in which there are only two rather prominent grooves.

Their function is, however, dubious. It is a fact that, whereas the "B" type midribs are peculiar to pugiones, the grooves – both as simple lineations and as larger markings

Fig. V/8: blade of a pugio slightly grooved in the middle (photo by the author, courtesy Vindonissa museum, Brugg – Swiss)

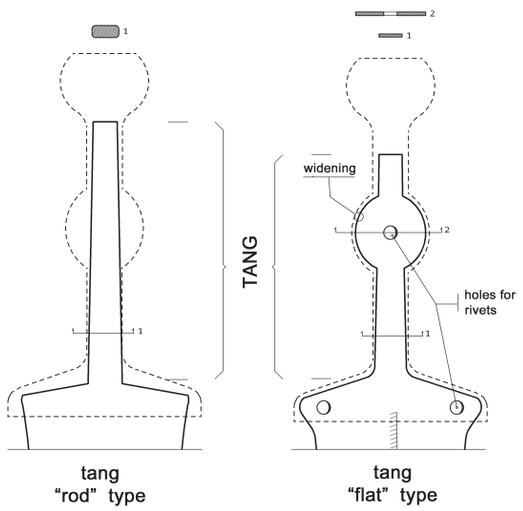


Fig. V/9: the two types of tang. (drawing by the author).

– have always been widely present among the Roman weapons. We often find them in "pompei" type gladi, from the second half of the I century, and also in spathae, especially from the II-III century[18] (among which we cite, for example, two exemplars from Augusts, from the III century, and three from the collection in the archaeological museum of Zagreb, dating to the end of the II century[19]).

The structural function does not appear very convincing as they are concave and not convex and, therefore, as we have already seen, did not contribute in any way to increasing the resistance of the blade.

Not having any confirmation, we can only logically deduce that they simply had a decorative function; which is hardly surprising as it is already present for the same reason on some Celtiberian daggers[20]. The possibility that they could have been used to lighten the blade is hardly to be taken seriously, as we have already seen that a pugio had an average weight of 150 grams, and was, therefore, already light, and hence there would not be much sense in using this to lighten the weight by a few grams.

In order to give a complete overview, we must mention a frequently accepted theory, and with which we cannot agree. These grooves could have a function of acting as a channel for the "blood flow" in order to maximise the haemorrhaging of the wound, which derives from eastern-European weapons[21].

[15] C. und. E. Deschler-Erb, op. cit.;
[16] Carmelo Fernandez Ibanez, "Las dagas del ejército altoimperial en Hispania", Gladius XXVIII, 2008;
[17] M.C. Bishop & J.C.N. Coulston, op. cit.;
[18] Michel Feugere, "*Weapons of Romans*", ed. Tempus;
[19] C. Unz. E. Deschler-Erb," Katalog der militaria aus Vindonissa";
[20] Fernando Quesada Sanz, " Armas de la antigua Iberia, de Tartetos a Numancia", la Esfera de los Libro;
[21] Edit B. Thomas, "Helme, schiude, dolche", Akademiai Kiado, Budapest;

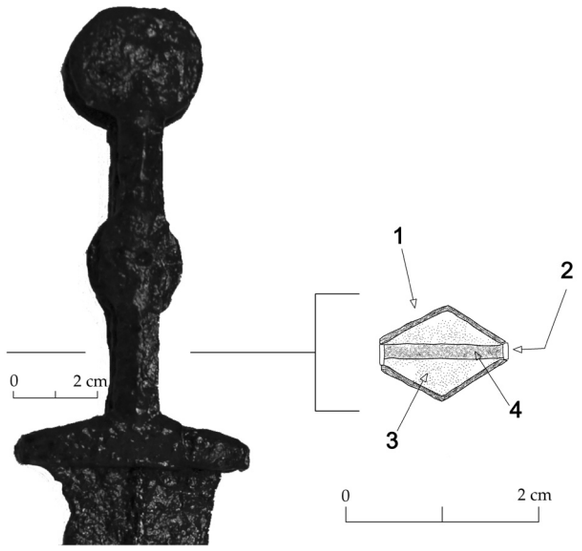


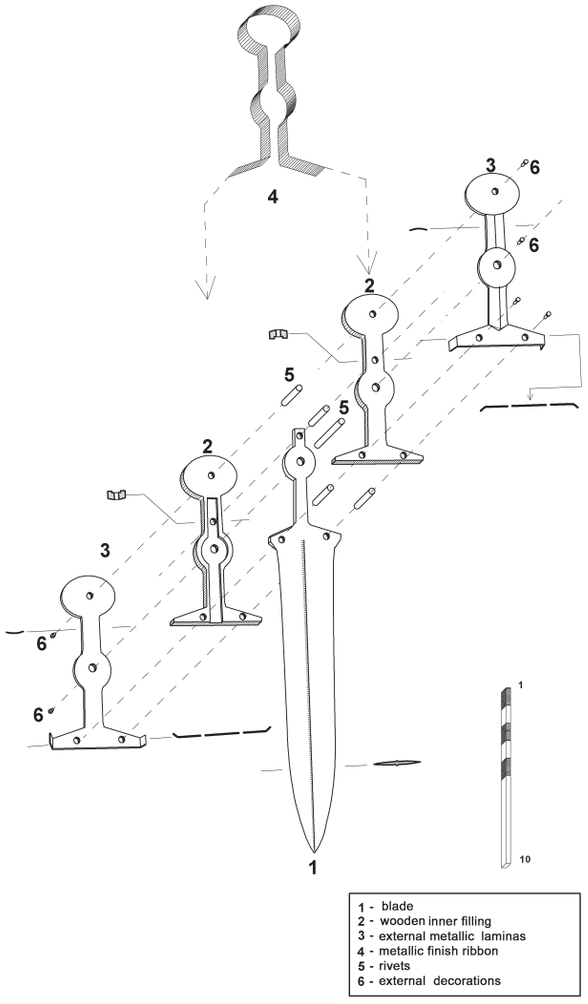
Fig. V/10: on the left is an example of a pugio hilt including the most common features. It is a Republican exemplar on which we can see the guard with its overhanging edges; the grip cross section is vaguely diamond shaped with a clearly defined knob in the centre together with a rivet; and finally the upper pommel, also circular and with a central rivet. On the right, a cross section of the grip made by quite a common method and, therefore, to be considered a stereotype, in which we find:
1) xternal metallic lamina;
2) lateral, metallic finishing ribbon, with both a decorative and sealing function for the grip at the point in which the laminas meet at point;
3) material for filling the inside, which could have been wood or bone;
4) blade tang; (photo and drawing by the author).

The meeting point between the blade and the hilt is the **tang**. Always forged in a single piece together with the blade, it is made in two different types: one which is simpler and more solid, with a cross-section tending towards a rectangular shape, which reminds us of a smaller version of the gladius, and which we will call the "rod" type. Then other is more complex and forged in a flat shape, which we will call the "flat" type. The latter type did not have a regular cross-section, but rather followed the shape of the profile of the grip. In the central part there was a circular enlargement (fig. V/9), basically of the same size as the one on the grip. This latter type also had holes which rivets passed through to attach the hilt.

The technical motivation which encouraged the tang to be forged in this, apparently more complicated, way, it not completely clear, but was most probably aimed at facilitating the attachment of the hilt and the sealing of the spaces inside. The sealing was often done in hard wood, but there are quite a few exemplars which show traces of it in bone.

The hilt: varied in size, about 10 cm long and had a depth of about 1.5-1.8 c.m. It was composed of three main elements: the hand guard (or guard), the grip and the superior pommel. In some cases these three elements were not separate but formed part of a single piece.

The **hand guard** was never accentuated and its overall size was always moderate. Its main function was to allow a solid point of attachment between the hilt and the blade, besides holding back the hand of whoever held the weapon. As seen in chapter I, often – but not always – two openings were made through it, which were also present on the blade below, through which rivets were affixed in order to obtain a solid attachment of the two elements: hilt



COMPOSITE TECHNOLOGY

Fig. V/11: stylized blow-up drawing of the construction components of a hilt made by "composite" technology. (drawing by the author)

and blade. It generally passed over the edge of the upper profile of the blade by only a few millimetres, and in some case was practically a thin strip, even though there are not a few unusual exemplars (see exemplar no.30 Chap. IX), showing the opposite. Considering the overall small size of the weapon and its light weight in contrast with the gladi it was not necessary to create this construction element in order to facilitate the perfect positioning of the weapon in the hand, nor was it necessary to assign it the function of balancing the weight, which, due to the way it was conceived for the pugiones, it is not able to do. In contrast with all the other parts of the hilt, it had an altogether quite simple geometrical shape, something like a metal element in a parallelepiped shape, which varied only in the first two periods in the upper part, which was slightly inclined (Fig. I/7 chap. I).

The **upper end pommel** could be in a circular, semicircular or bi-lobed shape, depending, as we know, on the historical period. In the gladi it was an extremely important component because it was meant to facilitate the brandishing of the weapon by leaning against the wrist and thus creating a greater lever. However, with the pugiones this could not happen because its size is no where near

Fig. V/12: detail of hilt in composite technology. As well as showing quite clearly the various technological components, a metallic element on the pommel with the function of increasing its durability is indicated (point "1"), working together with the central rivet placed opposite. (photo by the author)

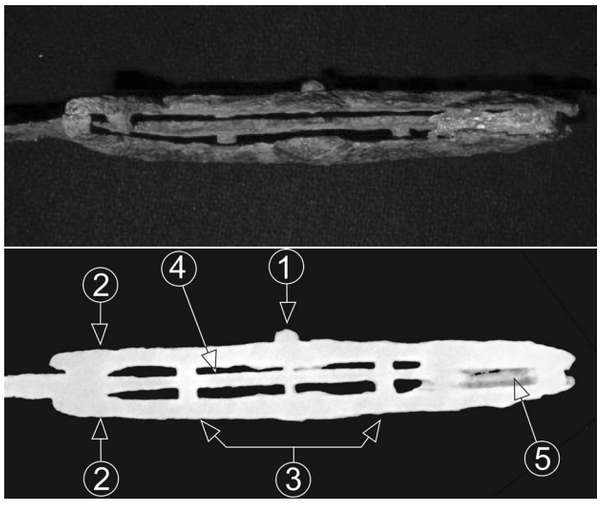


Fig. V/13: this hilt is shown in its natural state (top image) and under X-ray (lower image). In the natural one we can clearly see on the right the surviving part of the metal ribbon used to finish off the sides, which is one of the very few we have trace of. However, the rest of the technological elements are not so clear. They can, however be seen on the weapon under X-ray, in which we can easily identify:
1) passing rivet fixing hilt to blade. The upper part protrudes on the outside and acts as a decorative element;
2) external metallic plates;
3) internal rivets. Just like the rivet at point 1, they had the function of fixing the blade to the hilt, but in this case they are completely on the inside and not externally visible;
4) blade tang;
5) fragment of metal finishing edge on the side.
(photo and X-ray by the author)

adequate for this, so its practical function is limited to that of preventing the weapon from accidentally slipping out of the hand. There were almost always one or two rivets placed in it, which were quite often decorated on their visible side so as to embellish the weapon as a whole.

The **grip**[22], whose cross section was midway between a circular and an irregular diamond shape, was not generally deeper than the closing pommel and the hand guard. Its most important characteristic, which we find in all known pugiones, is that it always has a central bulge in a more-or-less round and generally not too large shape. Its practical function is not essential and is probably only that of improving the grasp. It may be hypothesised that it was rather a decorative element, related to tradition, rather than practical. We can now look at the construction technology of the hilt while duly remembering the above-cited warning that the lack of standardisation of ancient weapons very often makes it impossible to group them in rigid patterns, as it is always possible to find exemplars which are not possible to be placed exactly in the typologies that we are about to describe.

We can divide them into two main groups which,, we

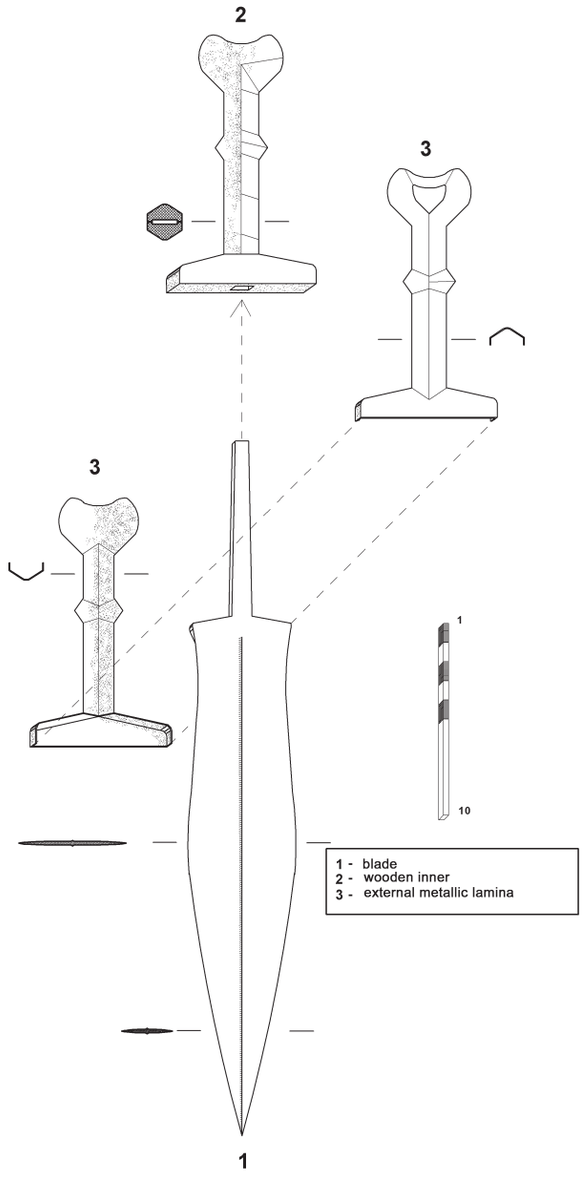


Fig. V/14: stylized drawing in blow-up of the construction components of a hilt made by "tight insertion" technology. (drawing by the author)

will call "composite technology" and "tight insertion technology":

Composite Technology:

this can certainly be considered the most distinctive technique for the construction of the pugiones, and again taken directly from the Celtiberian daggers. Together with the morphological characteristics of the various components used, it contributes decisively to making these weapons utterly impossible to mistake for another, and unique in their genre.

It was certainly an advanced construction method and not easy to carry out; and it was not appropriate for mass production; it required the rather laborious work of a skilful artisan, where nothing could be overlooked. Precisely for

[22] meaning the portion of the hilt between guard and pommel, hence that held by the hand.

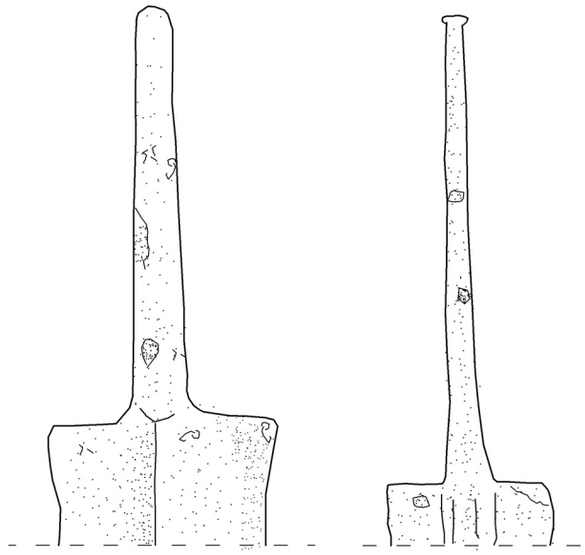


Fig. V/15: examples of tangs of the "rod" type. They appear to be of very simple geometry, completely free of central enlargements or holes for the passage of rivets – absent also on the blade – and of beating on the top. (Drawing by the author).

this reason it bestowed a charm on the weapons which other construction methods could not achieve.

There are six main technological components which contribute to this technique:

- two internal plates of organic material,
- two metallic laminas, or external plates, covering the internal ones,
- a metallic ribbon for finishing the edges (when present),
- a series of metallic rivets.

From an examination of archaeological findings we know that the **internal plates** are almost always lost, which leads us to suppose with a good degree of certainty that they were often made of wood, which would be compatible with their function and their position. This material is economical and easy to work, easily adjustable to the blade tang and, therefore, able to ensure an excellent adherence to it. The contraindications are that it is not of any value aesthetically and suffers wear and tear from long contact with hands, however, being internal, in this case there is no problem. Some exemplars have, nevertheless, been found which show this component in bone, even if limited to Period II.

They were covered by **external plates**, still in iron, which were no more than very thin laminas, more or less decorated.

However, one should not make the mistake of considering these only a coating without any structural function; these actually made up the resilient part of the hilt, as they were sufficiently solid and well anchored onto the blade tang. On the other hand, it is possibly more correct to consider the internal plates as a secondary element as they had the sole function of filling the spaces left empty by the outer ones. The examination of some weapons which have lost both internal plates but have the external ones still in good condition and well attached to the tang, shows the hilt completely solid and perfectly suitable for a hypothetical use, without being at all affected by the lack of the internal components.

Fig. V/16: detail of a pommel in which we can clearly see the three rivets placed at the top. We guess that, other than being for decoration, they are necessary to fix the lateral finishing metal onto the grip. This exemplar was made by "composite" technology.

Some other occasional elements confirm this hypothesis; on some hilts, on a level with the upper pommel, whose external plates could easily undergo small bends due to its circular shape and the presence of a single central rivet (fig. V/12, point 1), some metallic elements have been noticed on the inside, whose function was to prevent this from happening; they were obviously created because the material on the inside was not considered to have any capacity for resistance.

To conclude, the external plates were certainly the most important part of the hilt. In contact with the hand and almost always made with great attention to detail, at times embellished in various ways, they were what gave it its ultimate appearance.

In order to summarise a description of the production process we can say that at first the two internal plates were made in the desired shape, and they were positioned in contact with the tang on both sides, and then they were attached with one or two metallic rivets. After this they were covered with the two external elements, which were placed on the two faces of the hilt, and at times the sides were finished off with a fine lamina of precious material such as silver or orichalcum. In the exemplars in which this lamina is absent, we see that the internal plates are often in bone, a precious material and of pleasant appearance, which did not require any finishing. Some experts hypothesise that their external part, which is visible on the sides, was coloured with copper oxides[23].

Everything was fixed together by means of a variable number of metal **rivets**, a maximum of 6, in various sizes, some concerning all of the described elements, others concerning only the internal ones. Finally, the outside was finished off with decorative elements of varying degrees of value, insets and engravings.

In order to aid full understanding of the description above we included (fig. V/11) a diagram blow-up of this technology, from which the position of the various elements and the relationship between them is clear.

The fine lamina covering for the lateral edge (element no.4 in fig. V/11) has rarely survived, most likely due to the ease with which it could become separated from the rest.

Figures V/12 and V/13 show some exemplars built with the technique, where the double-laminated structure is quite visible. We can see in no. V/11 all the main technological elements, except for the internal plates which have

[23] Herbert Westphal, "Ein römischer Prunkdolch aus Haltern";

Fig. V/17: detail of the pugio on the stele of Firmus (Rheinisches Landesmuseum, Bonn, Germany)

been lost, including, however, a metallic element for reinforcement of the pommel, which we mentioned earlier. The hilt in fig. V/13 is also very interesting, and after a skilful cleaning of all the impurities, revealed a discrete portion of lamina finishing on the edge. This is one of the very rare exemplars in which this element can be seen.

b) Hilt with "tight insertion" technology

As previously seen, towards mid I century A.D. we experience a new technology for the assembly of the hilt, which is easier to complete in comparison with the previous one and which, due to its characteristics, we will call "tight insertion". This period coincides with the appearance of the gladius known as "pompei"[24] and this may not be by chance. In comparison with previous models (known as "hispaniensis"), the manufacturing of this one was decidedly simpler, with parallel cutting edges, a short and triangular point, and it was much more standardised[25]. Also the metallurgy used was of a lower level, and the blades are often forged without the stratification of different types of steel[26]. This leads one to believe that there was the necessity to satisfy a request for more weapons than previously and, therefore, to adopt

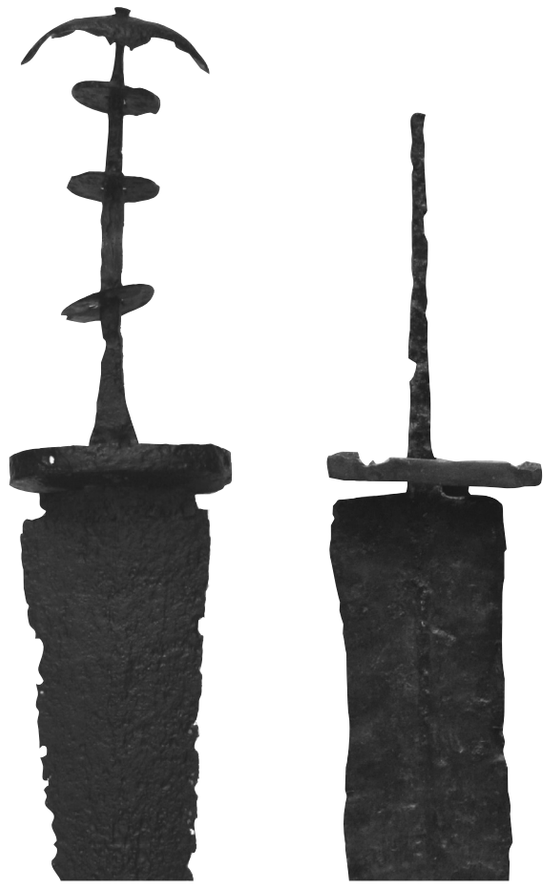


Fig. V/18: pugio from the museum of Saalburg (Ge) (on the right) in comparison with a gladius from the end of the Republic. Both have a hilt with an identical bronze plate, which leads to suppose that they underwent a very similar construction technique. (photo by the author).

a simpler technology, even if the quality was lower. The method must have been successful because both the pugiones and the gladi match its logic. The former were built with simple "tight insertion" technology, whereas the "pompei" gladi completely replaced the previous[27], more elaborate ones.

The technological components used are generally the same as the ones we have already seen with the difference that the hilt is not held onto the blade by screws like in the previous ones, but rather by simply inserting the blade tang into it without using any rivets; and this is very similar to the technique used to build gladi.

In this case the blade has a tang in a very regular shape, like

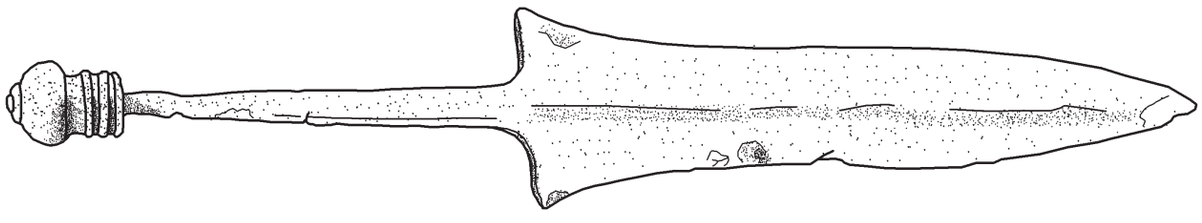


Fig. V/18: specimen preserving the pommel of closure. It represents one of the few clues of "tight insertion-subtype "A" technology in its secondary version (drawing by the author, private collection);

[24] R. D'Amato e G. Sumner, "arms and Armour of the imperial roman soldier", Ed. Frontline Book; M.C. Bishop & J.C.N. Coulston, op. cit.;
[25] Michel Feugere, op. cit.;
[26] M.C. Bishop & J.C.N. Coulston, op. cit.;
[27] Michel Feugere, op. cit.;

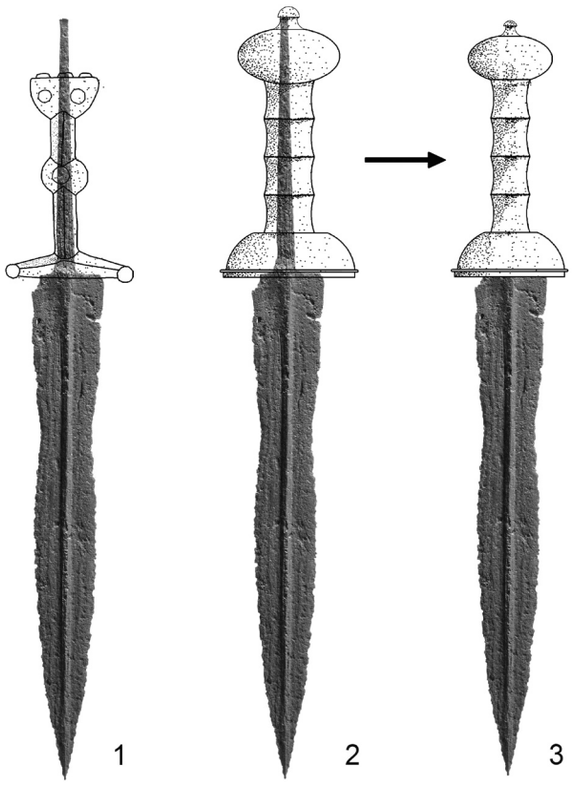


Fig. V/19: Virtual hilt reconstruction tests with "tight insertion subtype A" technology. In position 1 an original hilt (museum of Haltern) is superimposed on a pugio blade, which appears absolutely incompatible; in position 2, instead, a classic gladius hilt is superimposed, which appears to fit perfectly, but is only a little too large as it originally belonged to a much bigger weapon. Once it has been slightly re-proportioned (position 3) we can now see the probable and unexpected image of many pugio exemplars

a simple bolt with a section tending towards a rectangular shape (element of the "rod" type in fig. V/9) which lends itself better to this purpose than a wide, flat one. It is still without the central bulge, which would obviously have prevented its insertion; nor are the holes for the passage of rivets present, except in very rare exceptions.

The manufacturing process which was used to create the pugiones with this technique is less certain than the "composite" one, because a large quantity of blades with compatible blades have been found, but very few exemplars have been found together with their hilts, not even partial ones, thus depriving the expert from deepening his knowledge of this technique. Similarly, this is attributed to the ease with which the components separated from each other, and becoming irreparably lost, due to the lack of rivets to make it secure.

For this reason the following description, even if sufficiently reliable as it is based on common techniques also used for other weapons form various cultures and ages, is more approximate than the previous one.

Once the blade with its "rod" tang and hilt in the desired shape in hard wood had been separately made, the metal was brought to red heat and then driven with force into the special cavity, the size of which was slightly inferior to that of the tang. This forceful insertion, together with the elevated temperature of the metal, created a sufficiently secure bond between the two elements, at least for the purpose they were assigned for. Then the external, metal

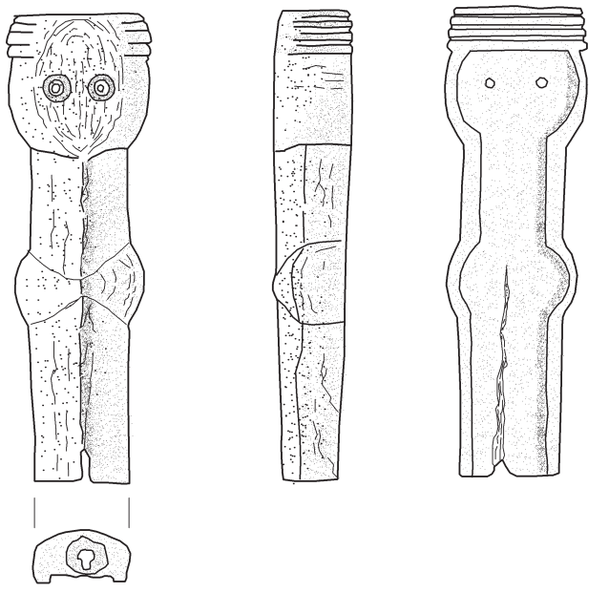


Fig. V/20: hilt with tight insertion subtype "B" technology in ivory, preserved in the Museum of London. From the left: view of main side, lateral side, back side. At the bottom: view of the bottom. (drawing by the author from information taken from "Zu einer elfenbeinernen Dolchgriffplatte aus Nida Hdderneheim am Main" by Jurgen Obmann)

plates were applied, which were substantially similar to those seen previously, working them with a hammer to make them adhere perfectly to the part beneath. Finally, there was no lack of decorative work applied to the weapon.

In the exemplars of type II one sometimes notices a rather curious component from a technological point of view: some rivets placed on the upper edge of the pommel, in a number of never more than three. They do not belong exclusively to the type of technology we are examining at the moment, but are common also to the "composite" one. In any case, their function is not well defined, also if they certainly did not have a role of great importance from a technological point of view. In some cases they do no more than keep the top part of the lateral finishing material of the pommel in place, but often they are only to be considered decorative[28].

As said before, it is easily understood that this technique is decidedly simpler than the first and suitable for mass production, without this necessarily being at the expense of quality. Exemplars of exquisite craftsmanship are, in fact, not at all rare; on the contrary they are actually more numerous than in the first periods.

It is now necessary to examine two techniques which, thanks to their characteristics, can be considered variants of the "tight insertion" type, and so we will call them "tight insertion of subtype A" and tight insertion of subtype B".

Tight Insertion subtype "A" technology:

The first type we are going to examine is very interesting and in some ways surprising as it is from this particular type of technology that weapons are derived which are of very different appearance to the more conventional ones looked at up until now. Let us therefore try to examine them carefully.

[28] Carmelo Fernandez Ibanez, op. cit.;

The first most important indication of its existence is on the stele of "Firmus".

The exceptional definition of detail allows us to see that the hilt of the pugio of this soldier is not like any we have seen until now, but totally similar to that of a gladius. Hence, the typical guard tending towards a semicircular shape is evident, as is the superior pommel with the small – but extremely typical – pommel of closure above, not similar in any way to the more standard ones seen till now.

In any case, this one piece of data alone may not be sufficient to classify it as a distinct subtype if there were not numerous other archaeological findings to confirm this.

Some come from the legionary camp of Vindonissa. As we know, on this site of great scientific value exceptional circumstances came to be which allowed findings in organic materials to survive in excellent condition, and among these is a wooden grip of similar craftsmanship to a gladius, but substantially smaller. Its size, not so much in length but rather in width, and above all the diameter of the internal opening which held the tang, makes it incompatible with a gladius but at the same time perfect for a smaller and lighter pugio.

Furthermore, from the same place we have an exemplar (chap. IX – database, no. 30) which has both its guard and grip still intact, both of which are similar to those of a gladius. The pommel is unfortunately missing.

What is more, also in the museum of Saalburg (GE) an exemplar is kept (fig. V/18; chap. IX – data base, no. 93) on which we can see that the part of the guard has been well preserved, made with a metal plate. What makes it unique is that it is perfectly identical to a type frequently used for some gladi. It would not seem to be too audacious to suppose that the whole hilt and its relative construction technology were very similar.

In addition to these exemplars, which are very indicative in themselves if nonetheless limited, we can easily extend our consideration to comprehend many other well-known ones. These are completely deprived of all parts of the hilt and could pass unobserved, if it were not for the fact that with closer observation we can see that they have a beaten tang at the top. This detail derives precisely from the constructive method described above and is, furthermore in antithesis with both the "composite" technology – which we have seen is based on a flat tang – and the "tight insertion" technology in its main version where the upper beating would have completely prevented insertion of the hilt. As it is impossible to ignore the great number of these tangs, we must deduce that this technology was not as rare as one might think, but simply less evident to the eyes of the expert. A simple explanation for this could be that, in comparison with hilts made using the main forms of technology, these hilts very often had to be in organic material and therefore hardly ever survived.

From a technological point of view, the experience of experimental archaeology teaches us that assembly was rather simple in the end and consisted in introducing three main elements in a precise order onto the tang – clearly onto the "pointed" type -: first the guard, then the grip and finally the superior pommel.

In order to guarantee the firm fixture of all these elements, once the first two had been inserted the top of the tang was beaten until an enlargement similar to the head of a nail was made which prevented them from coming out. Lastly, the pommel was applied by glue if it was made of wood. If the pommel was made of metal, as is frequent in gladi, instead of proceeding to beat the tang, the pommel was heated until red and then thrust inside the top of the tang. Once it had cooled and hence shrunk in size, it created a solid fusion.

To conclude, we have considered it useful to perform a "virtual test", which is possibly not very scientific but certainly more illuminating. It has the double objective of testing what has been stated above and helping the reader to imagine what such a weapon would look like.

Therefore, we took a blade which had a beaten tang at the top and we attempted to add two real hilts in a virtual manner: one is from a pugio kept in the LWL Romermuseum (Haltern) and the other of a gladius from a private collection, obviously scrupulously respecting the original size (fig. V/19).

The result, even if only speculative, speaks for itself.

Whereas the hilt from the pugio is completely incompatible with the tang (fig. V/19, pos. 1), that of the gladius fits perfectly (fig. V/19, pos. 2) (apart from a small fold towards the left due to the tang being slightly damaged). It is, therefore, evident that once the sizes have been perfected in order to adapt them better to a pugio blade, being shorter and narrower than that of a gladius, it appears to be completely compatible (fig/19, pos. 3).

Therefore, it has finally been possible to demonstrate what a weapon assembled with this type of technology may often have looked like, which was, as already stated, substantially different from common imagination.

Tight Insertion subtype "B" technology:

We deduce its existence and its characteristics only from two very similar hilts in ivory: one is preserved in the Museum of London[29], and the other comes from Nida-Heddernheim (Germany)[30]. The similarity is, however, so evident to make one think of a common fabrication technique, which is simpler in comparison with the main variant. Both seem to be made from a sole piece of ivory, duly shaped according to the classical shape of hilts of pugiones from Period II, and inside which we can see the special cavity for the insertion of the tang of the blade.

The special characteristic is that one of the two surfaces is completely finished off, whereas the other - flat and uncarved and most likely the back - has a place for what must have been a metallic lamina[31]. Neither of the two have preserved their guard, which could have been made in the same material, obviously metal, bone or wood.

It is easy to understand that it was simply necessary to insert this hilt, made almost from a single piece, onto the blade tang in order to finish off the weapon.

There are no other findings of this subtype of hilt, but this does not mean that they were very rare, as it is simply possible that these are the only surviving ones because they are made of non-biodegradable material, whereas the all the others in bone or wood have become irreparably lost.

[29] Archives: PDC/ER 546
[30] Jürgen Obmann, "Zu einer elfenbeinernen Dolchgriffplatte aus Nida Hedderneheim am Main", J.R.M.E.S. 3,1992
[31] Jürgen Obmann, op. cit.

CHAPTER VI
SHEATHS

Sheaths have always been an essential part of ancient cutting weapons. Their main purpose was that of assuring easy and safe transport of the weapon while hanging from the soldier's body. Despite this, in the I century A.D. we experience the appearance of exemplars which are particularly rich in decorative components and the valuable materials used to create them. We do not believe that these were only for aesthetic purposes, as has been held until today, but that their purpose was above all for political propaganda and apotropaic.

We, therefore, believe that it is right to begin our study from this point – doubtlessly the most eye-catching – that is to say the decorations and their related symbology, then we will go on to tackle more technical subjects, such as the suspension systems and construction techniques used, and finally the chronological evolution.

Decorations: Evolution and Symbology

Decorations on sheaths are exclusively found on the pugiones of type II. Their intrinsic symbology, and the implications this suggests, is one of the most surprising aspects of the weapon we are analysing.

During the Republican period, from the beginning of the use of pugiones in the Romans panoply, the sheaths were characterised by maximum simplicity and were basically without any form of decoration, limited to being a simple support instrument to contain the weapon. Very few such ancient exemplars have survived, and all that is left of them is a simple metal frame, onto which a covering structure in organic material (wood, leather) was most probably placed for its completion. Some rare exemplars of Celtiberian origin are a little more elaborate with a certain amount of carved decorations covering the surface, but it is not certain whether these exemplars are of Romans manufacture.

However, with the end of the Republic and the beginning of the Principate a very strange phenomenon occurs; the extreme simplicity suddenly stops and is replaced by a complete change in direction, that is the sheaths begin to be richly decorated in various symbols and ornaments. The phenomenon is very evident, so much so as to bestow them with the value of excellent craftsmanship if not as true works of art, generating a sudden, polychrome and astounding explosion of decorations in enamel and precious metals. It must be remembered that the phenomenon concerns almost all exemplars, with very few exceptions (among which we recall two: one coming from Xanten and the other from Mainz, no. F32 and F34 Chap. IX).

This transformation is too radical to have been merely due to chance; and during a careful study we have noticed that the appearance of these precious sheaths is connected to multiple factors, such as: the fashion at the time, the divinisation of the Emperor, political propaganda, and also a apotropaic function.

In the Augustan Period glitz was widespread, as was a new artistic style affected by the so-called "neoatticism".[1] As R. Bianchi Bandinelli describes: "*the Augustan art reaches its highest and most typical production ... in the craftsmanship of precious materials, destined to a public from the high ranks of society ... It is truly the art of silver, inlaid gems, of glass treated like cameos ... What Augustan art produced in this field remained an example for the whole duration of the Romans Empire*."[2] The great splendour of the costumes at the Imperial court, and in general in the upper levels of society, is admirably described by Tacitus in various passages in one of his greatest works[3], allowing himself to describe how the social climate of the austere Republic was now very far away: *"....and the richness of the banquets, maintained with enormous expenditure for one hundred years from the end of the Actium battle until the feats of arms which brought Galba to power (31 B.C. – 69 A.D. n.d.a.), fell slowly into disuse ..... Whoever was more splendid due to the availability of his means, his sumptuous home and riches, the more distinguished his name and clientele was."*[4]

"for Corbulo (the action took place during the rekindling of the hostilities against the Sides for the control of Armenia in 58 A.D. A.N.) *it was more arduous to fight against the sloth of the soldiers than against the perfidiousness of the enemy ... there were veterans who had never been on guard duty ... without helmets or armour, with their only care to be elegant and make money."*[5]

This running after splendour probably reached its height under Caligula – even if Claudius and Nero were no less – who squandered in one year of his reign 27,000,000 *aurei* (Romans gold coins), saved by Tiberius during his 20-year reign.[6]

A great change set in when Augustus took power, and it was represented by the Hellenistic cult of the Sovereign which was reserved only for the imperial house and no longer widespread among commanders or powerful Romanss as in the Republican Period. Veneration of the Emperor was the demonstration of loyalty towards Rome and its first Representative, whose presence was strengthened by the spread of his "Imago" and by symbols referring to him. The portrait of the Emperor and symbols connected to him were present on coins, statues and busts (widespread from the taverns to the forums of the cities in the far Provinces) just as one could find individual "miles" on banners and weapons. The Imago of the Emperor was sacred because his imperial majesty (*maiestatis*) and his divine power (*numen*) acted through it. As Athanasius[7] relates, *"whoever then adores the portrait, adores the Emperor in it. The portrait is, in fact, his image and essence."* Whoever treated the images of a divinised emperor without respect, whoever removed or damaged the Imago of the emperor, could have been accused of high treason.[8]

The divinisation of the Emperor favoured the development of imperial propaganda which frequently coincided both in purpose and form. It profoundly involved everything in Romans society from that period: from monetary themes to those of arms and military equipment;[9] from literary to monumental art forms[10]; because everything in all

[1] The classicist cultural trend widespread in the ancient greek world, highly influencing the young boys of the Romans jet set;
[2] Ranuccio Bianchi Bandinelli, "Roma, l'arte nel centro del potere", Ed. Rizzoli;
[3] Annales;
[4] Lib. III, 55;
[5] lib. III, 35;
[6] Richard Holland, "Nerone", ed. Carocci.
[7] Atanasio, Apologia contro gli Ariani, 3, 5, 5
[8] Eckhard Meyer-Zwiffelhoffer, Storia delle province Romanse. Ed. Il Mulino, Universale Paperbacks.
[9] Michel Feugere," Weapons of the Romanss", ed. Tempus pag. 203.
[10] Paola Chini, "Vita e costumi dei Romansi antichi", n°9, "La religione", ed. Quasar, 1990.

the world had to emanate the power of Rome and of the Emperor, and any means was valid to make him known and render him honour.

It is possible to observe this evolutionary phenomenon in the development of monetary and propagandist themes which became more marked with the advent of Julius Caesar as a consequence of the intensification and provocation of political and armed conflicts[11]. But it is with Augustus that the Imperial cult really began to spread through political, cultural and religious propaganda which aimed to gain universal approval for Rome and the Emperor. More precisely, it was a phenomenon of social cohesion for all the citizens of The Empire as well as being a means of checking on all the local leaders, since the Imperial cult they sustained was the way they demonstrated their own approval of both Emperor and Empire. On monetary themes the subject was no longer the gens[12], or the political party, but living individuals who were in charge of their destiny. The absolute predominance of one person over all the Romans state, in fact, made it possible to exalt the propagandistic function to excess. Even the cult of the Capitoline Triad was more and more frequently substituted by the new cult of the state, incarnated in the figure of The Emperor.

All this seems to have made a clear reflection on the weapons – not only the pugiones but also on the helmets and on the gladi – which we now see all rich in decor, aesthetically very eye-catching and carefully made, but consequently also very expensive. Just to have an idea, consider the difference between helmets from the Caesarian age (like the 'Mannheim' type) and those from only a few decades later (the "imperial Gallic/Italic type). Whereas the former were very simple in shape and decoration, little more than a metal cap, the latter ones often have every imaginable type of decoration, such as silver ribbons, pietre dure etc.

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The reason for the choice of symbols as a preferential means for imperial propaganda is admirably explained by René Guénon: *"While the organisation of language is analytical, conversational like human reasoning itself, symbolism is essentially concise and, therefore, intuitive. Its conciseness is what makes the symbol open to absolutely limitless possibilities of conception and, in its plasticity, makes it superior to language, which is, instead, characterised, by more definite and fixed meanings."*[13]

If we observe the themes on the Imperial coins, we find numerous images related to the classical divinity of the Romans Pantheon (Jupiter, Apollo, Hercules, Mars, etc.) or from the provinces (such as Serapis, sol invictus, Isis, Heliogabalus, etc.) or finally to allegories of abstract entity such as the figures of Genius, Victory, the goddess of Rome, Happiness etc. everything always in connection with the Imperial figure.

The deification of Augustus and his successors also acquired the characteristic of conforming their likeness to a divinity, for example Nero to Apollo, Commodus to Hercules, Heliogabalus to the Sun.

Even Augustus himself, according to legend, was a direct descendant of a divinity as he had been conceived in a relationship between his mother and Apollo during a ritual of sacred prostitution[14], as Cassius Dio relates: *"Atia (Augustus' mother A.N.) claims with absolute certainty that she conceived him with Apollo, because, having once fallen asleep in the temple of this god, it had seemed to her as if she had had intercourse with a dragon, and at the right moment she had born a child. Before the child was born, Atia dreamt that her entrails were carried to the sky and they were spread all over the earth; that same night Octavius (father of Octavian, A.N.) dreamt that from his wife's womb the sun was born."*[15]

After the death of Augustus, problems arose regarding his successor, and this political phenomenon was reflected on the iconographic layout, where images of politicians began to appear next to the symbolic figures.

Two well-known gladi demonstrating this are the Gladiusblech of Bonn (where a young woman, probably Julia, wife of Agrippa, is pictured between her sons Gaius and Lucius Caesar, adopted by Augustus and, therefore, the main heirs to the throne) and the so-called sword of Tiberius (where it is believed that the figures of Germanicus, Tiberius and Augustus are pictured).

Among the well-known pugiones only one, which originated from an imprecise locality in the north of France and is now preserved in the museum of Mainz (Germany), pictures the effigy of an unidentifiable figure (Chapter 9, exemplar 215).

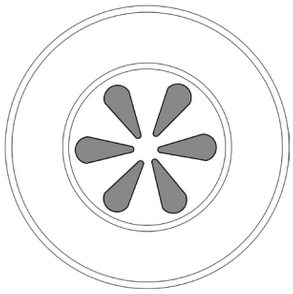
The apotropaic element (from the Greek αποτρέπειν apotrépein="to keep away") can be found in many figures present on the sheaths of pugiones, as well as gladi; and the significance of this is to be looked for in the weakness and superstition of man, above-all ancient man. The miles had to face death at every war conflict, exorcising it with rites and apotropaic gestures, which psychologically worked as a flight mechanism, keeping the danger away and, therefore, also the fear which it generated.

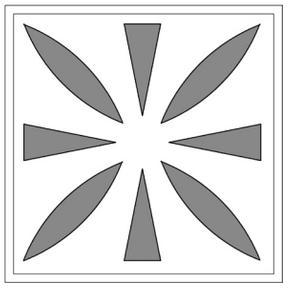
In this way we have introduced the fundamental concept that the decorations were not to be taken at face value, but that they had a definite symbolism; and this hypothesis finds confirmation in the writings of Edit B. Thomas[16]. Re-proposing also what Gonzembach says, he states – unfortunately dedicating only a brief mention to the subject – that the decorations should be understood as propaganda and that they were symbolic of belonging to a specific legion. Unfortunately, modern understanding of an ancient symbol is not always simple because a modern meaning might not correspond with what would normally have been associated with it at the time of its creation. Consequently, it follows that a specific image may be inappropriately deciphered even within a correct symbolic-mythological explication. For this reason a careful evaluation of the manuscript "Notitia Dignitatum" [17] has been made, which, despite being a later document,

[11] Roberto Bartolini, "Monete di Roma Imperiale", ed. Mondadori .
[12] Paola Chini, "Vita e costumi dei Romansi antichi", n°9, "La religione", ed. Quasar, 1990.
[13] René Guénon, "I simboli".
[14] Giuseppe Fazzini, "Vespasiano".
[15] Cassio Dione, "Storia Romansa", Libro XLV, paragrafo 2-3. Ed. BUR
[16] Edit B. Thomas, "Helme, schield, dolche, Akademiai Kiado, Budapest.
[17] The "Notitia Dignitatum" is an historical document of the late Empire, perhaps a kind of yearbook, written during Theodosius' reign, but updated at least until 425-429 A.D.

has a collection of images and symbols of military and civil officials whose full meaning nowadays is in many cases unknown. It is important to find corresponding, similar images both in this document and on the sheaths of the pugiones: if in the former they have a precise symbolic meaning, by deduction they must have the same in the latter.

SUN (Latin SOL) inside geometrical figures





Many religions, above all ancient ones, associate the sun with an idea of divinity because everything in nature depends on and is regulated by it[18]. This religious cult, which was also followed by the Latin civilisation, was introduced by the first Sabine king, Titus Tatius[19].

The Sun is the origin and the centre, and from which everything emanated. With this concept in mind the sun has been universally represented as a point inside a circle. In the Notitia Dignitatum numerous symbols are pictured which experts are led to believe are sun types[20], and the figurative analogy with those pictured on the sheaths of the pugiones, leads us to believe that they are connected to the Sun too.

Frequently the Sun is inside a square. The square is considered a symbol of the earth and this could suggest that the Sun dominates over all the earth. However, as Rome could be symbolised by a square (see symbol "square"), we could also understand it to mean that Rome impersonates the Sun.

Whereas in the Notitia Dignitatum a single Sun is depicted per shield, with different colours, shape and number of rays for each representation, in the pugiones there may be one or more Suns per sheath, with different characteristics for each one. This fact means that we can exclude the idea, at least for the pugiones, that a representation of a Sun could be the distinctive sign for a legion or an auxiliary troop, partly contradicting what Edit. B. Thomas (op.cit) stated.

On examining the symbolic meaning, for Panciroli[21] a central circle enclosed within a larger circle has the meaning that it is a single *Imperium* which holds together the "Orbe Romansus", whereas the rays surrounding the circle indicate that the latter is protected from the violence of enemies. In the Notitia Dignitatum we find suns with 3-4-6-7-8-9-10-11-12-13-14-16-18-20 rays, in the pugiones the Suns are represented with 4-6-8-12-16-20 rays.

Sometimes the number of rays is totally casual, whereas at other times their number acquires a symbolic value. For example, the Sun with 7 rays is connected to the Mithraic religion, where there are seven metal-planets, and the crown with 7 rays is typical of the initiation of the initiate. On the other hand 12 rays can be referred to the 12 months of the year and to the zodiacal months.

In Romans tradition, there were twelve vultures dictating the good omen to Romulus, twelve greater gods, and twelve rods made up the fasces.

Also the colour and the shape of the rays can have a meaning. For P. Berger in "The Insignia" the beams represent lances or arrows, whereas for G. Panciroli (op. cit.) they represent valid defence against the enemy opposed by the centre, made up of Imperial units. When the rays form a type of diamond – a very ancient symbol of divine lightning – they acquire the meaning of "death from the sky" by means of "lightning projectiles" on behalf of the divine Empire. On the emblem of the *Balistarii juniors*, the Sun surrounded by rays, represented by red and blue diamonds, alludes to the sharp points of the projectiles which have been cast.

In modern times, some experts have defined the drawings we have described as Suns as "rosettes". It is necessary, however, to observe that in Romans times only the wild rose existed. Its name was given by Pliny The Elder, who claimed that a Romans soldier was healed from rabies by a decoction made with its roots. It is the ancestor of the modern rose, whose large petals, which total 5, do not correspond numerically to the representations we have examined.

In any case, the rose was the symbol of the legio V Macedonica Legion, whose value was certainly not a florally Romanstic one, but certainly that of the sun. In actual fact, many floral patterns have been connected to the sun since the Paleolithic Age, and the wheels grasped by the Celtic solar divinities often assume the shape of a rose. In the Romans-Celtic world the rose is often associated with solar symbols and even with Jupiter's eagle, whereas the relationship of the rose with death is typical of the Romans world, symbolising eternal spring[22].

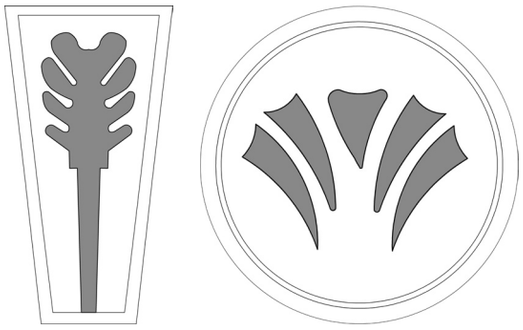
LAUREL (Latin. LAURUS)

Ovid tells us in Metamorphosis how the nymph Dafne, in order to escape the insistent amorous approaches of Apollo, asked her father, the river god Peneus, for help, who then transformed her into a laurel plant[23]. Apollo, clasping her in his arms exclaimed: *"As you cannot be my spouse, well then you will be my tree. My foliage, my cither, my quiver will always be entwined with you, oh laurel,"* thus becoming a sacred symbol for Apollo, and consequently, as divine protector of art, the prize for poets

[18] from "I Simboli", Le Garzantine. Ed. Garzanti.
[19] from "Mitologia - I miti greco-Romansi raccontati da Pierre Grimal", ed. Garzanti.
[20] Beniamino M. Di Dario, "La Notitia Dignitatum, immagini e simboli del Tardo Impero Romanso", edizione Ar.
[21] In "Commentarium";
[22] J. M. C. Toynbee, "Morti e sepoltura nel mondo Romanso";
[23] in "Metamorfosi", I,450-567; X,92;

as well as being used in prophetic rituals[24]. Laurel, being an evergreen, furthermore represented immortality acquired by means of victory, the emblem for both war and spiritual glory, the distinction for victorious generals after a triumph[25]. The victory weapons were bound with sprays of laurel and laid before the effigies of Jupiter, as they had a purifying function for spilt blood. In fact, the plant was also attributed to Jupiter, and according to legend, among all those planted by man, it was the only one never to have been struck by lightning.[26]

THE PALM TREE

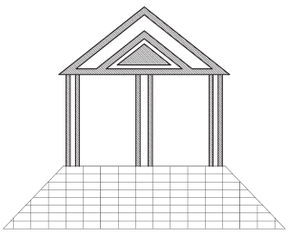


This plant is symbolically connected to Apollo because this god was born on the sterile island of Delos at the foot of a palm tree, the only tree present on the whole island.[27]

Ovid narrates that Rhea Silvia, before giving birth, saw Romulus and Remus in a dream in the shape of a palm tree, which was participating in the glory of Apollo, the Eternal Sun*: "Two palm trees were erect with a prodigious appearance, and one was higher than the other. The whole world was covered by its magnificent branches, and it touched the furthest stars with its foliage"*[28]

The palm tree is a universal symbol of victory, regeneration and immortality[29], and for this reason it was offered to the winners and carried in moments of triumph. Due to the shape of its leaves, which are similar to rays, and their layout, it has always been associated with the myth of the sun from the earliest of times. It is also associated with the origins of Rome.

THE TEMPLE

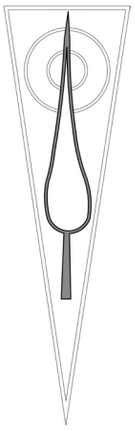


The temple (from the Greek *temenos*) is the sacred area, which is separated from the profane world by means of walls[30]. The temple is a reflection of the divine world and its architecture bears witness to the image that men have of the divine[31].

The symbolic reference found on the sheaths of pugiones could be connected to imperial propaganda initiated by Augustus in order to highlight the fact that the Emperor and all his works were guided and protected by the god Apollo. The representation could, therefore, be that of a temple erected in Anzio to give thanks to the god Apollo, as this god guided the victory of Augustus against Sextus Pompeius and Anthony; or the temple of Apollo Palatinus where the collection of oracles, called the "Sibylline Books," was kept because the Cumaean oracle pre-announced the birth of Augustus, the *pacatororbis*, according to Apollo's wishes.

Another connection is that with the temple of Jupiter Feretrius on the Capitolium, a place of cult, where trophies of those who had killed an enemy king or commander in single combat were deposited (the building was restored by Augustus, and at various times during the Empire many sovereigns re-proposed the same propagandistic iconography).

THE CYPRESS TREE

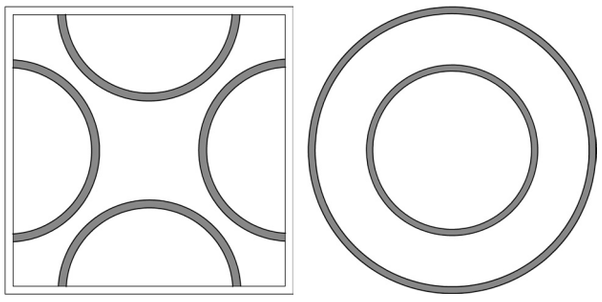


Both because of its longevity and due to the fact that it is an evergreen, this is a sacred tree for many peoples. For the Greeks and the Romanss it was a tree connected to the cult of the dead, and even nowadays we often find it adorning cemeteries[32].

It was the symbol of various divinities: Cronus (Saturn), Hesculapius, Apollo due to the flame shape of its foliage; and of many female divinities, such as: Cybelus, Persephone, Aphroditis, Artemis, Eurynome, Hera and Athena[33].

[24] Lucia Impelluso, "Dizionari dell'Arte – La natura ed i suoi simboli", ed. Electa.
[25] J. Chevalier e A. Gheerbrant, "Dizionario dei Simboli – miti, sogni, costumi, gesti, forme, figure, colori, numeri", ed. BUR Rizzoli.
[26] "I Simboli", Le Garzantine. Ed. Garzanti.
[27] Da "Mitologia - I miti greco-Romansi raccontati da Pierre Grimal",ed. Garzanti.
[28] A. Cattabiani & M.C. Fuentes, "Bestiario di Roma", ed. Newton Compton.
[29] J. Chevalier & A. Gheerbrant, "Dizionario dei Simboli – miti, sogni, costumi, gesti, forme, figure, colori, numeri",ed. BUR Rizzoli.
[30] "I Simboli", Le Garzantine. Ed. Garzanti.
[31] J. Chevalier & A. Gheerbrant, op. cit.
[32] "J. Chevalier e A. Gheerbrant, op. cit.
[33] "I Simboli", Le Garzatine, ed. Garzanti.

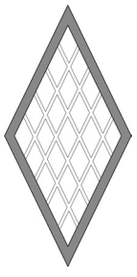
CIRCLES and SEMICIRCLES – MOON



A pattern of concentric circles or semicircles is present in various cultures and is frequently connected to the energy of the universe. The circle is also a sign for the sun, whereas the semicircle can represent the moon.

The moon is the most important star together with the sun, and whereas the latter is defined as a "masculine" figure, the moon is associated with the feminine concept both because of its connection with the menstrual cycle and also due to the fact that as a celestial star it is illuminated by reflected light. It symbolically represents "becoming, renewal, transformation and growth" in relation to the lunar phases, for at the death of a moon (waning moon) there is always a rebirth (waxing moon). The ability of this star to fecundate was highlighted in the changing of the tides and, by means of the popular belief, in its fecundating action on man, animals and vegetation[34]. The moon guaranteed the continuity of life, and ancient Rome was a symbol of longevity.

RHOMBUS or DIAMOND

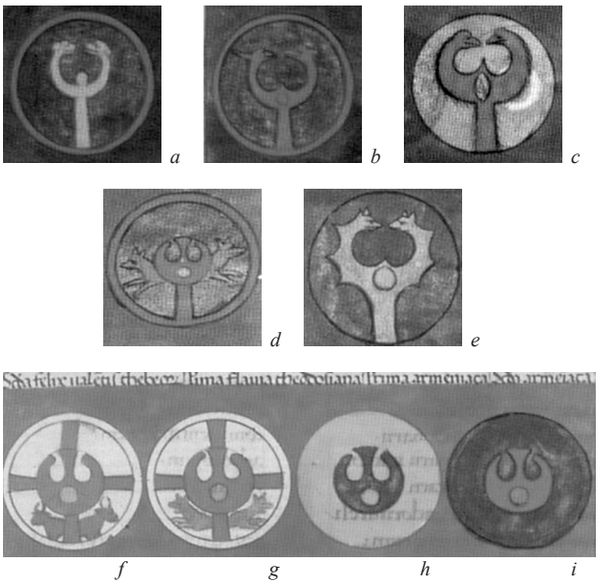


This is a very ancient symbol, representing the vulva (the pubic triangle) and, therefore, connected to life, fertility and regeneration[35].

THE PELTA

The pelta is a symbol frequently found in a stylized form on the Romans soldier's armament (buckle of the cingulum, end of the scabbard for the spatha etc.), which depicts a light shield in the shape of a half moon, originally used by the Thracians and popular first in Greece and then among the oriental populations. Representations of Peltas can be found on Etruscan sarcophaguses, on late Republican funerary monuments, Republican and first Imperial Age gladiator friezes, on Augustan jewels, and on the Amazonomachy of Imperial Age sarcophaguses[36]. Usually its image is used to represent the oriental peoples[37], but it is possible to obtain a more complete overview of its pattern and symbology from the images in the Notitia Dignitatum.

The image is composed of a crescent held up by a shaft, at the ends of which are two opposing animal heads, such as: wolves, bulls or snakes. The Panciroli (Commentarium) discerns the symbol of the caduceus and, therefore, the



a *b* *c* *d* *e* *f* *g* *h* *i*

Fig. VI/7: Some symbols of Pelta from the Notitia Dignitatum: a) Defensores b) Anglevarii c) Cornuti d) Sagitarii seniors Orientales e) Falchovarii f) Secunda Felix Valentis Thebeorum g) Prima Flavia Theososiana h) Prima Armeniaca

harmony of opposites (concord within the Empire).

According to an analysis by F. Altheim in Runen, the crescent was likened to animal horns for northern populations. To elevate an animal to becoming the symbol for a troop held the meaning of elevating the troop's strength and courage. If we move on to examine the meaning of some animals, we can notice how the horns of the bull bring us back to the lunar meaning. The bull is also a symbol for strength and the ability to fecundate. In Mithraism the bull takes on the meaning of death and resurrection. Concerning representations of the wolf: it is the totemistic animal of Rome and of the populations which participated historically in forming it: the Etruscans adored Aita, an infernal god with the head of a wolf; the Sabines represented Mamers in the shape of a wolf, an analogous god to the Romans Mars; Soranus, god of the underworld, in Osco-Umbrian language means wolf; Veiovis, also considered a Zeus of the underworld (Halicarnassus Dio), was considered the wolf-god.

For the ancient Romanss a divinity from the underworld did not hold any negative, demonical connotations in the Christian sense, but simply expressed an aspect of the god. Macrobius wrote in the Saturnalia that "the ancients represented the sun with a wolf" and added that at Lyocopolis *" they honoured Apollo and the wolf, and both were venerated by adoring the sun"*. During the Augustan Period, Apollo was identified with Soranus, and Virgil of the Aeneid wrote "*summe deum, sancticustos Soractis Apollo*". The relationship between the wolf and solar Apollo is also demonstrated by them having the same roots in Greek: Lykos (wolf) and Lyke (light). The Lykeion (lyceum or wolf skin) in Athens was the land around the temple of Apollo; and Apollo was honoured in Argo as a statue in the form of a wolf [38].

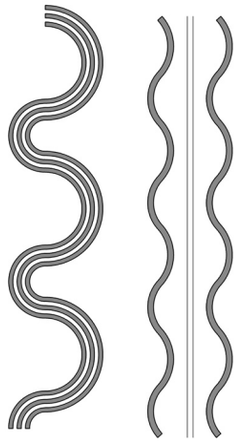
We must also remember that the standard bearers wore wolf skins and a wolf skull on top of their helmets. In this case the soldier was dressed in the guise of an animal not

[34] "I Simboli", Le Garzantine. ed. Garzanti
[35] "J. Chevalier e A. Gheerbrant, op. cit.
[36] Eugenio Polito, "Fulgentibus Armis, introduzione allo studio dei fregi d'armi antichi". Ed. L'Erma di Brestschneider;
[37] Waurick, "Rustung", e T. Holscher, "JDL";
[38] A. Cattabiani e M.C. Fuentes, op. cit.

to terrorize the enemy but to favour his transformation and in this way his possession by the beast-spirit, which entered into the warrior[39] and hence into all the Centuria, - as he was representative of all the soldiers.

In the central part of the half moon where the pole is met, Altheim catches sight of the rune "ing", symbol of the ancestral god of the Proto-Germanic people, the Inguaeones, who Pliny and Tacitus speak about. There is also the interpretation that it was the symbol of Virtus[40], because the literal meaning from Latin is man (from vir), with reference to physical strength and warlike values, as for example, courage.

SINUSOID and SNAKE COIL



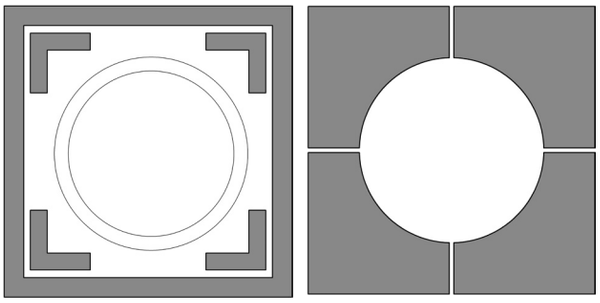
The curved lines carry a meaning of naturalistic origin (snake, wave, crescent, horns, hooks, whirl etc.), connected to the category of signs representing energy, the cycle of time and becoming.

The snake is the symbol of primeval water, from which everything originates and which everything returns to for regeneration. Its seasonal renewal, by shedding its skin and going into hibernation, has made it a symbol of the continuous life and death cycle (curled up snake), and of its relationship with the underground (underworld and kingdom of the dead) and consequently with all ancestors. The snake, whether directly or indirectly, enters into the myth of Apollo by means of various accounts:

1) Apollo frees the oracle of Delphi from the snake Python created by Hera in order to make Leto, Apollo's mother, suffer (symbolic narration of the victory of the god who dominates and illuminates natural powers).
2) Cassandra received the gift of prophecy from two snakes inside Apollo's temple.
3) Lamos, son of Apollo, was brought up by snakes and gave rise to a long line of priests.
4) Augustus' mother was visited in a dream by a snake in the temple of Apollo[41].
5) Laocoòn, Apollo's priest, died with his sons, surrounded by the coils of two sea serpents sent by Apollo himself, who was annoyed because the priest had not respected his vow of celibacy and had lain with his wife in front of his image, and fathered two sons.

Also the caduceus, symbol of Mercury, is composed of two snakes, tangled around the golden rod of god, looking at each other. It is the emblem of peace and friendship among peoples, and represents cosmic harmony which is born from the balance of opposites[42].

THE SQUARE



Rome was generally called "urbs quadrata" (square city) by the ancients, and Plutarch himself states that Rome was at the same time a circle (the *mundus*, the circular pit where offers were thrown for the establishment of the city) and a square, which represented the area of the city. The shape of Rome was circular, but we must understand the concept of a square in the sense that it was quadripartite, that is divided into four parts by two main roads, the Cardo and the Decumanus, which intersected at a central point. Therefore, the square represents Rome. Also the legionary fort, built on a precisely square partition base, represented Rome on foreign territory[43].

According to Varro, upholder of Pythagorical philosophy[44], the square is the most well proportioned of all geometric shapes because the "*quadratus*" encompasses proportion and regularity expressed by the concept of balance[45].

Rome was called "*urbs quadrata*" by the ancient peoples, although to this day this expression entails certain difficulty for modern-day interpretation[46]. In fact, the reference could refer to the ritual carried out by Romulus for the foundation of the city, as Dionysius of Halicarnassus writes, *"he drew a quadro-angled shape on the top of a hill, tracing a continuous furrow with a plough drawn by a bull and a cow, upon which the wall was destined to rise up*"[47] which is also confirmed by Appian[48].

Other authors indicate "*Roma quadrata*" (square Rome) as a sacred place which temporally precedes the Romulus *pomerius*: more precisely, Plutarch identifies it as a sacred area on the Palatine where Romulus received the omens before founding the city[49]. The same hypothesis is mentioned by Tsetse, a Byzantine scholiast[50], Varro

[39] C. Sighinolfi, "I guerrieri lupo nell'Europa arcaica. Aspetti della funzione guerriera e metamorfosi rituali presso gli indoeuropei", Rimini 2004.
[40] Eugenio Polito, "Fulgentibus Armis, introduzione allo studio dei fregi d'armi antichi". Ed. L'Erma di Brestschneider.
[41] "Dizionario dei Simboli – miti, sogni, costumi, gesti, forme, figure, colori, numeri" J. Chevalier e A. Gheerbrant. Ed. BUR Rizzoli.
[42] "Bestiario di Roma," A. Cattabiani e M.C. Fuentes - Ed.Newton Compton.
[43] "Dizionario dei Simboli – miti, sogni, costumi, gesti, forme, figure, colori, numeri" J. Chevalier e A. Gheerbrant. Ed. BUR Rizzoli.
[44] Musti, "Varrone nell'insieme delle tradizioni su Roma quadrata", within "Gli storiografi latini tramandati in frammenti. Atti del convegno". Quaderni urbinati di cultura classica, Urbino, 1975.
[45] A. Carandini, D. Bruno, "La casa di Augusto dai Lupercalia al Natale". Ed. Laterza, Bari, 2008.
[46] Mastrocinque Attilio, "Roma quadrata". Melanges de l'Ecole francaise de Rome. Antiquité T. 110, n.2 1998. Pp. 681-697.
[47] Dionisius Alicarnassi, "Romans antiquities"., Floriana Cantarelli, Milano 1984.
[48] App., fr la 9
[49] Rom. 9 e 11
[50] Tzetze, In Lycophr. 1232

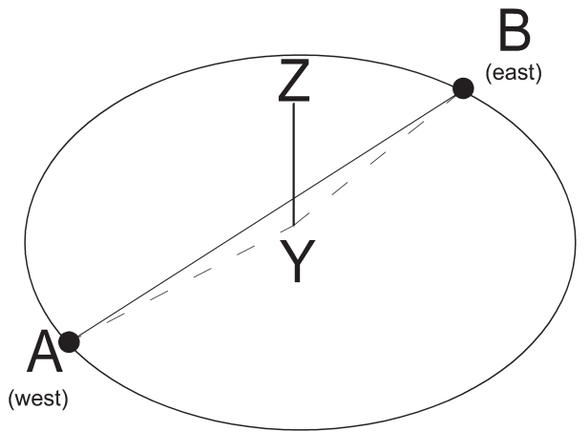


Diagram VI/1: graphic diagram of the method followed to identify the East-West axis during the foundation ritual for a sacred building. (Drawing by the author).

(related by Solinus)[51] and Verrius Flaccus. The latter, the most authoritative according to Attilio Mastrocinque[52], writes that "*from the beginning, this place* (situated on the Palatine in front of the temple of Apollo, A/N) *has been supplied with a stone in a square shape* (place on a sacred area containing the offers for the foundation A/N)". This place was remembered by Ennius when he says: "*et- qui est erat-Romae regnare quadratae*."[53]

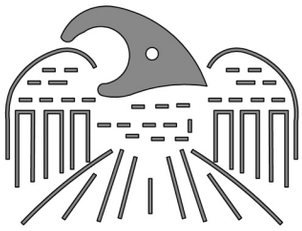
We can understand better the circle-square dialectic by studying the ritual for the foundation of religious monuments which is at the base of the establishment of the ancient city. This is due to the fact that buildings were part of an order connected to a higher reality in antiquity: the buildings, made by man and raised up according to the sacred ritual, were on a level with shapes created by divinity. Seeing as the temple (or the city) was an earthly representation of the universe – seen as physical space – but also its temporal representation – seen as an image of the cosmogenesis which forms the universe from a central point – its foundation took place by means of a precise ritual. The priest erected a pillar (YZ) around which a circle was traced out, the radius of which was double the height of the pillar, so as to form a solar clock, that is to say a sundial (fig. VI/1). In the morning and evening the shadow of the pillar (which acted as a gnomon) met two specific points (A and B) on the circumference, which when joined together made up the East-West axis.

The priest, after having carried out the *augurium* and identified the fundamental direction of the pivot (North/West – South/East direction), pointed it out to the surveyor who made the plan for the sacred building or city by means of the *groma*.[54] This, just like the military camp, was quadripartite according to the *cardo* (North-South axis) and the *decumanus* (East-West axis) which intersected at a central point.

Therefore, the square represented Rome because the geometric shape was based on the ancient directional location, which at the same time recalled a sacred function. Also the legionary camp, built on a precise quadripartition base, represented Rome on foreign territory[55].

Ultimately, the circle alludes to celestial reality, whereas the square refers to subordinate earthly reality[56] [57]. From this perspective it is easy to understand how Rome is identified not only with the earthly world but also with the celestial one by embodying in its plan the circle/square dialectic, which is typical of all sacred architecture[58].

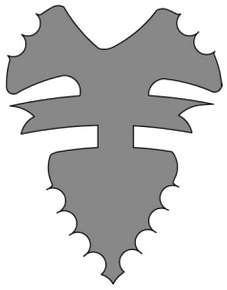
THE EAGLE



The eagle is the symbol of Rome as it is linked to the cult of Jupiter and the sun. Pliny the Elder relates the news: "that only this bird has never been killed by lightning, so tradition has made it Jupiter's armiger." In antiquity it was considered capable of staring at the sun without closing its eyes (living symbol of being able to approach the divinity without suffering any destructive effects)[59].

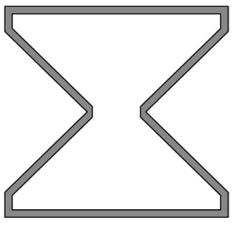
The emperors, as representatives on earth of divine Authority, used it as their symbol and the emblem of dominion of the Romans Empire.[60]

THE LEAF OF VINE



The vine recalls the cult of Dionysus and the mysteries of death, which are also those of rebirth and knowledge. The vine was an expression of plant life representing immortality, just as wine is the symbol of youth and eternal life[61].

THE HOURGLASS

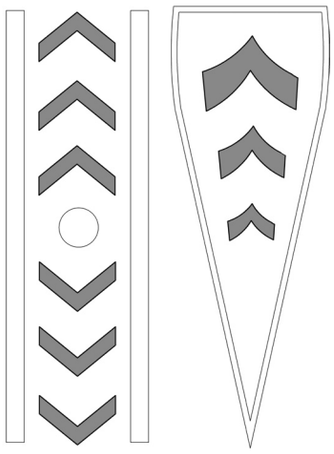


The hourglass shape, formed by two triangles joined together at the top, can have endless meanings. It can be a symbol for the regenerating Mother Goddess, above all if associated with other signs of life, such

[51] Solinus I. 17
[52] Mastrocinque Attilio, "Roma quadrata". Melanges de l'Ecole francaise de Rome. Antiquité T. 110, n.2 1998. Pp. 684.
[53] P. 310 L
[54] Tool to draw on the ground straight and orthogonal lines;
[55] From"Dizionario dei Simboli – miti, sogni, costumi, gesti, forme, figure, colori, numeri" J. Chevalier e A. Gheerbrant. Ed. BUR Rizzoli.
[56] Note that, above all in India, that symbolism is often reverse. In fact, if we consider the square in its metaphysical meaning of immutability and stability of the Principle, it becomes the direct reflection of the perfection of the One and All, whereas the circle is understood as an emblem of becoming increasingly cosmic and, therefore, it the symbol of a subordinate reality. The sky is hence associated with the square, whereas the earth with the circle. In fact, one can read in the Satapatha Brahmana (VII, I, I, 37) that the altar of the earth (garhapatya) is round, whereas that of the sky (ahavaniya) is square.
[57] R. Guénon, op- cit., pp. 135-140;
[58] we thank dr. T. Lorenzetti for consulting on that symbology;
[59] Beniamino M. di Dario, "La Notitia Dignitatum, immagini e simboli del Tardo Impero Romanso". Ed. Ar.
[60] "Bestiario di Roma", A. Cattabiani & M.C. Fuentes - Ed.Newton Compton.
[61] "Dizionario dei Simboli – miti, sogni, costumi, gesti, forme, figure, colori, numeri" J. Chevalier & A. Gheerbrant. Ed. BUR Rizzoli.
[62] "I Simboli", Le Garzantine. Ed. Garzanti.

as water and energy. When this shape represents the hourglass itself, as a timer, it symbolises the eternal passing of time. (Lamartine) The hourglass is not a symbol of death, but represents caducity, the passing of time, an invitation to virtue, so that the time allotted to man may not be voluntarily shortened by dissipated behaviour[62].

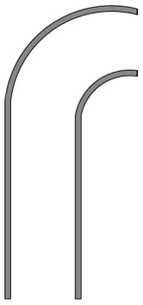
"V" SIGNS AND CHEVRONS



The "V" or Chevron (upturned "V" shape) are signs which have been present since the paleolithic age, both on vases and on numerous artefacts, symbolising both birds and the Mother Goddess, giver of life (the "V" symbolises a generating function, thus presenting a connection with the pubic triangle). The relationship between femininity and birds is also represented on vases and statuettes with ornithomorphic features.

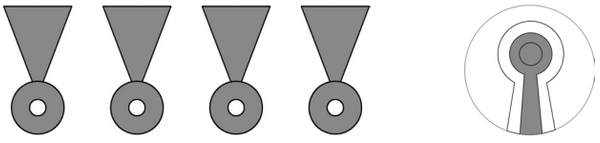
At times the V or the Chevron pattern can appear together, giving rise to an X or a cross. There are numerous variants: multiple signs arranged in columns, drawn opposite each other, inverted etc.

THE HOOK



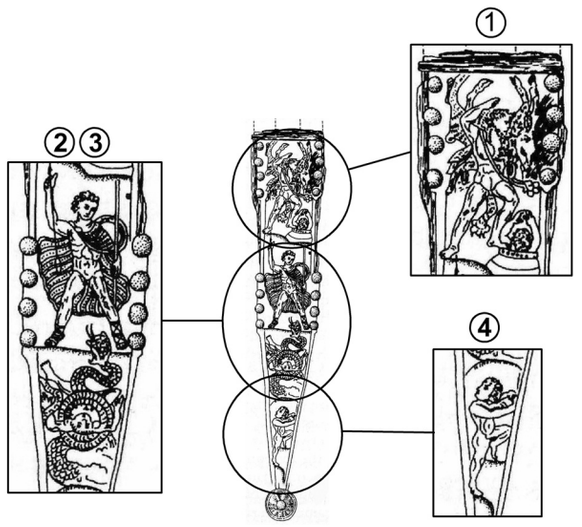
This is a sign for energy, the stimulator of life, and it is linked to the curved rod of the shepherd, his dignity and power. The "*aurispici*" possessed the "*Lituus*" which characteristically had this shape. The hooks can be placed in opposite directions and look like horns.

THE COCKADE



This symbol has not been described, but having found it depicted on numerous occasions on the emblems in *Notitia Dignitatum*, we are led to believe that it had a specific meaning which is not known to us at present.

HERCULES



Heracles (Hercules in Latin) is a mystical name which was given by Apollo, and whose meaning is "the glory of Hera" because all the labours that he was to complete were to serve towards the glorification of the goddess Hera.

This sheath, decorated with mythological scenes, was presented by R. Forrer[63] and is a rarity among the various decorative typologies of pugiones. In fact, even though the image is typically quadripartite, it shows some scenes relating to the myth of Hercules, instead of the typical propagandistic/symbolic drawings.

In detail no.1 of the previous pictures, we find the third labour of Hercules, imposed on him by Eurystheus, concerning the Erymanthian boar. Heracles captured the monstrous boar alive, which lived on Erymanthia, and brought it back on his shoulders to Mycenae. When Eurystheus saw it, he was taken by fear and hid in an earthenware jug he had prepared as a refuge in case of danger.

The second and third detail could represent the first of the great expeditions undertaken by Hercules, when he freed Hermione from the sea monster. The king of Troy, Laomedon, had refused to pay Apollo and Posseidon the agreed wage after they had built the city walls, and thus incurred their anger. Apollo sent a plague to infest the city, and Poseidon sent a sea monster, which devoured the inhabitants.

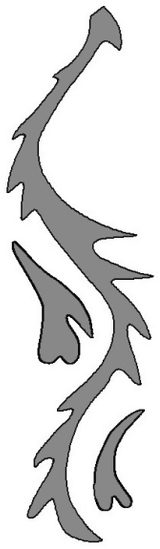
Hermione, the king's daughter, was offered by her father to be eaten by the monster after an oracle had revealed that the calamity could only be dispelled by such a sacrifice. At the moment in which Hermione was about to be killed by the monster, Heracles arrived in Troy and offered himself up to save the girl. Even in this case, Laomedon did not keep his promise, and did not give Heracles the recompense he had agreed to: the Arab mares Zeus had once given him as a gift.

The fourth detail seems to depict the descent to the underworld by Heracles. When the dead saw him arrive, they ran away in fear, and in this circumstance the god-hero freed Theseus and Ascalafo, gave some bloody libations to the dead in order to bestow some life on them, and tamed the dog, Cerberus, which he took back up onto the earth.

[63] Michel Feugere, "Weapons of the Romanss" pag. 126-127.

In mystical thought, the labours of Hercules represent the "tests of the soul, which is progressively freed from slavery of the body and passions".[64]

VARIOUS DECORATIONS



If we take a close look at the sheaths, there are numerous signs and patterns to be seen which we have not described here for lack of space. It is worth mentioning the Celtic decorations, or in Celtic style, which we find on a pugio found in Usk (no. 196 Chap. IX), where, instead of geometrical patterns a floral style is developed occupying the whole length of this scabbard[65].

If we consider all the patterns on the various pugiones together, the symbol of the Sun is depicted very frequently and often there is more than one sun on a sheath. Also images of the Laurel and Circles/Semicircles are very often pictured, certainly more so than those of the Temple, the Cypress and the Palm, which are less widespread (and which can often be easily confused with the Laurel - for which reason they have been marked with a question mark on the table). We have only recorded the presence of other symbols on one other find.

Many sheaths of pugiones are not classified on the table. This is the consequence of the Author's limitation, either because it was not possible to make an adequate study of the images available or due to his inability to understand the sign and associate it with a precise symbol.

Many of the highlighted symbols have a direct or indirect connection with Apollo, and consequently with Augustus as he was his protégé. As the first Emperor of Rome, when he obtained power, he made it absolutist, while keeping the form of Republican administration.

Quoting the words of Ranuccio Bianchi Bandinelli: *"the Pax Augusta did not mark for the Romanss the achievement of an objective for which they had long battled, but the end of a period of anguish, danger, agonizing uncertainty about tomorrow, continual changing of situations, which had all become unbearable for all those who had not been direct protagonists on the political scene. Essentially, even the Pax Augusta was based on pretence. This pretence was, however, even accepted by those who did not profit from it, because they were tired of fighting. It was a password which met with enthusiasm on various stratums; even among the opposition."*[66]

Therefore, Augustus, in order to send a message of peace and stability throughout the Empire, promoted an important form of propaganda, making use of the help of authoritative authors, such as Virgil and Horace, attributing to himself divine protection and descent.

In the Aeneid, written by Virgil, the Iulius family descended from Venus. Aeneas was, in fact, the Trojan hero, and being the son of Venus, was of divine origin. As his son, Ascanius Iulius, was a descendant of the "gens" (clan) of Iulius,(Julian), a divine connection between Augustus and Venus herself ensued.

In the IV Eclogue of the Virgilian Bucolicae, written towards 40 B.C., the Cumaen oracle announces the birth of an important person (Augustus) who would have established a new golden age according to the wishes of Apollo, bringing back order and prosperity. Augustus defined himself as the pacatororbis (peacemaker), he, who would have dominated the Romans Empire and made peace in all the world,; he, whose coming was already foreseen by the gods. In honour of god and in order to please his Emperor, the Romans poet Horace also composed the famous Carmen Saeculare.

Therefore, Apollo was the special protector of Augustus, whose cult became one of the most important means in his plan for religious renewal and personal propaganda. After the battle of Actium, whose victory against Anthony was attributed to the protection of the god, the Emperor had the ancient temple of **Apollo Sosianus** renovated and enlarged; he established five-yearly games in his honour and financed also the construction of the temple of **Apollo Palatinus**, where the collection of oracles, known as the Sibylline Books, were kept.

In late, Greek antiquity, Apollo was also identified as god of the **sun** and in many cases superseded Helios as the bringer of light and charioteer of the solar chariot. A similar "passing on of attributes" occurred also with the Romanss, when, starting with the late Republican Age, Apollo became the "alter ego" of Sol Invictus, one of the most important Romans divinities. Apollo was normally depicted wearing a crown of **laurel**, a plant symbolising victory under which some legends have it the god was born.

His typical qualities were archery and the zither. Another of his characteristic emblems was the sacrificial tripod, symbol of his prophetic powers. Animals which were sacred to the god included swans (symbol of beauty), wolves, locusts (symbolising music and song), and hawks, ravens and snakes again; the latter referring to his oracular powers. Another symbol of Apollo is the griffin, a mythological animal of distant, oriental origin[67].

Augustus also personified the new Heracles/Theseus, symbolised in this way in the Amazonomachy myth, as winner of the enemy forces in the struggle of the Greeks against the barbarians, but also Mars Ultor as vindicator of the death of Julius Caesar.

As we can see, many symbolic elements found on the sheaths are not simple decorations with no other purpose, but they are part of the political propaganda developed by Emperor Augustus and which lasted for all the Julio-Claudian dynasty.

However, the surprising facts do not end here.

As time went by the evolution of pugiones seems to have unexpectedly brought the sheaths and weapons themselves back to their original characteristics typical of the Republican Age: to austerity and lack of decoration. As sudden as the change from Republican simplicity to the glitz of the I century occurred, no less sudden was the return to original plainness.

Finds of exemplars of pugiones of type III are not rare, often together with their sheaths, and we notice in all of them the complete lack of any type of décor or symbol.

Also in this case we should wonder why this inversion of tendency occurred and try to understand if is connected to a more general change on the part of Romans society.

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[64] I miti greco-Romansi raccontati da Pierre Grimal", Ed. Garzanti.
[65] Ian. R. Scott, "First century military daggers and the manufacture and supply of weapons for the Romans army".
[66] R. Bianchi Bandinelli, "Roma, l'arte Romansa nel centro del potere", Ed. Rizzoli.
[67] "Il vento d'oriente – alla scoperta delle radici della cultura occidentale", Ignazio Marino Ceccherelli, Ed. IEI 1989.

TABLE VI / 1

Pugio	Sun	Laurel	Palm	Temple	Cypres-s	Circles/ Semicircles	Rhombus	Pelta	Sinusoid	Square	Various decorations
187			●	●							eagle
190	2 to 9 rays 2 to 8 rays	●	●?								
191	2 a 6 rays 1 a 8 rays	●	●?								
192											2 vine leafs
194	1 to 12 rays 1 to 8 rays 1 to 6 rays	●	●?								
195	●		●			●					writing
196									●		●
197	2 to 8 rays 1 to 6 rays			●	●?						
198	5 to 8 rays										●
199	3 to ? rays	●									
200										●	
202	2 to 8 rays		●?			●					
F1											Hercules
F2	2 to 16 rays 1 to 12 rays	●				●	●	●			hourglass
F3	1 to 16 rays 8 suns	●				●				●	
F4	●										Chevron
F5	1 to 6 rays 1 sun	●		●							chevron - hook
F6							●				
F7				●?			●				
F8			●				●			●	
F9	1 to 12 rays			●?		●					
F11	●	●									2 lines of 5 cockades
F12	2 to 8 rays 1 to 8 rays					●					Chevron
F14	2 to 8 rays 1 to 8 rays					●					
F15	2 to 8 rays 1 to 8 rays					●				●	Chevron
F16	1 to 12 rays				●	●	●				
F18		●			●	●					
F19	2 to 12 rays 1 to 16 rays					●				●	Chevron
F20			●			●				●	
F21			●							●	
F22						●					4 line of 4 cockards
F23	●					●				●	
F24										●	●
F26	●									●	●
F27									●		
F29	5 to 8 rays										V signs
F33		●				●					●

Tab. VI/1: presence of symbols on the various exemplars of pugiones. For numbering refer to Chap. 9 – data base archaeological finds. Where the question mark "?" appears, there is uncertainty in identifying the symbol.

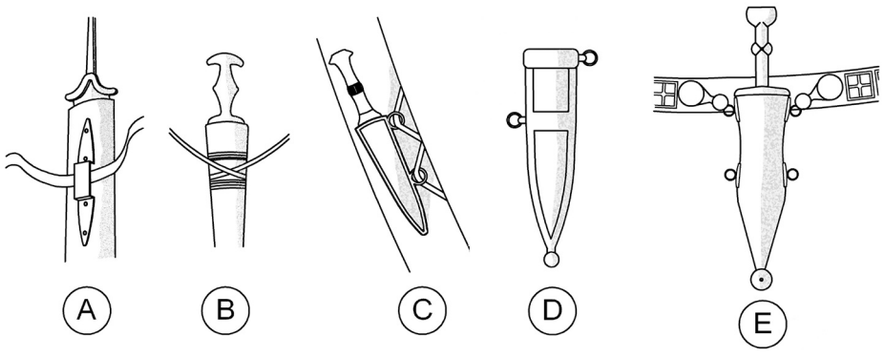

Fig. VI/1: schematization of some suspension systems used by various ancient populations.
A) Celtic sword: small metallic bridge applied onto the sheath, through which a leather throng or a chain was passed.
B) Etruscan/Villanovian sword: sheath in bronze onto which the belt was tightly bound.
C) Shardanian dagger: carried diagonally on the chest by a bandoleer, it was attached to this by means of rings on one side of the sheath.
D) Iberian sheath for dagger.
E) Romans pugio. Attached to the cingulum by means of two upper rings.

Some authors[68] tend to date this change to the advent of the Nerva-Antonine Dynasty (from the election of Nerva to the death of Septimius Severus in 193 A.D..) but from the information at hand we are convinced that the beginning should be anticipated by some decades to the ascent to power of Vespasian. He was doubtlessly one of the greatest emperors in all the history of Rome and a great innovator, capable of giving clear signs of discontinuity from the ways of his predecessors, much more than the Antonians did with the Flavians. The words of Gianni Fazzini ("Vespasian") express this: *"for what he was able to do, he may be considered one of the greatest Romans emperors: he found the houses of the State in disastrous condition but he redeveloped them, ... He managed to give to the Romans people a period of peace and prosperity, and he also built a new constitutional structure for the State which lasted two centuries. After Augustus, he is the second founder of The Empire."*

We recall, among many, some of the main innovations he brought, which may be of interest for the subject of this book:

- he was completely averse to the exaggerated adulation towards the figure of the emperor, which had been typical of the previous period, probably thanks to his bourgeois origins and the practical sense which distinguished him.
- as an administrator he was uncompromising, and indifferent to instrumental acts of flattery towards him. He began a strict policy for curbing expenses and a rigorous recovery of the State's finances, which were in a very difficult state due to the damage caused by the recent civil war and the administration of the previous emperors.
- he promulgated the "Lex de imperio Vespasianii" in 69 A.D., with which he established that both himself and all successive emperors would have to base their command on legal principles, and not on divine powers as his predecessors had done since the Julio-Claudian dynasty.
- he was a man of simple tastes, completely the opposite of figures, such as Nero and Claudius. Tacitus tells us the *"the strongest drive towards rules of moderation came from Vespasian, and he was an example, himself, of simple life according to the ancient dictates."*[69]

Abandoning the custom to make such glitzy and expensive sheaths for weapons, and the consequent return to simplicity and economy is perfectly consistent with the sort of revolution Vespasian brought about.

In fact, the first idea to disappear was that of hailing the emperor as a god; also in the symbols on the weapons, which were in some way dedicated to him, the custom (and need) to adulate the emperor always and in every manner disappeared; and finally, the necessity to cut all superfluous costs, also and above all in the army, was manifest.

All this rendered the glitzy and highly expensive symbolic decorations of the sheaths of the pugiones and gladi not only useless but also damaging, and it is not a hazardous guess to believe that Vespasian, himself, ordered their drastic reduction, if not specifically at least in the form of a more general series of regulations.

As we have said, this is how the weapons and their sheaths now came to be plain, functional and economical, directed exclusively at serving the legionary for war purposes, and not used for ulterior objectives. And so they remained until the moment of their disappearance.

Nevertheless, one must not make the mistake of believing that this innovation occurred from one year to the next, however sudden it may have seemed. Historically and socially this is almost impossible, so one should consider a suitable period of co-existence between both types of weapon.

SUSPENSION SYSTEMS

The Romans soldiers carried the pugio on their left side, inserted in its sheath and hanging from a *cingulum*[70]. The gladius, instead, was on the right, also hanging from a *cingulum* specifically made for it (at least until this was substituted by a *balteus* towards the end of the II century).

Celtic suspension system (fig. VI/1-A)

We know that the centurions inverted this arrangement as a distinctive sign of their rank, carrying the gladius on their left and the pugio on their right.

[68] M. Bishop in "Romans Military Equipment"; Ian. R. Scott, "First century military daggers and the manufacture and supply of weapons for the Romans army".
[69] "Annales", III, 55;
[70] the cingulum was a leather belt used up to the end of the I cent. A.D., from whom the weapon was hung. Romans soldiers often wore two of them, one for the gladius and one for the pugio. Both were richly decorated with square metallic plaques, and usually from that for the pugio even the apron was hung. It had been partially replaced by a balteus on the beginning of the II cent. A.C.

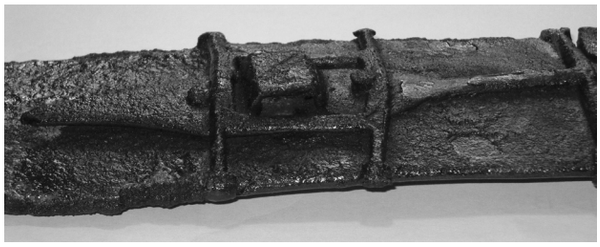

Fig. VI/2: detail of the suspension system of a Celtic sword from II-I century B.C. The small bridge, attached to the sheath with a special metal structure and rivets, is clearly distinguishable. A belt made of chain or a simple leather one was attached to this.

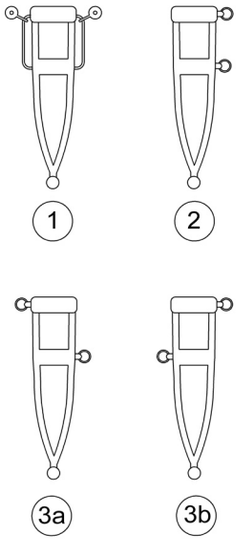

Fig. VI/3: diagram of the main suspension systems of bi-globular daggers from the Iberian peninsula.
1: "side hilt" suspension type;
2: "isolateral" system type;
3a: "left diagonal" system type;
3b; "right diagonal" system type.

Both the gladius and the pugio were connected to a *cingulum* by a substantially identical technique, which was so typical that it has become a true characteristic of these two Romans weapons. In any case, this is once again not a Romans invention, but borrowed from previous cultures.

These populations, which often influenced the Romans military world in many ways, used essentially different methods from the Romanss to attach their weapons to their belts. They usually equipped the sheaths of their swords with a sort of metal bridge fixed to the structure below by means of metal rivets, inside which they inserted a belt, which could have been of two types: the first, which we can define as "chain mail", was technologically advanced and certainly reserved for high rank warriors because of its elevated cost. It was made of a chain of advanced craftsmanship, designed in a way to give freedom of movement, which was indispensable in battle.

It ended in a hook to close it, often made with such care that it became a small, Celtic work of art[71].

The second is rather similar but less elaborate, as the chain was substituted by a simple, leather belt assisted by some metal rings for knotting; so, much more economical and, therefore, possible to be produced for a large number of armed soldiers.

This technology in its simpler, leather variant, may be considered more valid and efficient, and certainly more appropriate for the mass production necessary for an army, such as the Romans one. Nevertheless, it scarcely penetrated Romans culture. Curiously enough, Romans weapons with similar techniques to this one are not Republican nor from the first Empire when contact with the Celts was contemporary or at least not far away in time. Some rather come from the late Empire, hence several centuries later. In the spathae from the III century onwards, we do actually find very similar components to the Celtic one just seen.

Suspension system of italic populations (fig. VI/1-B):

There are abundant archaeological finds often together with sheaths from populations of Etruscan and Villanovian culture, whereas those with belts are decidedly more rare. The sheaths are always in an extended, triangular shape, not very decorated and often provided with an end pommel. In more ancient times they were in bronze, whereas in Etruscan culture we find them also in leather and wood[72].

A common characteristic is the frequent absence of metallic components to attach them to the belt (or to a baldric) instead, their surface is often flat without any other components.

This leads us to suppose that there was not a particular system for suspending the sheath, but that they resorted to the use of leather or canvas thongs, which were tightly wound around it.

Some daggers from the Samnite culture originating from Campovalano (Italy) and Alfedena (Italy) are of greater interest, presenting a sort of metal strap on their sheaths, equipped with a hole with a short chain attached, which in turn was used to attach it to the belt. In this way the weapon seems to have been hung from one side only in an oblique position.

Once more, we do not notice any analogy with the systems used by the Romanss, who seem to know nothing of the traditions of the Italic populations even if they were particularly near to them from both a geographical and cultural point of view.

Suspension system of the shardanian population (fig. VI/1-C):

lanian
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seem
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lightly
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only
one of
ring to

now, and which seems to be the one which is closest to this suspension system.

Another analogy worth mentioning is the warriors depicted on the stelae of Lunigiana, who appear to be armed with daggers worn in exactly the same manner.

Iberian suspension system (fig. VI/1-D):

There are numerous weapons originating from this culture, and so it follows that we have been able to deepen our knowledge of their characteristic suspension systems with

[71] Giovanni Banfi, "L'armamento dei Celti", ed. il Cerchio.
[72] I. Fossati, "Gli eserciti etruschi". Ed. "Militare Italiana".

certain precision. The use of suspension rings has been recorded since the beginning of the Iron Age, and some weapons have them still intact and dating already from the VI century B.C., even if at such an early age we also find other types of system being used which are closer to the Celtic use. They become much more frequent towards the III century B.C. and in particular with the advent of the bi-globular dagger (cf Chap. I). In any case, we must point out that the Iberian sheaths never have four rings (one pair on each side), but almost always only two, placed mainly in three ways[73]:

- System with "side hilts" (fig. VI/3;1), of the three, the most archaic as it is present already from IV B.C. and it shows interesting details which we will look at in more detail later. There are two metal components placed on both sides at the top of the sheath in the shape of small hilts onto which it was attached by means of two metal hooks ending in a small disc, and which were fixed onto the belt.
- "Isolateral" system (fig. VI/3;2). This consists in two rings put onto one side only. It appeared not earlier than the II century B.C. and was pre-eminently Celtiberian technology. A good number of exemplars have been found, mainly from the archaeological sites of Carretiermes and Numancia.
- "Diagonal" system (fig. VI/3;3a-3b). This consists in two rings, one on each side of the sheath, placed diagonally, appearing from the IV century B.C. onwards. Their layout gives rise to two subgroups: "right diagonal" if the upper one is on the right; and "left diagonal" if it is on the left.

It is necessary to point out that this difference is not marginal because it indicates on which side the weapon was hung (see fig. VI/4). On Celtiberian territory we find a net prevalence of the "right diagonal" system, which makes us understand that they carried their daggers on the right.

As said, experts believe that each of these systems was connected to a specific way of wearing the weapon, and on this subject we remember that Eduard K. De Prado (op cit) suggested that the "isolateral" type compelled the soldier to wear his weapon in a horizontal position; the "left diagonal" type with the upper part tilted forwards if worn on the left side; and the "right diagonal" type with the upper part tilted forwards if worn on the right side. The author does not mention the "lateral hilt" type, but it appears evident that the weapon was worn vertically.

We can, therefore, see that the use of rings for suspension is a characteristic which we find largely among Iberian and Celtiberian populations, with some signs of it in the Shardanian population. It is not to be excluded that the latter had in some way influenced the Iberians, or that they influenced each other.

The fact remains that the Romanss adopted this system, adapting it to their needs, which led to their custom of providing the pugiones and gladi with four rings and carrying their weapons more or less vertically.

The classics do not help us understand how these four rings were used and how the weapon was connected to the belt, whereas there are many theories in modern literature, some acceptable and others less so[74]. However, as far as the pugio is specifically concerned, we believe that the

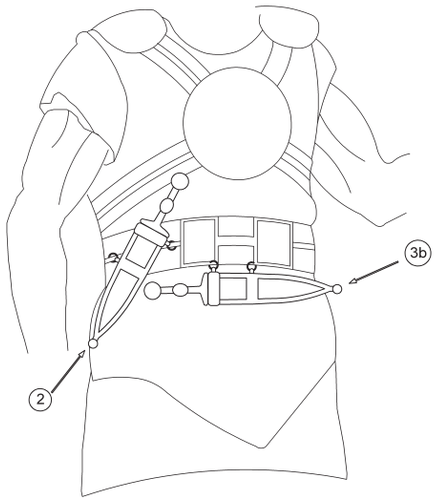

Fig. VI/4: reproduction of a Celtiberian warrior imaginatively equipped with two daggers, with the aim of clarifying which position the weapon assumed according to the layout of the suspension rings. In this case, we have a "right diagonal suspension"(2) on the right side, whereas on the abdomen an "isolateral suspension" (3b). It can be noticed how the former makes the sheath lean forwards, whereas the latter makes it take on a horizontal position.

details shown on the funerary stelae are so numerous and above all so well made that they give us a comprehensive overview and leave us with no doubts. We recall among them those of *Publius Favoleius Cordus, Annaius Daverzus, Hyperanor, Tiberius Iulius Abdes, Firmus, Genialis,* as well as some unknown soldiers.

They clearly show us that the weapon was connected to the *cingulum* only by a pair of upper rings using a hook which was richly decorated on top (note the similarity with the Celtiberian "hilt" system). A fact emerges, which is as evident as it is surprising, that the pair of lower rings seem to be completely unused for the suspension of both the pugiones and the gladi. We define this as surprising because it appears hardly rational to spend energy and materials to provide weapons with a component which is then left unused, and it is therefore normal that the modern expert attempts to find its practical function at all costs. We believe, however, that the iconographic representations are sufficiently clear so as not to allow space for other interpretations.

A vague element of doubt may arise from the fact that the stelae were originally painted[75], and so it is possible that the original colouring suggested something which is now lost, but at the actual state of things this does not seem very credible.

Some exemplars preserved in the museum of Vindonissa (Brugg-Swizerland) suggest that between the rings on the sheath and the metal component which connected to the cingulum there was another simple connection made with a metal thread (fig. VI/6, element 3). The particular exemplar which shows this does not have any rings but a type of hinge. In any case, we may hypothesise that it was used also in the presence of the classic rings. We also cannot exclude that small leather straps were used as a substitute, even if this is not very convincing as they would be too frail to sustain the wear and rubbing caused by the movement of the sheath against the metal parts for long.

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[73] Eduardo k. De Prado- "El puñal bidiscoidal peninsular", Gladius, XXVIII (2008).
[74] On regards, see the interesting article by P.J .Hazell "The Pedite Galdius";
[75] Adrian Goldsworthy, "storia completa dell'esercito Romanso", ed Logos.

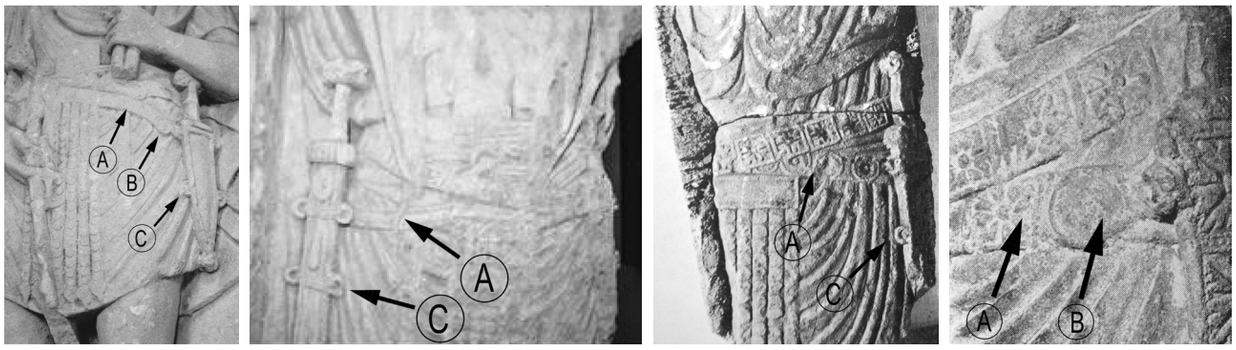


Fig. VI/5: from the left: stele of Flavoleius Cordus, unknown legionary, unknown legionary, Annaius. These are some of the many where we can clearly see the representation of the suspension system of the pugiones (the second fig. from the left is of a gladius). In all of them we can clearly distinguish the pair of lower rings without any components or system to connect them to the cingulum. It is interesting to note the folds of the tunic underneath, which highlights even more their lack of use. What is more, in the first and even more evidently in the third we can clearly see the metal components which connect the sheath to the cingulum. The letters on the photos indicate:
A: cingulum;
B: connective component between the cingulum and the sheath;
C: pair of lower rings as always without any connection.

From this panorama of archaeological finds and funerary monuments it is clear that the use of the four rings was wide spread from the moment the pugio appeared, and it lasted unaltered for all the time Romans soldiers were equipped with it. This is a unique occurrence because even the gladi made an exception to it. As time passed we see that they underwent a substantial modification of their suspension system and we see the arrival of the use of a baldric instead of the cingulum. Also with the arrival of longer weapons, such as the spathae, a suspension system reminiscent of the Celtic one arrives on the scene. This does not happen with the pugio, which always maintains the initial system unaltered over time. Probably no other component of the Romans weaponry remained so unaltered. We only have to think of the many variations to the helmets, the armour, and even the other components of the pugiones etc.

Not only did it survive time, but this system is also common to practically all known exemplars with very few exceptions: for example, the already mentioned pugio depicted on the stele of Minucius Lorarius; and the exemplar found in TItelberg-Luxemburg (Chap. 9, exemplar 216) complete with sheath and kept in good condition, which has a suspension system with only two rings of the Celtiberian "left diagonal" type. As this is a weapon dating back to the Augustan Age, most likely between 30 and 12 B.C.[76] (note VI/6),. the most believable hypothesis is that it was created by a Celtiberian craftsman, or a craftsman connected with the construction methodology of that culture but adapted to Romans needs and, therefore, designed to be worn on the left.

CONSTRUCTION TECHNIQUES

Most information on the construction components of the sheaths and the technology used to make them come from the study of specimens found, even if some useful contributions come from classical sources and iconography.

The strange thing is that we find the same analogies in them as we have just seen in the decorations. That is that the specimens from Periods I and III use very similar technologies, whereas those from Period II have a separate one. Let us proceed in order.

We have already mentioned that there are only few exemplars of sheaths from Period I brought to the attention of experts, whereas those of contemporary gladi are slightly more abundant. It is worth taking these into consideration as they use very similar construction technology to the pugiones. One of the most well known of these is a find from the island of Delos which can be associated with conflicts with pirates in 69 B.C.[77] and some of the construction details of this sheath are very clear. The front of a sheath from Giubiasco is equally as revealing, made with the same technology as that of the pugio of Titelberg (chapter 9, exemplar 216), dating between 30 and 12 B.C. This dating coincides with the moment of transitions from type I to II, so even though this pugio is classified among those belonging to type II regarding the blade and the hilt, it has a sheath made with technology typical of the previous type, which is worth noticing.

From an analysis of these finds we deduce that the sheath from the archaic period was technologically rather simple; its main part being a thin metal frame (fig. VI/8-component no.3) with a cross-section roughly like a "U" which ran all along the two sides, making up the framework of the artefact. It was easy then to insert two wooden plates (fig. VI/8-component no.2), most likely covered on the outside in leather or another appropriate material, which made up the "walls" of the sheath. Two metal bands (fig. VI/8-components no.6 and 7). These were fixed on by means of screws with metal rivets.

All the sheaths ended at the bottom with a small button whose round shape was useful to stop the soldier from being wounded from the continual rubbing against his thighs.

Almost all these components are easy to see on the famous stele of Minucius Lorarius, the only one to demonstrate a type I pugio. Particularly clear are the metal frame and the internal plates, whereas it is not clear if we are in the presence of the classic two horizontal metal bands or of binding in material in the Villanovian/Etruscan style.

A quotation from the VII century A.D. is worth mentioning – so rather late and well after the moment of the disappearance of the pugiones – and it clearly refers to some construction methods: *"so the Latins called it in the same way with an appropriate term: pugio. From the beginning it was artfully forged from the red hot entrails of the earth, the rest of the material was derived from wild bulls and it was shaped from the putrid carcasses of goats"*[78]*:* If the first part is rather clear – we have, in fact,

[76] L. Venden Berghe& M. Simkins, "Construction and reconstruction of the Titelberg dagger", J.R.M.E.S n. 12/13, 2001.
[77] M. Bishop, "Romans Military Equipment, ed. Oxbow Books.
[78] Aldhelmus Scireburnensis "Aenigmata - Cl. 1335, aenigma61, versus 1.

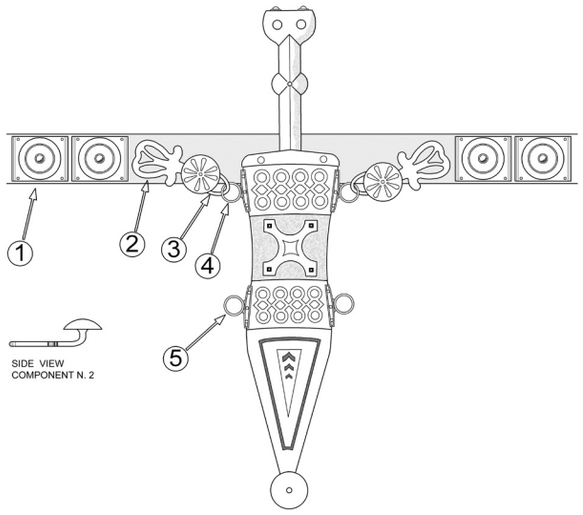


Fig. VI/6: representation of the entire suspension system of an imaginary pugio (from Period II):
1) cingulum 2) metal hook to connect the pugio to the cingulum 3) binding with metallic and leather threads 4) pair of upper rings 5) pair of lower rings.

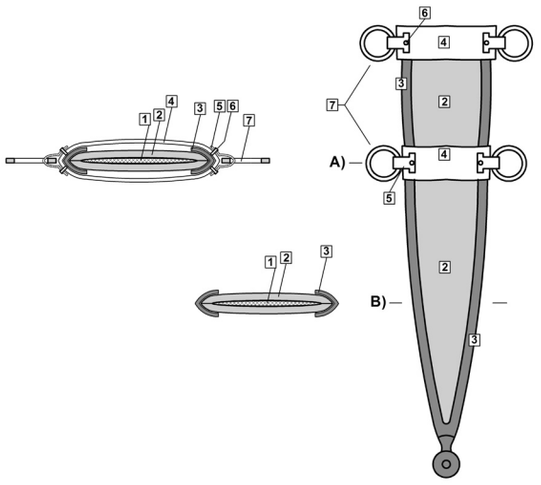


Fig. VI/8: construction details of a sheath from the first period (for reasons of graphic clarity the scale of the two sections is bigger than that of the sheath):
1) weapon blade;
2) plates in wood or other organic material;
2) metal frame;
3) "binding" components connecting the sides lengthwise;
4) suspension component to connect sheath-to-rings;
5) rivets to fix components no.5;
6) suspension rings

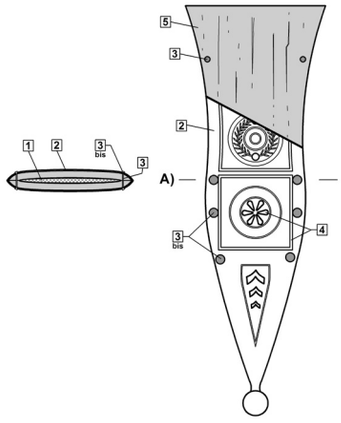


Fig. VI/9: construction detail of a sheath of Period II (for reasons of graphic clarity the scale of the cross-section is bigger than that of the sheath):
1) blade;
2) external metallic covering;
3) fixture rivets for components no.5;
3 again) external decoration of components no.3;
4) decorations;
5) plates in wood or other organic material; In this case we are in the presence of an exemplar of type "A" according to the classification of I. Scott.

previously seen that forging was well known and amply used – it is more difficult to interpret the second, which seems to refer to the hilt and perhaps also to the sheaths. It could be understood that bulls horns were used as the material for making a part of the grip, whereas possibly details for the assembly of the hilt were taken from the goats by maceration; or much more probably, the leather for covering the sheath was made by using the animals' skin having stopped its putrefaction by tanning. However, these attempts to interpret are hardly reliable as the information we have is excessively poor, and it has not been possible for the authors to find confirmation elsewhere.

We have seen that with the beginning of Period II the sheaths radically changed in their exterior appearance, and we can now add that at the same time also the construction technology changed. The technique described above using a frame seemed, in fact, to fall into complete disuse and was replaced, in short, by joining two main half shells together onto which all the other necessary components were applied. The two parts were made in flat pieces of wood of the desired size and shape and as the blade to be contained by them. They were then stuck together with glue and/or small nails and rivets were placed onto the sides. These were then covered with thin metal laminas, which protected the wooden parts below. They could only be placed on the anterior or posterior side in contact with the body, as we will see later on.

The techniques to make the laminas rich in symbolic and apotropaic decorations were predominantly enamel, inlay and Agemina, and we will now take a brief look at the characteristics[79]:

Enamel: used since the remotest of ages, seems to have originated within the Mycenaean culture towards the XV century B.C.. It consists in the fusion of vitreous substances directly onto the metal surfaces to be decorated, into small, specially made spaces.

This substance was obtained mainly from the fusion of silica (50%), lead oxide (35%) and potassium carbonate (15%), thus creating a transparent and colourless product. The colourations were obtained by adding metal oxides in a percentage not superior to 2-3%. Once cooled, the fusion became hard, transforming into coloured glass, which was then ground into a powdery consistency. The final stage was the application onto the metal. The Romanss knew this technique well, but did not use it very often in comparison with the Byzantine population, who were able to produce objects of astonishing value in enamel.

Inlay and Agemina: this technique is possibly more remote than the previous one. It originated in the Aegean in the II millennium B.C. and there are mentions of it even in an

[79] Following informations are from Claudio Guardino, "I metalli nel mondo antico", ed. Laterza

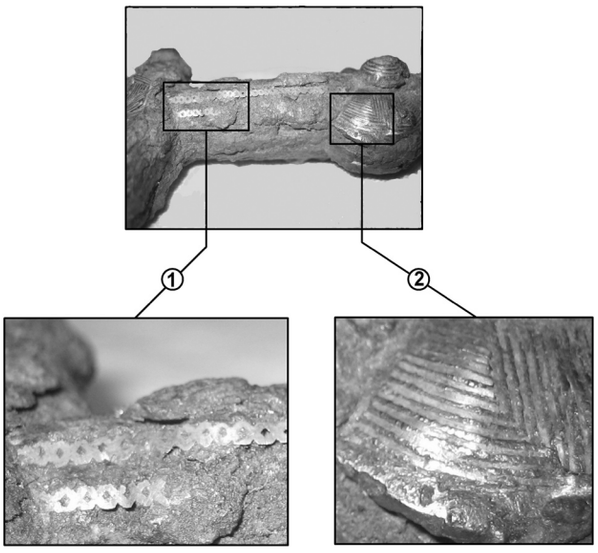


Fig. VI/10: example of decorations made with the Agemina technique on the hand of a pugio embellished with thin silver laminas. Detail "1" and "2" show this in detail. In number 2 the cavities, into which the metal laminas are set, are quite visible. (photo by the author)

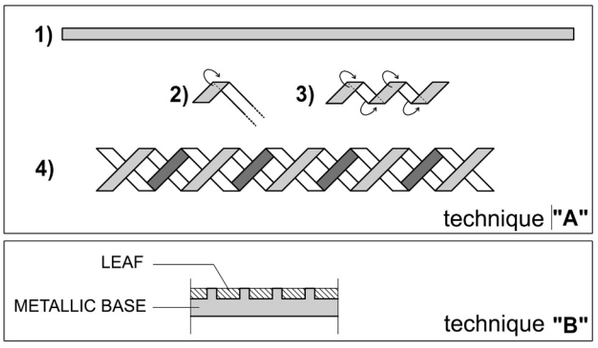


Fig. VI/11: technique "A" shows the various stages for creating the decorative laminas visible on the weapon 10 – detail 1:
- **creation of two very thin laminas;**
- **folding them at 90°;**
- **repeating the folding in sequence;**
- **entwining the two folded laminas;**
- **technique "B", instead, shows the most common method for Agemina: the creation of special grooves in the metal base to be decorated, into which the decorative laminas are set by hammering.**

extract of the Iliad. It consists of inserting materials, such as pietre dure, coral and precious metals into special spaces on a metal surface. If pietre dure, precious stones, corals or other similar materials are used then we are using the inlay technique; if, instead, metals are used, we are using Agemina. The thin metal laminas were affixed cold within the special grooves by delicate hammering. Numerous finds of furniture and vases in Pompei and Herculaneum, all of high quality, are proof of the Romanss' taste for this technique and also their ability.

In the Romans pugiones of Period II these two techniques were both widely used, often together, and as a general rule, Agemina was used to create symbols, whereas enamel and inlay were to ornate the heads of the rivets, often present both on the sheaths and the hilts.

In order to understand better the Agemina technique, which can be found more frequently on pugiones, let us take as an example the one visible in fig. VI/10. The decorations

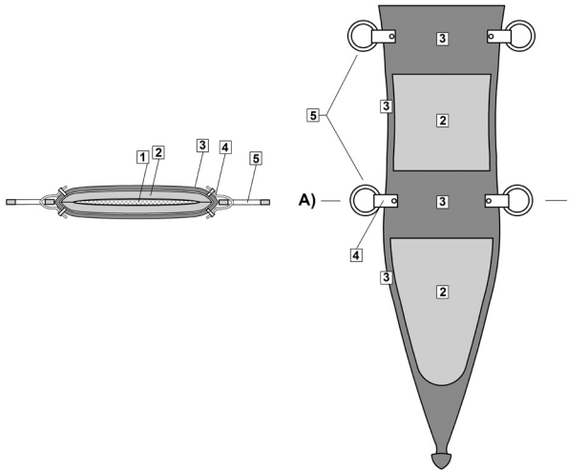


Fig. VI/12: construction detail of a sheath from Period III (for reasons of graphic clarity the scale of the cross-section is bigger than that of the sheath):
- **blade;**
- **plates in wood or other organic material;**
- **metal frame;**
- **suspension component to connect the sheath to the rings;**
- **suspension rings**

are in silver and two different Aemina techniques have been used to create different patterns. The first was made with a rather simple technique; first two small laminas were cut out of the desired metal, not very thick (around a few tens of millimetres), which were then folded over at 90° at regular intervals until they reached the necessary length. Once this had been done, the two strips were layed over each other in their zig-zag shape in order to achieve a pattern of small diamonds placed in a row, and they were soldered on by increasing the temperature and hammering (fig. VI/11-technique "A"). Alternatively, it was also possible to obtain them from a single, wider lamina by removing them from solid with special tools for hammering and cutting.

The second technique, instead, demonstrates the more classic procedure. On the surface of the metal base special grooves were obtained of the correct size and geometry for the future decoration and compatible laminas. After this the laminas were introduced into the grooves, again using a small hammer and pointed utensils, and finally it was all heated to make it hold solidly together (fig. VI/11-technique "B").

From a construction point of view the sheaths of the I century (that is Period II) are subdivided by Ian R. Scott[80] into two subgroups, called "A" and "B". The former was made up of a wooden nucleus covered by a metal plate both on the front and back surfaces and folded over at the edges to overlap over each other.

They are without bulges on the sides to hold the suspension rings, which seem to be fixed directly onto the front metal plate by two or three rivets.

Type "B" sheaths, however, only consist in the front plate which is fixed onto that which would otherwise be a simple wooden covering. This plate is not folded over at the edges so it appears practically flat. Normally there are small components sticking out at the sides for fixing the suspension rings on; these are also an easy clue when classifying a sheath as type "B". Often archaeological finds are limited only to the metal plate, because the organic components have decayed away.

[80] Ian. R. Scott, "First century military daggers and the manufacture and supply of weapons for the Romans army" B.A.R. n. 275, 1985.

So after the turning point seen above we come to the advent of the Flavian dynasty, and hence the appearance of the pugio type III and its return to Republican simplicity and plainness. Curiously, the construction technology follows exactly the same path, and so the technique of the frame reappears, applied in a very similar way to the Republican one. The only differences we can report, which nevertheless appear to be of secondary importance, are that the metal elements are applied lengthwise (components no.4 in fig. VI/12) and do not overlap – they remain distinct from the frame even if they form a single shape with it - and the button at the bottom end now appears usually smaller and in a vaguely half-sphere shape. For the rest, everything remains substantially the same. As the weapons are without decoration, there is no use of any inlay or Agemina.

CHRONOLOGY

In this phase our attention will obviously be concentrated only on sheaths, having treated the dating of blades and hilts in chapter I.

As regards the exemplars from Period I, their birth, like the blade they had to contain, occurred indistinctly over time, beginning at the end of the II century B.C. During the whole period in which they were in use no significant variations have been found which permit more precise dating; this is also due to the already mentioned scarcity of surviving exemplars.

Better defined is the moment in which they begin to fall into disuse and leave their place to those of Period II which - thanks to the great abundance of finds which can be dated with a good degree of certainty - allows us to study in detail the exemplars which are placed here. The writings of Scott (op cit) are of great help to us here, which we will, therefore, follow with great attention from now on.

We must immediately point out that within this second group, the first to appear are the exemplars of type "A", which precede those of type "B" by several decades. We have also seen that the moment in which the transition from type I occurs is during the reign of Augustus, and we have precious proof of this in the sheath of an exemplar from Titelberg. However, it is useful now to also cite an exemplar found in Haltern, dated from 10 B.C. to 9 A.D., which was also made with the same "frame" technique. These two exemplars, created with the technique typical of Period I, overlap in time with those which are probably the most archaic exemplars of Period II (type "A"): an exemplar from Oberaden and another from Dangstetten. The first is dated between 11 and 7 B.C., as the Romans presence was concentrated there during those years, whereas the period of occupation of the camp of Dangstetten could be placed between 15 and 10 B.C. The co-presence of these exemplars of different types during the same period, together with the absence of either during both the previous and following periods, confirms the beginning of the Augustan reign (approximately 15 B.C.) as the transition moment from one type to another and the appearance of subtype "A". The latter ended during the reign of Claudius (approximately 50 A.D.), as there is practically no evidence of exemplars after this period.

The oldest sheath of type "B" seems to be the one originating in Velsen, certainly dating back to the reign of Tiberius (14-37 A.D.), as well as from Kempten and Aurerbeg, dating between the end of the reign of Tiberius and the beginning of Claudius' reign. This type of sheath continues until it is gradually substituted by the those of Period III, which we see occurring in the final part of the I century, under Flavius' reign.

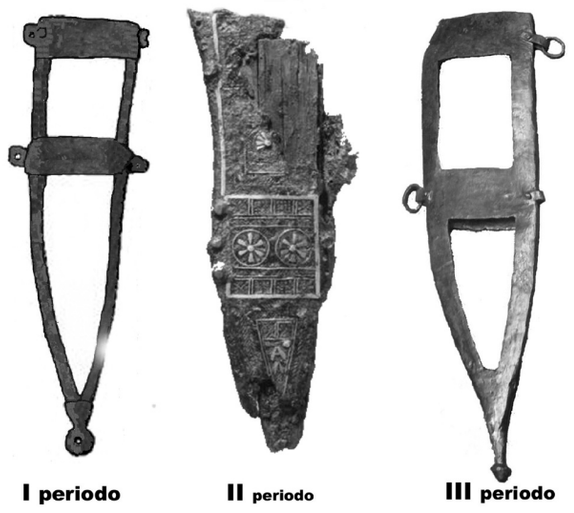


Fig. VI/13: sheaths comparing the three periods. From the left to the right:
- **sheath from Period I (digital reconstruction based on authentic find)**
- **sheath from Period II (Landesmuseum, Mainz- Germany). This exemplar clearly shows the lack of metal frame, substituted with a wooden structure with two valves and the metallic lamina on top, as well as the décor in Agemina and enamel. It appears to be type "A" according to the classification of I: Scott.**
- **Sheath from Period III (museum of Munchen – Haltern). Only the metal frame has survived, whereas the organic part has been lost.**
- **Note the similar construction of the first and third, which are both based on the use of a metal frame, completely absent in the second.**

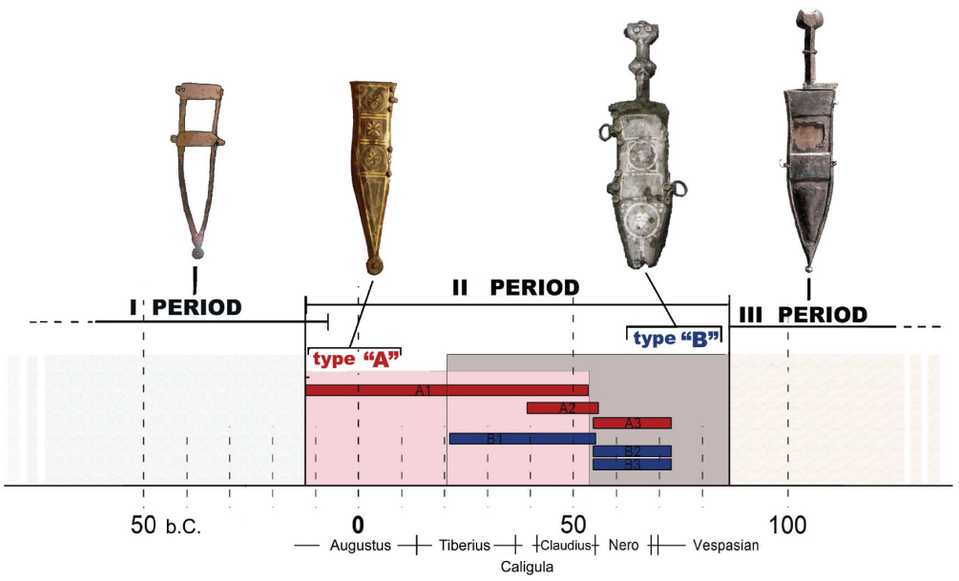
Also the decorations can be a valuable aid in dating the sheaths from Period II.

In type "A" sheaths we find brass used for the inlays, or more generally alloys of a yellow colour; whereas for those of type "B", silver is more widespread.

As far as type "A" decorations are concerned, they can be subdivided into three subgroups:

- type "A-1": sheaths belonging to this subgroup are decorated with brass and enamels. The most frequent symbols used are the Sun, laurel leaves in the shape of a crown (often closed by concentric circles) and the lines on the edges by palm leaves and peltae.

  They may be placed between the beginning of the reign of Augustus and that of Claudius (approximately between 15 B.C. and 50 A.D.). Whenever sheaths of this type were found together with blades, the latter did not have inlays on the hilts.
- type "A2" (or "Allériot type according to Scott's classification): prefers the use of silver and enamels for decoration, with symbols similar to the previous group, even if there are a small amount of exceptions. It can be chronologically dated to during Claudius' reign. The blades found together with these sheaths normally have hilts with inlays in the same way.
- type "A3": these are decorated with brass and silver without the use of enamels, and the absence of the latter is their specific characteristic, united to the fact that they have an analogous symbology to those of type "B" sheaths of the later period, as we will soon see, and which can be mainly identified with temples, palms, diamonds inside squares. They can be dated back to Nero's reign and possibly later still.



Graph VI/1: schematic representations of the chronology of the sheaths, with particular reference to Period II (I century). The latter has been done according to the classification proposed by I. Scott. The three "A" types are presented in red, whereas the "B" types are in blue.

Also the "B" types are subdivided by Scott into three subgroups:

- "B1": have the some of the same characteristics found in types "A", such as the use of silver and enamels – often red – for decorations, with symbols in the form of laurel leaves both in circular shapes and as lines on the edges, and Suns with varying shapes and numbers of rays. Chronologically they are placed during the reigns of Tiberius and Claudius.
- type "B2": are characterised by the recurrent use of a décor in silver infrequently used in the previous types, mainly temples and palms, with a modest number of diamonds. They can be dated to the period of Nero and also a little beyond.
- type "B3": generally have abstract designs, which are difficult to classify from a symbolic point of view, made with silver inlays. No blades appear to have ever been found together with this type of sheath, and this makes their chronological placing more difficult. Scott believes that they are, however, among the later types, possibly to be placed in the late Neronian period or later still.

We find that the categorisation proposed by Scott regarding all the construction characteristics and the sheath decorations of type II are not accepted by all experts. This is not only due to difficulty in understanding some of the exemplars in one of the subgroups, but also due to the lack of chronological coincidence of some pugiones where the dating is certain.

For example, in Herbert Westphal's study[81] of some pugiones coming from Haltern (Germany) there seems to be some information which is not in accordance with Scott's classification. The author particularly lingers on some exemplars coming from a camp from the Augustan Age which, however, cannot be classified as type "A1", as they should be according to Scott's classification, because they have decorations in silver and not in brass (or tending towards yellow), and also because the hilts are decorated, which is not foreseen by Scott's classification.

Another contrast with Edit B. Thomas' report[82], which frequently refers to G. Ulbert's thesis[83], dates an exemplar coming from Oberammergau (chap. IX exemplar no. 192) at the beginning of the I century. This is incompatible with Scott's classification, which would consider it type "B", that is from 25-30 A.D. onwards.

TABLE VI / 2

	I Period	*II Period*						*III Period*
	single	**A1**	**A2**	**A3**	**B1**	**B2**	**B3**	**single**
				material of the decorations				
brass		●		●				
silver			●		●	●	●	
enamel		●	●	●	●			
				symbols				
enamel		●	●	●	●			
Sun		●	●		●			
laurel		●	●		●			
Palm		●	●	●		●		
Pelta		●	●					
Temple				●		●		
Rhombus				●		●		
abstract							●	
				construction techniques				
frame	●							●
Front plate		●	●	●				
Front & back plate					●	●	●	

Tab. VI/2: Table of the main characteristics of the sheaths of pugiones. For type II (I century) we have based our information on I. Scott's classification.

[81] Herbert Westphal, "Ein Römisher Prunkdolch aus Haltern".
[82] Edit B. Thomas, "Helme, schield, dolche, Akademiai Kiado, Budapest.
[83] Ulbert G.,"Straubing und Nydam zu romischn Langschwertern der spaten Limeszeit", Munich 1974.

CHAPTER VII
ICONOGRAPHICAL SOURCES

The figurative reproduction of weapons in Rome had the effect of representing and exalting the social status of the commissioner of the reproduction and his *Gens*, whether the soldier's personal panoply was depicted or weapons he had conquered from the enemy; the latter demonstrating the power consequential to victory. In this tradition can be included sepulchral stelae, sarcophaguses, great monuments (where the depiction of weapons took on the cause of political propaganda), and the numerous public and private architectonic structures decorated with friezes of weapons.

The weapons depicted could have both a symbolic and real value. In fact, whereas the armament of barbarians was represented both realistically and ideally (in this case the depiction of gladiator weapons was frequent), those of the Roman soldiers on their funerary monuments acquired the function of portraying the deceased in all his panoply in the most realistic way possible[1]. For this reason the study of iconographical sources, which we will now go on to do, represents one of the greatest sources of information on legionary weapons and consequently the pugio[2].

Funerary stelae

The stelae, when they were designed in a very realistic and detailed manner, help us to guess the armed corps which the soldier belonged to, his rank, and the type of equipment soldiers might have had, precisely dated, as well as allowing us to obtain information regarding the shape of the weapons and how they were worn.

The greatest limit to our particular investigation is that our analysis is concentrated on only the number of funerary monuments we have examined, which are only a small fraction of those that were actually made. In fact, many monuments have been lost and of those surviving not all are the object of public study and the depictions are not always complete or clear (sometimes the poor clarity is due to the photographic reproduction of a stela which was not possible to study from life). There is also the quality of the fabrication of stelae which depended more

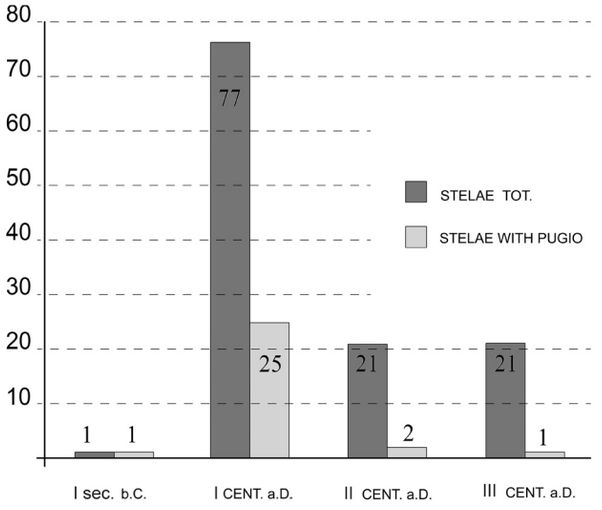


Fig. VII/1: Temporal distribution of 120 military stelae, of known dating. For simplification, the stelae dating between two centuries have been placed in the column of the previous century. The blue lines represent the total number of stelae, whereas the red lines are the chronological distribution of the 29 stelae in which the pugio is depicted. (drawing by the author).

on the ability of the stone cutters who were attached to a particular corps of the army than on who commissioned the work[3]. A further limit to our observations derives from the typology of the representation. This is because after the I century A.D. images of soldiers reflected less increasingly war characteristics and preference was given to civil clothing[4]. In fact, after the first period, when exaltation of the individual and the concept of heroism were given precedence, a historical phase followed which concentrated on the individual who hoped for resurrection, and the custom of burials. It was typical during this second phase to use sarcophaguses with frequent symbolic and allegorical images, among which is the representation of a deceased man[5] lying inclined at a banquet on the kline[6].

Returning to the stelae: the representation of the soldier in military *habitus*[7] was a means to show the observer the value of the gens which the deceased belonged to, and the degree of wealth they had achieved. As Paul Zanker states, this was not only relevant to high social ranks, but also great importance was placed on the vast middle classes, which simple soldiers and petty officers belonged to.

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1 Eugenio Polito, "Fulgentifus armis, introduzione allo studio dei fregi d'armi antichi", ed. L'Erma di Bretschneider;

2 The Roman people attributed great importance to the burial of their dead because the destiny of the soul was the responsibility of its relatives and friends and, whenever these were lacking, the State. The soul of the dead person, which was seen as a divine essence, would remain wandering on the earth without finding peace and distressing the living if the body remained unburied. For this reason the soldier set aside a part of his wages for the entire length of his service, the so-called "funeraticium", for a funerary society managed by the Centuria. This small tax was indispensable in order to assure the soldier a decent burial after his death (Vegetius, "The art of Roman War", book II, Chap. XX). In order to offer the dead person an appropriate dwelling place even high sums were invested. It has been estimated that for the making of this dwelling place a sum of money equal to half or even the whole yearly wage of an official of the imperial guard could have been invested, to which the cost of transport had to be added. The cost, certainly high, was not necessarily proportional to the degree of wealth of the dead person, but rather to his desire to invest in his final dwelling place, as P. Zanker and B. Chr. Ewald state in "Mit Mythen leben, die Bilderwelt der romischen Sarkophage", Munchen 2004, p. 24, for which reason it was much more widely spread than the mere circle of senatorial aristocracy. We have included a table on the costs of funerary monuments collected from the research carried out by Duncan Jones, "The Economy":

period	Soldier	Cost of the monument	Annual wage (about)
end I cent.	A.D.Praetorian (Cisalpina)	5000 sesterces	3000 sesterces
beginning II cent.	A.D.Praetorian (emiliano)	2000 sesterces	4000 sestercesbeginning
II cent. A.D.	Praetorian (Piquentum)	4000 sesterces	4000 sesterces
Fist half III cent. A.D.	Optio (Aquileia)	10.000 denarii	7500 denarii

3 Sergio Rinaldi Tufi, "Militari romani sul Reno", ed. G. Bretschneider.

4 Ranuccio Bianchi Bandinelli, "Roma: la fine dell'arte antica", ed. BUR.

5 M. Torelli, M. Menichetti e G. Grassigli, "Arte e archeologia del mondo romano" , ed. Longanesi. "Vivere con i miti, iconografia dei sarcofagi romani", ed. Bollati Boringhieri;

6 the "Kline" was the convivial bed;

7 Latin translation of the term "suit";

	I cent. B.C.	I cent. A.D.	II cent. A.D.	III cent. A.D.	No date	N° Stelae with Pugio
Legionary Infantrymen						
36 soldiers	0	9 6 with P.	5	7	9	6 infantrymen (16,6%)
13 n.c. officers	1centurion with P.	3 centurions 1 centurion P. 1 Optio		1 Centurion	3 Centurions 2 Optiones 2 Officers	2 centurions (25%)
Auxiliary Infantrymen						
16 soldiers	0	3 7 with P.	0	1 1 with P	3 1 with P	9 soldiers (56%)
1 n.c. officers	0	1 Centurion	0	0	0	0
unidentifyed infantrymen						
22 soldiers	0	3	2	1	16	0
2 n.c. officers	0	1 centurion	1 Optio	0	0	0
Praetorians						
10 soldiers	0	2 1 with P.	2 1 with P.	2	5	2 soldiers (20%)
1 Tribune	0	0	0	1	0	0
Cavalry						
75 cavalry men	0	22	10 1 with P.	5	38	1 (?) (1,3%)
Standardbearers						
13 Standardbearers	0	6 5 with P.	0	1	6 1 with P.	6 Standardbearers (46,1%)
Musicians						
3 Musicians	0	1	1	0	1	0 musicians
Navy						
4 navy soldiers	0	2	0	0	2	0 navy soldiers
other						
	0	1 quartermaster with P.	0	0	0	1 quartermaster

Table VII/1: summary of the stelae, marked by the various military corps. The subdivision is based on dating (when known) and if there is a representation of the pugio (marked with the letter "p"). The percentages in the column "N stelae with pugio" refers to the number of soldiers who were wearing the weapon, for example 6 infantrymen out of 36, referring, therefore, to the line in which this figure is found.

CORPS	weapon	%	No date	I B.C.	I A.D.	II A.D.	III A.D.
Legionary infantrymen	Gladius	63,7%	6 1 centurion 1 officer,1 optio		2 1 centurion	2 1 officer	4
	Gladius/Pugio	36,3%		1	7 1 centurion		
Auxiliary infantrymen	Gladius	20%			1		1
	Gladio/Pugio	80%			7		1
Not defined infantrymen	Gladius	100%	8		2 1 centurion	2	1
	Gladius/Pugio	0%					
Praetorians	Gladius	66,7%	2		1		1
	Gladius/Pugio	33,3%			1	1	
Standard bearers	Gladius	53,9%	5		1		1
	Gladius/Pugio	46,1%			6		
Cavalry	spatha	100%	9		9		
	spatha/Pugio	0%(?)				1 (?)	
navy	Gladio	100%			2		
	Gladio/Pugio	0%					
quartermaster	Gladius	0%					
	Pugio	100%			1		

Table VII/2: this shows a comparison of the percentages between stelae depicting only a gladius and those with both a gladius and pugio. The subdivision is based on dates (when known).

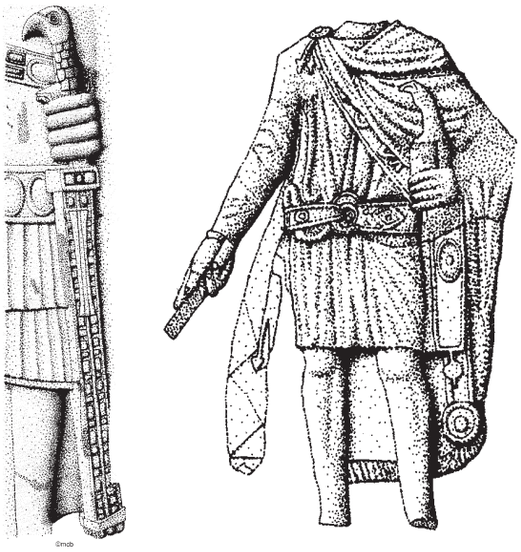


Fig. VII/2: from the left: detail of sword from the monument to the Tetrarchs in Venice (end III century – beginning IV century); detail of the stela of an unknownn Roman official (Rome), with a sword also on his left side. The latter was a mystical weapon rather than from the every day life of a Roman official, and it symbolised power. (from "Roman Military Equipment: from the Punic war to the fall of Rome, M. Bishop & J. Coulston).

The iconographic choice to represent the *milites*[8] with numerous details of their weapons, clothing, the ranks and offices they held was the consequence and evolution of Greek and Etruscan influence. The funeral of Patrocius, described in the Iliad, certainly served as a reference point for the exaltation of honour and military valour, whereas from the Etruscans the proud representation of the self and the deceased's privileges was assimilated. The monument, therefore, became a eulogy of the deceased's valour and *"a means of social elevation, a source of distinction and prestige, in the knowledge of belonging to a fundamental component for the function and preservation of the State"*.[9]

The data which emerges from an examination of 220 military stelae, however, is not always complete because at times the monuments appear fragmentary or unclear, or because they are frequently out of context. If we observe the temporal distribution of various stelae whose dating is known (120 exemplars), we see that 64.1% of the total (77 stelae) belongs to the I century A.D., whereas among those with a representation of a pugio only 29 out of 41 stelae (18.63 % of the total) can be dated to a sufficiently reliable chronological date, and 86.2% of these (25 stelae) belong to the I century A.D.

The reason why the greatest concentration of stelae is ascribable to the I century A.D. is that cremation, for which stelae were used, was the most popular rite from the II century B.C. until the first Imperial Age. Burials during this period were reserved for the poor and slaves who were often buried in the plebeian cemeteries (Pliny N.H., VII, 187).

From the beginning of the II century A.D. the use of burials progressively began to spread and hence so did the use of sarcophaguses. This occurred first among the leading classes and then, more slowly, among the inferior classes (with the exception of the emperors, who continued to be cremated), giving progressively rise to the concept of "internalization of the funerary cult", as defined by Paul Zanker (op. cit.).

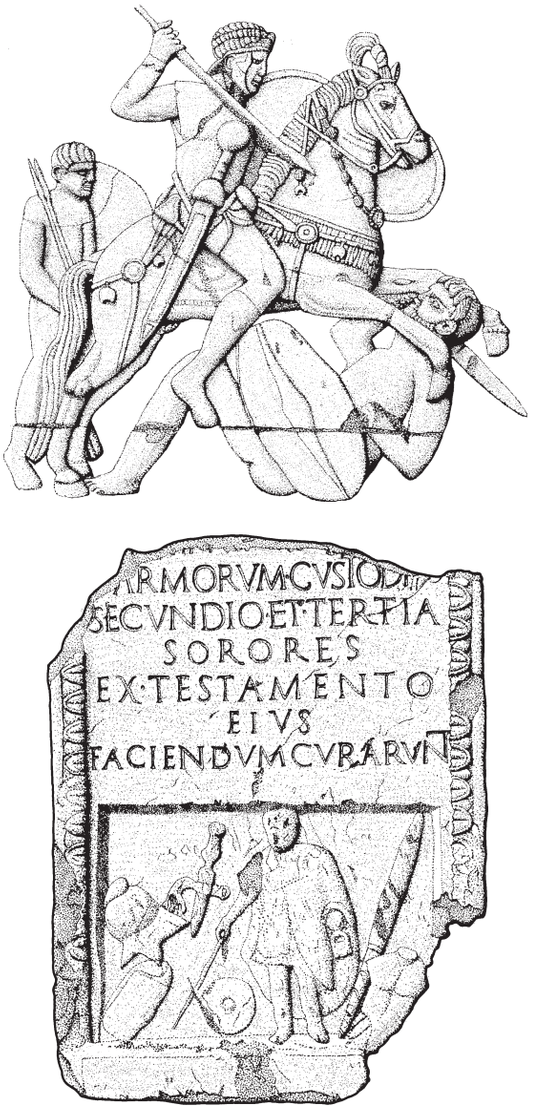


Fig. VII/3: on the top: detail of the stela of Flavius Bassus, cavalryman of the Ala Noricum, dating back to the high Empire. On the bottom: detail of the stela of Publius Marcius Probus, *custodies armorum*, I century A.D. (from "Roman Military Equipment: from the Punic war to the fall of Rome, M. Bishop & J. Coulston).

With this custom it was no longer necessary to show off the deceased's social status to the passer-by with an image of himself. This was because this new culture favoured the idea that the deceased was the inhabitant of the tomb, which was understood as a house for the dead, thus justifying the channels by which the relatives introduced the libation for the deceased on anniversaries. With the spread of Christian culture, the tomb lost importance as it became just a provisional home while waiting for true eternal life.

After the III century A.D., only burial was common, used also by the emperors, as the oriental religions (Judaism and Christianity) forbade cremation, with the consequence that the funerary stelae, stones, crematory rites and all, ceased to exist.

This fact allows us to understand how the study of stelae has a great importance for the study of the military habitus

[8] latin term meaning "soldiers";
[9] Claudio Franzoni, "Habitus atque habitudo militis", ed. l'Erma di Bretschneider.

Appendix I: list of the stelae where the presence of the pugio can be traced from authors, supplied with information which is considered useful. In all cases the gladius is also present, and is, therefore, an unmentioned established fact.

stela	name	rank	spot	period	note
1	Annaius Daverzus	Auxiliary infantyman, Cohort Delmatarum	*Germania superior* Bingen	First half I cent. A.D.	Belt with plates, 4 suspension rings, the sheath shows only two. Co-presence of 2 hastae, shield, tessear , sagum.
2	Attio L(i?)ani	Auxiliary infantyman cohorts Raetorum	*Germania superior* Magonza	unknownn	Lost stela (only a print remains). Co-presence of paenula, 2 hastae, shield.
3	Balaterus	Auxiliary infantyman Cohort Delmatarum	(Algeria) Mauretania Cherchel	I cent. A.D.	Co-presence of 2 hastae, sagum
4	Bato Dasantis	Auxiliary infantryman IIII Cohort	Dalmatia	I cent. A.D. Claudian age	Soldier is wearing a sagum
5	Caius Castricius Victor	Legionary infantryman Legio II Adiutrix	Pannonia inferior	Late I cent. A.C.	Co-presence of 2 hastae, shield , lorica
6	Caius Faltonius Centundus	Legionary infantryman Legio XXII Primigenia	*Germania superior Moguntiacum,*	half I cent. A.D.	Wearing a Paenula. Note the presence of 2 slaves at his sides
7	Caius Valerius Centundus	Standard bearer Legio XIIII Gemina Martia Victrix	*Germania superior Moguntiacum,*	70 A.D.	The soldier is wearing a bearskin and is equipped with a shield. In his right hand he is clasping the "signum". Note the 4 suspension rings.
8	Caius Valerius Valens	Legionary infantryman Legio VIII Augusta	Acaia, *Greece*	I cent. A.D. 45-70	Co-presence of Codex ansatus and Vitis. The soldier is wearing a paenula.
9	Firmidius Rufus	Praetorian Cohort VI pretoria	Aquileia	I cent. A.D.	Stela without an effigy of the deceased, showing a pugio, a gladius, a pilum (?), a helmet and a shield separately.
10	Firmus	Auxiliary infantryman Cohors Raetorum	*Germania Superior Antunnacum,*	I cent. A.D.	Stela rich in details, shows a pugio in a sheath with 2 suns and 4 suspension rings very clearly. The soldier, wearing a sagum, has 2 slaves at his sides.
11	Gaius Ottiedius Attianus	Praetorian Cohors Praetoria	Assisi, Italy	III cent. A.D.	Stela without an effigy of the deceased, shows a pugio, a gladius, a helmet and a Codex ansatus separately. The quality of the work is not the best and does not allow a great amount of details to be discerned.
12	Genialis	Standard bearer Cohors VII Raetorum	*Germania superior Moguntiacum,*	second half I cent. A.D.	High quality representation, rich in detail. It shows a pugio with decorated sheath. The soldier is wearing a lorica hamata, with a bear skin on top. In his right hand he is clasping an "imago", in the left a role of papyrus.
13	Hyperanor	Auxiliary infantryman Cohors I Sagittarior.	Germania Superior Bingen-Bingerbrück,	I cent. A.D.	Excellent depiction of decorated pugio sheath, on which we can see 2 suns and 4 suspension rings. The soldier is wearing a sagum.
14	Licaius	Auxiliary infantryman Cohors Pannorium	*Germania superior* Wiesbaden	I cent. A.D. Flavian age	A cingulum with plates and an apron is depicted in great detail. The soldier is wearing a sagum.
15	Lucius Sertorius Firmus	Aquilifer Curator veteranorum Legio XI Claudia	Verona, Italy	I cent. A.D. first half claudian age	High quality stela showing a cingum with plates and a lorica squamata. The pugio, even if scarcely visible, is on the right side of the soldier, who is holding a standard with an eagle in his right hand.
16	Marcus Favonius Facilis	Centurion Legio XX Valeria Victrix	Colchester Castle (UK)	I cent?	Pugio on the right hanging from a thin cingulum and apparently not decorated. Co-presence of panoply in Greek style, witth armour in muscolata and greaves
17	Marcus Lucillius Germanus	Standar bearer Legio II Adiutrix	Alexandria, Egypt		The soldier is wearing a Paenula, holding a standard in his right hand.
18	Minucius Lorarius	Centurion Legio Martia	Padova (Italy)	around 43 BC	Only known stela with visible pugio from Style I. The soldier is wearing a sagum.
19	Pintaius	Standard bearer Cohors V Asturum	*Germania Inferior*	beginning I cent. A.D.	Pugio carried on the right with 4 clear suspension rings. The soldier is wearing a lorica hamata with a wild skin over it, holding a standard with an eagle in his hand
20	Publius Flavoleius Cordus	Legionary infantryman Legio XIIII Gemina Martia Victrix	*Germania superior Moguntiacum,*	I cent. A.D. 43 A.D. (death)	Pugio very clearly depicted without decorations visible either on the handle or on the sheath, with 4 suspension rings. Co-presence of shield and two roles in the left hand

21	Publius Marcius Probus	quartermaster	Bergamo, Italy	I cent. A.D.	The weapons of the soldier are not worn but scattered within the work. Co-presence of elements from a panoply in Greek style, such as a Boeotian type of helmet and a lorica musculata. The soldier has a Codex ansatus in his hand.
22	Quintus Luccius Faustus	Standard bearer Legio XIIII Gemina Martia Victrix	*Germania superior, Moguntiacum,*	I cent. A.D. 70-92 A.D.	The pugio can only be guessed at due to the low quality of its depiction. Co-presence of signum, shield and wild skin.
23	Quintus Petilius Centundus	Legionary infantryman Legio XV Primigenia	*Germania superior,* Magonza	I cent. A.D. + 40 A.D.	Co-presence of pilum held in right hand. The soldier is wearing a paenula.
24	Respectus	Auxiliary cavalryman, exploratory	Pannonia superior Heidelberg	end II beginning III cent A.D.	On the right side a short weapon can be noticed which could be a semispatha or a spatha, now in a deteriorated state. Even if not probable, it is also possible that it is a pugio.
25	Rufus Lucilius	Legionary infantryman Legio XV Apollinaris	Pannonia superior,Carnuntum,	I cent. A.D. 39-44	Bad state of preservation and low quality image. The soldier is wearing a paenula.
26	Tiberius Iulius Abdes Pantera	Auxiliary infantryman Cohors I Sagittariorum	Germania Superior, Bingen-Bingerbrück,	I cent. A.D.	Pugio worn on a cingulum over that of the gladius.
27	Titus Aelius Victor	Auxiliary infantryman	Verona, Italy	inizio III cent A.D. ?	The presence of the pugio is, however, doubtful due to the low quality of the image, which could be a semispatha.
28	Unknownn soldier		Udine, Italy	First half I cent. A.D.	Pugio handing from a cingulum with plates, beneath that of the gladius, with 4 suspension rings.
29	Unknown soldier		*Germania superior,* Mogontiacum		Fragmented stela, pugio sensed on the right side. Co-presence of pilum
30	Unknown soldier		*Germania Inferior Augusta Treverorum,*		presence of pugio very doubtful, however, if present it is on the right side.
31	Unknown soldier		*Germania superior, Moguntiacum,*	second half I cent. A.D.	Pugio well depicted hanging from the left side froma cingulum beneath that of the gladius. Sheath with 3 or 4 flowers (vine leaves).
32	Unknown soldier		*Germania inferior Ara Agrippinensium,*	half I cent. A.D.	Two parallel cingula. Co-presence of pilum.
33	Unknown soldier		*Germania superior Moguntiacum,*		Pugio well depicted, hanging from a cingulum over that of the gladius, in a sheath which depicts 2 rosettes and 4 suspension rings. Co-presence of 2 spears.
34	Unknown soldier		*Germania superior Moguntiacum,*	second half I cent. A.D.	Very clear image of the pugio with sheath with 4 suspension rings. The soldier is wearing a paenula and is holding a tessera in his right hand.
35	Unknown soldier		*Germania superior* Andernach		Pugio well depicted hanging from the left side from a cingulum beneath that of the gladius. Co-presence of lorica hamata and perhaps a shield behind the soldier.
36	Unknown soldier		*Germania superior* Andernach		Fragmented stela, showing a pugio on the right side. The soldier is wearing a lorica hamata on top of a sagum, holding 2 spears in his right hand.
37	Unknown soldier		*Germania superior* Coblenza		Pugio hanging on left side from a cingulum over that of the gladius. This soldier is wearing a lorica hamata on top of a sagum.
38	Unknown soldier		*Germania superior* Gustavsburg		Pugio hanging on left side from a cingulum over that of the gladius. This soldier is wearing a lorica hamata on top of a sagum.
39	Unknown soldier		*Germania inferior* Bonn		Showing a pugio on the right side, which could, however, be a badly-depicted gladius. The soldier is wearing a lorica hamata over a sagum and is clasping a spear in his right hand.
40	Unknown soldier		*Germania inferior* Bonn		Pugio, hanging on left side from a cingulum beneath that of the gladius. The soldier is wearing a lorica hamata over a sagum, and is holding a pilum.
41	Unknown soldier		*Germania inferior* Bonn		Gladius and pugio not visible as they are half hidden by the paenula, worn in a rather high position (from “Militari sul Reno” by S. Rinaldi Tufi).

Table 5: table in which all the stelae are recorded in which it has been possible to trace the authors where the presence of the pugio has been noted, with relative information considered useful. In all cases the gladius is co-present, and is, therefore, to be considered as an established fact.

stela	nome	luogo
42	Aprilius Lecterus	Rhaidestos, Turkey
43	Aurelius Mucianus	Apamea, Syria
44	Aurelius Sabius	Nikopolis, Egypt
45	Aurelius Sudecentzus	Aquileia, Italy
46	Caecilius Avitus	Chester / Deva, Britannia
47	Caius Castricius Victor	Pannonia inferior
48	Caius Monnenius Secundus	*Roma, Italy*
49	Camomile	*London, England*
50	unknownn	Croy Hill (Caledonia)
51	Flavinus	Corbridge / Corstopitum (Britannia)
52	Lucius Blattius vetus	Este, Italy
53	Lucius Septimius Valerinus	Rome, Italy
54	Lucius Sincio	Padova, Italy
55	Marcus Aurelius Alexys	Athens, Greece
56	Marcus Aurelius Sossius	Aquileia, Italy
57	Marcus Aurelius VItalynus	Rome, Italy
58	Valerius Quintus	*Aquileia, Italy*
59	Unknown	England
60	Unknown	Pannonia inferior
61	Unknown	Nikopolis, Egypt
62	Unknown	Raetia/ Germany
63	Unknown	Baths, England
64	Unknown	Pannonia
65	Unknown	Pannonia
66	Unknown	Tracia
67	Unknown	*Aquincum, Pannonia Inferior*
68	Unknown	Italy, Este
69	Aelius Septimus	*Pannonia Superior* (Komarom, Hungary)

Appendix II
Synthetic list of the stelae which have been traced from authors, which show a soldier clearly in procintus, armed with a gladius and often also a javelin, but without a pugio. We have only considered those belonging to legionary, auxiliary and Praetorian infantry.

n.	Conventional name/place of finding	
1	Portonaccio (Rome)	180 A.D.
2	Big Ludovisi (Rome)	III cent. A.D.
3	Small Ludovisi (Rome)	II cent. A.D.
4	Sarcophagus of Brescia	II cent. A.D.
5	Battle on ships (Monastery S. Giulia- Brescia)	
6	Amendolara (Vigna Amendolara)	III cent. A.D.
7	Abbey of Farfa (Rieti)	end II cent. A.D.
8	Camposanto di Pisa (Pisa)	Beg. III cent. A.D.

Appendix III
list of main sarcophaguses with war scenes:

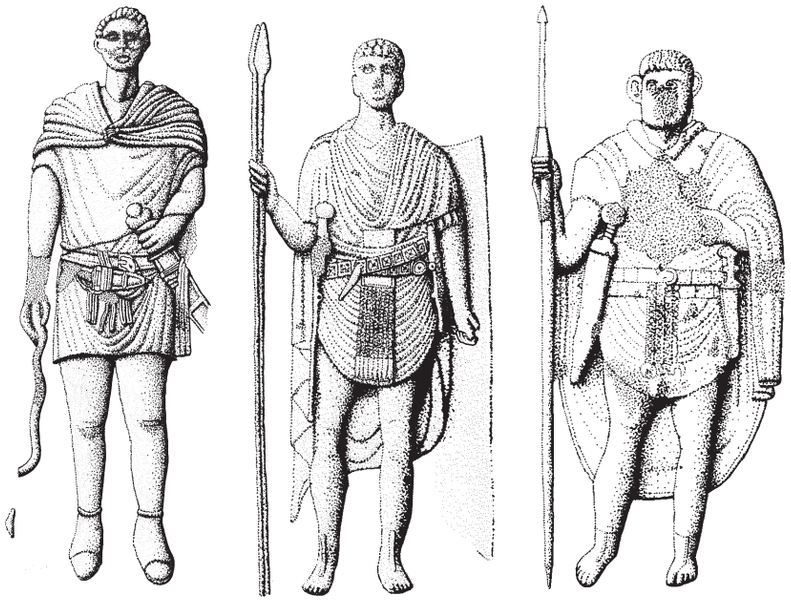


Fig. VII/4: detail of the stelae of (from the left):

- **Minucius Lorarius, legionary of the legio Martia (I century B:C.). Note the detail of carrying the pugio on the abdomen in a horizontal position;**
- **Annaius Daverzus, auxiliary of the cohors IV Delmatarum (I century A.D.). The soldier is wearing two cingula, one for his gladius and the other for his pugio, worn crossed over.**
- **Petilius Centundus, legionary of the legio XV Primigenia (I century A.D.). as in the previous stela, the soldier is wearing two cingula, but both in a horizontal position, one above the other.**

(from "Roman Military Equipment: from the Punic war to the fall of Rome, M. Bishop & J. Coulston)

for only the I-II centuries A.D. when these funerary representations were very widespread; whereas they lose importance outside this time span because their scarcity means that they may not appropriately present the military population of the time.

In order to simplify the study of stelae, we have used a classification (table VII/1) with the appropriate military corps, distinguishing them in infantrymen (subdivided into legionary, auxiliary and undefined infantrymen when the typology was not certain), cavalry, Praetorian corps, standard bearers, musical corps, naval corps and so on.

In the stelae where the soldier is represented in *procintus* (battle outfit), the offensive weapons depicted are the gladius, the *hastae*, the *pilum*[10], the bow and the pugio. We have limited our comparison to the gladius and pugio as these are most frequently depicted on the stelae, and above-all because these weapons were very similar in shape and function. In all the funerary finds the gladius and the pugio are both present together, in fact, there is no soldier where only a dagger is depicted; vice versa, there are 28 where only the gladius or a spatha (23.3%) are depicted without the presence of the dagger too.

From this analysis we can see how the gladius was a fundamental weapon, whereas the pugio had a complementary importance. This observation is confirmed in a quotation by Tacitus[11], where he narrates that in situations of danger, the sentinels and the men had to be armed during military service, and the arming of only a pugio was punishable with death as not considered sufficient.

In order to understand better what the true relationship was between the soldiers in possession of a pugio within the individual military corps, we have made a comparison by examining the stelae depicting the gladius.

From this analysis it is possible to deduce that the pugio is depicted in 36.3% of the stelae with the gladius of the Legionary infantrymen, in 80% of the Auxiliary infantrymen, in 33% of the Praetorians and in 46% of the bearers. There are no pugiones to be seen among the milites of the naval corps or cavalry (with the only exception of a dubious stelae) and only one for a *Custus Armorum*.

The stelae of the infantrymen include the greatest number of representations of the pugio (out of 90 stelae, 19 show the dagger, with a percentage of 21.1% of the total). It is worth noticing that even if it was a weapon in the possession of both Legionary and Auxiliary infantrymen, it was statistically more frequently carved onto the stelae of the Auxiliaries (56%) in comparison with the Legionaries (16.6%). This difference is not explicable on the basis of the difference between the two corps. In fact, even if the Legionary soldiers were Roman citizens on a higher wage to the Auxiliaries and also hierarchically superior, and the Auxiliaries came from the Provinces, there was, however no difference in their equipment, as has emerged from this study and in the previous ones[12].

In fact, there is no disparity between the shape of the gladi, the pugiones, the *cingula*[13], the tunics and the shields (whose oval shape was used by both the Legionaries and the Auxiliaries). Among the officers, only two stelae of Legion centurions have their armour sculpted. As far as the analysis of the stelae of officials is concerned, neither of the two monuments examined shows evidence of a pugio, and the explanation for this can be found in G. Waurick's[14] observation when he describes the creation of the stelae in a provincial environment. The weapons and clothing of simple soldiers are depicted realistically, whereas those from superior ranks, who belonged to the cultivated urban environment, often depicted "mythical" weapons – not actually in use – right until the late Flavian Age, due to the influence of the Hellenistic tradition.

For this reason the stelae and the statues in general cannot be of help in understanding if an official actually had or did not have a pugio as part of his equipment.

An examination of the temporal distribution of the stelae of the infantrymen confirms that almost all the monuments with pugiones that can be dated (14 out of 17) belong to the I century A.D. Exceptions to this are the stelae of

[10] Spears and javelin;
[11] Annales, Liber XI - cap. 18, par.3;
[12] G.R. Watson, "The roman soldier", ed. Bristol; Sergio Rinaldi Tufi, "Militari romani sul Reno", ed. G. Bretschneider;
[13] belts to hang and gladius and pugio;
[14] Soldaten in der romischen Kunst", British Archaeological Reports, 71, 1980;

Fig. VII/5: detail of the sarcophagus of Portonaccio, II A.D. (Museo Nazionale Romano, Rome).

Minucius Lorarius, Centurion of the *Legio Martia* in 43 B.C., Titus Aelius Victor, auxiliary infantryman of the III century A.D., and Gaius Ottedius Attianus, Praetorian of the II century A.D.

The Praetorians were soldiers who, like the infantrymen, were sometimes depicted with a pugio. They were an elite of the army with the function of bodyguard to the Emperor and were rarely used in true war action. The Praetorian infantry were trained and equipped like the legionaries, even if their clothing was much more decorated. Of 11 stelae of Praetorians, one of which belonged to a Tribune, only two depicted a dagger, that is 20% of the total infantrymen or 33% of the infantrymen who also depicted the gladius, according to the stelae we have looked at.

The standardbearers are infantrymen who frequently testify the presence of a pugio. Having examined 13 of their stelae, 6 depicted a dagger (46.1%), independently of whether they belonged to the Legions or the Cohorts, whether they were *aquiliferi* like L. Sertorius Firmus, image-bearers like Genialis or standarbearers.

Finally, there are two stelae which show the pugio exceptionally in a military corps where normally it is not typical to find one. The first belongs to Respectus, an auxiliary scout of the cavalry, whose stela dates back to the end of the II – beginning of the III century A.D. It was found in Heidelberg (Germany) and depicts a soldier on horseback with a shield, two hastae, and what could be a pugio (the bad state of preservation of the tombstone does not permit certainty in evaluation). However, there is no stelae belonging to a cavalryman where we can identify a dagger without an element of doubt.

The second unusual stela is that of Publius Marcius Probus, weapons keeper, whose monument from the I century A.D., was found in Bergamo (Italy). The soldier is depicted with a paenula[15], a stick made of vine, on the right and a *codex ansatus*[16] on the left; in the stela various weapons are shown among which: a helmet, two shields (one circular and one rectangular), a *lorica musculata*, a spear (?) and a pugio attached to a belt with the apron[17].

No soldier belonging to the naval fleet is depicted with a dagger.

We also believe it is important to take a moment to look at the positioning of the pugio and the gladius in the stelae and their relationship with the cingulum[18].

The cingulum was for a Roman soldier the military symbol par excellence[19], probably because it was the means by which he carried his most important weapons, the gladius and the pugio. We often find it depicted singly (supporting only the gladius) or double (to carry both weapons) both in the non-crossed-over form, but more frequently in the crossed-over one. All the infantrymen carried their gladius on the right and their pugio on the left, with the following exceptions:

- Centurions: Marcus Favonius Facilis, centurion of the Legio XX Valeria Victrix carries his gladius around his neck with a baldric on the left and his pugio on the right; Minucius Lorarius, centurion of the Legio Martia, carries his pugio horizontally across the front, and his gladius on the left.
- Standard Bearers: Lucius Sertorius Firmus, aquilifer of the Legio XI Claudia, and Pintaius, bearer of the Cohort V Asturum, carry their pugiones on the right. The other 4 bearers instead carry their pugio on their left, and their gladius on the right.

Having examined 22 stelae, each of which features two cingula, it appears that half the soldiers wear their gladius hanging from the belt below, and the other half from the one above. The only constant factor has been found in the bearers because the pugio is always seen hanging from the cingulum above.

Sarcophaguses, Monuments and Friezes with War Scenes

- *Sarcophaguses*

Only about 20 examples are known where a sarcophagus depicts a war scene. Certainly the high cost of manufacture as well as religious reasons were a strong limitation for their popularity. They are placed between the II and III centuries A.D., more precisely from 170 onwards, time of the reign of Marcus Aurelius, until around 200, the first years of the reign of Septimius Severus, until the time of the barbaric raids of the Quadians and the Marcomannians. We can recognise two types of these: those with battle scenes, and those whose style is similar to that of the stelae. It is very probable that many commissioners of

[15] the *paenula* was a large circular cloak, made from rather crude wool, always having a hood. It had usually wore against rain and cold during the march;
[16] handle-bag to carry documents;
[17] typycol of the legioraies and made with leather decorated strips;
[18] military belt, often richly decorated and valuable;
[19] Svetonius, "Augustus" lib. XXIV;

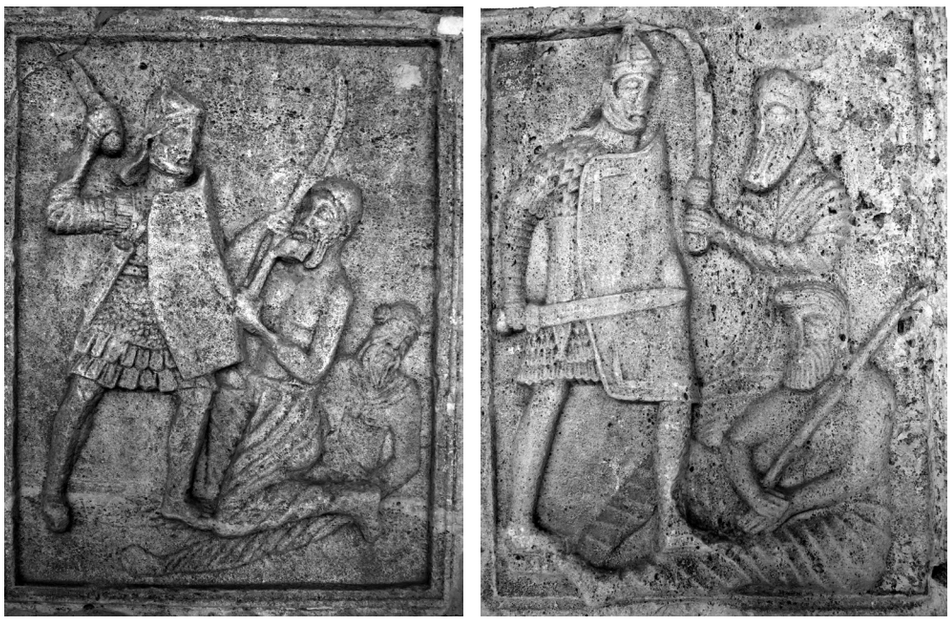


Fig. VI/6: metopes from the monument of Adamclisi, where Dacian soldiers are depicted who, by means of scythes, struck the Roman soldiers from above to below.

sarcophaguses with battle scenes belonged to the circle of high officials[20], above all those closest to the emperor, and they manifest two main influences. The first is Greek, where the fight between the forces regulating the cosmos and the opposing forces is exalted (an example of this is the sarcophagus of Brescia, which shows the episode in the Iliad of the battle of Marathon against the Persians), the second is official imperial art, where the acts of the emperor are exalted.

Instead, the sarcophaguses which for some reason recall the style of funerary stelae are commissioned by soldiers belonging to inferior ranks[21].

Close examination of the images and the individuals on the décor highlights the absence of the pugio.

This is best explained by the historical period in which they were widespread, which, as previously seen, easily justifies the absence of this weapon.

- *Monuments*

The most important monuments which have war scenes are the Trajan Column and the Trophaeum Traiani of Adamclisi (Romania), symbols of the war which conquered Dacia (101-106 A.D.) and the column of Marcus Aurelius, which exalts the Roman victory over the Marcomannians; Germanic-Sarmatic peoples from continental Europe, a war which was fought from 167 to 188 A.D.

The way the individuals are made in these monuments is very realistic and rich in details, but in none of them do we find a depiction of the Pugio. Comparing the localities of the archaeological findings of pugiones with the regions where the wars celebrated on these sculptures took place (fig.II/1), we can notice that there is no territorial overlap. This means that a type of combat was used against the Dacians and the Marcomannians in which the dagger was not useful, underlining even more how the Pugio had a specific military use against certain enemies and within a context of well-defined war techniques. The hypotheses, which we can propose to support this observation, are the following:

- The Dacians developed war weapons in the shape of scythes to be held by one or two hands, which represented the precursor to the medieval pike. This new weapon induced the Roman soldiers to protect themselves with reinforced helmets, in a type of combat which excluded close confrontation;
- According to the account by Cassius Dio "*Trajan then took hold of the high ground which had been fortified, and in those places discovered the weapons, the captured war machines, as well as the banner which had been taken from the temple of Fusco (that is under Domitianus A/N)*[22]*. In another passage"(Decebalus) after having been reached by the presence of Trajan, throwing himself onto the ground and prostrating himself in front of him, throwing his weapons onto the ground, he accepted against his will to hand over the weapons, the war machines and those who built them, and to hand over the deserters, to demolish the fortresses …*"[23]. It can be inferred how the catapults were an important point of strength, as their action was based on hitting an object at a distance.
- In the war which conquered Dacia, the cavalry had an important role, as the depiction of Trajan facing his enemies by charging on his horse confirms. This is found on the great frieze which was re-used on the Arch of Constantine, and the frequent depictions of horse riders on the Trajan Column. In fact, in the first Dacian war, Roman tactics were concentrated on the use of legions to besiege the mountainous fortresses, and by the cavalry to ravage the county and break up the logistics of the barbarians;
- During the second Dacian war, Decebalus invaded the Moesian again with the aid of Sarmatian catafracts, Iranian nomads, whose tactic was based on the ability to collide with and break through the armoured cavalry at a gallop.

[20] one of the most famous and fascinating is the so-called "sarcophagus from Portonaccio" (also mentioned in II chapter);
[21] Paul Zanker e Bjorn Christian Ewald, "Vivere con i miti, l'iconografia dei sarcofagi romani", ed. Bollati Boringhieri.
[22] Dione Cassio, "Storia Romana" 68, 9.1
[23] Dione Cassio, "Storia Romana" 68, 9.4

- *Friezes with weapons*

Decorations involving weapons were already very widespread during the Republican Period and during all the Imperial Age. Public monuments, mausoleums, great sanctuaries and public squares were decorated with friezes of arms, but it is always very difficult to reconstruct a coherent picture of the arms actually used among those depicted. In fact, as Eugenio Polito writes, the depiction of arms in friezes *"is not uniform proof nor equally reliable for every period; to this one might add that the traditional nature of ancient art is such that reality is often covered by a uniform-making patina, which is, however, deformed by frequent incoherencies"*[24]. According to present convictions, ancient artists preferred to create arms on the friezes which were connected to tradition or fruit of their imagination rather than using real ones which corresponded to the historical context[25].

The absence of an image of the pugio in the friezes depicting weapons is, therefore, easily explained. Their absence tends indirectly to exclude the attribution of a symbolic value to the weapon, which certain quotations would give credit to, and thus makes it an irrelevant weapon for such depictions and rather an object for normal military use.

As we have already noticed, the "*Stehenden Soldaten*" from the stelae of the Rheine-Danubian limes are the only direct iconographic source for the use of the Pugio by Roman soldiers. We must point out that the lack of its image on many reliefs which faithfully represent war scenes must not be interpreted as incomplete information, but considered equally useful in suggesting that in a certain geographical and historical context the Roman dagger was not used.

[24] Eugenio Polito, "Fulgentibus armis, introduzione allo studio dei fregi d'armi antichi". Ed. L'Erma di Bretschneider, 1998.
[25] Eugenio Polito, "Fulgentibus armis, introduzione allo studio dei fregi d'armi antichi". Ed. L'Erma di Bretschneider, 1998.

CHAPTER VIII
CLASSICAL CITATIONS

In this chapter we will examine all the texts written in the Latin language (excluding those in Greek) where the term "pugio" appears, and all its declinations[1]. We will not only give the english translation, but we will attempt to analyse the texts in order to extract the greatest amount of data possible from a statistic point of view.

From the I century B.C. until the XVI century A.D. the term "pugio" can be found quoted by Authors of the Latin language 145 times. Such a high number of citations leads us to believe that this weapon was very important in everyday life at the time. However, the long historical period during which the pugio was quoted – covering almost one and a half millenniums – highlights a great dyscrasia with the period of practical use of this weapon: in fact, we know that historically and archeologically its use was witnessed from about the I century B.C. to mid III century A.D., that is less than 400 years. In order to understand this phenomenon better and understand the right meaning which each citation had in the historical period in which it was written, we have used a form of classification.

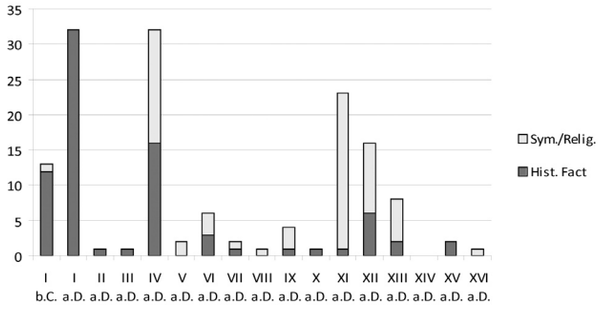
On the basis of the type of narration, we have distinguished the citations as "Historical Fact" when it related a real event from the past in which the pugio acted as protagonist, and "Symbolic or Religious Account" for all accounts where the reference to the pugio is not a real fact but relative to what it represented in the collective imagination. In this final distinction we also find the Biblical stories which occurred before the disappearance of the pugio: in these cases murderous events are narrated with this weapon which, for historical/geographical reasons, could certainly not have been the true murder weapon. (see Graph 1).

Dividing the citations into the centuries in which they were written we have noticed how the historical events tend to prevail in an absolute sense until the III century A.D.: in this way we find that the practical use of the weapon and the quotation coincide. In the IV century A.D. the first religious/symbolic citations appear, above-all in the works of Saint Girolamo and Saint Augustine, and these will subsequently tend to outweigh the historical accounts, highlighting how they were typical of the later historical period, that is when the pugio was no longer in use.

Analysing all the individual citations, we have tried to find clues and explanations regarding the pugio from the "Historical Events" (who wore one, how it was used and what it was used for), whereas from the "Symbolic and Religious Accounts" we have tried to understand the meaning this particular weapon had acquired in the collective imagination, to the point of being mentioned even after the end of the Western Roman Empire.

Marcus Tullius Cicero was the first Author to have ever cited the pugio, and most of his numerous citations are connected with Caius Julius Caesar's assassination.

Moving on to examine the citations where the pugio is used for acts of violence, we can distinguish three distinct situations: military use in war; assassination and suicide.



Graph 1: number of citations over the various centuries, divided by type. (drawing by the author).

Its description in a war context has only been found in four citations:

- Virgil the Grammarian (Epitomae chap. 4);
- Tacitus (Historiae – Liber V chap. 29);
- S. Julius Frontinus – Stategemata – Book 2, chap, 7;
- Ammianus Marcellinus (Rerum gestarum libri qui supersunt – Liber: 31, chap. 16).

This result appears strangely very wanting, considering that it was a war weapon, supplied to military units. However, there is a citation by Valerius Maximus from the I century A.D. (Facta Memorabilia Libro 3, chap. 5) where, in order to describe the abandonment of military service on the part of a soldier, he cites that the soldier placed his pugio on the wrap of the woman for whom he had made this decision.

On the other hand, there are several mentions of the pugio in the other two contexts: assassinations and suicides. Five assassinations are described, the most noteworthy being that of Julius Caesar, related by several Authors, and that of Emperor Caracalla:

- Bellum Alexandrinum (Chap. 52);
- S. Julius Frontinus (Strategemata – Book.2, chap. 7);
- Julius Caesar and his conspirators in C. Sutenoius Tranquillus (De vita caesarum Divus Iulis);
- Julius Caesar in Orosius (Historiarum adversum paganois – books vii Cl. 0571, vol. II, book, 6, chap. 17);
- Emperor Caracalla in the Scriptores Histoirae Augustae – Aelius Spartianus (XIII: Antoninus Caracallus – chap. 7);
- Julius Caesar in Iohannes Ximenius de Rada (Breuiarium historie catholice – CM72B, book,8, chap. 101);

There are ten narrated suicides, five of which are relative to Emperors (Nero, Otho and Julian) and five relative to individuals of high rank:

- Emperor Otho in Tacitus (Historiae – Liber iI, chap. 49);
- A Praetorian in Tacitus (Annales – Liber IV – chap. 22);
- Emperor Nero in Tacitus (Annales – Liber XV, chap. 74);
- Onorius, a valiant soldier in Tacitus (Annales- Liber XVI, chap. 15);
- Arria, wife of Cecina Peto, in C. Plinius Caecilius Secundus (Epistulae – Liber:3, Epstula:16);
- Commander Brenno in M. Junianius Justinus (Epitomia historiarum Philippicarum Pompei Trogi – Lib:24, chap.8);

[1] 1 Search by "BREPOLiS – BREPOLS LATIN" by "Brepols Publisher";

- Emperor Nero in Suetonius (De VIts Caesarum – Nero, chap.49);
- Emperor Otho in Suetonius (De Vita Caesarum – Otho, par.11);
- Emperor Julian in Aurelius Uictor (Libellus de uita et moribus imperatorum breuiatus – Epitome de Caesaribus – chap. 39);
- Commander Brenno in Iohannes Sarisberiensis (Policraticus – tom.II, lib.6, chap.17).

The behaviour of emperors Nero and Otho is characteristic when before their suicide they test the edge of the blade of two pugiones in order to choose the weapon, as is the custom of emperors Otho and Domitian when they keep their weapon under their pillow.

Having analysed the body parts that are targeted for fatal action, we have obtained the following distribution:

- neck: 64.28% (7 assassinations and 2 suicides)
- heart: 28.57% (4 suicides)
- side: 14.28% (1 assassination and 1 suicide)
- wrist: 7.14% (1 suicide)

The striking of genitals is narrated by religious Authors in Biblical accounts of the killing of the Midianites by Moses and his followers. As this fact occurred before the development of the pugio, we can certainly exclude its historical use, leaving only a symbolic meaning connected to this dagger.

	TOTAL	SUICIDES	MURDERS
Neck	9 (64,28%)	2 (22,2% of stabs in the neck) (25% of suicides)	7 (77,77% of stabs in the neck) (83,3% of suicides)
Chest	4(28,57%)	4 (100% of stabs in the chest) (50% of suicides)	0
Side	2(14,28%)	1 (50% of stabs in the side) (12,5% of suicides)	1 (50% of stabs in the side) (16,6% of murders)
Wrist	1(7,14%)	1 (100% cutting of veins) (12,5% of suicides)	0

1. Head and stomach (M. Tullius Cicero, Epistulae ad familiars – Lib.4, Epist.12, par,2);
2. Side (Seneca, De Clementia – Book 1, chap. 9);
3. Chest for suicide (Tacitus, Historiae – Liber II, chap. 49);
4. Cutting veins for suicide (Tacitus, Annales – Liber IV – chap.22);
5. Throat for suicide (Tacitus, Annales – Liber XVI, chap. 15, par.2);
6. Chest for suicide C. Plinius Caecilius Secundus, Epistulae – Liber:3, Epsitula:16, par,6);
7. Throat for suicide (Svetonio De Vita Caesarum – Nero, chap. 49, par.1);
8. Left side for suicide (Svetonio, De Vita Caesarum – Otho, par. 11);
9. Side for suicide (Scriptores Historiae Augustae, Aelius Spartianus, XIII: Antonius Caracallus – chap:7);
10. Chest for suicide (Aurelius Uictor Libellus de uita et moribus imperatorum breuiatus – Epitome de Caesaribus – chap. 39);
11. Neck (Ammianus Marcellinus Rerum gestarum libri qui supersunt – Liber: 31, chap.16, par.6);
12. Throat (Prudentius-Liber Cathemerinon Cl.1438, hymnus.12, versus,113);
13. Inguine (Augustinus Hipponensis, Epistulae – Cl.0262, Epist.185, vol.57,par.7);
14. Genitals (Pauca problesmata de enigmatibus ex tomis canonicis Prefatio et libri de pentateucho Moysi (textus longior) – De Numeris, par.444);
15. Neek (Petrus Damianus, Epistolae – Epp. Kaiserzeit iV, 3, Epist.123);
16. Cutting off the head (Petrus Damian, Epistulae – CLXXX vol.3, Epist.120);
17. Genitals (Petrus Damianus, Epistulae – CLXXX, Vol.2, Epsit.61);
18. Genitals (Rupertus Tiutiensis, Commentarium in Apocalypsim Iohannis apostolic – Lib.2, chap. (s.s.): 2);
19. Genitals (Rupertus Tuitiensis – De sancta trinitate et operibus eius, CM 22, lib,17, In Numeros II);
20. Genitals (Philippus Haurengius – De oboedientia – Chap.38);
21. Genitals (Thomas of Chobham – Summa de arte praedicandi – Chap. 6)

Out of eight assassinations, seven (77.7% of the total) are carried out using the neck as the target of the victim, probably both to avoid the blade from finding obstacles during penetration composed of possible parts of lorica and above-all by the bone structure, and also in order to obtain a definitively fatal action by cutting through the vessels of the carotid artery and the jugular vein. We must point out that the typical action of the pugio is not cutting but penetration by its point, therefore, it is supposed that the weapon was used not for cutting the throat (typical action of a single-bladed knife) but to penetrate the base of the neck in the jugular clefts. Only in one episode does the assassin stab the victim in his side (16.6% of total cases).

Instead, the part of the body preferably used for suicides is the heart (50%), with penetration of the blade through the rib cage (an action which is very often assisted by a servant as described by Tacitus – Annales – Liber XVI, chap.15); the choice falls 25% of the times on the neck and 12.5% on the side, and 12.5% by cutting the veins. Characteristically, the narrated suicides all refer to the historical period of I century A.D. In fact, during the reign of Nero suicide was exalted as *exitus illustrium virorum* ("the end of illustrious men"), which Tacitus, in Annales, opposes, defining it as a useless martyrdom, contrary to many wide-spread works.

The pugio, other than just being a weapon, was a symbol of power. Galba (Suetonius – Galba XI) as soon as he was appointed emperor, in order to face the journey wore the "padulamentum", the while or purple cloak typical for generals during war, and hung his pugio around his neck. The paludamentum was the symbol of the Imperium which a Roman judge received from the Comitia Curiata after having sworn oath at the Capitolium, accompanied by the lictors, also clothed in paludamentum. With the figure of Galba, the pugio worn so clearly would seem to acquire the symbolic function of the life and death of the lictorian classes. In Cassius Dionysius (LXIV 3.4) it seems that the use of the pugio by Galba aroused much derision. Another reference to the pugio as a symbol of power is found in Tacitus (Historiae – Liber III, chap. 68). In this citation, when Emperor Vitellius certified that he no longer had the support of the soldiers and his people, he attempted to abdicate by first delivering his pugio to his consul, Gnaeus Caecilius Semplice, and then to the judges

and senators afterwards. As they all refused the symbol of imperial power, Vitellius delivered the pugio to the Temple of Concord in order to give a tangible sign of his desire to re-establish peace among the citizens.

In S. Aurelius Victor (Historiae abreviatae – vulgo: Liber de Caesaribus – Chap.13) by delivering this weapon, Suburano, Praetorian Prefect, is bestowed with the symbol of power and, therefore, the Emperor's trust.

As well as being a symbol of power, we find the pugio as a divine or divinised weapon, by which life was taken from an emperor: in Suetonius (De Vita Caesarum – Vitellius – chap. 10, par. 3) the pugio with which Otho is killed is sent to the Colonia Agrippiniensis to be consecrated to Mars; in Tacitus (Annales – Liber XV – chap.53 and Liber XV, chap. 74) Nero is killed with a pugio which was consecrated to the temple of the goddess Salus or, in another version, from the Temple of Fortuna in the city of Ferrento on which "A Giove Vindice" had been engraved.

The pugio could be interpreted as a message of death, an invitation to suicide by means of an honourable death, as described by Tacitus (Annales – Liber IV – chap. 22) referring to the pugio sent to the praetor, Plautius Silvanus, who had killed his wife in a disgraceful manner.

The soldiers who in the citations are narrated as carriers of a pugio are: a Prefect of the Pretorio (Scriptores Historiae Augustae – Aelius Lampridius – VII: Commodus Antonius – chap.6); the Praetorians (Tacitus in Historiae – Liber I – 43); and the soldiers from the infantry (Tacitus Annales in Liber XI – chap. 18, par. 3) among whom a soldier is decorated with the Civic Crown, Tacitus (Annales – Liber XVI, chap.15).

In any case, in most citations the pugio is described as being in the possession of civilian. The most narrated use is for a plot, an underhand and scheming action, probably due to the ease with which it could be hidden under the folds of the togas (C. Sallustius Crispus – Historiarum reliquiae – in aliis scriptis servatae – liber: 3; Seneca – De Clementia – libro 1 chap. 9) or generally hidden on a person (Esusebius Caesariensis – sec. Translo. Quam fecit Rufinus – Historia ecclesiastica CL. 0198 K(A), bk.2, chap.20); one particular episode has it strapped to a thigh (Velleius Paterculus in Historiae Romanae – Liber.2, chap.43).

Cicero was the first Author to use the pugio with a symbolic purpose. The definition "leaden pugio", which contrasts with how the weapon actually was, refers to a deceptive action or way of speaking and intends an object which has lost its otherwise excellent effectiveness, thus illustrating its reputation as an infallible means to causing death. A historical fact which illustrates the pugio being used symbolically is when, after the death of Emperor Caligula, two booklets were found: one of which was entitled "pugio" and the other "gladius". Both contained the names and faults of those who were condemned to death, the first by order of the Senate and the second by the equestrians. The account is given to us by Suetonius (De Vita Caesarum – Caligula, chap.49), Orosius (Historiarum adversum paganos – bks vii, Cl.0571, vol.III, bk.7, chap.5), Landolfus sagax (Additamenta ad Pauli Hist. Rom.- Auct.ant.2, Bk.VII), Iohannes Sarisberiensis (Policraticus – tom.II, bk.8, chap. 18), Alexander Minorita (Expositio in Apocalypsim – QQ Geistesgesch.1, chap.6) and Ebendorfer Thomas (Chronica regun Romanorum – SS rer. Germ. N.S.18, Liber II).

The symbolic/metaphorical meaning, however, was typical of Christianity, where the pugio was understood as an instrument of aggression (Hieronymus in Liber tertius adversus libros Rufini – Cl. 0614), as a cause for cutting (Laurentius a Brundisio in Explanatio in Genesim – dissertatio.5), or as a means for seeking justice towards people who are too attached to things of the flesh, who would have been symbolically struck first by the double-bladed sabre in the Old Testament and then by the pugio in the Gospels (Iulianus Toletanus in De comprobatione sexae aetatis libri tres – Cl. 1260).

The "leaden pugio", symbol of inefficacy, we find referring to pagans whose dialectics were misleading in comparison with those of Faith (Hieronymus in Epistulae – Cl. 0620, epist. 97, vol. 55), an example of a false weapon, referring to the pagan truth (Augustinus Hipponensis in Contra Iulianum – Cl. 0351, bk.1), or in comparison with the pointed javelins of dialectic statements (Augustinus Hipponensis in Contr Iulianum – Cl. 0351, bk.3), unsteady like a fragile spider's web (Sedulius Scotus in Liber de rectoribus christianis – pag. 65, line.10), and generally a symbol for an invalid subject as cited in Augustinus Hipponensis (Contra Iulianum – Cl. 0351, bk.3), Claudianus Mamertus (De statu animae – Cl. 0983, bk.3, par.16), Iohannes Scoto Eriugena (De divina Praedestinatione – liber chap. 3) and Sedulius Scotus (Collectaneium miscellaneum – Diusio.13, subdiuisio.1). The pugio is also described as a means of sadness, through which pleasure may then be appreciated (Gregorius Magnus – dubium – in librum primum Regnum expositionum libri VI, Cl. 1719, bk.1, chap. 77), very efficient as a weapon for materially and morally killing a person (Petrus Damianus in Epistulae – CLXXX, Vol.4, epist.154), a means used by the divinity to strike the religious when mendacious (Petrus Damianus (Epistulae – CLXXX, Vol. 3, epist. 107) or as a symbol for the most dangerous snares which God can, however, save us from (Historia Compostellana in bk.2, chap.53). There are three Biblical accounts in which the pugio acquires the significance of a Divine means through which a purifying action is performed.

The story of the massacre of the Midianites is related in 20 citations. Moses and his followers attacked the Midianites (whose forefather, Madian, was the son of Abraham and his concubine Keturah) when the two peoples entered into contact, and killed the men and women who were not virgins. Killing by pugio (the genitals of the sinners were struck) transferred a purifying action to the genitals which had committed the sin. The citations referring to the Midianites are in Isidorus Hispalensis (Etymologiarum sive Originum – books XX, Cl. 1186, bk.7, chap. 6 and Mysticorum expositions sacramentorum esu Quaestiones in Uetus Testamentum – Cl. 1195, In Numeros, chap. 42), Pauca problesmata de enigmatibus ex tomis canonicis (Prefatio et libri de pentateucho Moysi – textus longior – De Numeris, par. 444) in Petrus Damianus (Epistulae – CLXXX, Vol.2, epist. 61), in Petrus Damianus (Epistulae – CLXXX, Vol.3, epist. 112), in Petrus Damianus (Epistulae – CLXXX, Vol.4, epist. 162), in Rupertus Tuitiensis (Commentarium in Apoclypsim Iohannis apostolic – Lib. 2, chap.2), in Rupertus Tuitiensis (De sancta trinitate et operibus eius, CM 22, bk.17, In Numeros II), in Rupertus Tuintiensis (De sancta trinitate et operibus eius – CM 22, lib.17, In Numeros II), in Rupertus Tuitiensis (De sancta trinitate et operibus eius – CM 22, bk. 19, In Deuteronomium II), in Bernardus Claraeuallensis (Epistulae – Epist. 236, par.1, vol.8), in Aelredus Rieuallensis (Homiliae de oneribus propheticis Isaiae – Homilia, 24, par.20), in Stefanus Tornacensis (Sermones – PL 211, col.568), in Philippus Haurengius (De oboendientia – chap. 38), in Petrus Blesensis (Passio Reginaldi principis Antiochie), in Thomas of Chobham (Summa de arte praedicandi – chap.6), in Petrus Cantor (Summa quae dicitur Uerbum adbreuiatum (textus conflates) – par.2, chap. 24), in Petrus Cantor (Summa quae dicitur Uerbum adbreuiatum (textus conflates)

– pars.2, chap. 32), in Speculum uirginum (Chap.5) and in Giullebertus (De superfluitate clericorum – Stropha, 263, verus, 1).

The story of Judith describes the assassination of Holofernes, general of Nebudchadnezzar, during the conquest of Judea. Judith, a Jewish woman famous for her intelligence, presented herself in the Assyrian camp declaring to have betrayed her people and, after having made Holofernes drunk, she cut his head off with a pugio. By means of this action by a woman, God stopped the enemy army which, without its general, could not conclude its task of conquering the promised land. The 5 citations which mention the name of the weapon in question are: Petrus Damianus (Epistulae – CLXXX, Vol.3, epist. 114), Petrus Damianus (Sermones – Sermo. 68), Rupertus Tuitiensis (Liber de diuinis officiis – Lib.12), Philippus Haurengius (De silentio – Chap. 111) and Speculum uirginum (Chap.7).

Also in the Biblical episode of David against Goliath, the Philistine giant who terrorised and insulted the Jews and their God, we find the action of the pugio. David, thanks to the action of God, managed to knock out Goliath with a stone thrown from his sling, and then he used the giant's sword to decapitate him, which Petrus Damianus in the Epistulae (CLXXX vol.3, epist. 120) defines as a pugio.

We have given a long excursus on the Pugio in its various citations in order to understand how it was interpreted by the various Authors of the Latin language. When we read a citation, unfortunately we cannot know whether the Author use the term pugio in an appropriate way or whether it was used as a general synonym to define any type of dagger. The pugio implies a military weapon, typical of the Roman army, with very precise connotations, as can be inferred from the chapters in this book. Unfortunately, it is not possible to sort these citations into groups other than "Historical Events" and "Symbolic/Religious", nor is it possible to define those as more reliable which are contextual to the age in which the pugio was in use. Certainly, Julius Caesar was killed by this weapon during a conspiracy, not only because numerous Authors relate the news (many later writers had the habit of relating news by copying it from previous Authors), but also because a coin was made with the effigy of a pugio proclaiming the tyrannicide. We can, therefore, hypothesise and draw personal conclusions, but we consider it appropriate – until proved wrong - to consider that all the citations in the context of historical events refer to the pugio as we have defined it par excellence.

LIST OF THE VARIOUS AUTHORS WHO CITE THE TERM "PUGIO"

divided by centuries

Author/work	*historical events*	*Symbolic or Religious Account*
I cent. B.C. (100 b.C. – 31 a.D.)		
CICERO	7	1
"CORPUS CAESARIANUM"	2	0
CAIO SALLUSTIO CRISPO	1	0
VERGILIUS MARO GRAMMATICUS	1	0
MARCUS VELLEIO PATERCOLUS	1	0
Total	12	1
I –II cent. a.D. (0 – 125 a.D.)		
LUCIO ANNEO SENECA	1	0
VALERIUS MAXIMUS	3	0
GRANIUS LICINIANUS	1	0
MARTIAL	1	0
SEXTUS J. FRONTINUS	1	0
PUBLIUS C. TACITUS	10	0
PLINY the YOUNGER	1	0
M. IUNIAN(I)US IUSTINIUS	1	0
G. SVETONIUS TRANQUILLUS	13	0
Total	32	0
II cent. A.D. (125 – 166 a.D.)		
AULUS GELLIUS	1	0
Total	1	0
III cent. A.D. (263 – 339 a.D.)		
EUSEBIUS CESARIENSIS	1	0
Total	1	0
IV CENT. a.D. (320 – 430 a.D.)		
MARCELLUS NONIUS	1	0
HISTORIA AUGUSTA	5	0
AURELIO VICTOR	1	0
AMMIANUS MARCELLINUS	3	0
SAINT GIROLAMO	0	6
HOLY BIBLE	0	3
AURELIUS PRUDENZIO CLEMENS	1	0
SERVIUS GRAMMATICUS	1	0
AGOSTINO D'IPPONA	1	4
SESTUS A. VICTOR	1	0
OROSIUS	2	0
HISTORIA APOLLONI REGIS TYRI	0	3
Total	16	16
V CENT. a.D. (474 – 521 a.D.)		
CLAUDIANUS MAMERTUS	0	1
ENNODIUS MAGNUS FELIX	0	1
Total	0	2
VI CENT. a.D. (538 – 636 a.D.)		
GREGORY OF TOURS	1	0
GREGORIY I (MAGNO)	0	1
S. HISIDORUS HISPALENSIS	2	2
Total	3	3

VII CENT. a.D. (640 – 709 a.D.)		
ADELMUS	1	0
JULIAN OF TOLEDO	0	1
Total	1	1
VIII CENT. a.D.		
PAUCA PROBLESMATA de enigmatibus	0	1
Total	0	1
IX CENT. a.D. (825 – 880 a.D.)		
FRECHULFUS LEXOUIENSIS	1	0
IOANNES SCOTUS ERIGENA	0	1
SEDULIUS SCOTUS	0	2
Total	1	3
X CENT. a.D.		
LANDOLFUS SAGAX	1	0
Total	1	0
XI CENT. a.D. (1007 – 1100 a.D.)		
PETRUS DAMIANI	0	12
BENZO	0	1
CHRONICON NOVALICIENSE	1	1
RUPERTO OF DEUTZ	0	5
BERNARDUS CLARAEUALLENSI	0	1
SEXTUS A. G. PIOSISTRATUS	0	1
Total	1	21
XII CENT. a.D. (1100 – 1204 a.D.)		
HISTORIA COMPOSTELLANA	0	2
AERLEDUS RIEUALLENSIS	0	1
ANDREAS DE SANCTO VICTORE	0	1
IOHANNES SARISBERIENSIS	6	1
STEFANUS TORNACENSIS	0	1
PHILIPPUS HAURENGIUS	0	3
PETRUS BLESENSIS	0	1
Total	6	10
XIII CENT. a.D. (1160 – 1271 a.D.)		
THOMAS DE CHOBBAM	0	1
RODERICUS XIMENIUS	1	0
PETRUS CANTOR	0	2
SPECULUM VIRGINUM	0	2
GIULLEBERTUS	0	1
ALEXANDER BREMENSIS	1	0
Total	2	6
XV CENT. a.D. (1388 – 1464 a.D.)		
THOMAS EBENDORFER	2	0
AGOSTINUS BELGICUS	0	1
Total	2	1
XVI CENT. a.D. (1559 – 1619 a.D.)		
LAURENTIUS A BRUNDISIO	0	1
Total	0	1
TOTAL	80	66

TEXTS OF THE CITATIONS

(Translated from Latin)

For all the citations which follow:

No.) number of order of the citation;

H.E.) historical event, citation which describes a real event;

S.R.) symbolic or religious citation, where the term "pugio" does not refer to the weapon itself, but to what it represents in the collective imagination;

D) brief description of what the text describes (where possible)

W) work from which the extract is taken;

I CENTURY B.C.: 100 B.C. – 31 A.D.

CICERO

1) H.E.) D) Assassination of Julius Caesar;

W) M. Antonium orations Philippicae – Oratio 2, par.30, line,5;

"In fact, he thus said: "Bruto, honourable as I recall, holding the bloody pugio in his hand, exclaimed 'Cicero': from this it must be understood that he had been an accomplice (omission).

So you call me a villain, me whom you assume to have suspected something: the one who carried the pugio, dripping with blood, before him, is remembered by you as honourable?"

2) H.E.) D) Assassination of Julius Caesar

W) Orationes – Philppicae – Seconda Filippica – par. 28;

"But remember with which words this man of subtle talent has demonstrated my guilt: "Immediately after the killing of Caesar" he said, "Bruto, holding up high the bloody pugio, shouted out the name of Cicero and congratulated him for having brought back freedom." Why me, in particular? Why, was I part of the conspiracy?

3) H.E.) D) speech against Mark Antony

W) M. Antonium orations Philippicae – Oratio. 13, par. 33;

"What great crime of the Senate! We have neglected Theopompus, man of very great importance, who knows or who cares where he is, what he is doing and finally whether he is alive or dead? You can see Servius Galba in the encampment surrounded by the same pugio (omission).

I will tell you nothing of Galba, most strong and vigorous citizen: he will come close furtively, and being close to you, both he himself and he whom you defame, he will answer you with the 'pugio'."

4) H.E.) D) Assassination of Julius Caesar

W) Epistulae ad Atticum – Liber2, epist.24, par.2;

"In any case he said that there had been a group of youngsters, at first including Paolo, Cn. Cepione, that Brutus and Lentulus, son of the Flamine, with the complicity of the father; then C. Settimio, the scrivener of Bibulus, had brought a pugio from Bibulus' house."

5) H.E.) D) Assassination of Julius Caesar;

W) Epistulae ad atticum – Liber.2, epist. 24, par. 2;

"And all that was the object of laughter, Vezio would not have had a pugio had the consul not given him one, and on top of that it was disapproved that two days before the Idi, Bibulus in person had informed Pompeius to be aware of the trap, so Pompeius had thanked him."

6) H.E.) D) Assassination of Julius Caesar;

W) Epistulae ad Atticum – Liber, 2, epist. 24, par. 3;

"We believed that it had been done so that Vezio would have been surprised in the forum with a pugio and, in the same way, his servants with their javelins, and that he then would have declared that he had betrayed him."

7) H.E.) D) the pugio is used to stab the stomach and the chest

W) Epistulae ad familiars – Lib.4, epist. 12, par. 2;

"I had left Marcellus that day; I was going to Beozia, he was about to go to Italy by ship. The next day Postumius came to me and told me that M. Marcellus, my colleague, had been stabbed after dinner with P. Magius Chilone's pugio and that he had received two wounds, one in the chest and the other in the head. In any case, the doctor hoped that would live."

8) S/R) D)

W) De finibus bonorum et malorum – Lib.4, chap. 18, par. 48;

"Oh, useless pugio! (figurative expression meaning "What a petty-minded point!"). In fact, who could grant you the most important preliminary remark?"

CORPUS CAESARIANUM (work possibly written by Aulo Irzio)

9) H.S.) D) Assassination

W) Bellum Alexanrinum, Chap. 52, par.2;

"After the assembly he took refuge in Cordobae that same day in the afternoon, while a certain Minucius Silone, customer of Lucius Racillus, went to the basilica, delivered him a motion as if he had to tell him something as a soldier; then behind Racillus (in fact he covered Cassius' side), as if he was quickly asking for a reply - seeing as he had been given the chance, having wormed his way in - he grabbed him from behind with his left hand and with his right hand he stabbed him twice with his pugio."

10) H.E.) D) Violent aggression

W) Bellum Hispaiense, chap. 18, par. 2;

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C. SALLUSTIUS CRISPUS

11) H.E.) D) Civil and treacherous use of the pugio (in the folds of the toga)

W) Historiarum reliquiae (in aliis scriptis servate) – liber.3, fragmentum. 59 (par. 134);

"But Oppius, having obtained nothing by prayer, was held back by Cotta and Voscius while he timidly attempted to extract his pugio hidden under his robe."

VIRGIL THE GRAMMARIAN

12) H.E.) D) Use in war

W) Epitomae – LLA (vol.8) chap. 4;

"Even between 'war (bellum)', 'battle (praelum)', 'clash (pugnam)' and 'fight (certamen)' they say that the difference is not small; in fact, the praelium cannot take place if not on the praelum, that is on the sea, which is called praelum because it is more (prae) than the other elements (elimentis) due to its immensity, with its submerging and making re-emerge it has supremacy (praelatum) so to speak in all that is marvellous; the bellum, instead, cannot be done if not on the belsa, that is on the field; the belsa, in fact, takes its name from the fact that it produces many belsa, that is herbs; 'certamen' also derives from a definite place (certo), or rather from the refuge of the army. 'Pugna' is where the rivals (pugilles) lash out on both sides with their pugiones."

VELLEIUS PATERCULUS

13) H.E.) D) Way of carrying the pugio

W) Historiae Romanae – Liber. 2, chap. 43;

"Having seen the pirate ships along that route, as he thought, after having taken off his robe and having strapped his pugio onto his thigh, thus preparing himself for any event, he suddenly realised that his sight had been deceived and that a row of trees from far off had created the image of masts."

I CENTURY B.C.: 0 – 125 A.D.

SENECA

14) H.E.) D) Civil and treacherous use of the pugio (under the folds of the toga)

W) De Clementia – Bk. 1, chap. 9;

"I would like to remind you how true this is with an example taken from your family. The star Augustus was a meek prince, if we start to judge him from the beginning of his princedom; at the time of the general disaster of the Republic he drew out, instead, the sword. When he was as old as you are now, having entered into his eighteenth year, he already hid pugiones under the folds of friends' togas, he had already attempted betrayal by stabbing the side of the consul M. Antony, and had already been his colleague in banishment."

VALERIUS MAXIMUS

15) H.E.) D) The pugio as a symbol of power and belonging to the army;

W) Facta et dicta memorabilia – Bk.3; chap. 5;

"Clodius Pulcrus obtained the favour of the people, and attaching his pugio to Fulvia's robe, he subjected his soldier's pride to the power of a woman. Their son, Pulcrus, not only experienced a soft and indifferent youth, but was dishonoured by falling hopelessly in love with a prostitute who was well known in all Rome, and died a shameful death: having greedily devoured the abdomen of a pig, he paid for his dirty and shameful intemperance with his life."

16) H.E.) D)

W) Facta et dicta memorabilia – Bk. 9 – Chap. 4, par. 2;

"But the vice of greed was shown in greater measure in Quintus Cassius, who, having surprised Silius and Calpunius in Spain, ready to kill him with their pugiones, stipulated with Silio five and with Calpunius six million sesterce and then let them go. Here is a man, if offered just as many sesterce, one could believe he would happily offer them his throat."

17) H.E.) D)

W) Facta et dicta memorabilia – Liber. 9; chap. 11, para. 4;

"Also the spirit of Magio Chilone was overcome with madness, who tore with his own hands the life from Marcellus, who had been spared by Caesar – and this because he was angry with Marcellus, even though he was a dear old friend of his and had been his fellow soldier in the Pompeian army, because he preferred some of his friends to him: while he was returning to Rome from Mitilene, where he had been, he stabbed him with a pugio at the port of Athens, lashing out to slaughter the one who had caused his madness, enemy of friendship, canceller of a divine gift, bitter dishonour of the public, religious pity, for he who had decided to save the life of a very illustrious citizen."

GRANIUS LICINIANUS

18) H.E.) D) Silla's prescription list;

W) Operis histoirci fragmenta codice rescripto servata – liber. 36, par. 10, linea. 10;

"And Papirio Mutilo, escaping from there, seeing as during the night in Teano he had not been welcomed even by his wife, Bassia as he was on the prescription list, he helped himself with the aid of a pugio."

MARTIAL

19) H.E.) D) Construction technique

W) Epigrammi – Liber XIV – 32, 33 XXXIII;

" The pugio, which is engraved with a small groove, curved and not straight, has been sharpened with the screeching from the gelid waters of Salone."

S. JULIUS FRONTINUS

20) H.E.) D) Assassination on the battle field;

W) Stratgemata – Lib.2, chap.7;

"Quintus Sertorius, while he was fighting on the battle field, stabbed with his pugio the stranger who had told him of Irtuleius' death, so that he could not bring the new to others and so that the spirits of his men would not be weakened by this fact."

TACITUS

21) H.F) D) pugio supplied to praetorians;

W) Historiae – Liber I – 43;

"That day our age saw a great man: Sempronius Densus, centurion of the praetorian cohort, appointed by Galba to guard Piso. Grasping his pugio he ran against the armoured men, cursing their murderous crime and, attracting the assassins to him by his gestures and words, helped the wounded Piso, to escape."

22) H.E.) D) Suicide of Emperor Otho;

W) Historiae – Liber II, chap. 49;

"After having scolded the provokers of the disturbance, once he had gone back, he stayed to greet the leavers, until all of them had left without violence. When evening fell he quenched his thirst with a drink of fresh water. Then he had two pugiones brought to him, he tested the edge and placed one under his pillow. When he was sure that his friends had left, he spend a peaceful night, and they say, not without sleep. At the first light of day he threw his chest onto the iron. At the groans of the dying man, the freedmen and slaves and the prefect of the praetorian Plotius Firmus entered: they found him with only one wound. They quickly celebrated the funeral: he himself had firmly urged this in order to avoid his head being chopped off and exposed to the offences."

23) H.E.) D) pugio worn on the side; symbol of power, life and death;

W) Historiae – Liber III, chap. 68;

"Holding out his small son, he entrusted him to this one and then to that one, and then to all the crowd; finally, his throat tight with grief, he took his pugio from his side, as the right to life or death of citizens, and handed it over to the consul (it was Cecilio Semplice), while standing next to him. When the consul refused to accept it, he went away to the shouts and protests of the those present, to put the emblems of power into the Temple of Concord and then reach his brother's house."

24) H.E.) D) war scene, weapon used in situations of very close combat.

W) Historiae – Liber IV chap. 29;

"Civilis, having understood this, ordered the fires to be extinguished, and everything became confused in the fray and the shadows. Then there was a great cry of confusion, uncertain combat, because it was neither possible to see, nor to wound, nor to defend oneself; where the cries came from, in this direction all the bodies moved, in this direction the arms were held out in the dark. Personal valour did not help at all, everything was conducted by chance, and in the chaotic confusion often the strong fell under the strikes of the cowardly. The Germanians were transported by rash frenzy; the Romans, with their experience of danger, did

not throw at random, iron rods and heavy boulders. When the noise of the assailants or the lifted ladders brought the enemy close at hand, they pushed them back, knocking against them with their shields or crushing them with stacks, and many who had climbed up onto the terreplein were pierced with pugiones. Once the night had been spent in this manner, the day uncovered a new phase of combat for their eyes."

25) H.E.) D) Suicide of a praetor, the pugio is considered a message of death from the Emperor;

W) Annales – Liber IV – Chap. 22;

"Without losing time, Tiberius went to Plautius' house, examined the bedroom in which traces of resistance and pushing were apparent. He presented a report in the senate and the judges had already been chosen when Urgulania, Silvano's grandmother, sent a pugio to her grandson. It is believed that she did this as if to obey a warning from Tiberius, given the friendship of Augusta towards Ugulania. The accused, after vain attempts to stab himself with the weapon, had his veins cut."

26) H.E.) D) Stories of discipline in a theatre of conflict. It can be sensed that the pugio was a secondary weapon in comparison with the gladius: the soldier with only a pugio during his guard duty is punished.

W) Liber XI – chap. 18, par. 3;

"He ordered no one to abandon his troop and start attacking without having received the order: also the sentinels and all the military services, both by day and by night, had to be carried out by armed men. For this purpose it is said that two soldiers were punished with death, one because he was digging a trench without being armed, the other because he only wore a pugio. Overdone accounts and possibly lies: their origin lies in the severity of the commander."

27) H.E.) D) Pugio consecrated in a temple;

W) Annales – Liber XV – Chap. 53;

" While he was immobile on the ground, above him tribunes and centurions and others according to the boldness of each one rushed to slaughter him. Scevinus had asked for a highlighted role for himself, as he had stolen a pugio from the Temple of Salus in Etruria, or as some said, from the Temple of Fortuna in Ferento, and he carried it with him as if it were consecrated to a great work. Piso meanwhile waited at the Temple of Ceres, where the prefect Fenius and the others would take him and bring him to the Praetorian barracks, accompanied by Antonia, daughter of Claudius Caesar, in order to generate the people's sympathy."

28) H.E.) D) The pugio as a weapon for an attempt on someone's life;

W) Annales – Liber XV – Chap. 54;

"It is really surprising how among people from different social ranks, ages and sexes, rich and poor, everything was kept in total silence until the betrayal was underway from the house of Scevinus. He, on the eve of the attack, had a long discussion with Antonius Natalis and then, once home, set his seal on his will; he drew then his pugio from its sheath, which has been spoken about, and noticing, irritated, that it had lost its edge, had it sharpened on a grindstone until the point was sharp and shiny, designating the task to the freedman, Milicus."

29) H.E.) D) The pugio as a weapon for an attempted murder and consecrated in a temple;

W) Annales – Liber XV, chap. 74;

"Then offers and thanks are enacted to the gods and particular honours to the Sun, whose ancient temple was near the circus, where the attack had been planned, because it had disclosed with its power the hidden plot of the conspiracy; it was also established that the games of the circus in honour of Ceres should be celebrated with more horse races, that the month of April should take its name from Nero and that a temple should be built to Salos in the place in which Scevinus had taken the pugio. Nero personally consecrated that pugio in the Capitolium with the inscription "To Jupiter Vindice". At the time no one noticed the coincidence, but after the revolt of Julius Vindice, it was interpreted as a wish and foreboding for the future vendetta."

30) H.E.) D) Suicide of Hostorius, valorous soldier;

W) Annales – Liber XVI, chap. 15;

"As every way out of the villa was blocked, the centurion then told Hostorius of the Emperor's command (for death). He used the same firm courage against himself as he had manifested many times before the enemy; and as his veins, however much he cut them, poured out little blood, he resorted to the hand of a slave, but only to make him hold the pugio quite firmly in an upright position, and grasping his right hand, he threw himself against the iron which penetrated his throat."

PLINY THE YOUNGER

31) H.E.) D) Suicide of Arria, wife of Caecina Paetus

W) Epistulae – Liber. 3, epistula, 16;

"Following this, when the tears she had long held back had the better of her and came out, gushing forth: she then abandoned herself to the pain; and after she had calmed down, with dry eyes and a composed face, she returned as if she had let the loss go.

Her gesture is certainly famous: grasping the weapon, piercing her chest, pulling out the pugio, handing it to her husband and adding an immortal and almost divine phrase: 'Oh Paetus, it doesn't hurt'."

M. JUNIANIUS JUSTINUS

32) H.E.) D) Suicide of Commander Brennus;

W) Epitoma historiarum Philippicarum Ponpei Trogi – Lib.24, chap. 8;

"A storm then followed which, because of the hail and the cold, caused the death of those who were wounded. The same commander Brennus, unable to bear the pain of those wounds, ended his own life with a pugio."

G. SUETONIUS TRANQUILLUS

33) H.E.) D) Killing of Julius Caesar;

W) De vita Caesarum – Divus Iulius, chap. 82;

"Caesar, after having grabbed Casca's arm, hit it with a stylus and, while he attempted to attack him, was held back by another wound; as soon as he realised that he was being assailed on all sides with pugiones in their hands, he wrapped his head in his toga, and at the same time using his left hand covered his chest right down to his legs so

that he would die with greater dignity, having also covered the lower part of his body;"

34) H.E.) D) Killing of the conspirators against Julius Caesar;

W) De vita Caesarum – Divus Iulius, chap. 89;

"All those condemned died, some for one eventuality, others for another; some by shipwreck, others in battle, some others killed themselves with the same pugio with which they had struck Caesar;"

35) H.E.) D) Killing of the conspirators of Julius Caesar;

W) De Vita Caesarum – Divus Iulius – par. 89;

"So much for his assassins, none of them survived more than three years and none died of natural circumstances. All of them, after having been condemned, one way or another, died in a tragic way, some by shipwreck, some in battle. Some then killed themselves with the same pugio with which they had assassinated Caesar."

36) H.E.) D) Death of Caligula

W) De Vita Caesarum – Caligula, cap.49;

"He died more or less four months later, pondering over even more heinous crimes than those which he had had the courage to be guilty of, because he had decided to move first to Anzio, then to Alexandria after having sent to their death all the most eminent members of the two orders. So that no one has any doubts, let us say that among his secret cards two booklets were found with two different headings: one was headed "sword", the other "pugio"; both contained the names and faults of those meant to die."

37) H.E.) D) Attempted assassination of Tiberius;

W) De Vita Caesarum – Caligula – chap.12, para.3;

"There is nothing plausible about this version because, according to some authors, he himself confessed after having pondered for a while over this parricide even if he did not carry it out; in fact, he continually boasted, exalting his filial love, of having entered with a pugio in his hand into the room where Tiberius slept in order to vindicate the assassination of his mother and his brothers, and to have withdrawn and thrown the weapon away, overcome with pity. The Emperor had realised this, but did not venture to conduct the least inquiry nor even to punish him."

38) H.E.) D) Emperor Claudius (conspiracies);

W) De Vita Caesarum – Divus Claudius – Chap.13, para.1;

"Despite this, he did not always remain sheltered from criminal deeds, and he was exposed to individual attempted murders, conspiracies, and finally a civil war. A common man was surprised in his bedroom at midnight with a pugio in his hand; two Roman cavalry men were also discovered in the city who were waiting for him with a rapier and a hunting knife to attack him, one at the theatre exit, the other while he was making sacrifices in the Temple of Mars."

39) H.E.) D) The pugio is considered a weapon for hypothetical attempted murder;

W) De Vita Caesarum – Nero – Chap.34, para.3;

"He spent the night awake in a state of agitation, waiting for the result of the deed, but when he found out that everything had gone differently and that Agrippina had saved herself by swimming, not knowing what to do when L Agermo, a freed man of his mother's, came happily to announce to him that his mother was safe and sound, he furtively threw a pugio at him with the pretext that he had been sent by Agrippina to assassinate him, and he gave the order to take his mother, put her in chains and put her to death: which would be taken for suicide because her crime had been discovered."

40) H.E.) D) Nero commits suicide with a pugio;

W) De Vita Caesarum – Nero, Chap. 49;

"While they lingered in this way, a messanger brought a note to Faone; Nero, tearing it out of his hand, read that the Senate had declared him a public enemy and were looking for him in order to punish him according to ancient custom; he asked what this type of torture might be and when he found out that the condemned man was undressed, his head was put in the gallows and then he was beaten to death, horrified, he grabbed the two pugiones he had brought with him, he tested their points, then he put them in their sheaths, protesting that the hour destiny had reserved for him had not arrived yet."

41) H.E.) D) Otho commits suicide with a pugio;

W) De vita Caesarum – Otho, para.11;

"After which, quenching his thirst with a little fresh water, he took two pugiones, whose points he felt, put one under his pillow, had all the doors closed and slept profoundly. After waking at sun rise, he pierced the left side of his chest with one strike; at his first groans they ran into his room, and he died first hiding and then revealing his wound."

42) H.E.) D) Galba makes it a symbol of power;

W) De Vita Caesarum – Galba – Chap.11, para.1;

"The death of Vindice was added to the great dangers which dismayed him and, as if he had lost everything, he was very close to giving up his own life. But when he then came to know from some messengers who arrived from Rome that Nero had killed himself and that everyone had sworn to his name, he abandoned his title of lieutenant to adopt that of Caesar and left on a journey, wearing (NUOVA PAGINA)

his general's cloak, with a pugio hanging round his neck which fell onto his chest; he did not take up the toga again until he had defeated those who were plotting a revolution: that is the prefect of the praetorian Ninfidius Sabinus in Rome, and the lieutenants Fonteio Capitone in Germania and Clodius Macer in Africa."

43) H.E.) D) Vitellio offers it as a symbol of power;

W) De Vita Caesarum – Vitellius, chap. 15, para.4;

"Offering the pugio he had taken from his side, first to the consul and then, as he refused it, to the magistrates and immediately afterwards to the senators one by one, seeing as no one would take it, he went away as if to go and place it in the Temple of Concord."

44) H.E.) D) A pugio is consecrated;

W) De Vita Caesarum – Vitellius – Chap.10, para.3;

"When he arrived in the camp where the fight had taken place, as some were disgusted by the sight of decomposing corpses, he ventured to give them courage with these unworthy words: 'the body of the dead enemy always has a good smell and even more so when it is that of a

citizen.' Nevertheless, in order to overcome the strength of the odour he drank a large quantity of wine in front of everyone and had it distributed around. With similar lightness and the same insolence, when he saw the stone on which was engraved: 'In memory of Otho', he said that 'he was worthy of a similar mausoleum' and sent the pugio with which that emperor had been killed to the Agrippinian colony so that it could be consecrated to Mars."

45) H.E.) D) Domitian attempts to defend himself from an attack by using a pugio;

W) De Vita Caesarum – Domitanus – chap. 17;

"The young slave who was there as usual to watch over the Lari in the imperial bedroom and was present at the assassination, also said that from the first wounds Domitian ordered him to bring him his pugio which was hidden under his pillow, and to call his servants, but that he only found the weapon's handle at the bedside, and that apart from that all the doors were barred; he also added that in the meantime Domitian, having thrown Stephanus on the ground and grabbed him, fought for a long time with him, both attempting to take the dagger away from him (here the term 'ferrum' is used) and also to dig out his eyes with his chopped fingers."

II CENTURY A.D.: 125 – 166 A.D.

AULUS GELLIUS

46) H.E.) D) List of the technical names of weapons

W) Noctes Atticae – Bk.10, Chap. 25, para.2;

"These are those things which were enough then: spear, javelin, *falarica*, small *falarica*, javelin of iron, Celtic javelins, spear, hunting javelins, long projectiles, *tragola, framea*, javelins with neckstraps, projectiles with nails, scimitars, war machines for hurling arrows, hunting skewers, small scythes, swords, daggers, greek swords, sabres, small points, pugiones, knives;"

III CENTURY A.D.: 263 – 339 A.D.

EUSEBIUS CAESARIENSIS

47) H.E.) D) History of persecution of the Church;

W) sec. Transl. Quam fecit Rufinus – Historia ecclesiastica CL.0198 k(A), bk.2, Chap.20;

"In the same way, a little afterwards, he added also this: 'Sometimes they killed even those who they ran into in the city; the killers, above-all on feast days, wandering among the people with hidden pugiones killed all those who had been nominated if they happened to meet them face to face."

IV CENTURY A.D.: 320 – 430 A.D.

NONIUS MARCELLINUS

48) H.E.) D) Definition of the pugio;

W) De compendiosa doctrina LLA615, bk.19;

(NUOVA PAGINA)

"The pugio is a short gladius";

SCRIPTORES HISTORIAE AUGUSTAE (AELIUS LAMPRIDIUS and AELIUS SPARTIANUS)

49) H.E.) D) The pugio as a messenger of death;

W) VII, Commodus Antoninius – Chap.4;

"And he, moving towards Commodus, having drawn his gladius, as he had had the opportunity to do so, he burst out with these words: 'The Senate sends you this pugio', he foolishly revealed the wickedness and completed the mission with few accomplices";

50) H.E.) D)

W) VII: Commodus Antoninus – Chap.5;

"In that period Claudius was also killed, so to speak by robbers, and his son once came close to Commodus with a pugio, many other senators were killed without judgement and also some rich women (were killed)."

51) H.E.) D) A freed man is called Pugio by the weapon he wore;

W) VII: Commodus Antoninus – Chap.6;

"Among these also the prefect Ebonziano was killed and in his place the same Cleandro was appointed with two others whom he had chosen. So for the first time there were three prefects of the praetorian among whom a freed man who was called after his pugio."

52) H.E.) D) Killing of Antonino- Caracallus by a henchman;

W) XIII: Antoninus Caracallus – Chap.7;

"And he was killed right in the middle of the march between Carre and Edessa after he had dismounted from his horse in order to empty his bladder while conspirators were moving among his bodyguards. Finally, while his henchman made him mount his horse, he pierced his side with a pugio and everyone shouted that Martial had done it."

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AURELIUS VICTOR (PSEUDO)

54) H.E.) D) The pugio as a weapon for a suicide;

W) Libellus de uita et moribus imperatorum breuiatus (Epitome de Caesaribus) – Chap.39;

"In this period Carausius in the Gaul, Achilles in Egypt, Julian in Italy, after having become emperors died in different ways.

Among these, Julian, after having stuck a pugio in his ribs, threw himself into a fire."

AMMIANUS MARCELLINUS

55) H.E.) D) fatal accident caused by a pugio;

W) Rerum gestarum libri qui supersunt – Liber.17, Chap.4;

"So, while he was running in a disorderly manner among those who were given to the looting, made clumsy by the width of his clothes, he fell to the ground flat on his stomach and, wounded almost mortally by his own pugio which he carried attached to his right thigh, unsheathed by the sudden violence of the fall, died."

56) H.E.) D) Violent attack with a pugio;

W) Rerum gestarum libri qui supersunt – Liber. 29, Chap.1;

"As it sometimes happened under the princedom of Commodus and Severus, whose life was often in danger of great violence after many, different internal dangers -the first in the cavea of the amphitheatre while he was entering to see a performance he was almost wounded to death with the pugio of senator Quinziano, a man of illicit greed; the second while, now at the end of his life, he was laying in bed, he would have been stabbed with unexpected violence by the centurion Saturninus, incited by the prefect Plauzianus, if his young son had not come to his aid;"

57) H.E.) D) Story of the use of the pugio by an oriental soldier;

W9 Rerum gestarum libri qui supersunt – Liber.31, Chap.16;

"But the oriental army (Saracens) won because of a new fact, never seen before. One of them with long hair, nude everywhere except in his pubic area, having extracted his pugio, ran into the middle of the Goths making raucous and grim cries, killed an enemy and put his lips to his neck and sucked the blood which came out."

HIERONYMUS (St. Girolamo)

58) S/R) D) The pugio with the meaning of aggressive behaviour;

W) Liber tertius adversus libros Rufini – Cl. 0614;

"And are you not ashamed to call your accusation defence? You complain because I counter your pugio with a shield and you put on the mask of humility as if you were a conscientious person and a goody-goody, and you say:'If I have done wrong, why do you write it to others and not blame me?"

59) S/R) D)

W) Comentarii in Ezechielem – Cl. 0587, bk.9, Chap. (s.s.),29;

" And as he served me and honoured my wishes against Tyrus, I will give him the land of Egypt, which some say was occupied by Nebuchanezzar, others by Cambises, son of Cyrus, who devastated Egypt up to Ethiopia, so that he killed Apis and destroyed all their statues, and they say that for this reason he went mad after falling from a horse and that he was pierced with his own pugio;"

60) S/R) D) The dialectics of faith disarms pagans armed with a pugio;

W) Epistulae – Cl. 0620, epist. 97, vol.55;

"Besides, compared with a place, consecrated to Apollo, ready Faith and pure confession do not lack dialectic acumen, which pierces one's adversary after having snatched the pugio from his hands;"

61) S/R) D)

W) Epitulae Cl. 0620, epist. 64, vol.54;

"all that we have relished and eaten voraciously is thrown into the latrine. We have already spoken about the arm; the jaw indicates an eloquent and educated person because we express with out mouths what we have conceived in our hearts; the stomach, where food is received, pierced by the pugio of a priest into the Midianite courtesan, condemns all the efforts of men and all the momentary pleasures of gluttony, transforming them into dung, and shows the minds which are consecrated to God that all we have relished and eaten voraciously is thrown into the latrine."

62) S/R) D) killing of the Midianites;

W) Comentarii in prophetas minores – Cl. 0589, SL 76A, In Malachiam, Chap. (s.s.) 2;

"We read in the book of Numbers of Phineus, who struck with a pugio Zamri, together with a Midianite prostitute;"

63) S/R) D) killing of the Midianites;

W) Cl. 0620, epist.78, vol.55;

"He fornicates with the Midianite daughters; and Phineus, son of Eleazar, after having fornicated with the daughters, for love of the Lord, pierced Zamri and the Midianite prostitute with a pugio, for which he received as a prize the stomach of the victim as an eternal souvenir,"

BIBLIA SACRA IUXTA VULGATAM VERSIONEM (VT)

64) S.R.) D) The pugio as murder weapon;

"She spread a perfumed ointment onto her face, gathered her curls into a headdress to deceive him, her sandals attracted his eyes, her beauty captured his soul, she cut off his head with a pugio."

65) S.R.) D)

W) Judith, chap.13, verse. 8;

" Saying, Oh Lord, God of Israel, give me strength and at this hour look at the works of my hands so that you may raise up Jerusalem, Your city, as You promised, and I can complete with faith that which I believed possible with Your help and, after having said these things, he came close to the column which stood at the head of the bed and untied his pugio which hung from it after having been tied on to it."

66) S.R.)

W) Liber sec. Paralipomenon – Chap. 23, verse.10;

(NUOVA PAGINA)

"The priest gave the centurions spears, shields and the small shields of the king which David had consecrated in the house of the Lord.

He put all the crowd holding pugiones from the right to the left part of the temple, in front of the altar and along the king's route."

PRUDENTIUS-LIBER CATHEMERINON

67) H.E.) D) Description of the type of wound inflicted by a pugio;

W) Cl. 1438, hymnus. 12, versus.113;

"So the executioner, having pulled out the dagger, overcome by fury, strikes at the bodies that have just been made to fall and makes new soul come out. The killer hardly finds a space in the small limbs where the wound descends expanding, and the pugio is bigger than the throat. Oh, what a barbarous spectacle! The neck is spread with the brain and vomits from the wounds, in addition the eyes are trembling and incapable of speaking, immersed in a profound vortex, and the tight jaws cause the saliva and breathing to produce a noise similar to a hiccup."

SERVIUS GRAMMATICUS

68) H.E.) D) Definition of various arms;

W) Commentarius in Vergilii Aeneidos libros – Servus auctus, LLA 612, vol.2, bk.7, comm.. ad Versum. 664;

"The 'pilum' is specifically a Roman spear, like the Gauls' gaesa and the Macedonians' sarissae. The picca can be an instrument, in whose rod the pugio can be hidden or, according to Varrone, a long pole with a very short blade. The picca is also called in this way from the verb fallo, as they deceive with iron, as their shape looks like a piece of wood;"

AUGUSTINUS HIPPONENSIS

69) H.E.) D) The torment suffered by Catholic Bishop Massimiano by the Donatists;

W) Epistulae – Cl. 0262, epist. 185, vol. 57, para. 7;

"While the bishop was at the altar, they assailed him with horrible violence and furious cruelty, and they struck him with sticks and every type of weapon and with the same planks of the altar they had broken up; they even struck him with a pugio in his groin and, due to the blood which flowed out of the wound, he would have died there and then had their greater ferocity not saved his life. In fact, by pulling him across the ground after having wounded him so badly, the dust penetrated the open veins and stopped the haemorrhage which would have led to his death;"

70) S./R.) D) Leaden pugio, referring to deceptive pagan truths;

W) Soliloquiorum libri duo – Cl. 0252;

"So the soul lives forever. (Augustine) Oh, inoffensive pugio!"

71) S./R.) D) Symbol of inefficiency (if leaden);

W) Contra Iulianum – Cl. 0351, bk. 1;

"What are the Aristotelian categories, by virtue of which you would always like to seem perfect to attack us as one who is a master of expressing their thoughts? Which of your points, as points of glass or as leaden pugiones, will dare to be shown to their eyes?

Which weapons will not escape you and will not leave you unmasked??

72) S./R.) D) Symbol of inefficiency (if leaden)

W) Contra Iulianum – Cl. 0351, bk. 3;

"But now you could be completely incapable and inexpert, then you would be an incapable artificer. And in any case, as if you were crushed by the pointed javelins of dialectics, you advance in the debate and fling leaden pugiones saying that if the mixture of bodies placed in different sexes is negative, then also the condition is deformed."

73) S./R.) D) Symbol of inefficiency (if leaden)

W) Contra Iulianum – Cl. 0351, bk. 3;

"And in any case, as if you were crushed by the pointed javelins of dialectics, you advance in the debate and fling leaden pugiones (intended as inoffensive) saying that, if the mixture of bodies placed in different sexes is negative, then also the condition is deformed."

ST. AURELIUS VICTOR

74) H.E.) Symbol of power;

W) Historiae abbreviatae (vulgo. Liber de Caesaribus) – Chap. 13;

"So, confiding in honesty, he often scolded Suburanus, prefect with the title of Praetorian, while he handed him the pugio, symbol of power, according to custom: 'I entrust you with this for my defence, if you behave correctly; but if you behave differently, it will rather be used against me,"

OROSIUS

75) H.E.) D) Killing of Julius Caesar;

W) Historiarum adversum paganois – libri vii Cl. 0571, vol. II, bk. 6, Chap. 17,

"It is said that that in that conspiracy there were more than sixty accomplices. The two, Brutus and Caius Cassius and other companions with pugiones in their hands left for the Capitolium;"

76) H.E.) D) booklet with list of enemies of Emperor Caligola;

W) Historiarum adversum paganos – libri vii, Cl. 0571, vol. III, bk. 7, Chap. 5;

"And he subsequently ordered all the exiles to be killed together, but he, himself, was killed by his protectors. Among his secret papers two booklets were found: one had a pugio and the other a gladius in the place of the indication of the title: both contained the names of first-rate men of both orders, those of the Senate and the equestrians, and notes on those who had been meant to die;"

HISTORIA APOLLONI REGIS TYRI (Italian novel)

77) S./R.) D)

W) Chap. 31, para. 23;

"Vilico carried the pugio and kept it hidden on his side and, turning his gaze towards the sky, said: 'Oh God, I do not deserve to have received freedom, if not for having spilt the blood of a virgin,"

78) S./R.) D) weapon advised for a murder;

W) Chap. 31;

"You should hide yourself with a pugio, kill her while she arrives and throw her body into the sea. When you arrive and give news of this fact, together with the reward you will receive freedom."

79) S./R.) D)

W) Chap. 31, para. 65;

"Vilico, although he was attracted by the hope of freedom, still left with sadness, he prepared the pugio making it very sharp and went away behind the statue of the wet nurse, Tarsia."

V CENTURY A.D.: 474 – 521 A.D.

CLAUDIANUS MAMERTUS

80) S./R.) D) Symbol of inefficiency (if leaden);

W) De statu animae – Cl. 0983, bk. 3, para. 16;

"But naturally it was right to fight all the time in which the adversary managed to oppose resistance; to be more precise, it was right, when he escaped, to chase after him and disarm him of his leaden pugiones after having placed him under my power;"

ENNODIUS

81) S./R.) D) weapon of death;

W) Dictiones xxvii – Cl. 1489, dictio. 23, para. 497;

"Ruined by the evil of obstinacy, after having killed his father, the son forced himself to cancel his mother's good reputation. Disillusioned by the fact that we had escaped the pugio, he attempted to find fame by death; we have more fear of losing our honour than of dying;"

VI CENTURY A.D.: 538 – 636 A.D.

GREGORIUS TURONENSIS

82) H.E.) D) weapon used during a struggle;

W) Historiarum – libri X Cl. 1023, liber. 7, Chap. 29, para. 348;

"While Claudio, having raised his right hand, tried to stick the knife into his chest, he (Eberulfo) tried to dig the pugio under his armpit in the same way; pulling back to deal a blow, he cut off Claudio's thumb;"

GREGORIUS MAGNUS

83) S./R.) D) The pugio as a symbol of beneficial sadness, as a means to then appreciate pleasure

W) (dubium) – In librum primum Regnum espositionum libri VI, Cl. 1719, lib. 1, Chap. 77;

"And since in this joy of the soul relief is not received from tears if one does not first experience the bitterness of strong pain and, whatever survives after fleeting joy, strikes it dead with the pugio of beneficial sadness, it was said that Anna was first saddened in her soul, so she was then able to cry abundantly;"

85) S./R.) D) killing of the Midianites;

W) Etymologiarum sive Originum – libri XX, Cl. 1186, bk. 7, Chap. 6, para. 49;

"In fact, he pierced Zambri together with the Midianite prostitute with a pugio and appeased the wrath of the Lord until he had pity. Zambri was in the position of one who poses a challenge and provokes bitterness;"

86) S./R.) D) killing of the Midianites;

W) Mysticorum expositions sacramentorum esu Quaestiones in Uetus Testmentum – Cl. 1195, In Numeros, Chap. 42, para. 8;

"But Phineus, priest full of zeal, in order to appease the wrath of the Lord, pierced Zambri and the Midianite with the pugio, hoping to point out that by means of the cross of Christ not only idolatry but also carnal passion and the lust of modern life are destroyed;"

87) H.E.) D) description of a deceptive pugio sheath;

W) Etymologiarum siue Originum – libri XX Cl. 1186, Bk. 18, Chap. 9, para. 4;

"The book deposit is also called library. The picca are wooden sheaths within which a pugio is hidden under the appearance of a stick. The picca are called this way because of their deceit, as they deceive by way of the iron, while they have the appearance of a piece of wood;"

VII CENTURY A.D.: 640 – 709 A.D.

ALDHELMUS SCIREBURNENSIS

88) H.E.) D) Construction technique, proposed in quite an enigmatic manner;

W) Aenigmata – Cl. 1335, aenigma. 61, versus. 1;

"The Greek has marked the name on the base of the end; so the Latin speakers call it in the same way with the appropriate term (pugio). From the beginning it was artfully forged from the enflamed entrails of the earth, the rest of material derives from wild boars and is formed from the putrid corpses of goats;"

IULIANUS TOLETANUS

89) S./R.) D) the pugio as an instrument of power;

W) De comprobatione sextae aetatis libri tres – Cl. 1260;

"So it is right that the mouths of similar people, soiled by a long experience of attachment to carnal things, are limited first by the double-bladed sabre of the Old Testament, then by the strong and new pugio of the Gospels, that they might approach the book of the third issue, in which they might also recognise the sixth age of the world and understand that Christ was born in this;"

VIII CENTURY A.D.

PAUCA PROBLESMATA DE ENIGMATICUS ET TOMIS CANONCIS

90) S./R.) D) killing of the Midianites;

W) Prefatio et libri de pentateucho Moysi (textus longior) – De Numeris, para. 444;

"During this stop, Phineus, son of Eleazar, struck Zambri with a pugio, together with a prostitute, in the genitals; that is Christ from the wood of the cross kills the devil and idolatry and the concupiscence of idolatry;"

IX CENTURY A.D.: 825 – 880 A.D.

FRECHULFUS LEXOUIENSIS

91) H.E.) D) Killing of Julius Caesar;

"The two, Brutus and Caius Cassius and other companions left with pugiones in hand for the Capitolium;"

IOHANNES SCOTO ERIUGENA

92) S./R.) D) Symbol of inefficiency (if leaden)

W) De divina Praedestinatione – liber. 7, Chap. 9;

"What did you say about the division of the world into four parts? Oh inoffensive pugio (leaden in the original text)! Oh, perhaps you think that predestination is made of two parts, just as the world is made of four elements, even if is one?"

SEDULIUS SCOTUS

92) S./R.) D) Symbol of inefficiency (if leaden)

W) Collectaneum miscellaneum – Diusio. 13, subdiuisio. 1;

"We have out ears as witnesses: the way of speaking is uncertain, a sign of mendacity. Oh, inoffensive pugio (leaden in the original text)! Oh, ridiculous subterfuge and spoils worthy of a fox! Oh, badly made syllogism, worthy of laughter or rather solecism! Oh, bald forehead! Shamefully disfigured after your horns were taken out!"

94) S./R.) D) Symbol of inefficiency (if leaden);

W) Liber de rectoribus christianis – pag. 65, line. 10;

"Whoever, powerful in war, confides in horrible arms, as he is not confident, puts aside hope in himself or in his own and shakes like a leaf; the hail-fall of strikes will be simulated, since what has been done would even shake a stranger. And the weave of his armour, like metal, is rigid; the pugio, like lead, is unstable like the fragile web of a spider: the long sword with a sharp point becomes pasty, and not even the shield is sure to protect its owner any more."

X CENTURY A.D.

LANDOLFUS SAGAX (LANDOLFO SAGACE)

95) H.E.) D) booklet with Emperor Caligula's list;

W) Additamenta ad Pauli Hist. Rom. – Auct. Ant. 2, Bk. VII, p. 300, line 21;

"After he was killed, among his secret documents two booklets were found: one had a pugio, the other a gladius in the place of the indication of the title: both contained the names of men from very high ranks from both orders, the senate and the equestrian, and notes on those who had been meant to die."

XI CENTURY A.D.: 1007 – 1100 A.D.

PETRUS DAMIANI

96) S./R.) D)

W) Epistulae – CLXXX Vol. 1, epist. 27;

"Eglon, King of Moabita, may he not keep you under his power, but may he pierce you suddenly with his pugio together with that Aoth."

97) S./R.) D) Attempt of capital punishment;

W) Epistolae – Epp. Kaiserzeit IV, 3, Epist. 123;

"But as they could not perpetrate this villainy among them, attempting first fear and then blandishments, once the sentence of the governor was pronounced, they were condemned to death. What more can be said? Immediately the javelin throwers approached them, threw the pugiones which made their bare necks vibrate, but they did not manage to cut even the outer layer of their skin as the strokes were without effect,"

98) S./R.) D)

W) Vita sancti Romualdi – Chap. 28;

"Precisely all night through the bushes of the forests, across the spread of woody areas, through the shadowy places of the woods, they looked for the road in fear, but could in no way find it because the trail was spread here and there. But they could not even hide their pugiones in their sheaths because their openings had become rigid with the dryness,"

99) S./R.) D) Judith uses a dagger;

W) Epistulae – CLXXX, Vol. 3, eptist. 114;

"Certainly Judith, an example of widow's modesty, despised Oloferne's wedding bed which was covered in gold and radiant with crimson; her heart clothed with even stronger weapons, plunged the pugio, and courageously cut off his head even if he was drunk;"

100) S./R.) D) Judith uses the pugio;

W) Sermones – Sermo. 68;

"Judith had been allocated this army, and she refused the wedding bed of Oloferne, covered with gold and gems, and she cut off the intoxicated head of the lustful prince with his own pugio;"

101) S./R.) D) Davdi uses the pugio against Goliath;

W) Epistulae – CLXXX Vol. 3, epist. 120;

"David, at the beginning of his adolescence, while he was fighting against Goliath in an almost puerile manner, not with a sword, but with some stones, but like a man in his full strength he cut off his head with a pugio;"

102) S./R.) D)

W) Epistulae – CLXXX, Vol. 3, epist. 123;

"What more can one say? Immediately the javelin throwers approached, they threw their pugiones which vibrated against their bare necks, but they did not manage to cut even the outer layer of their skin, because the strokes were without effect;"

103) S./R.) D) The pugio understood as a very efficient

weapon in killing materially and morally a person;

W) Epistulae – CLXXX, Vol. 4, epist. 154;

"Recently some news has reached us that concerns you, new and never heard before, and it has brought us sadness from great pain, it has shaken our already terrified entrails, shut our mouths from praising your glory as we were accustomed and it has pierced out heart so to speak with the very sharp pugio of interior pain;"

104) S./R.) D) The pugio understood as a lethal weapon;

W) Epistulae – CLXXX, Vol. 3, epist. 107;

"I call as witnesses Jesus and his holy angels to the fact that I am not lying with this excuse. So, if I have to die for this letter, I stretch out my neck, stick in the pugio."

105) S./R.) D) Killing of the Midianites;

W) Epistulae – CLXXX, Vol. 2, epist. 61;

"This shame did not cover the face of the priest Phineus, who grabbed the pugio, and in front of all the people struck an Israelite in the genitals who was copulating with a Midianite woman;"

(NUOVA PAGINA)

106) S./R.) D) killing of Midianites;

W) Epistulae – CLXXX, Vol. 3, epist. 112;

"You, man of the Lord, fervent with zeal, take possession of Phineus' short sword, so that you can pierce the Israelite with a sharp pugio who is copulating with the Midianite, Cosbin,"

107) S./R.) D) killing of the Midianites;

W) Epistulae – CLXXX, Vol. 4, epist. 162;

"You, furthermore, oh brother, armed with these and other javelins of the Scriptures, come close to the Madian camp, strike with the pugio of the divine word Zamri and Cosbin, who are copulating shamefully under everyone's eyes, so that you can deserve the peace of the pact with the Lord and the right to the office as priest together with Phineus;"

BENZO DE ALBA

108) S./R.) D)

W) Ad Heinricum IV. Imp. Bks VII SS rer. Germ. 65, Bk. V, Chap. 1;

"Oh triumpher, Henry, I am coming to you as a petitioner. From the depths of my heart I turn to you alone. May your pugio kill those who raid the temples;"

CHRONICON NOVALICIENSE

109) S./R.) D)

W) SS 7, Bk. 5, Chap. 31;

"They said: You know nothing of this? In truth, Saint Peter, taking away their pugiones, gave them some rods and said. "Go and punish Vidone with the rods, not with cutting weapons,"

110) H.E.) D) List of weapon names;

W) Synonyma Ciceronis quae dicuntur (Charisii artis grammaticae libro quinto inserta), LLA 705;

"Volta. Spuma. Lupanare. Caverna. Antro. Caverna. Immagini. Piccolo antro. Scoglio. Rocks. Baratro. Nascondiglio. Iron. Iron instruments. Javellin. Gladius. Pugio. Sica. Straight sword. Dagger. Stiletto. Spear. Sparo. Spiedo. Spear. Long javelin. Hunting spear."

RUPERTUS TUITIENSIS

111) S./R.) D) Judith uses the pugio;

W) Liber de diuinis officiis – Bk. 12;

"At that point she showed how violent the cut through Oloferne's head had been, dozy from drunkenness, work of his own pugio, she said: 'My God, give me comfort in this hour;"

112) S./R.) D) the killing of the Midianites;

W) Commentarium in Apocalypsim Iohannis apostolic – Bk. 2, Chap. (s.s.):2;

"With the same strength of burning love also Phineus, whom the Jews say was Elijah in person, in the scandal of which was spoken earlier, as Balaam informed him to send Balac, under the eyes of the children of Israel, clasping the pugio entered the den of vice after the Israelite man who had entered to go to the prostitute, and he pierced both, the man and the woman in the genitals, and so the wrath of the Lord was dispelled from Israel;"

113) S./R.) D) the killing of the Midianites;

W) De sancta trinitate et operibus eius, CM 22, bk.17, In Numeros II;

"After having seen this, Phineus, son of Eleazar, priest of Aaron, got up in the middle of the multitude and, clasping a pugio, entered into the den of vice behind the Israelite man and pierced both, the man as well as the woman, in the genitals;"

114) S./R.) D) the killing of the Midianites;

W) De sancta trinitate et operibus eius – CM 22, bk. 17, In Numeros II;

"Madian committed impure acts with his daughters and Phineus, son of the priest Eleazar, overcome by a burning love for the Lord, pierced with a pugio Zamri and the Midianite prostitute;"

(NUOVA PAGINA)

115) S./R.) D) The killing of the Midianites;

W) De sancta tinitate et operibus eius – CM 22, bk. 19, In Deuteronomium II;

"At that fleeting moment of spontaneity the dignity of the priest Phineus is blessed, who during the initiation of Belfagor, clasping the pugio, entered the den of vice after the Israelite man and, by piercing both the man and the woman, dispelled the scourge of the sons of Israel, while the Lord spoke to Moses;"

BERNARDUS CLARAEVALLENSIS

116) S./R.) D) The killing of the Midianites;

W) Epistulae – Epist. 236, para. 1, Vol. 8;

"Who could grant that Phineus step forward with the pugio against this fornication and that Peter, who with a breath from his lips could kill the wicked, alive in his See?"

SEXTUS AMARCIUS

117) S./R.) D) Sermone;

W) Sermones – QQ Geistesgesch. 6, Bk. 3, Chap. 1; "No pugio is useful in the work of cruel Mars, who collected wrath in a stone that was not hard. As we have been given a fragile life by the Lord and oft times we lead a life of misfortune with our bodies turned forwards, and we succumb to the cruel strikes of the enemy, may a perpetual rite be addressed to the merciful Lord and may those who are without food and covers be often led under our roof, and venerated in the manner of Tobia;"

XII CENTURY A.D.: 1100-1204 A.D.

HISTORIA COMPOSTELLANA

118) S./R.) D) The pugio understood as a treacherous and lethal weapon;

W) Bk. 2, Chap. 53;

"But the capacity of human intellect is not able to understand or fully explain how the strong right hand of our just judge, for whom all is possible, could have ripped him out of the siege and the fire of the tower, how he could have led him out, in the middle of enemies in wedge shapes, how he could have freed him from the same pugiones of the followers who were thirsty for his blood, and how he could have drawn him out from the midst of his enemies, even by the guards, how he then could have made him sublime over his enemies;"

119) S./R.) D)

W) Bk. 3, Chap. 47;

"In truth, while the archbishop was speaking humbly to them, some of the wicked men wanted to kill him deceptively with pugiones and javelins between the iron doors of the altar;"

AELREDUS RIEUALLENSIS

120) S./R.) D) The killing of the Midianites,

W) Homiliae de oneribus propheticis Isaiae – Homilia : 24, para. 20;

""In fact, Phineus, thanks to this anger of which we speak, due to which he killed those who were fornicating with a pugio, deserved an eternal priesthood, and Leo, son of Namsi, for the burning love which had spurred him against the house of Acab, bequeathed to his descendants the reign of Israel until the fourth generation with God's favour;"

ANDREAS DE SANCTO VICTORE

121) S./R.) D) Definition during religious preaching;

"Clasping the pugio. The pugio is a type of gladius, called this way because it pierces. A great miracle occurred."

IOHANNES SARISBERIENSIS

122) H.E.) D) Nero meditates suicide by pugio;

W) Policraticus – Ed. Webb. Tom. II, Bk. 8, Chap. 19;

"And having come to know that the neck of the stripped man would be passed through the yoke and that the body would be beaten with rods until death, terrified, he grabbed two pugiones which he had brought with him and, having touched the points of both, put them back with the pretext that it was not yet the moment fate desired for his death;"

(NUOVA PAGINA)

123) H.E.) D) The killing of Julius Caesar;

W) Policraticus, tom. II, Bk. 8, Chap. 15;

"For the rest, somewhat greater strengths were shown in Quintus Cassius who sent Silius and Albinu Purnius to Spain to kill those who had been taken with pugiones, having stipulated fifty sesterces with one and sixty with the other;"

124) H.E.) D) The killing of Julius Caesar;

W) Policraticus – tom. II, Bk. 8, Chap. 19;

"He (Caesar a.n.) anyway, as he had entered the territory of the state with arms, was considered a tyrant and, with the consensus of most of the Senate, was killed in the Capitolium by pugiones clasped in the hands of the conspirators …. (missing)…

But also at that moment he was mindful of honesty, in fact, as soon as he realised that he was being attacked by drawn pugiones, he covered his head with his toga, and at the same time with his left hand covered his chest right down to the bottom, to die with more dignity."

125) H.E.) D) Nero meditates suicide with a pugio;

W) Policraticus – tom. II, Bk. 8, Chap. 19;

And having come to know that the neck of the bared man was passed through a yoke and that his body was then beaten by rods until death, terrified, he grabbed two pugiones which he had brought with him, and having touched both their points, put them back under the pretext that it was not yet the moment fate desired for his death;"

126) S./R.) D)

W) Policraticus – CM 118, Bk. 1, Chap. 4;

"For this purpose he requests the art of those executioners and puts it into practice, and has as his performer a mime with a knife which he twirls about, now, clasping the pugio, the sword blunted, you will be astonished if you chance to participate in their rituals;"

127) H.E.) D) Suicide of Commander Brenno;

W) Policraticus – tom.II, BK. 6,Chap. 17;

"The a storm came, and the hail and cold killed the wounded. The same Commander Brenno, not able to stand the pain of the wounds, ended his life with a pugio;"

128) H.E.) D) Booklet with Emperor Caligula's list;

W) Policraticus – tom. II, Bk. 8, Chap. 18;

"He himself was killed by his protectors. Among his secret documents two booklets were found containing the names of men of high rank who had been condemned to death; one had a gladius as a title, the other a dagger;"

STEFANUS TORNACENSIS

129) S./R.) D) The killing of the Midianites;

W) Sermones – PL 211, Col. 568;

"If I wanted to take his magnificent works into my own hands again, Phineus pierced an Israelite with a pugio

who was committing impure acts with Midianite woman; in fact, with the fulfilment of this task it happened that he kept his own place, encountered favour and placed an end to the upheaval."

PILIPPUS HARUENGIUS

130) S./R.) D)

W) Epistulae – Ep. 16 (ad Philippum);

"Although he murmured the stupidity of some carnal men against him (in fact he always finds some envious men and this is a sign which the power of the spirit opposes) in any case, enflamed with ardour, he proceeds and does not put the pugio back until he carries out a worthy revenge on his slanderers;"

131) S./R.) D) The pugio in the hand of a woman;

W) De silentio – Chap. 111;

"When divine mercy decided to visit those who underwent sufferance, it took away those who caused it in the way it wanted and sent the widow Judith, endowed with moral integrity, skilful in speaking, worthy of praise for her purity, to seduce the prince with wine and love and to kill him with his own pugio by the hand of a woman;"

132) S./R.) D) The killing of the Midianites;

W) De oboedientia – Chap. 38;

"So the priest Phineus considered just that when one of the children of Israel, under the eyes of all the people, turned to a Midianite prostitute, enflamed with love for God, clasping the pugio, hurried to enter the den of vice and pierced the genitals of the man and the woman;"

PETRUS BLESENSIS

133) S./R.) D) The killing of the Midianites;

W) Passio Reginaldi principis Antiochie;

"Samuel cut the King Agag into pieces. Phineus killed with a pugio a Jew who was copulating with a Midianite. Elijah, inciting celestial fire, killed two Commandants of fifty men together with one hundred men;"

XIII CENTURY A.D: 1170 – 1271 A.D.

THOMAS DE CHOBBAM

134) S./R.) D) The killing of the Midianites;

W) Summa de arte praedicandi – Chap. 6;

"And for the second time, as can be read in Numbers, as the sons of Israel had committed impure acts with the Midianites, the Lord wanted to destroy all their people, if he had not been appeased by Phineus, who with his own pugio pierced the genitals of one while he was sleeping with a Midianite woman, and God could not have been appeased by the discourse of Moses or Aaron if not by Phineus alone who for the first time avenged so cruelly that sin of fornication;"

RODERICUS XIMENIUS DE RADA

135) H.E.) D) The killing of Julius Caesar;

W) Breiarium historie catholice – CM72B, Bk. 8, Chap. 101;

"On the instigation of Brutus and Cassius a conspiracy was organised against him by more than sixty senators and, as it was not lawful to bring arms into the Capitolium, the conspirators brought rods of iron with them or pugiones and, after having moved aside with him, stuck him twenty-three times;"

PETRUS CANTOR

136) S./R.) D) The killing of the Midianites,

W) Summa quae dictur Uerbum adbreuiatrum (textus conflates) – para. 2, Chap. 24;

"On the one hand Phineus struck with a pugio those who were copulating, on the other Moses, armed, killed the idolaters going from door to door to avoid all the people perishing, and on the other again Samuel killed Amalech, saved by Saul against the order of the Lord and cut Agag, the very obtuse king, into pieces;"

137) S./R.) D) The killing of the Midianites;

W) Summa quae dicitur Uerbum adbreuiatum (textus conflates) – para. 2, Chap. 32;

"On the one hand Phineus pierced with a pugio those who were copulating and put an end to the upheaval;"

SPECULUM VIRGINUM

138) S./R.) D) The killing of the Midianites;

W) Chap.5;

"Judith and Susanna presented themselves, one of whom was a prim winner, and slaughtered with his own pugio the invincible tyrant, enemy of chastity, rebel of God, dissolute adulterer; the other drove away some shameless priests, wolves in sheep's clothing, choosing, after having kept chastity, death itself and unaware of the fear of God."

139) S./R.) D) Judith;

W) Chap. 7;

"Listen to what Judith earned for herself with a widow's modesty, honour of the Judaic lineage, who, abandoning sex with uprightness and tenacity, killed with his own pugio a common enemy;"

GIULLEBERTUS

140) S./R.) D) The killing of the Midianites;

W) De superfluitate clericorum – Stropha. 263, Versus. 1;

"No one is capable of appeasing anger and turmoil, God is not induced to appease. In fact, no Phineus holds a pugio with which Madia avenges the prostitute;"

ALEXANDER MINORITA

141) H.E.) D) Booklet with list Emperor Caligula;

W) Exposisto in Apocalypsim – QQ Geistesgesch. 1, Chap. 6;

"In fact, after his death, among the secret documents two booklets were found, on one of which pugio had been written, on the other gladius instead of the title, both contained the names and news of men of high rank of both orders, senators and equestrian, who he wanted to vanquish with death;"

XV CENTURY A.D.: 1170-1271 A.D.

EBENDORFER THOMAS

142) H.E.) D) Booklet with Emperor Caligula's list;

W) Chronica regum Romanorum – SS rer. Germ. N.S. 18, Liber. II;

"Two booklets were found after his death: one of which was called pugio, the other sword, in which it is said were written the names of the Romans of high rank who were condemned to death;"

143) H.E.) D) The pugio as a threatening weapon;

W) Chronica Austriae – SS rer. Germ. N.S. 13, Lib. III;

"Hearing that Rodolfo, having immediately grabbed the edge of the Emperor's robe and brandishing the pugio, said: 'Not like this, but a bitter death by the work of my hands first strikes you down, I will die later.'

And while the ones, who have been mentioned, tried to take him away, he shouted: 'Stop! Otherwise soon this pugio will pierce the Emperor's heart.'

AUGUSTINUS (PSEUDO) BELGICUS

ISBN: 9781407309996

144) S./R.) D) Weapon for a murder;

W) Sermones ad fraters in eremo commor 14;

"This is the medicine for vice, the antidote the pugio with which I struck a Judean who over a Medianite, and the upheaval came to

XVI CENTURY A.D.: 1170 – 1271 A.D.

LAURENTIUS A BRUNDUSIO

145) S./R.) D) Way of speaking: reason, cutting like a pugio;

W) Explanatio in Genesim – dissertatio, 5;

"Now then, of grace let us see these definitions and discuss his reasons which people of his retinue believe to have struck and pierced Moses and all the ancient philosophers who followed divine dogmas like very solid pugiones and piercingly sharp double-bladed gladi."

CHAPTER IX
DATABASE OF ARCHAEOLOGICAL FINDINGS

The following database concerns the various exemplars which it has been possible to trace, with the intention of making it as complete as possible, even if we do not claim to cover all existing ones.

The sources we have used for this purpose are museum collections, private collections and publications of various types.

For the purpose of greater clarity, we have decided to subdivide it into various sections according to the nature of the finds and the quality of the information available:

Section **A**) – exemplars without sheath, divided into three subsections:

- section A1) – exemplars with various information and images available;
- section A2) – exemplars with various information available but no images;
- section A3) – exemplars with only the place of finding available;

Section **B**) – exemplars complete with sheath,

Section **C**) – exemplars of only sheath.

(for the definition of the various types please see Chap. 1 – "Origins, Evolution and Classification")

SECTION A - exemplars without sheath
section A1 - exemplars with various information and images available

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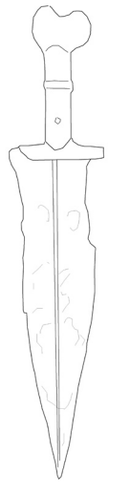

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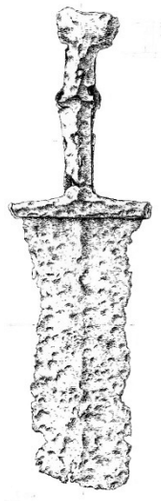

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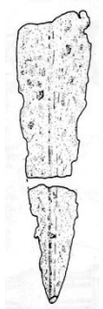

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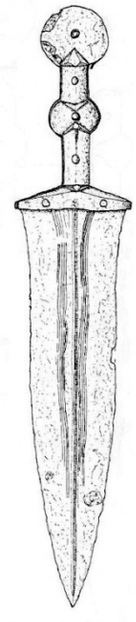

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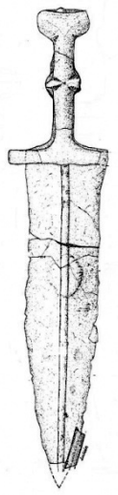

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section A1 - exemplars with various information and images available

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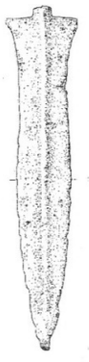

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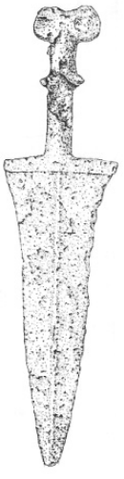

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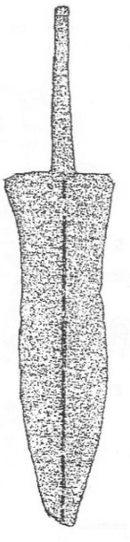

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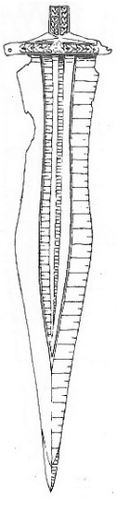

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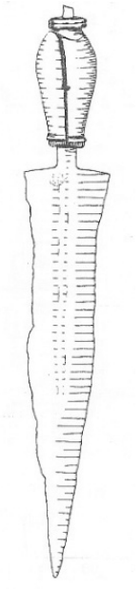
section A1 - exemplars with various information and images available



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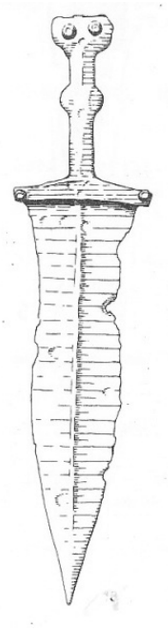

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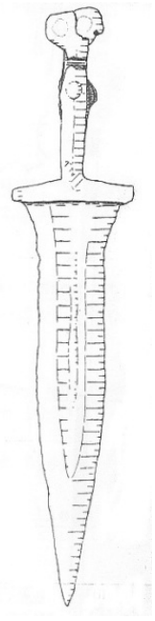

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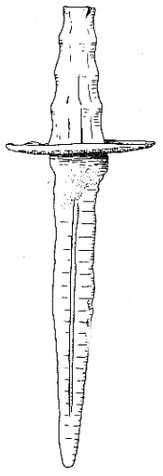

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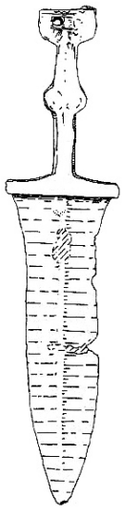

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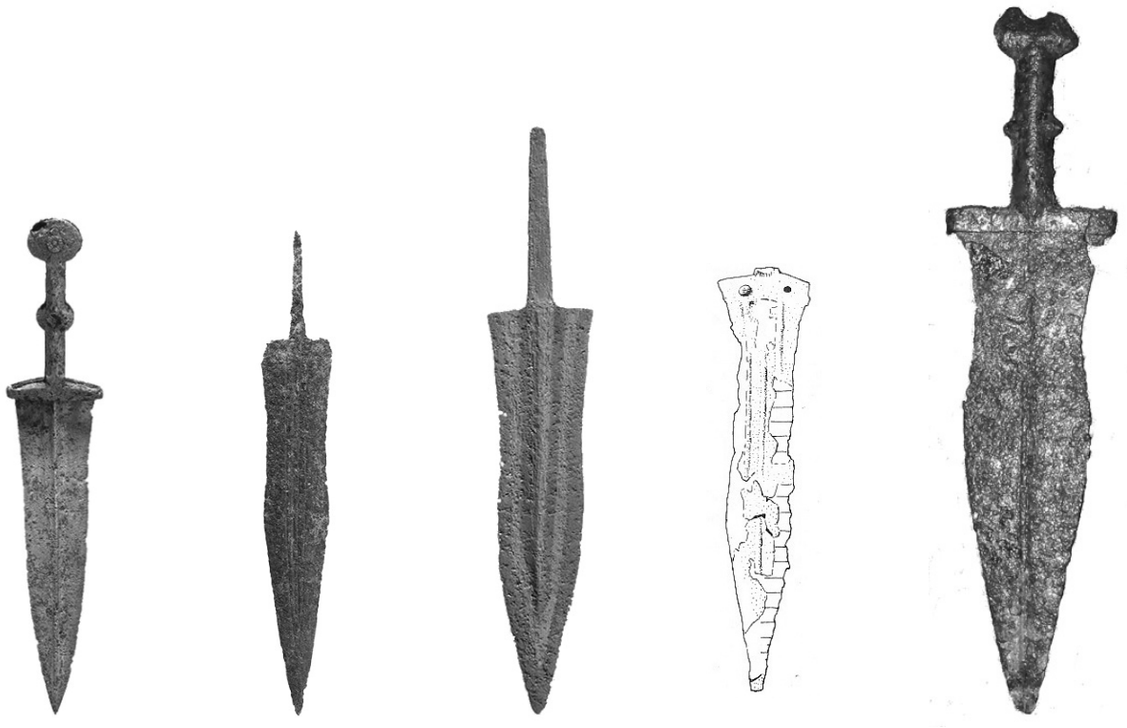
section A1 - exemplars with various information and images available



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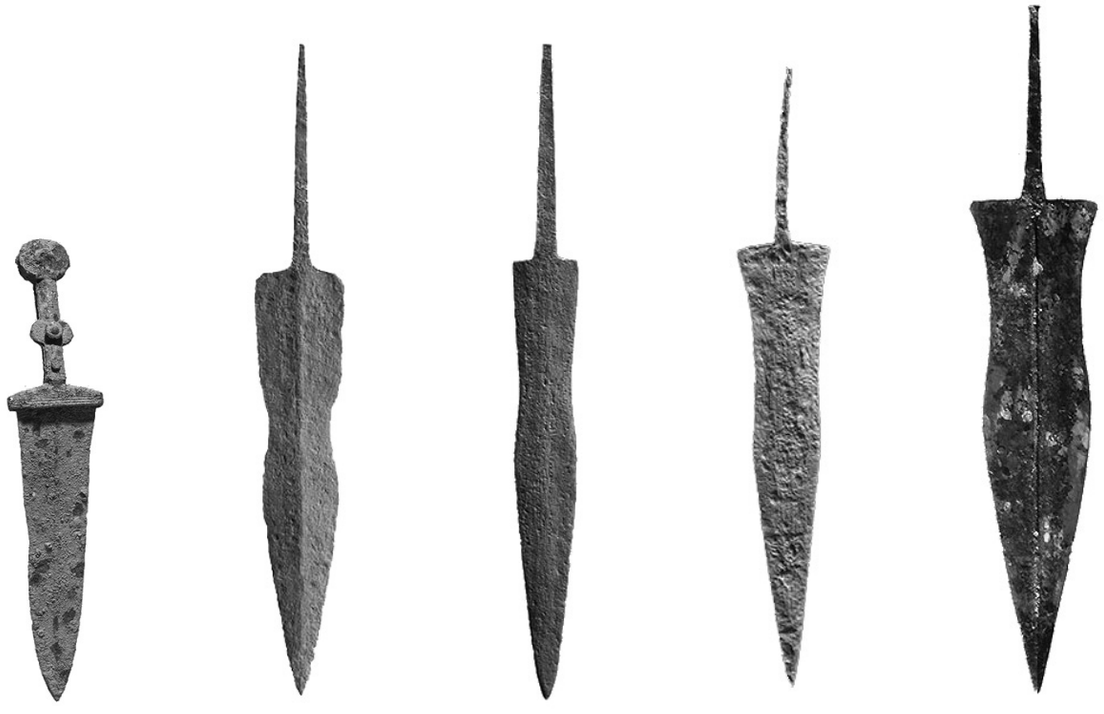

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section A1 - exemplars with various information and images available

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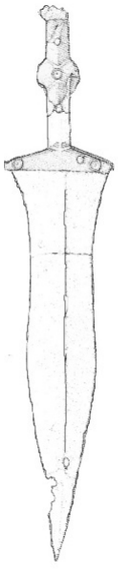

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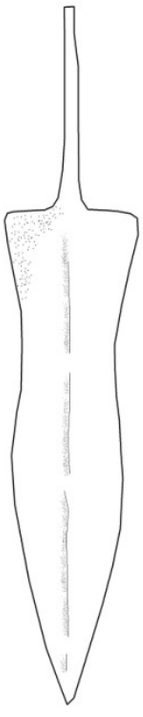

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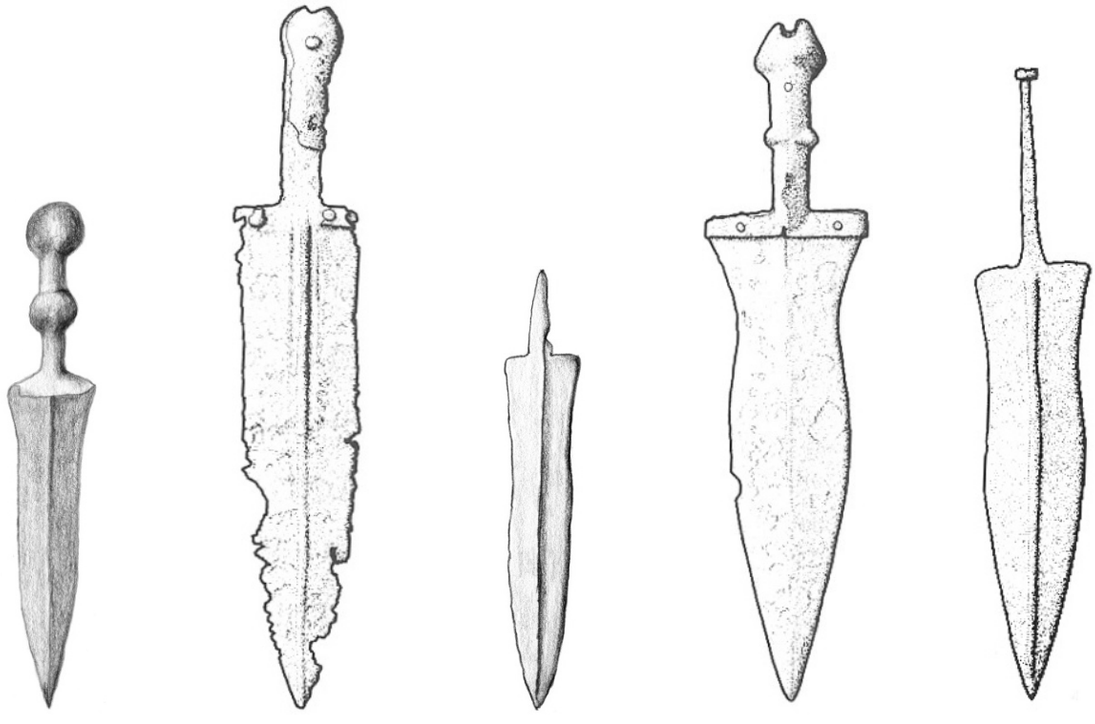

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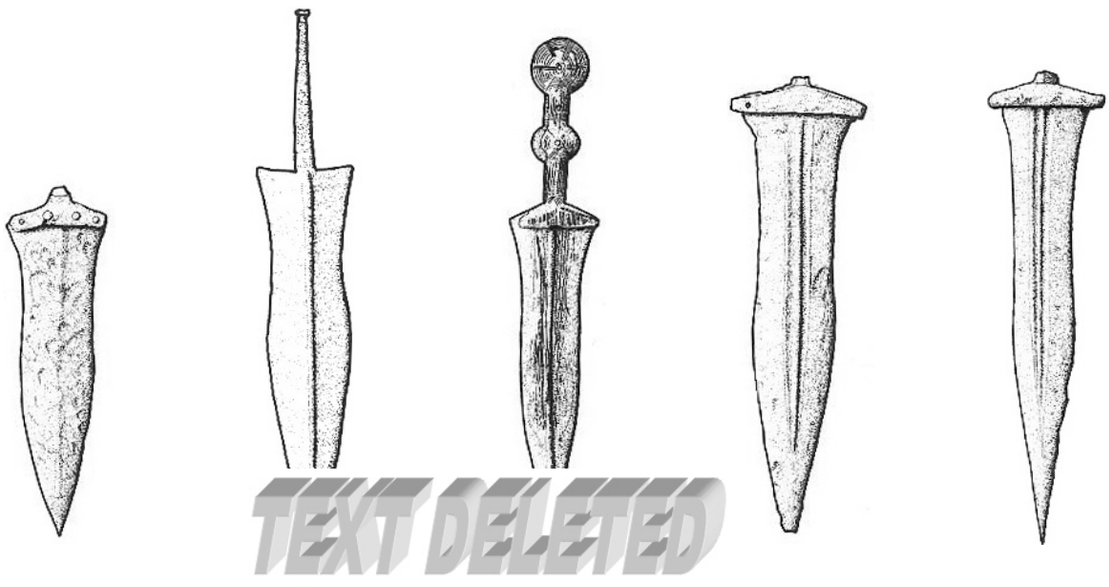
section A1 - exemplars with various information and images available



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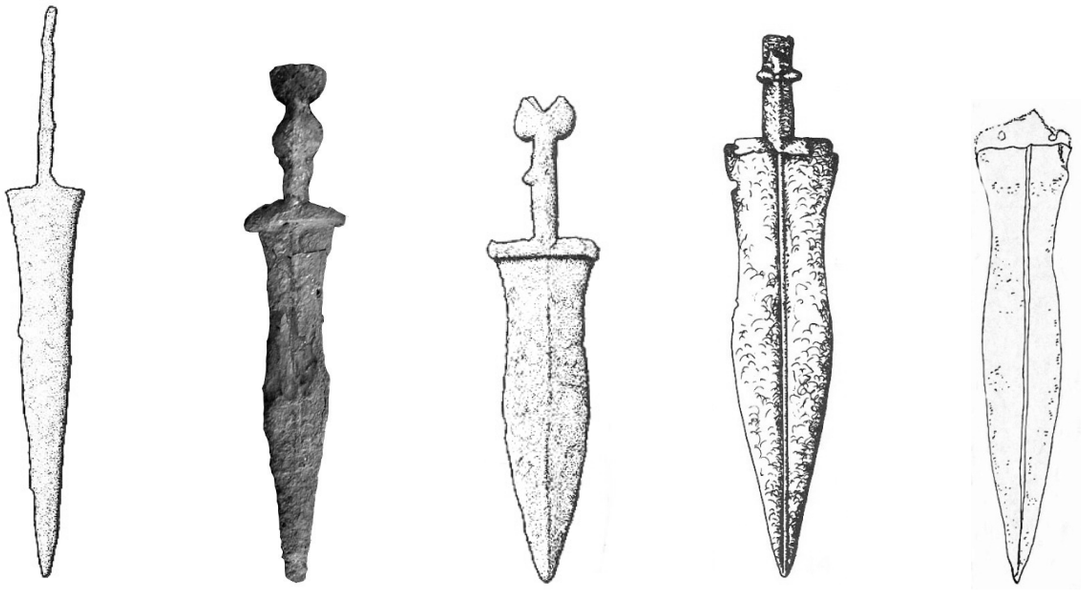

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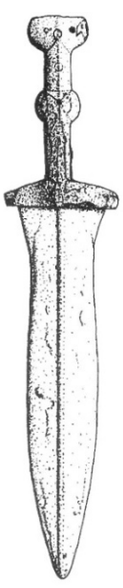
section A1 - exemplars with various information and images available



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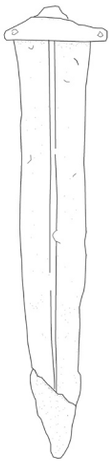

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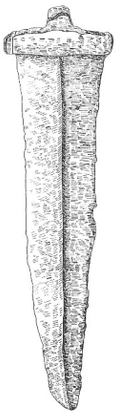

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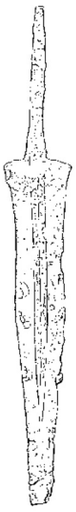

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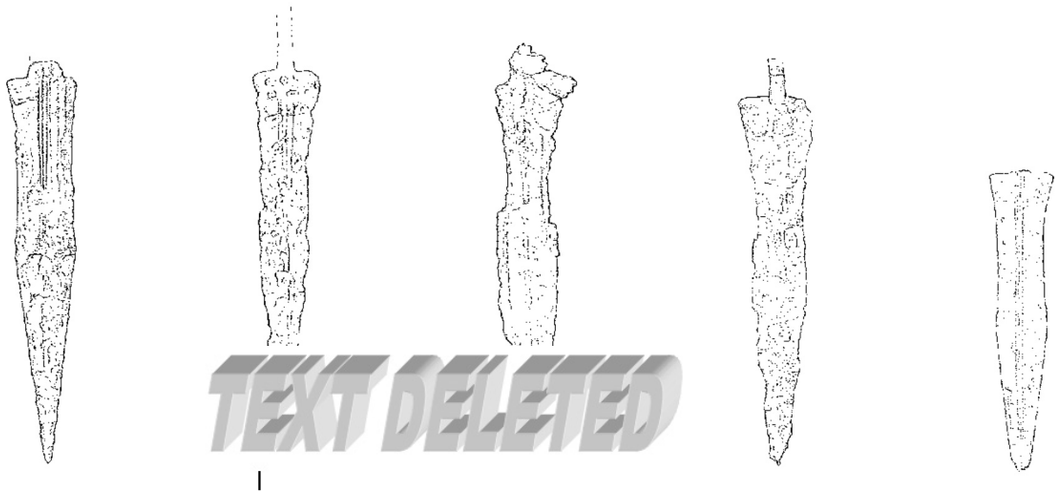
section A1 - exemplars with various information and images available



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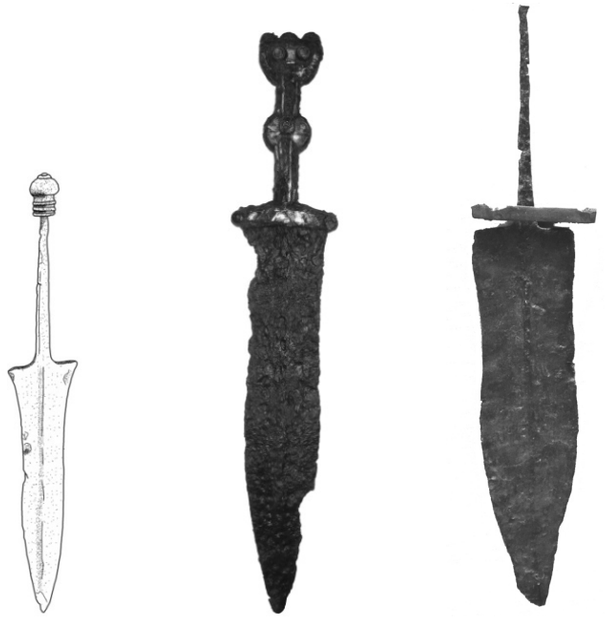
ISBN: 9781407309996



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section A1 - exemplars with various information and images available

	Find spot	*Now kept*	*typology*	*measurements*	*source*
1	Arcobriga (Spain)	National Archaelogical Museum in Madrid	I	Blade 213x56 mm.	"Gladius", XXVIII,2008
2	Planura De Bolmir (Cantabria)	Museo de Prehistoria Y arquelogìa de Cantabria	II	Tot. length 270 mm, blade 172x34 mm.	F. Ibànez, 1999; "Gladius", XXVIII,2008
3	Aroche (Spain)	Cadice Museum (Spain)	II	Tot. length 377 mm, blade 274x57 mm.	Quesada, 2000; "Gladius", XXVIII,2008
4	Tolegassos (Spain)	Museo di Girona	I	Blade length 125 mm	Casas Genover 1989 See "notes"
5	La Cendrera (Spain)	Burgos museum	II	Tot. length 295 mm, blade 184x50 mm	Abàsolo Álvarez 1977; "Gladius", XXVIII,2008
6	Castrillo de la Reina (Burgos, Spain)	Museo del Monasterio de Silos	II	Tot. length 260 mm, blade 144x66 mm	Esparza Arroyo, 1988; "Gladius", XXVIII,2008
7	Castro de Corporales	Museo de Leòn	II	length 289 mm, blade 182 mm.	: Sànchez Palencia 1985;"Gladius", XXVIII,2008
8	Los Myuelos (Palencia)	Palencia museum (Spain)	I	blade 169x42 mm.	Fernàndez Ibànez, 2006; "Gladius", XXVIII,2008
9	necropolis di Eras del Bosque	private collection (Eugenio Fontaneda)	I	length 339 mm, blade 234x46 mm.	"Gladius", XXVIII,2008
10	necropolis of Eras del Bosque	Valencia museum (Spain)	II	length 246 mm, blade 211x50 mm.	Fernàndez Ibànez, 2006; "Gladius", XXVIII,2008
11	necropolis of Eras del Bosque	Valencia museum (Spain)	I	tot. length 203 mm.	Fernàndez Ibànez, 2004; "Gladius", XXVIII, 2008
12	unknown	National Archaelogical Museum in Madrid	II	length 277 mm, blade 167x39 mm.	"Gladius", XXVIII, 2008
13	Numancia (Spain)	Numantino Museum of Soria (Spain)	I	Total length 195 mm	Lorrio 1997; "Gladius", XXVIII, 2008
14	Numancia (Spain)	Numantino Museum of Soria (Spain)	I	Total length 242 mm	Lorrio, 1997; "Gladius", XXVIII, 2008
15	Numancia, fortress of Castillejo (Spain)	Römische-Germanischen Zentralmuseum, Mainz	I	Total length 210 mm	Schulten 1927; "Gladius", XXVIII, 2008
16	Numancia (Spain)	Numantino Museum of Soria (Spain)	I	Total length 190 mm	"Gladius", XXVIII, 2008
17	Numancia, fortress of Molino (Spain)	Römische-Germanischen Zentralmuseum, Mainz	I	Total length 175 mm	Luik, 2002; "Gladius", XXVIII, 2008
18	Numancia (Spain)	Römische-Germanischen Zentralmuseum, Mainz	I	blade 210x45 mm	Luik, 2002; "Gladius", XXVIII, 2008
19	Las Minas (Spain)	unknown	I	tot. length 289 mm, blade 185x64 mm	Fernàndez Ibànez, 2004; "Gladius", XXVIII, 2008
20	Numancia (Spain)	Römische-Germanischen Zentralmuseum, Mainz	I	length blade 175 mm	Luik, 2002; "Gladius", XXVIII, 2008
21	Petavonium	Zamora museum	II-III	blade 169x38 mm.	"Gladius", XXVIII, 2008

section A1 - exemplars with various information and images available

	Find spot	*Now kept*	*typology*	*measurements*	*source*
22	Santa Cruz (Spain)	Valladolid museum	II	blade 223x82 mm.	Fernàndez Ibànez, 2002; "Gladius", XXVIII, 2008
23	necropolis de Ateabalsa (Navarra)	Navarra Museum	II-III	total length 320 mm.	Fernàndez Ibànez, 2004; "Gladius", XXVIII, 2008
24	Monte Castrelo	unknown	II	Tot. length 26,6 mm, blade 170x46 mm.	"Gladius", XXVIII, 2008
25	River Waal (NL)	Leeuwen (NL)	II	total length 282 mm (remaining portion)	Ypey 1960; B.A.R. 275, 1985
26	Spot for the building of the National Safe Deposit (London)	Museum of London	II	total length 331mm, blade 236x48 mm.	Pulleston & Price,1873; B.A.R. 275, 1985. see "notes"
27	Rhine river (?)	Mittelrheinisches Landesmuseum, Mainz (GE)	II	Tot. length 356 mm. blade 250x69 mm	B.A.R. 275, 1985
28	unknown	unknown	II	total length 334mm, blade 240x64 mm	B.A.R. 275, 1985
29	Gelligaer (UK)	Gelligaer Nationl Museum,Wales	II	total length 178 mm (remaining portion), blade 152 x 35 mm.	B.A.R. 275, 1985
30	Vindonissa (Sw)	Vindonissa Museum	II	total length 256 mm, blade 177x30 mm. weight: 89 gr	Fellmann 1966; B.A.R. 275, 1985 see "notes"
31	Lorenzberg (GE)	unknown	II	Tot. 290 mm., blade 190 x 56 mm., length	Ulbert 1965; B.A.R. 275, 198
32	Hod Hill (UK)	British Museum, London	II	total length 336 mm.,sheath 253 mm.	British museum database
33	unknown	private collection	I	Tot length. 282 mm.; blade 250 x 55 mm., weight 128 gr.	never published see "notes"
34	unknown	private collection	I	Tot. length 287 mm.; blade 182 x 42 mm., weight 145 gr.	never published
35	Annecy (France)	private collection	I	tot. length 294 mm., blade 192x 34 , weight 140 gr	never published
36	Southern Europe (?)	private collection	I	tot. length 280 mm.	auction house Hermann Historica, auction n. 52
37	unknown	private collection	II	tot. length 270 mm., blade 210x 37 (?)	auction house Hermann Historica, auction n. 53
38	unknown	private collection	II	tot. length 345 mm	auction house Hermann Historica , 52th auction
39	Hod Hill (UK)	British museum, London	II	blade 239 x52 mm.	British Museum database
40	Desa- Romania	private collection	III	tot. length 395 mm., blade 270x 69 mm. weight 345 gr.	never published
41	Southern Europe (Balkans)	private collection	I	tot. length 265 mm.	Hermann Historica auction house, 51th auction
42	unknown	private collection	II	tot. length. 395 mm	Hermann Historica auction house, 57th auction

section A1 - exemplars with various information and images available

	Find spot	*Now kept*	*typology*	*measurements*	*source*
43	unknown	private collection	II	tot. length 413 mm.	Hermann Historica auction house, 54th auction
44	unknown	private collection	II	tot. length. 380 mm.	auction house Hermann Historica, 57th auction
45	unknown	private collection	III	tot. length. 46 cm.	auction house Hermann Historica , 44th -57th auction
46	Vindonissa fortress	Vindonissa Museum - Brugg- Swiss	II	tot. length 300 mm. blade : 199x40 mm. weight: 88 gr.	C. Unz, "Katalog der Militaria aus Vindonissa", 1997
47	Vindonissa fortress	Vindonissa Museum - Brugg- Swiss	II	tot. length 268 mm. blade: 192x38 weight 90 gr.	C. Unz, "Katalog der Militaria aus Vindonissa", 1997
48	unknown	private collection	III	unknown	"Römer-Zwische Alpen und Nordmeer"- P. Von Zabern
49	Castra Cecilia, Spain	Römisch-Germanisches Zentralmuseum - Mainz	II	unknown	www.Roma-Vitrix.com
50	Kupa river, Sisak (Croatia)	Arheološki muzej u Zagrebu – Zagreb (Croatia)	III	Tot. length 365 mm, length blade 265 mm	"Militaria Sisciensia" 2004
51	unknown	National museum Concordiese-Portogruaro (IT)	II	length tot. 330 mm.	www.Roma-Vitrix.com
52	river Kupa, Sisak, Croatia	Arheološki muzej u Zagrebu – Zagreb (Croatia)	II	length tot. 300 mm, blade 220x50 mm	Hoffiller 1912; "Militaria Sisciensia" 2004
53	river Kupa, Sisak (Croatia)	Arheološki muzej u Zagrebu – Zagreb (Croatia)	II	length tot. 280 mm, blade 230 mm.	Hoffiller 1912; "Militaria Sisciensia" 2004
54	unknown	private collection	III	length tot. 56 cm, blade 38,2 cm. ca.	Christie's 5524th auction, 2004
55	near Sisak, Croatia	Arheološki muzej u Zagrebu – Zagreb (Croatia)	?	Tot. length 390 mm., length blade 260	"Militaria Sisciensia" 2004 see "notes"
56	Hedemunden, Welt, Germany	unknown	II	unknown	www.goettingerland.de
57	unknown	Munich Archeological Museum (Germany)	III	unknown	www.romancoins.info
58	Haltern (Germany)	LWL Römermuseum Haltern am See(Germany)	II	unknown	mr. Rien Bongers
59	unknown	private collection	III	length tot. 380 mm.	Bonhams auction house, 16853th auction
60	Numancia	unknown	I	length tot. 189 mm., blade 178x46 mm	Bishop & Coulston, "Roman Military Equipment", 2006
61	Oberaden (Germany)	unknown	I	length tot. 295 mm., blade 188x48 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
62	Kunzing	unknown	III	length tot. 420 mm, blade 287x68 mm.	Bishop & Coulston, "Roman Military Equipment", 2006

section A1 - exemplars with various information and images available

	Find spot	*Now kept*	*typology*	*measurements*	*source*
63	Numancia	unknown	I	tot length.276 mm, blade 223x45 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
64	Kunzing	unknown	III	length tot. 416 mm., blade 287x91 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
65	Eining	unknown	II	length tot. 343 mm., blade 236x59 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
66	Dangstetten (Germany)	unknown	II	length tot. 190 mm., blade 170x50 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
67	Eining	unknown	II	length tot. 312 mm., blade 216x54 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
68	Oberaden (Germany)	unknown	I	length tot. 270 mm, blade 160x50 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
69	Rißtissen (Germany)	Provincial museum G.M. Kam, Nijmegen	II	length tot. 250 mm., blade 230x60 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
70	Mainz (Germany)	unknown	II	length tot. 260 mm, blade 240x50 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
71	Kingsholm (UK)	unknown	II	length tot.32 0 mm. , blade 220x40 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
72	Devon (UK)	private collection	II	length tot: 330 mm blade length 220 mm-width (max) 37 mm	D. X. Kenney
73	Buciumi (Romania)	unknown	III	length tot. 270 mm, blade 180x50 mm	Bishop & Coulston, "Roman Military Equipment", 2006
74	Tuchyna (Slovakia)	unknown	III	unknown	E. Krekovic, Journal of Roman Military Equipment n. 5, 1994
75	Nijmegen (?)	Provincial museum G.M. kam (Nijmegen)	II	Length remaining portion: 248 mm, blade 232 x 49 mm.	Ypey 1960; B.A.R. 275, 1985
76	Gravenvoeren (Limburg. Belgium)	Koninklijke Musea Voor Knust (Bruxell)	II	length tot. 308 mm. , blade 204x50 mm.	J.R.M.E.S.n. 7, 1996
77	Nijmegen (?)	Provincial museum G.M. kam (Nijmegen)	II	Length remaining portion):275 mm, blade 247 x 44 mm.	A.M. Gerhartl "J.R.M.E.S" n. 1, 1990
78	Alesia (France)	unknown	I	length tot. 209 mm., width 57 mm	Bericht der Römisch-Germanischen Kommission 76 (1995)
79	Kingsholm	British Museum, London	II	total length 352 mm.	British museum database
80	Vindonissa	Vindonissa Museum	II	blade 249x52 mm.weight: 149 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
81	Vindonissa	Vindonissa Museum	II	tot. length 278 mm. blade 203x45 mm.	C. Unz, "Katalog der Militaria aus Vindonissa"
82	Vindonissa	Vindonissa Museum	II	tot. length 320 mm.blade 245x46 mm.	C. Unz, "Katalog der Militaria aus Vindonissa"

section A1 - exemplars with various information and images available

	Find spot	*Now kept*	*typology*	*measurements*	*source*
83	Vindonissa	Vindonissa Museum	II	tot. length 380 mm. blade 293x85 mm weight: 65 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
84	Vindonissa	Vindonissa Museum	II	tot. length 278 mm. blade 194x39 mm weight: 113 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
85	Vindonissa	Vindonissa Museum	II	tot. length 218 mm. blade 188x32 mm. weight: 66 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
86	Vindonissa	Vindonissa Museum	II	tot. length 208 mm. blade 198x35 mm. weight: 89 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
87	Vindonissa	Vindonissa Museum	II	blade 200x33 mm.	C. Unz, "Katalog der Militaria aus Vindonissa"
88	Vindonissa	Vindonissa Museum	II	blade 222x31 mm.	C. Unz, "Katalog der Militaria aus Vindonissa"
89	Vindonissa	Vindonissa Museum	II	tot. length 207 mm. blade 191x37 mm. weight: 74 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
90	Vindonissa	Vindonissa Museum	II	blade 164x33 mm. weight: 57 gr.	C. Unz, "Katalog der Militaria aus Vindonissa"
91	unknown	private collection	II	total length: 260 mm.	auction house Hermann Historica (Munich-Germany), 44th auction
92	unknown	private collection	II	total length: 330 mm. blade: width max: 60 mm- length 220 mm. weight: 255 gr.	never published
93	Saalburg (Germany)	Saalburg Museum (Germany)	II/III	unknown	from the museum display

section A2 – exemplars with various information available but no images

	Find spot	*Now kept*	*typology*	*measurements*	*source*
94	Dangstetten	Unknown	?	blade 160 mm., blade width 50 mm.	Fingerlin, 1972; B.A.R. 275, 1985
95	Oberaden	museo di Dortmund	?	blade 143 x 55 mm.	Wells, 1972; B.A.R. 275, 1985
96	Haltern	RomischeGermanische museum of Haltern	II	blade (estim.) 220 mm., x 50 mm.	B.A.R. 275; 1985
97	Augusburg-Oberhausen	unknown	II	total length 301 mm., blade 210 x 40 mm.	Wells, 1972; B.A.R. 275, 1985
98	Augusburg-Oberhausen	unknown	II	total length 232 mm. (remaining portion), blade 175 x 29 mm.	Hubner, 1973; B.A.R. 275, 1985
99	Aurerberg	unknown	II	total length 285 mm., blade 200 x 35 mm.	Ulbert, 1975; B.A.R. 275, 1985
100	Velsen	unknown	II	unknown	Schimmer, 1979, B.A.R. 275, 1985
101	Colchester	Colchester Castle museum	II	length tot. 301 mm. (remaining portion), blade 207 x 60 mm.	Hawkes & Hull, 1947; B.A.R. 275, 1985
102	Mainz	unknown	II	blade 200 x40 mm.	Beharens & Brenner, 1911; B.A.R. 275, 1985
103	Kingsholm	British Museum, London	II	Total length 352 mm.	B.A.R. 275, 1985
104	Rißtissen (Germany)	unknown	II	total length 240 mm (remaining portion), blade 235 x 65 mm.	Ulbert, 1970; B.A.R. 275, 1985
105	Straubing	unknown	II	total length 300 mm, blade 210 mm.	Walke 1965; B.A.R. 275, 1985
106	river Kupa (Croatia)	Sisak	II	total length 285 mm (remaining portion), blade 230 x 46 mm.	Hoffiller 1912; B.A.R. 275, 1985
107	river Kupa (Croatia)	Sisak	II	total length 300 mm (remaining portion), blade 220 x50 mm.	Hoffiller 1912; B.A.R. 275, 1985
108	Dunafoldvar, into the Danube	Dunafoldvar (Hungary)	II	total length 326 mm	Thomas 1969
109	Nordendorf (Germany)	unknown	II	total length 320 mm	Lindenschmidt,1900; B.A.R. 275, 1985
110	River Sâone (Fr)	Alleriot	II	total length 355 mm, blade 238x60 mm.	Bonnamour & Ferroux, 1969; B.A.R. 275, 1985
111	Mainz	Mittelrheinisches Landesmuseum, Mainz	II	total length 360mm, blade 250 mm.	B.A.R. 275, 1985
112	Rhine river	unknown	II	total length 320 mm	Lindenschmidt 1881; B.A.R. 275, 1985
113	Mainz	Mittelrheinisches Landesmuseum, Mainz	II	total length 290 mm, blade 200x53 mm.	B.A.R. 275, 1985
114	Mainz	Mittelrheinisches Landesmuseum, Mainz	II	total length 362mm, blade 260x75 mm.	Mainzer Zeitschrift,1917; B.A.R. 275, 1985
115	Rhine river	Mittelrheinisches Landesmuseum, Mainz	II	blade 246x57 mm.	Lindenschmidt 1900; B.A.R. 275, 1985
116	Rhine river	unknown	II	blade 245x50 mm.	Mainzer Zeitschrift,1917; B.A.R. 275, 1985

section A2 – exemplars with various information available but no images

	Find spot	*Now kept*	*typology*	*measurements*	*source*
117	Rösebeck (Germany)	Germaniche National-museum, Norimberga (GE)	II	total length 382mm, blade 280x59 mm.	total length 300 mm (remaining portion), blade 220 x50 mm.
118	Nijmegen (NL)	Rijksmuseum G.M. Kam, Nijmegen	II	total length 228 mm (remaining portion)	B.A.R. 275, 1985
119	River Waal, località Leeuwen (NL)	Rijksmuseum Van Oudheden, Leiden (NL)	II	total length 330mm, blade 224x54 mm.	B.A.R. 275, 1985
120	Vechten (NL)	unknown	II	total length 336mm, blade 224x60 mm.	Ypey 1961; B.A.R. 275, 1985
121	Vechten (NL)	Rijksmuseum Van Oudheden, Leiden (NL)	II	total length 263mm, blade 215x47 mm.	B.A.R. 275, 1985
122	Vechten (NL)	Rijksmuseum Van Oudheden, Leiden (NL)	II	total length 303mm, blade 204x54 mm.	B.A.R. 275, 1985
123	Vechten (NL)	Rijksmuseum Van Oudheden, Leiden (NL)	II	total length 303mm, blade 214x54 mm.	B.A.R. 275, 1985
124	Colchester (UK)	British Museum, London	II	total length 327mm	B.A.R. 275, 1985
125	unknown	Lisbon National Archaelogical museum	III	total length 280 mm.	"Gladius", XXVIII, 2008
126	unknown	Museo Monografico de castro de Chao San Matìn	?	length tot. 284 mm, blade 177x49 mm.	Fernàndez Ibàn-ez,2006; "Gladius", XXVIII,2008

SECTION A3 - exemplars with only the place of finding available

127	USK (UK)
128	Hedegård (Denmark)
129	Rijnwaarden (Nederland), Rhine river
130	Melun, river Seine (France)
131	Torre de Palma, Portugal
132	Monte Castrelo, Portugal
133-138	Oberaden (Germany) – 6 specimens
139	Rösenbeck (Denmark)
140	Moers-Asberg (Germany)
141	Neuss (Germany)
142-143	Köln (Germany) – 2 specimens
144-156	Mainz,l Rhine river (Ge) – 13 specimens
157-159	Mainz (Germany) -3 specimens
160-163	Auerberg (Germany) - 4 specimens
164	Novara (Italy)
165	Abtei Ladiner Tal (Italy)
166	Carnuntum (Austria)
167	Budapest (Hungary)
168	Dunaföldvàr (Hungary)
169	Hallischen (Germany)
170	Caerleon (UK)
171-172	Colchester (UK) -2 specimens
173	Arnhem-Meinerswijk (Nederland)
174	Saint-Pieters-Voeren (Belgium)
175	Rheingönheim (Germany)
176	Rottweil (Germany)
177	Basilea (Swiss)
178	Curel (France)
179	Nice (France)
180	Oberammergau (Germany)
181	Magdalensberg (Austria)
182	Globic bei Šmarjeta (Slovakia)
183	Alesia (France)
184-185	Bregenz (Au)

SECTION B – exemplars complete with sheath

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SECTION B – exemplars complete with sheath

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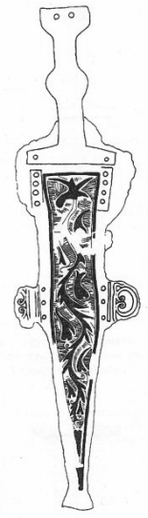

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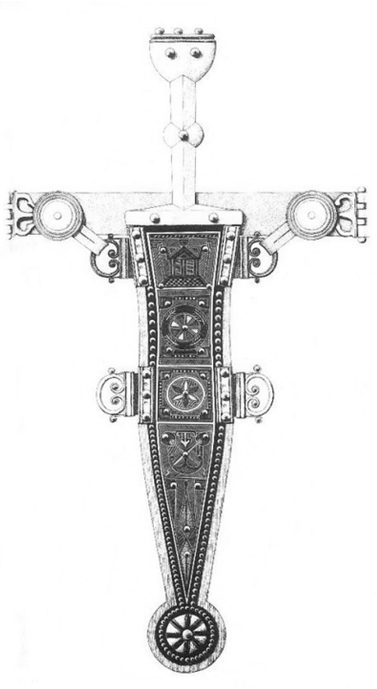

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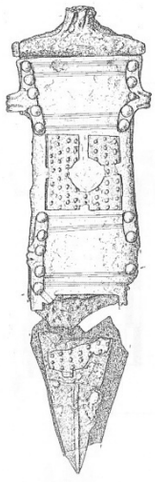

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SECTION B – exemplars complete with sheath

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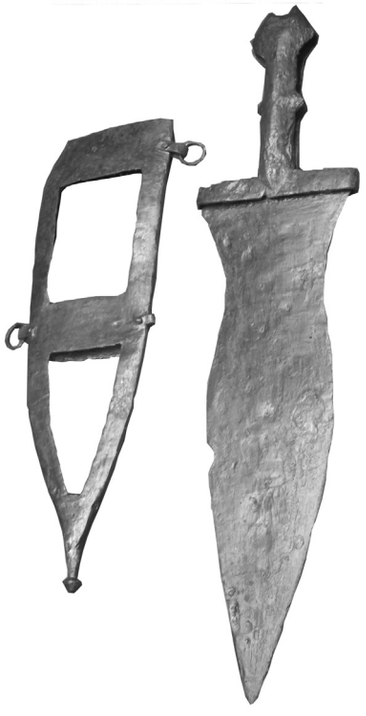

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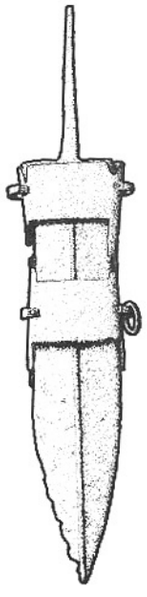

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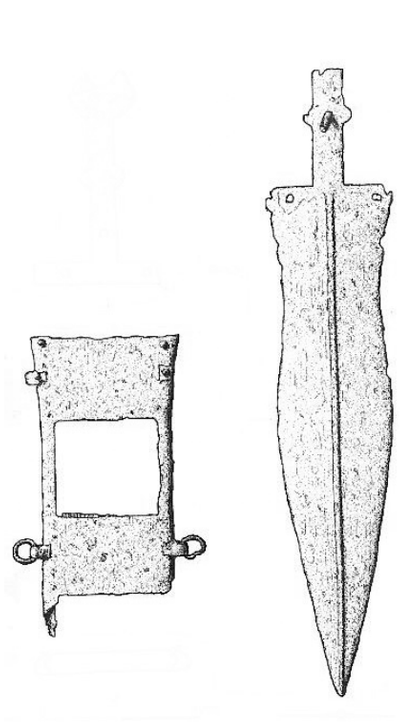
SECTION B – exemplars complete with sheath



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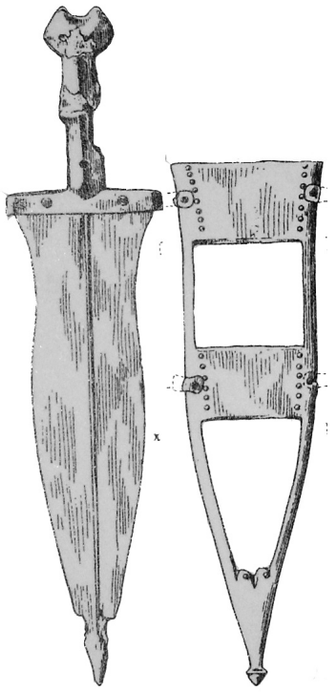

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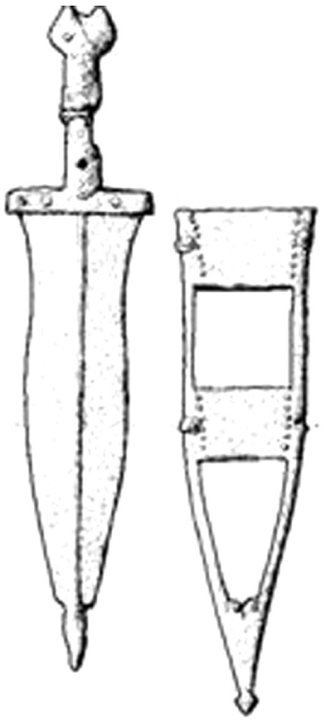

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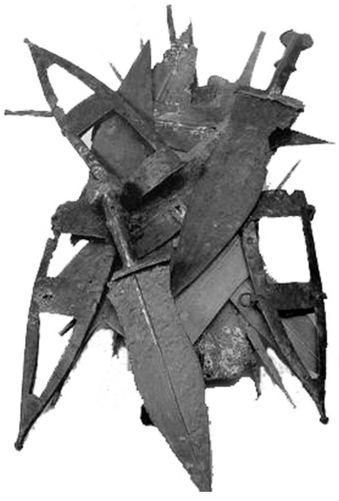

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SECTION B – exemplars complete with sheath

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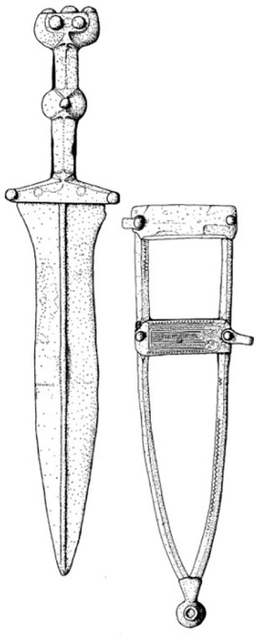

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	Find spot	*Now kept*	*Typology*	*measurements*	*source*
186	Buciumi (Romania)	unknown	II	unknown	M. Feugere -"Weapons of Romans"; N. Gudea 1975
187	Colonia (Germany)	unknown	II	unknown	www.romancoins.info
188	Rhine river	Mittelrheinisches Landesmuseum, Mainz	II	unknown	www.romancoins.info
189	Britain	Colchester Castle museum	II	unknown	www.romancoins.info
190	river Kupa, Sisak (Croatia)	Arheološki muzej u Zagrebu – Zagreb (Croatia)	II	tot. length 330 mm.	Hoffiller 1912; "Militaria Sisciensia" 2004
191	river Kupa, Sisak (Croatia)	Arheološki muzej u Zagrebu – Zagreb (Croatia)	II	tot. length 330 mm.	Hoffiller 1912; "Militaria Sisciensia" 2004
192	Oberammergau (Germany)	Archäologische Staatssammlung, München	II	tot length. 235 mm. (remaining portion)	Römer-Zwische Alpen und Nordmeer"-V. P. Von Zabern
193	Aalen (Germany)	Limesmuseum Aalen (Germany)	II- III	Lengths: blade: 259 mm. ca sheath: 276 mm.	www.roma-vitrix.com
194	Mainz (Germany)	Landesmuseum - Mainz-Germany	II	tot. length 380 mm.	"Traiano-Ai confini dell'Impero" - Electa
195	Mainz (Germany), Rhine river	Römische-Germanischen Zentral-Museum, Mainz	II	tot length. 259 mm. sheath 215 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
196	Usk (Great Britain)	unknown	II	length with sheath 315 mm.	Ian R. Scott, "British Archaeological Report", n. 275, 1985

SECTION B – exemplars complete with sheath

	Find spot	*Now kept*	*typology*	*measurements*	*source*
197	Velsen (Nederland)	unknown	II	length with sheath 395 mm	Bishop & Coulston, "Roman Military Equipment", 2006 (redrawn by dr. J. Morel)
198	Hod Hill (Great Britain)	British Museum, London	II	sheath 253 mm pugio 336 mm.	The Trustees of The British Museum
199	Hedegard (Denmark)	unknown	II	length tot 350 mm	Peter S. Wells "la parola ai barbari"
200	necropolis of Eras del Bosque	private collection (mr. Eugenio Fontaneda)	II	length tot. 246 mm,	"Gladius", XXVIII,2008
201	Ultrecht (Nederland), auxiliary camp	Unknown	II	Unknown	Andreas Tiel, "Journal of Roman Military studies",5, 1994
202	Haltern (Germany)	Munich Archaelogical museum (Germany)	II	unknown	mr. Rien Bongers
203	Galles (UK)	National Museum of Wales, Cardiff (UK)	II	tot length. 335 mm., blade 230x50 mm.	E.M. Chapman, "catalogue of Roman Military Equipment in the National Museum of Wales", 2005
204	unknown	Private collection	II	lengths pugio 350 m m.sheath 260 mm.	auction house Hermann Historica (Ge) 44th auction
205	Ercolaneum (Italy)	Naples Archaeological museum	?	unknown	Indeterminatesee "notes"
206	unknown	private collection	III	length tot. with sheath: 450 mm.	M. Junkelmann, 2000 Sammlung A. Guttmann
207	unknown	Munchen-haltern museum	III	unknown	www.Roma-vitrix.com
208	Speyer	unknown	III	tot length 334 mm. blade 244x58 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
209	Tuchyna (Slovakia)	unknown	III	length tot.400 mm., blade 324x76 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
210	London (Copthall Court)	Museum of London	III	tot. length 417 mm. blade 286x82 mm.	Michel Feugère, Weapons of Romans", 2002
211	London (UK)	unknown	III	length tot.440 mm., blade 300x73 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
212	Kunzing (Germany)	unknown	III	Several- unknown	T. Fisher, "'Zwei neue Metal-lsammelfunde aus Künzing" Spurensuche
213	unknown	private collection	III	lengths: pugio .295 mm. sheath 112 mm.	auction house Hermann Historica (Germany), 44th auction
214	unknown	Römisch-Germanisches Zentralmuseum – Mainz	II	unknown	mr.Künzl
215	northern France (unknow spot)	Römische-Germanischen Zentra-Museum di Mainz	II	unknown	M. Feugere- "Weapons of Romans" pag. 126-127
216	Titelberg – Pètange (Lux)	Koninkeelijke Musea Voor Knust (Bruxell)	II	Length 345 mm with sheath, 314 mm. w/o sheath; blade 206x61 mm.	B.A.R. 275, 1985; L. Vanden Berghe in J.R.M.E.S. 2001/2

SECTION C– exemplars of only sheath

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SECTION C– exemplars of only sheath

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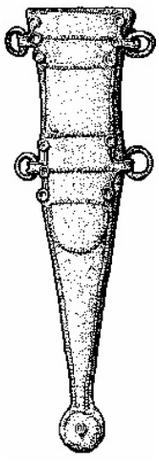

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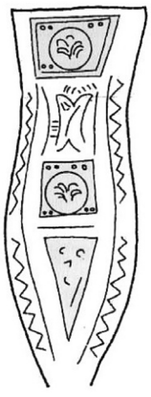

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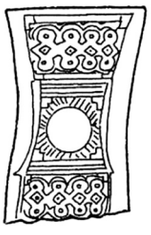

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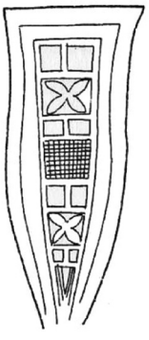

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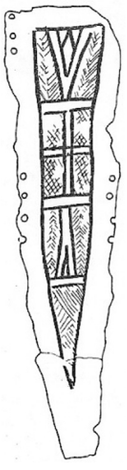

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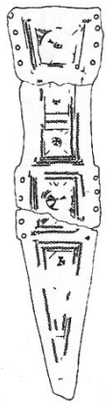

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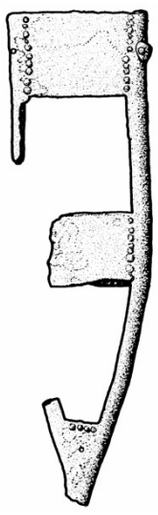
SECTION C– exemplars of only sheath



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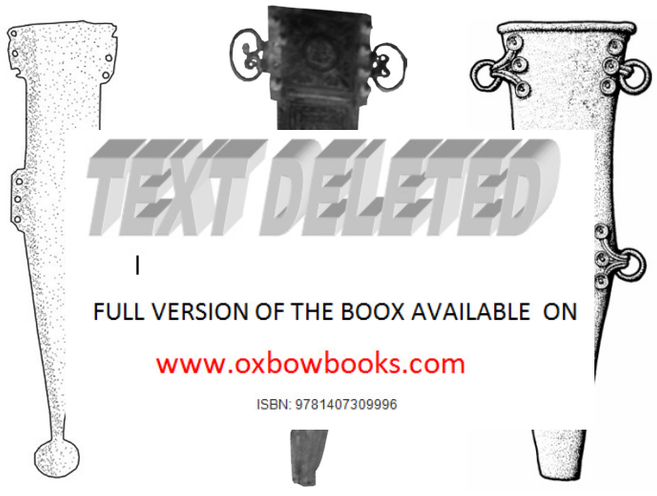

F32 *F33* *F34*

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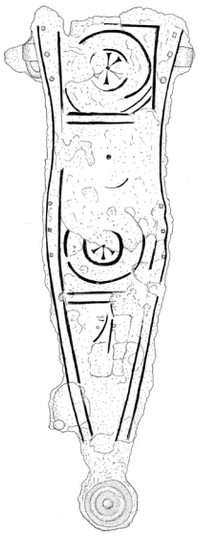

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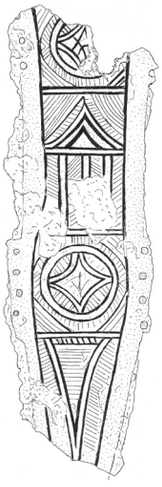

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SECTION C– exemplars of only sheath

	Find spot	*Now kept*	*typology*	*measurements*	*source*
F1	unknown	unknown	II	unknown	M. Feugere- "Weapons of Romans", pag. 126-127
F2	Leeuween (Nederland)	Provincial museum G.M. Kam, Nijmegen	II	unknown	M. Feugere- "Weapons of Romans"
F3	Carnuntum fortress	Archäologisches Museum Carnuntinum - Bad Deutsch-Alten-burg-AU)	II	lengt 16,5 cm	www.Roma-vitrix.com
F4	Carnuntum fortress	Archäologisches Museum Carnuntinum - Bad Deutsch-Alten-burg-AU)	II	length 27,1 cm	www.Roma-vitrix.com
F5	Carnuntum fortress	Archäologisches Museum Carnuntinum - Bad Deutsch-Alten-burg-AU)	II	length 20,3 cm.	www.roma-vitrix.com
F6	Vindonissa fortress	Vindonissa Museum (Brugg- Swiss)	II	length 18,4 cm	C. Unz "Katalog der Militaria aus Vindonissa"
F7	Vindonissa fortress	Vindonissa Museum (Brugg- Swiss)	II	length 24,3 cm	C. Unz "Katalog der Militaria aus Vindonissa
F8	Vindonissa fortress	Vindonissa Museum (Brugg- Swiss)	II	length 23,2 cm	C. Unz "Katalog der Militaria aus Vindonissa
F9	Vindonissa fortress	Vindonissa Museum (Brugg- Swiss)	II	length 7,9 cm	C. Unz "Katalog der Militaria aus Vindonissa
F10	Vindonissa fortress	Vindonissa Museum (Brugg- Swiss)	II	length 13,6 cm	C. Unz "Katalog der Militaria aus Vindonissa
F11	Vindonissa fortress	Vindonissa Museum (Brugg- Swiss)	II	length 7,5 cm	C. Unz "Katalog der Militaria aus Vindonissa
F12	Unknown	Concordiese nazional Museum (Portogruaro-Italy)	II	length 27 cm.	www.roma-vitrix.com
F13	Unknown	Rijksmuseum Van Oudheden, Leiden (NL)	II	unknown	indeterminate
F14	Carnuntum fortress	Carnuntinum museum (Bad Deutsch-Alten-burg, AU)	II	unknown	Exhibition catalogue "Legionsadler und Druidenstab, F. Humer
F15	Dunafoldvar (Hungary)	unknown	II	unknown	M. Bishop & Coulston, "Roman Military Equipment", 2006
F16	Alleriot (France)	unknown	II	unknown	M. Bishop & Coulston, "Roman Military Equipment", 2006
F17	Leeuwen (Nederland)	unknown	II	unknown	M. Bishop & Coulston, "Roman Military Equipment", 2006
F18	Aalen (Germany)	Limesmuseum Aalen (Germany)	II	length 228 mm.	www.roma-vitrix.com
F19	Mogontiagum fortress (Mainz)	Landesmuseum – Mainz (Germany)	II	230 mm.	www.roma-vitrix.com
F20	Lincoln (Great Britain)	unknown	II	unknown	British Archaeological Report, n. 275, 1985
F21	Lincoln (Great Britain)	unknown	II	unknown	British Archaeological Report, n. 275, 1985
F22	Richborough (Great Britain)	unknown	II	unknown	British Archaeological Report, n. 275, 1985

SECTION C– exemplars of only sheath

	Find spot	*Now kept*	*typology*	*measurements*	*source*
F23	Usk (Great Britain)	unknown	II	unknown	British Archaeological Report, n. 275, 1985
F24	Waddon Hill (Great Britain)	unknown	II	unknown	British Archaeological Report, n. 275, 1985
F25	Loughor (Great Britain)	unknown	II	unknown	British Archaeological Report, n. 275, 1985
F26	Usk (Great Britain)	National Museum of Wales, Cardiff;	II	length tot. 213 x 50 mm.	B.A.R., n. 275, 1985; E. M. Chapman, "catalogue of Roman Military Equipment in the National Museum of Wals"
F27	Hod Hill (Great Britain)	unknown	II	unknown	M. Bishop & Coulston, "Roman Military Equipment", 2006
F28	unknown	British Museum, London	II	unknown	The Trustees of The British Museum
F29	Hod Hill	unknown	II	unknown	M. Bishop & Coulston, "Roman Military Equipment", 2006
F30	Galles (UK)	National Museum of Wales, Cardiff (UK)	II	tot. length 195x64 mm.	Evan M. Chapman, "catalogue of Roman Military Equipment in the National Museum of Wales"
F31	Speyer (Germany)	unknown	III	length 287 mm.	Bishop & Coulston, "Roman Military Equipment", 2006
F32	Xanten (Germany)	Römermuseum, Xanten	II	unknown	indeterminate
F33	Mainz (Germany)	Römisch-Germanisches Zentralmuseum - Mainz-Germany	II	unknown	indeterminate
F34	Rhine river, Mainz (GE)	Römisch-Germanisches Zentralmuseum - Mainz-Germany	II	unknown	M. Bishop & Coulston, "Roman Military Equipment", 2006
F35	Exter, UK	unknown	I/ II	unknown	P. Connolly, "Pilum, gladius and pugio in the late Republic", J.R.M.E.S. n. 8
F36	Vindinissa fortress	Vindonissa Museum (Brugg- Swiss)	II	Length 29,4 cm	C. Unz "Katalog der Militaria aus Vindonissa"
F37	Vindinissa fortress	Vindonissa Museum (Brugg- Swiss)	II	Length 13,9 cm	C. Unz "Katalog der Militaria aus Vindonissa"
F38	Vindinissa fortress	Vindonissa Museum (Brugg- Swiss)	II	Length 18,7 cm	C. Unz "Katalog der Militaria aus Vindonissa"
F39	Vindinissa fortress	Vindonissa Museum (Brugg- Swiss)	II	Length 12,9 cm	C. Unz "Katalog der Militaria aus Vindonissa"
F40	Vindinissa fortress	Vindonissa Museum (Brugg- Swiss)	II	Length 14,5 cm	C. Unz "Katalog der Militaria aus Vindonissa"

NOTES:

specimens n. 4 and 33: possible celtiberian manufacture;

specimen n. 26: uncommon handle, perhaps not original but afterwards fitted;

specimens n. 30 and 55: the handle, the guard and blade let us suppose these specimens could be deriving from a re-utilization of a damaged gladius;

specimen n. 205: the very uncommon handle let be doubtful the classification as a pugio;

specimen n. n.c.1: not original guard.

specimens known by authors after the final release of the book

nc1

nc2

nc3

	Find spot	*Now kept*	*typology*	*measurements*	*source*
nc1	unknown	Private collection	II	Length 329 mm.; blade length 216 mm., width 29 to 51 mm; midrib 5,5 mm; weight 225 gr.	never published see "notes"
nc2	unknown	Private collection	II	Length 348 mm; blade length 206 mm., width 36 to 64 mm; midrib5,9 mm; weight 222 gr.	never published
nc3	unknown	Private collection	II	Length 445 mm.; blade length 305 mm., width 31 to 45 mm; midrib 4,5 mm; weight 222 gr.	auction house Hermann Historica, 63th auction

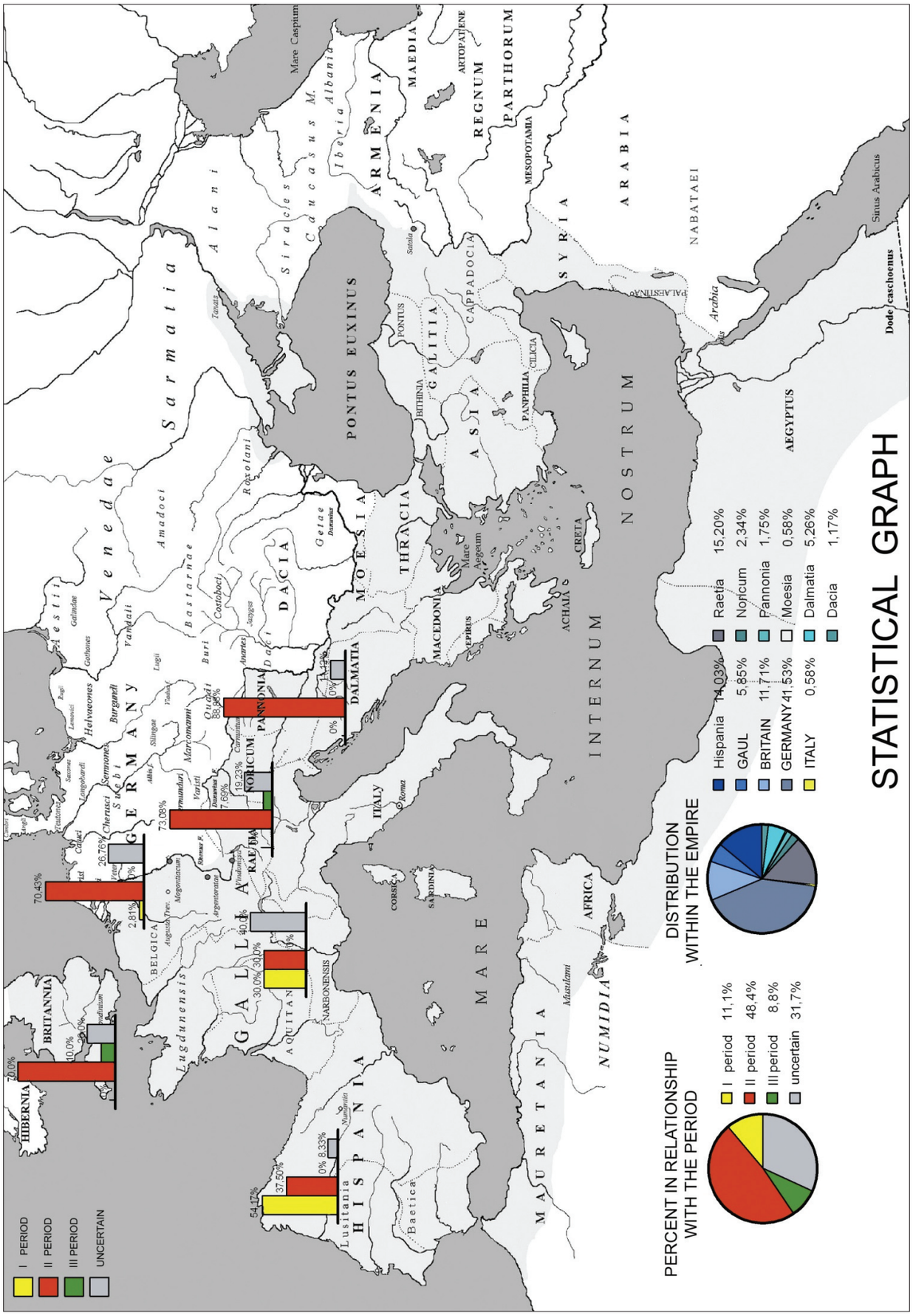
STATISTICS

Number of specimens on regard the typology

I typology specimens:	24
II typology specimens:	108
III typology specimens:	19
unclassifiable specimens:	68
TOTAL	219

	Hispania	*Gaul*	*Britain*	*Germany*	*Italy*	*Raetia*	*Noricum*
typology I	13	3	0	2	0	0	0
typology II	9	5	14	50	0	19	0
typology III	0	0	2	0	0	2	3
uncertain	62	4	4	19	1	5	1
total	**24**	**11**	**20**	**71**	**1**	**26**	**4**

	Pannonia	*Moesia*	*Dalmatia*	*Greece*	*Asia*	*Africa*	*Dacia*
typology I	0	0	0	0	0	0	0
typology II	1	0	8	0	0	0	0
typology III	0	1	0	0	0	0	0
uncertain	2	0	1	0	0	0	2
total	1	1	9	0	0	0	2



CONCLUSIONS

At the end of the course of study of our weapon what ultimately emerges is that it is one of the fruits of the exceptional pragmatism of the Roman Army.

In fact, we notice that as far as "when" is concerned, it was exclusively used during the period it was useful to them; as far as "where" is concerned, it was used in the territories in which the miles confronted enemies who made its use efficient; finally, as far as "who was equipped with it" is concerned, we have pointed out that only those soldiers possessed it who had real necessity to use it in combat.

Every element converges in its practicality and in the maximization of its use, which is at the base of both our weapon and the Roman Army.

Considering the remarkable amount of information which has arisen, we would like to conclude by summarising the main points:

- from a historical point of view:
  - Its roots are to be found directly in the Celtiberian bi-globular dagger;
  - It first appeared at the end of the II century B.C., probably within the cohortal legion, as a response to the necessity to optimise the individual armament of the legionary, with its period of maximum splendour and diffusion around the I century A.D.;
  - During the historical period of its existence it evolved in three main types: the I (or Republican), the II (or Imperial) and the III (or final);
  - Its efficiency was such that it became proverbial in time, and writers both of the time and subsequently used it as an example of infallibility;
  - It was not equally distributed in all the provinces of the Empire, but almost exclusively concentrated in those which confined with populations of Celtic/Germanic stock (Rheine-High Danube limes and low Britannia) while virtually absent in almost all the others;
  - Only the legionary and auxiliary heavy infantry were equipped with it and, in the military hierarchy, only to the rank of centurion;
  - Its main function was that of a war weapon, complementary to the gladius, to be used in situations of close combat and against the type of enemy who made it useful;

- from a technological point of view:
  - Two main types of construction technology can be identified: "composite" and "tight insertion";
  - "Composite" technology was particularly complex, to the point of being typical only of this weapon, with the only exception being the Celtiberian dagger from which it descended;
  - The blades were of a rather small size at first, but they progressively increased until they became very long and exceptionally wide;
  - During the Republican and final period the weapons and their sheaths appeared austere and plain; in the Imperial Age, instead, they were richly decorated, even with precious materials;
  - Its decoration during Period II, above all on the sheaths, often had a specific symbolic meaning or one of political propaganda;

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