

THE ROMAN MILITARY TUNIC

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The original aim of this paper was to discuss both the design and the colour of the Roman legionary tunic in the first part of the 2nd century A.D. However, because of the lack of evidence for colour of tunics in that period, the time span has been greatly extended in both directions (forward to c.A.D.300) so as to bracket it. This in turn brought together material relating to the colour of centurions' uniforms, of cloaks, of naval tunics and, to a very limited extent, of auxiliary tunics, all of which has been thought worthy of inclusion.

PART 1 - DESIGN

THE MILITARY TUNIC OF THE REPUBLICAN PERIOD

As good depictions in this period show only soldiers in armour, it is not possible to evince the detailed designs of the tunics worn. The monument of Aemilius Paullus (167 B.C.),¹ the 'Altar of Domitius Ahenobarbus' (c.100 B.C.),² the bas-relief from Seville (1st century B.C.)³ and the Glanum relief (? late 1st century B.C.)⁴ all show the bottom edge of the tunic as being either just above the knee or at mid-thigh. In the case of the first three examples the sleeves appear to be minimal which supports the remark of Gellius that the original Roman tunic was narrow and sleeveless.⁵

CIVILIAN TUNICS

For the late Republic and the first two centuries of the Empire there are many depictions in various art forms of civilians in tunics, ranging from the poorest to the Imperial family. It is noticeable that men engaged in physical work, such as farmworkers and fishermen, are often shown as having the right shoulder bared.

Most tunics were sleeveless, for example, on the man offering wine to a guest at a Pompeian banquet.⁶ Some tunics have closed neck openings, somewhat in the manner of the modern 'T-shirt',⁷ while others, in order to allow the baring of the right shoulder, appear to:

a) be 'slit' from shoulder to shoulder with only a short length of stitching holding the back and front together, for



Fig.1 (left): Vine dresser - note the long slit on the shoulder which allows the arm through so as to bare the right shoulder, but leaves the 'sleeve' stitched up (after STRONG, 1923, tav.XLIII).

Fig.2 (right): Defaced olive harvester, from Cordova - note the large knot behind the neck and the folds of the tunic leading up to it (after BANDINELLI, 1971, pl.175).

example, a vine dresser from the Torre del Padiglione (Fig.1).⁸
 b) have the back and front joined at the shoulder by a fibula or some other form of attachment, rather than being sewn, for example, the fuller from Sens.⁹

Tunics are usually girdled at the waist and, to allow the bottom edge to be girt at the desired height, the surplus material is pulled up over the belt and allowed to blouse out. Quintilian (late 1st century A.D.) notes that for the person who

has not the right to the lati clavi, the edge of his tunic should come a little below the knee.¹⁰ Examples of this fashion are numerous, for example, the bronze statue of a youth in the Capitoline Museum¹¹ or the bas-relief of a rabbit seller and his customer.¹²

Occasionally, a figure is shown in an unbelted tunic such as the olive oil seller in Cherchel Museum,¹³ while there are also frequent depictions of civilians who, when engaged in hard physical work, have hitched the bottom edge of their tunics above their knees; this especially applies to farm-workers.¹⁴

The length of ungirdled tunics varies somewhat on artistic representations, but usually comes down to mid-calf. There is a precise measurement given by Cato (c.160 B.C.) when he recommends that in alternate years farm slaves should be issued with tunics of a length of 3½ Roman feet (1.03m; 3ft 5in).¹⁵

Elsewhere in literature, the description of Varro (mid-1st century B.C.) of a tunic with clavi (the twin vertical stripes of purple) clearly indicates that it was made from two separate panels of material sewn together.¹⁶ On many sculptures the seam on the shoulder is clearly shown,¹⁷ while the actual stitching is depicted on some of the 1st and 2nd century A.D. painted coffin lids from Egypt.¹⁸

Of particular interest to this paper are the occasional side or back views of tunic-clad workers who are shown with a knotted bunch of material at the back of the neck opening, for example, the olive harvester from Cordova (Fig.2)¹⁹ and a slave attending magistrates and lictors from Waltersdorf, east Austria (Fig.3).²⁰

The most obvious explanation for the gathering of the back of the neck opening in this fashion would be that it is an easy method of considerably reducing the size of a large neck opening. This in turn suggests that such tunics are of the type, mentioned above, which have a slit running from shoulder to shoulder in order to allow the baring of the right shoulder.

By a happy chance the comparatively well preserved remains of some eighteen coloured woollen tunics complete with clavi have been found in the Cave of Letters (Bar Kochba period - A.D.132-5) in the Nahal Hever, where torn apart, they have apparently been used as burial shrouds.²¹

On the loom the clavi have been woven as bands of weft thread running from one selvage to another (i.e. woven horizontally) within a rectangular panel. Two such panels were joined together along one selvage to form the shoulders of a



Fig.3 (left): Partly defaced slave, from Waltersdorf, E. Austria - note the knot behind the neck and folds of the tunic centering in on it (after ALFÖLDY, 1974, pl.19).

Fig.4 (right): Tunic-clad soldier in a religious procession, from Trajan's Column - note the folds centering on the knot which appears to have been doubly secured with some sort of thong, and the heavy blousing over the back of the belt (after Cich. 273).

tunic, while 'the section between the bands was left unsewn' to serve as a neck opening;²² thus, the bottom edge of the tunic was formed of a selvage from each panel which obviated the need for a sewn hem. However, it is not clear from the report as to whether the selvages at the shoulders were always sewn up to and including the clavi, or whether some could be of the shoulder to shoulder slit variety. The sewn borders of no.7 'show it to have been closed on the sides, except at the upper parts where holes were left for the arms'.²³ It would seem reasonable to infer that the general methods of weaving and joining together the Nahal Hever tunic panels were similar to, if not the same as, their Roman Counterparts. The shop sign of Verecundus at Pompeii, which depicts various stages of manufacture of materials, has on the right hand side a worker coming forward with what appears to be a tunic panel, or perhaps a complete tunic.²⁴



Fig.5 (left): Rower, presumably a soldier, from Trajan's Column - note the knot and the folds again (Cich. 209).

Fig.6 (right): Bare-shouldered soldier cutting down a tree, from Trajan's Column - note the lack of a semblance of a sleeve and the apparent dearth of stitching on the right hand side of the tunic (after Cich. 243).

Of the ten Nahal Hever tunics where it is possible to take measurements of their original dimensions, nine of them are longer than they are broad; while it is not possible to arrive at the height and build of their owners, some tunics may have belonged to children.²⁵ Leaving aside a particularly small example (no.17), the lengths of the tunics measure between 0.72m and 1.12m (2ft 4in and 3ft 8in), with an average of 0.93m (3ft 1in). Likewise, the tunic widths range from 0.60m to 1.00m (2ft to 3ft 3in), with an average of 0.79m (2ft 7in).²⁶ These figures may be compared with Cato's $3\frac{1}{2}$ Roman feet (1.03m; 3ft 5in) for the length of a slave's tunic and with the one nearly complete

single-piece woollen adult's tunic (with short sleeves) from Dura Europos, which is c.0.92m (3ft) long and c.0.66m (2ft 2in) wide or, including the sleeve lengths, c.1.03m (3ft 4½in) wide.²⁷

THE LEGIONARY TUNIC

On Trajan's Column tunic-clad legionaries are normally depicted in one of three basic forms of dress:²⁸

- a) dressed only in a tunic with both shoulders covered but, where a back or side view is shown, with a bunched knot of material at the rear of the neck opening, for example, building roads (Cich. 255-6), taking part in a procession (Fig.4 - Cich. 273) and rowing (Fig.5 - Cich. 82-6 and 209-12);
- b) dressed in a tunic and cloak - sometimes the bunched knot of material still shows, for example, the two musicians in a procesion (Cich. 273);
- c) dressed in armour when there is no visible indication of a bunched knot at the back of the neck; usually the legionary is depicted with a 'scarf' around his neck with one length crossing over another under the chin, unlike the scarves tied in a knot at the throat, which the auxiliaries wear.

Only one scene shows soldiers dressed in a tunic with the right shoulder bared while felling trees and excavating earth (Fig.6 - Cich. 241-4). However, the right hand side of the tunic appears not to have been stitched either at the right shoulder or at the right side. As this is the only scene on the Column depicting the state of dress, the apparent vagary may perhaps be attributed to a sculptural error.

The depiction of a soldier's tunic with a bunched knot of material behind the neck opening is not confined to Trajan's Column. For example, it is clearly shown on the triumphal scene on the Antonine Belvedere sarcophagus (Fig.7)²⁹ and in the collection of debt tablets scene on the Hadrianic Chatsworth relief, which also illustrates that the tunic is sleeveless (Fig.8).³⁰

The bunched knot of material behind the neck opening appears to have the following effects:

- a) the neck opening, assuming a shoulder slit, is reduced to whatever size is required;
- b) because the knot draws material towards the centre of the back, the tunic blouses out to a considerable extent over the back of the belt (Fig.4);
- c) the knot also produces across the back of the tunic a number of folds which centre onto it (Fig.3, 4 and 7);

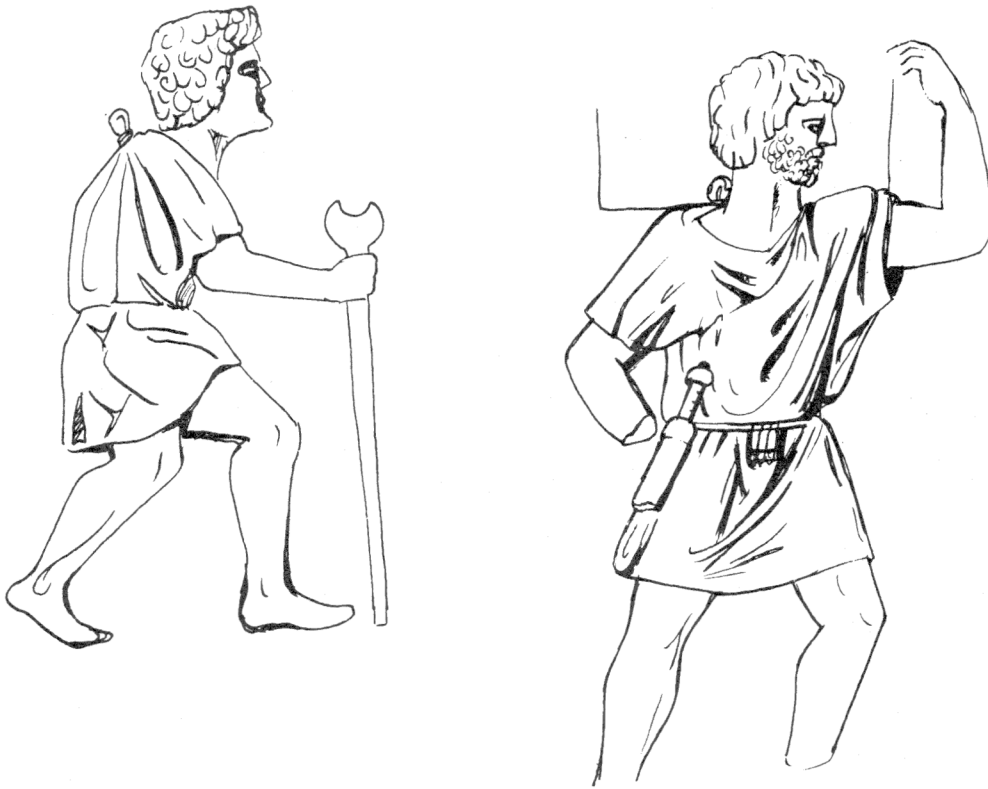


Fig.7 (left): Soldier carrying a platform in a triumphal procession, from the Belvedere sarcophagus - note the apparent double thonging around the knot, the folds of the tunic centering on the knot and the blousing over the belt (after STRONG, 1923, fig.179).

Fig.8 (right): Soldier carrying a box of tablets, from the Chatsworth relief - note the knot, the clearly sleeveless tunic, the 'V'-shaped fold under the chin and the strap passing under the right arm (after STRONG, 1923, fig.125).

d) as the knot pulls in the material at the back of the slit, the spare material in front drops forward in characteristic 'V'-shaped folds under the chin (Fig.8);

e) the length of the side of the tunic, which falls from the shoulder to make a 'sleeve', is adjustable by the amount of material taken into the knot, for example many rowers have the complete arm bared (Cich. 82-6 and 209-12).

It has already been suggested that Roman tunics were of a similar design to those found at the Nahal Hever. For military tunics at least this contention is strengthened by the known system of compulsory purchase for the Roman Army of tunics and other clothing from both towns and small villages in Egypt.³¹ It would seem most likely that the system was prevalent elsewhere, including Judaea, and one would therefore expect the designs to

be basically the same.

Two of the references to the compulsory purchase of tunics in Egypt, in A.D.128 and A.D.138, are orders relating specifically to the wool weavers of the villages concerned.³² This suggests that the tunic of the ordinary soldier was made of wool.

The use of a selvage to form the bottom edge of a tunic may explain why on some sculpture a stitch line is shown on the vertical edges of a paenula but not at the 'hem' of the tunic, for example, the Camomile Street soldier.³³

The depictions of the military tunic in the first two centuries A.D. continue the earlier practice of showing the front edge of the tunic as coming to just above the knee. This practice is confirmed in literature by Quintilian who notes that when a tunic's edge comes above the knee, it is the dress of a centurion.³⁴ The importance to a soldier of this dress distinction is illustrated by one of the punishments instituted by Augustus for dereliction of duty by centurions whereby the offenders were to stand all day in front of the praetorium in beltless tunics (tunicati discincti).³⁵

On a number of monuments such as the Chatsworth relief (Fig.8) it is of additional interest to note the thin strap crossing over the left shoulder and passing under the right arm. It appears to be in the same position as a modern cavalry pouch belt, but is much narrower. The most practical application for this strap seems to be to prevent the blousing of the material on the right hand side of the tunic from falling across the sword grip, which could otherwise make it difficult to draw the weapon.

One final point not yet covered is whether the legionaries of the early 2nd century A.D. had clavi woven into their tunics. This point is considered in Part 2.

A RECONSTRUCTION OF A MILITARY TUNIC

As an aid to the understanding of the design of the tunic, two successive simple reconstructions were made up from blanket material. The dimensions of the first tunic (exhibited at the Conference) were 1.15m (3ft 9in) square, based on visual and practical appreciations. In order to fall within the maximum measurements of the Nahal Hever tunics, those of the second reconstruction were reduced to a length of 1m (3ft 3in) and a width of 0.90m (3ft), with slits at the neck of 0.50m (1ft 8in) and at the arms of 0.30m (1ft) (Pl.1 and 2).

In passing it should be noted that the folds of the second reconstruction, which was made of a thicker material, imitate to a lesser degree those seen on so many sculptures. Indeed, the so-called 'undress uniform' of tunic and cloak must indicate that the former was made of a comparatively light material.

It was found that when the back of the neck opening is bunched up, the knot pushes the material into a thin cone, but this when folded down and tied around with a leather thong, closely resembles the depictions. Likewise, the folds centering on the knot, and the heavy blousing at the back of the tunic are reproduced well (compare Pl.3 with Fig.4). Wilson has suggested that the knot was secured by a fibula but a thong not only seems more practical but also follows the sculpture better.³⁶

When following the Chatsworth and other reliefs by wearing a 'pouch belt' strap (Fig.8), it can be seen to gather up much of the blousing on the right hand side, thus allowing easy access to the sword (Pl.4 and 5). When the tunic is unknotted and the right arm is passed through the opening, there is plenty of room for swinging a pick or whatever (Pl.6).

In considering the wearing of armour over a tunic, the first reconstruction, when unknotted and the rolls of spare material pulled forward around the neck, allowed the two lengths of roll to be crossed over in the manner of a scarf worn under a lorica segmentata. This raised doubts as to whether there actually was a separate scarf. However, not only does the second, smaller, reconstruction not allow for this crossover of material but also the ends of scarves appear to be depicted on two of the praetorians on the Cancelleria relief;³⁷ a scarf would thus be of the order of 1.20m (c.4ft) long. A scarf would prevent the neck opening becoming excessively dirty and any chafing of the neck by body armour; in differing colours it might even provide a distinction between different legions or cohorts.

How the slit of a tunic was fastened when armour was worn, must remain something of a mystery. The answer may simply be a pair of fibulae (Pl.7) - this could explain the rather unusual top shoulder plate of the lorica segmentata which creates a hollow beneath it which could house the fibulae; this suggestion might also go some way towards accounting for the large number of fibulae found on military sites.

CONCLUSIONS

The evidence clearly indicates that the legionary of the early 2nd century A.D. and of the preceding and succeeding periods wore a sleeveless tunic with a wide neck opening capable of allowing an arm to pass through so as to bare the shoulder; the opening was reducible by knotting a bunch of material behind the neck. The garment was probably woollen, and at its lower edge and neck opening there was a selvage rather than a stitched hem. A length of c.1m (3ft 3in) and a width of c.0.90m (3ft) appear to represent the order of the magnitude of the Roman military tunic of the early 2nd century A.D.

PART 2 - COLOUR

A CATALOGUE OF THE EVIDENCE

Although an attempt has been made to note all the evidence for colour relating to military clothing (leaving aside generals), there will doubtless be some items which have been omitted. The evidence is arranged in chronological order with individual interpretations.

a) Historical fresco

(3rd century B.C. - a tomb on the Esquiline)³⁸

Four registers of figures are depicted with some of the characters being named; two of the registers show fighting taking place.

Interpretation: The scenes appear to represent an historical event with the Romans in white tunics and their enemies (?Samnites) wearing only short white kilts.

b) Historical fresco

(late 1st century B.C./early 1st century A.D. - the tomb of the Statilii)³⁹

The fresco includes a battle between soldiers in white tunics, who are winning, and other men who are dressed only in short white kilts.

Interpretation: The victorious soldiers are Romans.

c) The Barberini Nilotic mosaic

(?c.30 B.C. - Palestrina)

Dates for this mosaic range from the time of Sulla to the 3rd century A.D.⁴¹ but to the writer the most convincing date offered is the visit to Egypt by Octavian after the Battle of Actium when there was a particular abundant flooding by the Nile;⁴² some support for this date comes from the size of the tesserae⁴³ and from the presence of the rectangular scuta carried by two of the figures.⁴⁴

The scene at the bottom of the mosaic in an eye-catching

position shows a number of figures with shields, spears, helmets and body armour approaching the front of a classical temple; nearby to the right is a war galley. 'Octavian' is blowing a horn to summon the priestess and immediately behind him, in the manner of a bodyguard, is a soldier in a bronze helmet, (?)chainmail and an offwhite tunic. Next stands a person of authority in a very pale blue tunic and moulded cuirass accompanied by a figure, possibly bearded, dressed apparently in a red sleeveless knotted tunic and, unlike any other male person in this scene, he is not wearing any body armour; by the feet of these two figures who face one another, is a dark blue shield bearing a dolphin design.

Of the remaining six soldiers, the colour of the tunics of only four are visible - in each case they are white, including the two men with red painted rectangular scuta bearing the emblem of the scorpion. The leading soldier of these six, whose tunic is not visible, wears a red crest on a white-coloured helmet; the other five soldiers have white horsehair plumes on their bronze helmets.

Interpretation: Because of the nearby galley and the shield with dolphins on it, the 'officer' in a very pale blue tunic near 'Octavian' may be considered to be Agrippa (or some other admiral) while the unarmed (?)bearded accompanying figure is clearly not a soldier, but with the 'Agrippa' connection he may be a naval personnel. The remaining soldiers are probably praetorians (with the scorpion emblem on the scuta) or legionaries, but the leading figure with a red crest may be an officer, perhaps a centurion. His crest, unlike the flowing horsehair plumes of the other five soldiers, appears to be symmetrical and transverse. If the white-coloured helmet can be taken to represent a silver plated one, then these two features recall the comment by Vegetius that centurions wore iron helmets with crests which were both silvered and transverse, so as to aid recognition.⁴⁵

d) 'Judgement of Solomon' fresco

(earlier 1st century A.D. - Pompeii)⁴⁶

This is a court scene which, arguably, appears to echo contemporary practice and dress. Behind the three judges on a podium (?Solomon plus two advisers) are a number of shadowy figures of attendant soldiers; in front of the podium are three other soldiers who are rendered in more detail.

The soldier about to cleave the baby in half is wearing a white tunic as is his companion in the background; both are

wearing bronze cuirasses and helmets. The third figure stands in a pose of authority close to the podium and is dressed in a red tunic and a red cloak while his cuirass and helmet appear to have been silvered, unlike the other two soldiers. All three soldiers have red horsehair plumes.

Interpretation: With Vegetius' remarks in mind (above) the figure in red with silvered armour may be regarded as some sort of officer, perhaps a centurion. The other two soldiers in front of the podium may be considered to be legionaries, or even praetorians.

e) A wine shop sign

(earlier 1st century A.D. - Pompeii)⁴⁷

Mine host offers a jug of water to a figure carrying a spear and wearing a yellow-brown paenula which falls down to cover his arms and tunic; he is also wearing a light green scarf.

Interpretation: The cloaked figure is an off-duty soldier in undress uniform.

f) The entry of Vitellius into Rome

(A.D.69 - Tacitus)⁴⁸

The eagles of the Vitellian army were preceded by the praefecti castrorum, the tribunes and the senior centurions (primi centurionum) dressed in candida veste, while the other centurions marched with their centuries, their arms and medals gleaming.

Interpretation: This special mention by Tacitus of the senior officers of the legions being dressed in shining white probably indicates that their normal uniform was a different colour, perhaps red if the interpretation of the evidence of c) and d) above is correct. On the other hand, the reference may mean that their clothing had been specially whitened for the occasion, although this suggestion seems less likely. The gleaming arms of the junior centurions again recalls Vegetius' mention of silvered crests, and the silver colour of the cuirass and helmet of the Pompeii 'centurion' (above).

g) Papyrus receipt for tunics and cloaks

(A.D.128 - Socnupaei Nesus, Arsinoite nome)⁴⁹

The village weavers had delivered nineteen tunics for 'the guards', and five white cloaks 'for the needs of the soldiers serving in Judaea' to the collectors of public clothing.

Interpretation: See 1) below.

h) Antonine Wall distance slab

(c.A.D.142 - Bridgeness)⁵⁰

The sculptured scene on the right shows a man in a toga pouring a libation on an altar. Behind him and to his left are a vexillarius, a man in a paenula and scarf, and a third figure who has been defaced; on this last figure there are traces of red paint on the cloak.

Interpretation: In the light of the evidence already reviewed, a soldier in a red cloak might be construed as a possible centurion, but on the other hand the red paint may more likely represent an outline on a yellow-brown cloak, as is the case with many depictions of clothes of this colour in North-West Europe.⁵¹

i) Church parade of Cohors XX Palmyrenorum

(earlier 3rd century A.D. - Dura Europos)⁵²

The centre of this fresco is occupied by the vexillarius wearing a dark yellow-brown cloak and the unit's named tribune who is pouring a libation upon an altar; the latter wears a white cloak with purple fringes. To the right is a double row of eight figures of some distinction, seven of whom are wearing light yellow-brown cloaks; the eighth has a white cloak. Behind these figures but in an upper register are some fourteen other men with cloaks of a darker hue, which appear to be hairy. All the figures in the scene are bareheaded, unarmed and wearing white tunics with long sleeves (and with some purple decorative stripes).

Interpretation: The fresco is fairly self explanatory - the eight figures in the lower register may be interpreted as the centurions and decurions of this part-mounted unit. Their apparent finer cloaks and their portrait faces contrast with those of their soldiers behind them.

j) Soldier and goddess fresco

(earlier 3rd century A.D. - Dura Europos)⁵³

On the same wall as the 'church parade' is another fresco with an apparently military figure with one hand on his sword face-to-face with a 'goddess'. The former who is presumably dressed in a white tunic (the text does not give the colour), wears a red cloak.

Interpretation: The soldier is probably an officer, on the colour of his cloak perhaps a centurion.

k) 'Chapel' fresco

(c.A.D.200-38 - Castellum Dimmidi)⁵⁴

The few battered surviving fragments appear to depict two soldiers, one of whom wears a helmet, and a third figure who, it has been suggested, is pouring a libation on an altar, but this is far from certain. This last figure is dressed in a white tunic with long sleeves and a blue-grey ('gris-bleu') cloak. There is a purple edging to the neck of his tunic and he wears a red baldric.

Interpretation: The third figure is probably the garrison's commander, either a tribune or a centurion. The presence of a sword and of a helmeted soldier must surely indicate that a libation is not taking place.

l) Papyrus receipt for a tunic and a cloak

(A.D.285 - Arsinoite nome)⁵⁵

This is a receipt from the 'controllers of tunics and white cloaks' to the leaders of a village for the delivery of a tunic and a cloak.

Interpretation: Both the mention (g) above) of white cloaks in similar circumstances but some 150 years earlier and this reference seem to go against all the pictorial evidence which, including Luxor, Piazza Armerina and Bone (below), indicates that military cloaks in general should be yellow-brown in colour. At first, the Greek words pallion leukon, appear to leave no room for manoeuvre, but the wording of the title of the collecting officials suggests that 'white cloaks' (not just

'cloaks') could be a technical term, perhaps meaning cloaks of undyed wool which could be of varied light colours. With the white tunics shown at Dura, Dimmidi and elsewhere, it would seem likely that the tunics in the two receipts were also white which makes the term 'white cloaks' even more puzzling if the colour is meant to be an accurate description.

m) Egyptian temple frescos

(A.D.284-305 - Luxor)⁵⁶

The frescos, which were badly damaged when found, depict a number of scenes of soldiers wearing the distinctive late patch decoration on their tunics. One wall has painted on it at least six horses and five soldiers who all wear white tunics except for one man who is dressed in a red tunic. The soldiers are armed with spears and shields but there is no certain sign of cloaks; the scene is obviously not a 'church parade'. On the adjoining wall to the right, which borders on an apse with depictions of emperors, are painted two registers of four soldiers each, standing in straight lines and facing forwards; they do not appear to be armed, but wear white tunics and yellow-brown cloaks.

A third scene depicts the lower parts of four apparently unarmed men in white or off-white tunics and yellow or yellow-brown cloaks; one figure holds a staff with a mushroom-shaped end and may be an officer. The fourth surviving fresco shows a commanding figure advancing, dressed in a dark grey or black tunic and a yellow-brown cloak with a thin red line running close to and parallel to the lower edge; behind him are two other figures.

Interpretation: In the horses scene the one figure in a red tunic is to be remarked on and presumably is an officer, perhaps a decurion. The other three scenes are of unarmed soldiers whose stances recall the parade scene from Dura. The white tunics and yellow-brown (or yellow) cloaks are now familiar company.

n) The great hunt mosaic

(c.A.D.300 - Piazza Armerina)⁵⁷

To follow in general the exposition of Carandini, the visual centre of the mosaic represents Italy which is connected on the left to Carthage and on the right to Alexandria by two galleys, each with a gangplank let down from the bow on Italy and another gangplank let down from the stern in the respective

North African ports; to the far right is a third boat berthed in India. The hinterland of the ports is covered with scenes of animals being hunted and captured, while the gangplanks are crowded with animals being taken on their way to Italy.

With well over 70 human figures depicted on this very long mosaic, it is not possible to give a detailed description of the scenes in the space available. For ease of discussion various areas of the mosaic are treated separately.

To the right of the African gangplank of the middle ship there are 25 figures on foot, of whom two are obviously local carters.⁵⁸ For the twenty remaining figures where it has been possible to ascertain the colour of the tunics, they are white or off-white (with the usual late decorative patches). Effectively all of these twenty have a red, or mostly red, cingulum, while seven sport a red baldric and seven others carry shields, one of which has a running boar, the emblem of the legion XX Valeria Victrix, painted on it; five wear yellow-brown cloaks. There are also three horsemen, two of whom wear white or off-white tunics, while the colour of the third is not ascertainable.

Interpretation: Carandini is to be followed in the identification of these men in white as soldiers who were often used for catching animals for the games.⁵⁹

On the left hand ship two figures in light blue tunics are attending to the rigging, while another figure in a red tunic is helping to ease an antelope on board. In the bows of the middle ship a figure in a red tunic is either attending to the rigging or adjusting a line attached to the gangplank; in the stern two figures, one in a dark blue tunic and the other in a white one, are helping to haul on board an elephant.

Interpretation: The two figures in light blue must be regarded as sailors while the figure in dark blue might also be regarded as a sailor with his darker tunic perhaps indicating a sign of ranking. Starr notes that each warship was considered to be a century with both a centurion and a trierarchus (captain) and presumes that the former should have rank over the latter.⁶⁰ With the earlier evidence in mind the figure in red on board each vessel may be seen as the ship's centurion and the figure in dark blue as the trierarchus.

On the African gangplank of the left hand ship there are two figures in light blue tunics, one in white and one in yellow, while on the middle ship's African gangplank there are two light blue tunics and three white ones.

Interpretation: Again, the men in light blue tunics may be seen as sailors and those in white as soldiers, working together to load the animals on board. The man in the yellowy tunic is probably a port worker - there are three others on the two Italian gangplanks. It is remarkable that all the figures depicted in light blue tunics are either on board a ship or on a gangplank.

Italy, or could it be Sicily, lies in front of the wide flight of steps leading from the corridor into the basilica of the villa. Immediately to the right of the centre point and standing above the spot where the two Italian gangplanks converge is a figure dressed in a long very pale blue tunic, a red cingulum, a light blue cloak and a Pannonian hat, and carrying a staff with a mushroom-shaped end, looks directly at the spectator. Another figure similarly dressed but with a cloak of yellow-brown and a very light yellow tunic, stands behind this man and to his left, glancing sideways at his face, while on his right there appears to be the remains of a similar diffident figure, probably wearing a red cloak or tunic.

Interpretation: Because the man in the light blue cloak is in the effective visual centre point of the mosaic, he may well be the owner of the villa. The colour of his tunic matches that of 'Agrippa' in the Palestrina mosaic and the light blue of his cloak echoes the colour of the sailors attending the rigging. He is obviously a person of substance and may well be the prefect of the Misene fleet. His two attending figures could be an army officer and, perhaps, a 'ship's centurion'.

Because the left hand side of the mosaic and 'Italy' have been so badly damaged, little of these areas have been published in colour which makes it difficult to comment on them in detail. In these areas, including the Italian gangplanks, there are at least six figures in yellow tunics, acting as porters, carters and animal attenders, while two figures in red tunics are also shown as porters. A third figure in a red tunic is being beaten by a man in a white tunic, red cingulum, and yellow-brown cloak and carrying a staff with a mushroom-shaped end.

Interpretation: The men in yellow tunics may be seen as civilians; the yellow of the tunics is reminiscent of six of the Nahal Hever ones published as coloured plates.⁶¹ The three figures in red tunics pose problems of interpretation, although one might be construed as a centurion being beaten by a senior officer for dereliction of duty, their presence must throw some doubt on the 'ship's centurion' interpretation. It may be that the shade of red is a deciding factor.

o) A wild animal hunt mosaic

(end 3rd century A.D. - Bone, Algeria)⁶²

A line of men invisible behind their red shields form part of a trap into which animals are being herded. One of these men who has been knocked down by a leopard, is wearing a white tunic as are two other figures on foot and two on horseback, all four carrying a brace of spears each and wearing cloaks of various shades of brown; two also wear a red cingulum.

Interpretation: As with the Piazza Armerina mosaic soldiers are being employed as beaters, wearing the by now familiar uniform of white tunics.

p) Mosaic of soldiers fighting

(?early 4th century A.D. - Rielves, Spain)⁶³

The mosaic depicts in the central panel two pairs of soldiers with oval shields, all four being identically dressed in short sleeved white tunics, yellow tops (?scale armour) and helmets. One pair is fighting and the other is shaking hands.

Interpretation: Because all four figures look alike and wear white tunics, the scene may celebrate the peaceful settlement of a civil war between the two Roman armies. The style of the armour and tunics looks to be of a much earlier date, and is certainly not gladiatorial.

q) Candidati duplares and simplares

(unknown date - Vegetius)⁶⁴

At the end of a long list of principales ('officers') of the legion are the candidati duplares and candidati simplares. The principales are protected by privileges, whereas the remaining soldiers are called munifices because they have to perform munera (services).

Interpretation: The duplares and simplares obviously hold lowly ranks (?immunes) and as they are excused fatigues, it would seem likely that their tunics stayed cleaner than the munifices. The term candidati could then be seen as a slang word, 'the lily white boys', being eventually incorporated into official use as was the word papilio (butterfly) for a tent.⁶⁵ Alternatively, a case might be made for the munifices wearing non-white clothing for part of the time at least when doing fatigues.

v) Naval uniforms

(date unknown - Vegetius)⁶⁶

Vegetius mentions that scout ships of the British fleet were painted in the colour, venetus which he likened to the waves, and that their soldiers and sailors wore clothes of the same colour.

Interpretation: The colour, venetus, which was also applied to the blue faction, can perhaps be envisaged as a dark greeny-blue. The special mention of this colour suggests that it was not that in normal usage, but it still might just be related to the blue tunics at Piazza Armerina.

GENERAL DISCUSSION AND CONCLUSIONS

Legionary tunics

Without doubt the evidence clearly indicates that the legionaries of the early 2nd century A.D. should have been dressed in white tunics, although the shade is more likely to have been an off-white rather than a gleaming white, probably based on undyed wool colours. It is not however clear whether soldiers' tunics would have had clavi. There is no sign of these on soldiers prior to the late 3rd century, but thereafter clavi, or variants on them, are generally to be seen. This could imply that the earlier legionaries did in fact have clavi on their tunics.

The only possible clue comes from the Zilten gladiatorial mosaic (2nd century A.D.) where a tubicen and two cornicines are playing. All three are dressed in white tunics girt above the knees, with clavi, and yellow-brown paenulae and could easily pass as soldiers; a yellow painted scutum has been placed indicatively against a herm just a little to the left of the tubicen. In the light of the activities at modern fetes and shows, these three figures might perhaps be interpreted as musicians of the legion III Augusta helping out at a local amphitheatre by supporting the lady organist who is also shown;⁶⁷ it might seem unlikely that an amphitheatre could find full time employment for musicians. The lack of clavi on the figures at Palestrina and Pompeii may simply be the removal of minor detail by the artists. The question of clavi on tunics of 1st and 2nd century soldiers must however lie on the table as unproven.

Cloaks

With the exception of the two Egyptian papyri referring to white cloaks, the yellow-brown variety appears to be a ubiquitous garment for the ordinary soldier and even on occasion for officers. Wild has noted that where colour survives on depictions of civilian coats, scarves and capes in north-west Europe, they 'are painted without exception yellow or yellowish-orange'. He suggests that the colours would be true to life if they represented shades of undyed wool.⁶⁸ This could be allowed to retain most of its natural oils in order to make such a garment warm and fairly waterproof.

Centurions' uniforms

The identification of the possible centurions at Palestrina and Pompeii by their silvered helmets and touches of red brings out two points. A red tunic, cloak and crest would help to distinguish a centurion from his men both in battle and in day-to-day activities. Secondly, of the five 'crowd' scenes examined, three (Palestrina, Pompeii and Luxor) all have one man in red among the many white tuniced figures. The lack of one or more red tunics at the Dura church parade may only imply that for religious ceremonies, when neither arms nor armour are worn, and for special events (e.g. the Vitellian entry into Rome) centurions (and other officers) put aside their special red coloured uniforms in order to assume the white tunic of a citizen.

At Piazza Armerina, leaving aside the two 'ship's centurions', there does not appear to be a figure in red who could be thought to be a centurion, but perhaps by that date centurions dressed differently. It is an attractive proposition to envisage centurions (and probably decurions as well) in red uniforms but the evidence is fragile; see also ship's centurions under 'Naval tunics' below.

Naval tunics

Before considering the uniforms of naval personnel, it is useful to recall Ulpian's dictum, 'in the fleet all rowers and sailors are soldiers'.⁶⁹ It has already been suggested that light blue tunics signify sailors, dark blue ones naval officers (perhaps the trierarchus) and a red one the ship's centurion who might also hold the senior command, while Vegetius mentions venetus coloured clothes for ships' crews.

This suggestion finds support from another mosaic from Piazza Armerina, which depicts cherubs fishing from four miniature galleys. There are three cherubs in each ship, but in the case of one of them only the head survives. Apart from three cherubs either naked or in loin cloths, there is one in a light blue tunic in each ship (in one instance, an oarsman). Three of the galleys have a cherub in a red tunic as a central figure (?in command) while the final cherub wears a dark blue tunic.⁷⁰ If, as proposed above, the owner of the villa was prefect of the fleet, then it is plausible to see the cherubs being depicted in the correctly coloured tunics in this droll mosaic.

The concept of a ship's centurion wearing a red tunic not only would mirror the possible uniform of an army centurion, but also would explain the presence of the unarmed figure in a red tunic next to 'Agrippa' in the Palestrina mosaic; if 'Octavian' could have a bodyguard or attendant, then so could 'Agrippa', a centurion from his fleet.

In passing it is of interest to recall that Augustus awarded Agrippa a vexillum coloured caeruleus after a naval action off Sicily.⁷¹ Caeruleus, which was sometimes used to describe the (?Mediterranean) sea, is perhaps best translated as a mid-blue.

The remarkable, but perhaps in retrospect not surprising, fact is that all the evidence relating to the various shades of the colour blue in a general military context refers only to the navy, rather than to the army. It is entertaining to speculate as to when the troops of the two Adiutrix legions changed the colour of their tunics, perhaps when each unit became a iusta legio, and whether any colour trace of their naval past was retained in their new uniforms, perhaps a blue neck scarf.

Auxiliary tunics

The appearance of the Cohort XX Palmyrenorum (as well as the soldiers from Dimmidi and Luxor) in white tunics might be held to indicate that auxiliaries in the first two centuries A.D. also wore that colour. Some support for such a contention comes from Arrian (c.131-7) when he states that cavalry troopers on special parades wore tunics of scarlet, hyacinth or another bright colour with blond/yellow long flowing plumes.⁷² This statement could be seen as implying that the troopers wore white tunics on normal occasions.

However, it may be argued that before the conferring of citizenship on all free inhabitants of the Empire in A.D.212, and probably even earlier, there would have been a call for

distinguishing marks between troops of the legions and the few citizen cohorts, and the great bulk of non-citizen auxiliaries; this might have been achieved by not allowing the latter to wear white tunics. Indeed, if the principle of raising new cohorts was simply to enlist a suitable number of local warriors, often with their own weapons, and add some officers, then one might expect local traditional colours appearing. For example, Strabo notes that in four named tribes of northern Spain 'all the men dress in black'⁷³ which could mean, for instance, that the various Asturian cohorts and alae wore black tunics.

The general lack of evidence forbids an attempt to make any worthwhile conclusion, but the future may be more yielding.

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NOTES

1. KÄHLER, 1965, Taf.6, 14, 18 & 19.
2. BANDINELLI, 1970, pl.53.
3. PIDAL, 1982, fig.76.
4. RUSSELL ROBINSON, 1975, pl.200.
5. Gellius, Noct. Act., VI,xii,3.
6. GRIMAL, 1963, pl.44.
7. GRIMAL, 1963, pl.43.
8. STRONG, 1923, tav.XLIII.
9. GRIMAL, 1963, pl.90.
10. Quintilian, Inst. Orat., XI,138.
11. WILSON, 1938, pl.XLII.

12. GRIMAL, 1963, pl.82.
13. GRIMAL, 1963, pl.86.
14. WHITE, 1970, pl.1, 2, 19, 26, 27, 28, etc.
15. Cato, Agri. Cult., 59.
16. Varro, Ling. Lat., IX,79,47.
17. WILSON, 1938, 57.
18. PARLASCA, 1969-80, e.g.2, tav.205, fig.1 & 2 (Antonine). the latter which comes from Hawara and very clearly shows the stitching on the shoulder, is on display in the British Museum, Egyptian Galleries, Room 62 (NG 2912); shoulder stitching continues into the 4th century.
19. BANDINELLI, 1971, pl.175.
20. ALFÖLDY, 1974, pl.19.
21. YADIN, 1963, 204-19.
22. YADIN, 1963, 204.
23. YADIN, 1963, 213.
24. MAIURI, 1953, 147.
25. YADIN, 1963, 205.
26. YADIN, 1963, 212-9.
27. PFISTER & BELLINGER, 1945, 14, 17-9.
28. CICHORIUS, 1896 & 1900 - in this article the scenes have been identified by their cast numbers.
29. STRONG, 1923, fig.179.
30. STRONG, 1923, fig.125.
31. JONES, 1974, 355-7.
32. JONES, 1974, 355.
33. BISHOP, 1983, pl.4 & fig.1.
34. Quintilian, Inst. Orat., XI,138.

35. Suetonius, Augustus, XXIV,2.
36. WILSON, 1938, 65.
37. BANDINELLI, 1970, pl.236.
38. BANDINELLI, 1970, 115 & pl.117.
39. BANDINELLI, 1970, 118-9 & pl.121.
40. The description of the military scene has been drawn from a site postcard (E. Richter, Roma), which appears to be the best source for colour reproduction. A much larger photograph of the scene occurs in BECATTI, 1968, fig.259, but the quality of the colour is very poor. A much more recent reproduction but small and again with poor colour, appears in BOWMAN, 1986, fig.45 & 71; the whole mosaic appears in fig.1.
41. WHITEHOUSE, 1976, 4.
42. BONNEAU, 1964, 93-4.
43. The size of the tesserae indicates an early date which could be compatible with the Augustan era - pers. comm. from Peter Johnson.
44. The incidence of depictions of the curved rectangular scutum suggest that it first appeared in the later 1st century B.C.
45. Vegetius, Milit., II,13 & 16; the early 17th century Dal Pozzo detailed pen and ink drawing of this scene depicts the red crest as being apparently transverse, shaped in a half-circle and of a quite different design to the other crests - WHITEHOUSE, 1976, fig.13c.
46. VANAGS, 1983, 116; a detail of the scene, which shows the soldier about to cleave the baby, appears in MAIURI, 1953, 110.
47. GUSMAN, 1900, 220 & pl.III.
48. Tacitus, Hist., II,89.
49. JOHNSON et al., 1915, 236-7.
50. CLARKE et al., 1980, 15.
51. WILD, 1968, 219.

52. CUMONT, 1926, pl.L.
53. CUMONT, 1926, 116-7 & pl.LIIII.
54. PICARD, 1947, 159-72.
55. CRAWFORD, 1955, 39-40.
56. WILKINSON, 1859, f.51-62; MONNERET DE VILLARD, 1953, pl.XXX-XXXII (B & W); the left hand half of the scene with the horses, including the figure in red, (f.51) appears in colour in BANDINELLI, 1971, pl.266, while the whole scene together with the one with two registers of soldiers (f.51 & 52) occur in BOWMAN, 1986, fig.34.
57. CARANDINI et al., 1982, 94-103, Ill.1, fig.12-8, 115, 118, 121, 122, 125 & 129, and pl.XXIII; GENTILI & EDWARDS, 1957, 210, 220-1, 223 & 226-7. These colour plates cover the great majority of the scenes in the centre and right hand side of the mosaic; there are however problems of colour shades not only between one and the other, but also with other reproductions.
58. CARANDINI et al., 1982, 102.
59. CARANDINI et al., 1982, 101-2 & 94-5.
60. STARR, 1941, 55-61.
61. YADIN, 1963, pl.64-6.
62. HADAS et al., 1966, 46-7 - the plate is reversed.
63. BLAZQUEZ, 1982, 73 & lam.50.
64. Vegetius, Milit., II,7.
65. MACMULLEN, 1963, 167.
66. Vegetius, Milit., IV,37.
67. WOOD & WHEELER, 1966, pl.18.
68. WILD, 1968, 219.
69. Ulpian, Dig., 37,13.
70. CARANDINI et al., 1982, pl.XXIII.

71. Suetonius, Augustus, XXV,3.

72. Arrian, Tact., 35,3.

73. Strabo, Geog., 3,3,7.

ADDENDUM

While this article was in press, the writer came across a good translation from the Greek of the papyrus of A.D.138 (B.G.U. 1564), which is the only one of the sources listed by Jones not translated in the actual references.

The papyrus, in referring to the compulsory purchase of garments from the 83 weavers of the village of Philadelphia, specifies that the items, including a tunic for the soldiers in Cappadocia, were to be made of 'fine, soft, pure white wool without discolouration, well and tightly woven, well selvaged, good looking, with no imperfections'. The tunic was to be 3 cubits (1.326m; 4ft 4in) long and 3 cubits, 4 fingers (1.40m; 4ft 7in) wide, and its weight 3.75 minae (1.6kg; 3.6lbs) (LEWIS, 1985, 174-5).

Leaving aside the colour and the clavi, the general specification might well have been used to describe the tunics from Nahal Hever. While the general argument over white tunics is strengthened, the lack of reference to clavi seems to support the pictorial evidence that soldiers in the 1st and 2nd centuries A.D. did not have them on their tunics. The specified weight of the tunic at 1.6kg/3.2lbs compares with the 1.25kg/2.75lbs of the second reconstruction. The tunic's dimensions are hard to reconcile with those of Cato and at the Nahal Hever unless either it was destined for a very tall and broad chested soldier or soldiers normally had tunics which when ungirt, reached their ankles, as was the case with some civilians (e.g. GRIMAL, 1963, pl.86 and 92).

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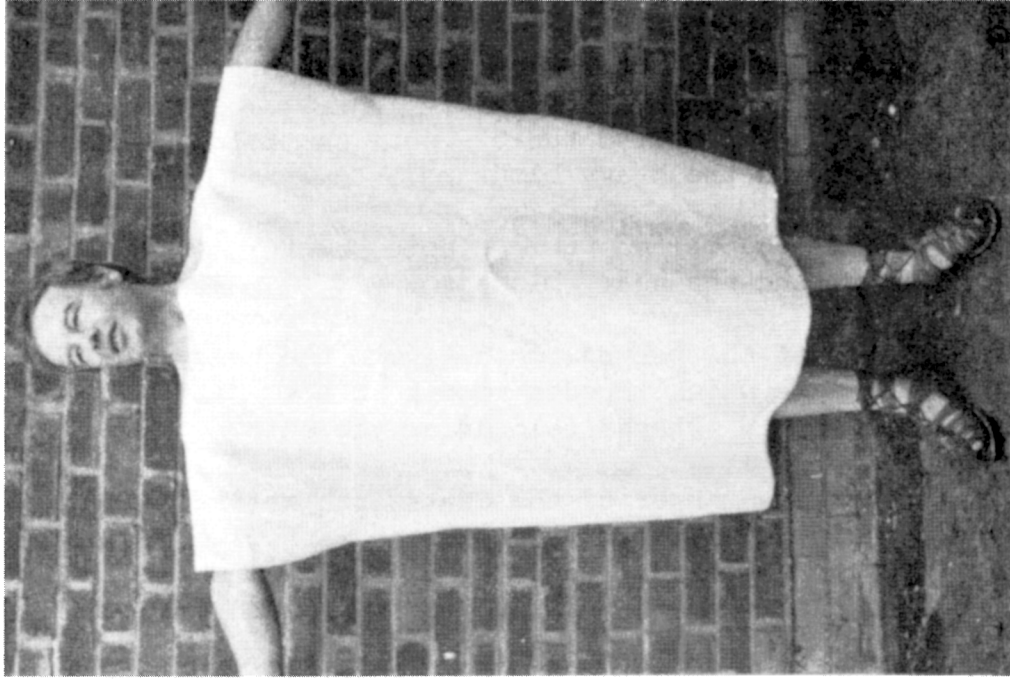
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PLATES

- Pl.1:** The second reconstruction of a tunic when unbelted - note where the sides and bottom edge come on the figure.
- Pl.2:** Rear view of the belted tunic - note the folds centering on the knot and the heavy blousing.
- Pl.3:** Side view of the belted tunic - note the folds centering on the knot and the heavy blousing.
- Pl.4:** Front view of the belted tunic - note the heavy blousing under the arms which impedes access to the hilt of the sword and the 'V'-shaped fold under the chin.
- Pl.5:** A stance in the manner of the Chatsworth relief (Fig.8) - note the use of the transverse leather strap to gather in the spare material under the right arm pit, the sleeveless look and the pronounced 'V'-shaped fold under the chin.
- Pl.6:** Two (modern) fibulae secure the two panels of the tunic close to the neck and under where the top plate of a lorica segmentata would come.
- Pls.7 & 8:** The unknotted tunic with a bared shoulder (compare with Figs.1 and 6).



Pl.1



Pl.2



Pl. 3



Pl. 4



Pl.6



Pl.5



Pl. 8



Pl. 7