

# BYZANTINE CAVALRYMAN c.900–1204



MOTHY DAWSON

ILLUSTRATED BY GIUSEPPE RAVA

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**TIMOTHY DAWSON**

ILLUSTRATED BY GIUSEPPE RAVA  
*Series editors Marcus Cowper and Nikolai Bogdanovic*

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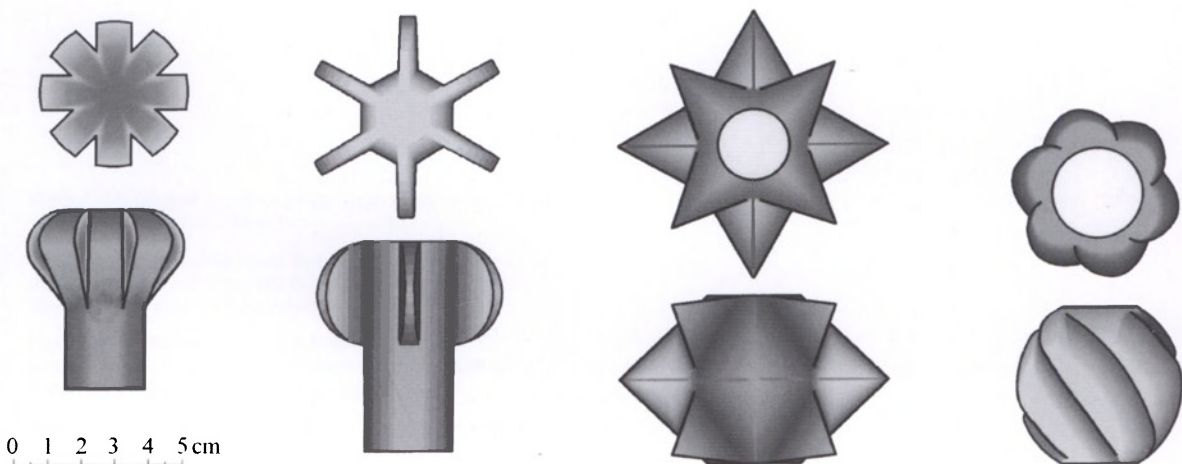
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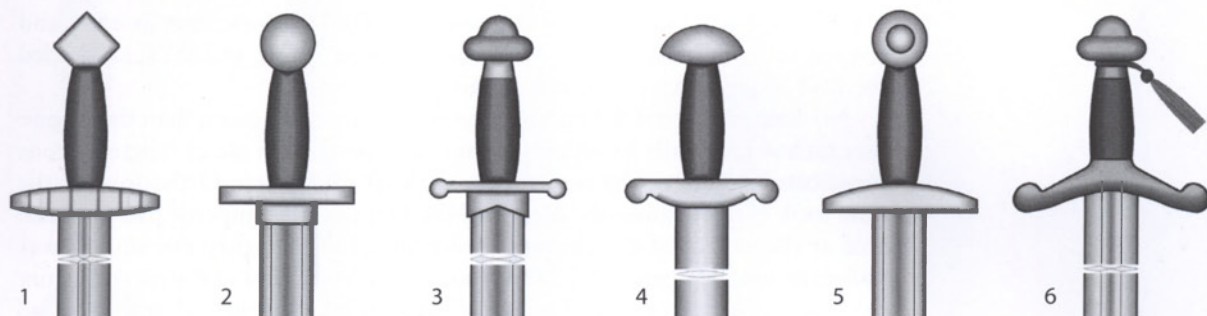
## c. 900–1204

### INTRODUCTION

Consult a dictionary and under 'Byzantine' you will find it described as an adjective meaning something like 'complex, inflexible or underhand'. What should we make, therefore, of the suggestion that there was such a thing as the 'Byzantine Empire'. The answer to that lies in where and by whom the term originated. It first appears in print in 1557 from the pen of a German, Hieronymus Wolf. In the tenth century Germany had looked to Byzantium (medieval Greek Vyzantion) as a paradigm of power and opulence seeking patronage and royal marriages from the City of Vyzantion. In the twelfth century their ambitions became much more grandiose, and led to formation of what they called the 'Holy Roman Empire' claiming the inheritance of the glory days of Old Rome. To take an inheritance, however, the ancestor must be dead, and the survival of the Roman Empire in the East was somewhat problematic. At first, the ideological expedient was to claim that with the schism between the Roman and Orthodox churches and supposed decadence, the Roman Empire was morally dead, despite its semblance of sometimes robust life. Wolf's expedient went further, by attempting to deny the empire's existence stripping it of its very name. He could only do that from his place after the final fall, for during its life, its people held to their true Roman heritage with all due tenacity, as some Greek speakers have done into modern times. From as early as the

Assorted middle Byzantine era mace heads found in the Balkans. All are represented to a common scale. The material of the majority of surviving examples are iron, but there are rare bronze ones too. Besides the shapes shown here, there are multi-spiked globular examples corroborating pictures in manuscripts. These were evidently fitted with wooden shafts.





first century AD the empire's residents called it 'Rômania'. The adjectives for that were *Rômaikos* and *Rômios*, and to this day, descendants of the Greek-speaking population which had continued in Ionia, the portion of Anatolia bordering the Aegean Sea, who were expelled by the Turks in the early twentieth century, still call themselves 'Romiosi'. So what is 'Byzantine'? Properly used, it should refer to anything pertaining to the City of Vyzantion, and that is the manner in which it will be used in this volume.

### Historical background

The sack of the city of Rome in the fifth century happened largely because Old Rome and the western provinces had increasingly become seen as no longer at the core of the political and economic life of the empire since Constantine I designated an ancient Greek city in Thrace as the new capital in 330 AD, and renamed it the City of Constantine (Kônstantinopolis). The rulers of the Roman Empire were never content to wave the West goodbye. Roman forces fought to recover and hold Italy for the empire with varying degrees of success right through to the late twelfth century. The most determined and successful effort to recover imperial territory was under Justinian I (528–65). From the late sixth century to the end of the ninth century the concerns of the rulers were rather more pressing and closer to home. After Justinian, the ancient rivalry with Persia dominated military matters until it was conclusively settled with the destruction of the Sassanian Empire by Emperor Herakleios in 629. Along the way one of the most important monuments of Roman military literature was created around 602, the *Stratêgikon*, sometimes attributed to the emperor and successful general Maurikios. The *Stratêgikon* was to remain influential right through the middle Byzantine period. The rejoicing was short lived, however, as a new wave of northern barbarians culminated in the Avars besieging the capital itself in 628. The fourth-century walls were more than enough to deter them, although the residents of Konstantinopolis themselves were of the opinion that the Virgin Mary, whose likeness had been paraded about the walls, deserved the credit. At about the same time a much more serious threat arose in the East with the advent of Islam. These newly proselytized Warriors of God conquered the southern and eastern provinces in a remarkably short time. It is commonly accepted that resistance in these areas was undermined by widespread disaffection prompted by religious policies emanating from Constantinople, which had tried to impose centralized Orthodoxy on a region that had very diverse traditions of Christianity, as well as substantial enclaves of older religions. Muslim successes led to them mounting repeated sieges of the city between 668 and 677. Again, the walls of Theodosios were more than equal to the task, but could not have remained so indefinitely against

A far-from-comprehensive sample of sword fittings shown in pictorial sources.

1: tenth century (ivory triptych, Hermitage). 2–5: early eleventh century (*Menologion of Basil II*).

6: later eleventh century (Dafnê Monastery, Chios). Blade forms include pillow section (4) and fullered with grooves ranging from narrow (1), medium (6) to broad (2, 3, 5). (2) and (3) have sleeves which encircle the mouth of the scabbard when sheathed. Other eleventh-century pictures also show what may be either a tassel or lanyard attached to the pommel (6) or at the join between grip and pommel.



continuing assaults. This prospect was forestalled by the schism in Islam and ensuing civil war that created the division between Sunni and Shi'a, and ended the first Muslim expansion into Anatolia.

No sooner had stable borders been established with Islam than the empire was racked internally by an argument over whether the use of religious icons constituted idolatry. The seriousness with which Eastern Orthodoxy of the time took such religious debates, and the fact that the emperor had a crucial role at the centre of the church, meant that for a century the empire was violently divided against itself, body and soul. At the end of the ninth century the issue was resolved in favour of icons, and a period of stability and restoration ensued under the Macedonian emperors.

Emperor Leo VI reformed the legal system. More significantly for our interest, he revived the study of military science at the highest levels. It is evident, despite the disruptions of the preceding century, that the development of new military techniques and adaptation to new circumstances had continued. Leo's contribution was to have these recorded and codified for the first time since the *Stratêgikon*. Leo's *Taktika* preserves those portions of the *Stratêgikon* that were still relevant, and adds the new developments, including the first mention of lamellar armour. Leo was succeeded by his son, Kônstantinos VII 'Born in the Purple' (PorphYROgennêtos). Constantine Porphyrogennêtos continued his father's literary activities, but on the military side his contribution is confined to a manual on imperial participation in military expeditions, which tells us much about the imperial encampment and arrangements, but nothing about ordinary soldiery.

The third quarter of the tenth century was an erratic period for imperial administration, but an important one for this study. Two generals who had proved themselves under Constantine VII undertook to write military manuals. The more significant of these was Nikêforos Fôkas, who had a short period on the imperial throne between 963 and 969. His manual, *A Composition on Warfare*, (more commonly known by a modern Latin title,

The wide plains of central Anatolia were excellent terrain for cavalry operations, as may be seen in this picture. The building in the distance is Sari Han, a lightly fortified caravansarai built by the Seljuk Turks following the example of the way stations maintained to serve the imperial post. (Author's photograph)





*Praecepta Militaria*) also shows a combination of continuities with and revisions of what has gone before, which tell us much of both his knowledge and his pragmatic experience. The *Taktika* of the second of these later tenth-century generals, Nikêforos Ouranos, owes a great deal to the *Composition on Warfare*, but also shows the benefit of Ouranos' campaign experience.

Throughout late antiquity and the earlier Middle Ages the primary cultural influences on the empire came from the east, especially from Persia, despite the wars, and the destruction of the Sassanian Empire, and despite Iran's incorporation into the new Muslim caliphate. The extent of these influences cannot be underestimated, taking in religion, diverse aspects of everyday life, especially clothing, and also military matters.

In 975 Basil II took the imperial throne. Basil was a man with austere personal habits, who ruled with consistency and firmness. Over the course of 50 years on the Golden Throne he stabilized imperial administration and campaigned effectively to expand the empire's borders to the greatest extent they had achieved since the seventh century. Basil was not an innovator by any means. His contribution was to consolidate, and to implement more consistently policies and practices developed or codified in the earlier tenth century. Basil was unfortunately followed by a series of much less effective rulers who ultimately squandered all of his gains and more. Initially events were merely mixed. Large areas of Sicily were wrested from Muslim control, and the Armenian homeland was brought back under imperial sovereignty. In contrast, territory in Italy, recovered for the Roman Empire by Justinian's campaigns, was gradually whittled away by encroachments of the Normans, who went on to take the newly recovered Sicilian possessions, and then turned their greedy eyes towards Greece. There were similar gradual losses in the East, including Antiokheia (modern Antioch) and Armenian Kilikia. The lowest point was the 'Terrible Day', the disastrous defeat at the battle of Manzikert, which resulted in the loss of the majority of Anatolia to the Seljuk Turks in 1071. Shattering as the defeat at Manzikert was, the empire might still have held its core territories but for almost a decade of civil wars in which rivals contended for the throne.

Art and archaeology have provided ample evidence for arrowheads of this era. A sample is reproduced here. (1) and (2) were used for hunting terrestrial game and other soft targets, while (3) was used for shooting birds on the wing. The conical pile (4), heavy diamond section (5 and 6) and triangular heads (7) are those with the most military utility. For mounted use, arrows were carried in a full-length cylindrical quiver with the points upwards. (Author's photograph)



The civil wars were eventually won in 1081 by another competent general, Alexios Komnēnos, and only just in time, as the Normans set their sights on richer pickings in the Balkans. The civil wars had left the empire impoverished and its army in disarray. Nor were the divisions in the aristocracy really eliminated, yet Alexios was able to fend off the Normans and consolidate his power – and, again, only just in time as the armies of the crusade arrived on the borders of the empire. Happily, Alexios proved up to the challenge, moving them on towards Syria, and on the way making good use of them to recover Nikaia for the empire, and extracting a pledge that they would return another recent loss, the city of Antioch, to the control of Constantinople. Until 1118 Alexios continued his work to stabilize the empire both militarily and organizationally.

Alexios' two successors both proved also to be reasonably effective rulers and competent military commanders. Building upon the stability created by his father, Iōannēs (John) II set out to recover lost ground, especially to the East. He regained control of Kilikia, and forced the multi-ethnic, Frankish-ruled Principality of Antioch to honour its pledge of allegiance to Kōnstantinopolis. Iōannēs also seems to have reformed the life of the court, and we can only speculate about how much more he might have achieved had he not died prematurely of septicaemia from an accidental arrow wound.

Manuelos Komnēnos set out to carry on the good work of his predecessors, but had somewhat mixed results. His early attempt to continue advances in the East by attacking the Seljuk sultanate based in Ikonion (Konya) failed, and there were renewed problems with Western armies travelling East to join the Crusades. After this, Manuelos turned his attention to the West and the recovery of territory in Italy. This achieved Roman control of Bari and much of Apulia by 1156, but unfortunately political incompetence by the expeditionary force's commander, which alienated allies, meant that these gains were short lived. Activities in the northern Balkans proved to be rather more successful, culminating in a major victory over the Hungarians at Semlin in 1167. Manuelos is said to have introduced western practices to the army, especially to the cavalry.

The political situation of the empire became increasingly difficult as the twelfth century advanced. Assorted western entities were growing in power. These included the 'Holy Roman Empire' and the maritime Italian city-states. The growth of the Italian cities – Pisa, Genoa and especially Constantinople's old colony, Venice – was particularly problematical, for they steadily nibbled away the empire's greatest source of wealth – trade, especially in high value exotic goods such as silk and spices. The emperors tried to use time-honoured military/diplomatic tactics of playing one off against the other. Unfortunately the only way this could be done was by the granting of trade concessions, which only had the result of further reducing Roman revenues from trade and customs duties. Late in his reign Manuelos tried another direction, stripping various Italians of their trading rights and expelling them from the city. This proved in the long term to be even more counterproductive, leading the Italians to redouble their efforts and scheming to strip away Roman trade and possessions in the Balkans. The ultimate expression of this was Venice's hijack of the Fourth Crusade to sack Zara and then Constantinople in 1204.

The empire's tendency to look to the East for its models of cultural sophistication had declined in the late eleventh century. The cultural and intellectual vigour that had characterized the Arab realm in the early centuries of the Islamic era had faded, and al-Islamiyya had much less novelty to offer.





The rise of the West and the great movements of crusade and trade meant that some of the need for novelty began to be satisfied from that direction as the twelfth century progressed, although the majority of cultural transmission was still from Rômania to the West.

The last 20 years leading up to the Fourth Crusade was a tragic period. The dynasty of the Komnênnoi petered out with two emperors who only lasted three years each, and achieved nothing beneficial. The rulers of the Angelos family who followed fared little better, as the political elite of the empire was riven with dissension about how to deal with the western powers and threats. In the Roman Empire such dissension was never merely a matter of debate, but of coups, counter-coups and spontaneous civil and military unrest. Thus the elite of the empire proved incapable of forestalling the machinations of the Venetians, nor of resisting effectively once the armies of the Fourth Crusade had been diverted against the Queen of Cities.

### **The military background**

The fully professional armies of early Rome were long gone by the beginning of the middle Byzantine era. There were still professional units based in the capital and major cities, but now the majority of any major expeditionary army was composed of part-time troops whose families held agricultural land in exchange for military service, further augmented by temporary levies and mercenaries.

The Roman army in the earlier period had been the infantry. Cavalry had been the province of foreign auxiliaries to begin with, and even when better established had only very specific and limited roles. Towards the end of Late Antiquity the empire faced new threats, and the army confronted unfamiliar military methods. Primary amongst these was the increased use of cavalry amongst Rome's enemies, and not just any cavalry, but heavily armoured horsemen riding armoured horses equipped with stirrups. The army lost no time in fully matching these eastern cavalry techniques. The Roman adoption of the stirrup in the later sixth century dramatically changed the balance of

A large garrison fortress guarding the north end of the Bosphoros, probably built in the Komnenian era. Its large size in part shows the greater economic strength of the empire in this period, but the expanse of its interior also suggests it may have been a major base for cavalry operations.  
(Author's photograph)

effectiveness in the forces, making the cavalry the pre-eminent offensive arm in the open battlefield. Even before this, the Romans had been fielding more heavily armoured horsemen riding armoured horses, as is shown by the lamellar horse's chest-piece from Dura Europos. In the wake of this, the infantry in the field became more of a moving fortress that often served to provide a solid base for the swifter striking of the mounted arm. It also made an essential focus for enemy action, for, of course, Roman cavalry was no less amorphous and capable of evading countermeasures than that of any other nation. In principle, the infantry retained the same capacity for offensive action it had always had, but the situations in which that offensive capability could be applied were fewer than they had been. Along with such cavalry methods, the Romans also enthusiastically adopted eastern archery techniques, to such a degree that the author of the *Stratêgikon* could speak of the thumb draw, devised originally by the nomadic horse-tribes for mounted use, as being the 'Roman draw', in contrast to the three-fingered draw of the Persians. From this time, as much was expected of Roman horse archers as of those of the nomads.

The recovery from the so-called 'Dark Age', which began in the eighth century, led the Roman army to re-acquaint itself with two ancient, oriental forms of armour – scale and lamellar. Both are made of plates of solid material, which may be metal, horn or leather and which may be of very similar size, shape and form. The consistent difference between them in our period is that scales were fastened to a single substrate, a garment of cloth or leather and overlapped downward, while lamellae were first fastened together in rows and then tied together, normally overlapping upwards. Like mail, these armour pieces with their numerous, but modestly sized identical components had the advantage of being amenable to small-scale production units. Unlike mail, they both offered much higher levels of protection. The manuals of the beginning of the tenth century do not make much distinction between infantry and cavalry armour, but the status of the cavalry as the elite arm meant that they had first claim on these superior forms of defence, and this is explicitly acknowledged in the later tenth-century manuals. The combination of lightness, flexibility and relative cheapness of lamellar made of hide allowed the Roman army to embrace the practice of armouring the horses. This made for another leap in the cavalry's effectiveness, as they

## A

### THE PRESS OF BATTLE

The success of any army on campaign hinges upon the effective coordination of its various component parts. In the case of the Roman army of the middle Byzantine era this meant not only coordinating cavalry with infantry, but ensuring that the specialized components of each of these arms worked well together. The speed of the cavalry arm and the fluidity of its engagements made this all the more critical. The medium weight unit called *koursôres* had a particularly diverse and important role in this respect. *Koursôres* had to be well enough equipped to be capable of engaging in direct hand-to-hand combat with opposing cavalry and smaller, less ordered groups of infantry, and yet had to be light and agile to operate flexibly over considerable distances and diverse terrain. Hence, mail was the most common armour for such troops, with scale as an alternative. When functioning as *defensores*, as shown in this plate at right, it was their job to cover the retreat of other units as they returned to base. Here they ride out to repel enemy horsemen pursuing lightly armoured archers, who are returning to cover behind an infantry block in order to restock their ammunition. The openings in an infantry formation, like the gates in a fortified camp, were choke points where things could go seriously awry, with units coming and going simultaneously. Pragmatically, it seems likely that troops would keep to the right when passing in such situations.





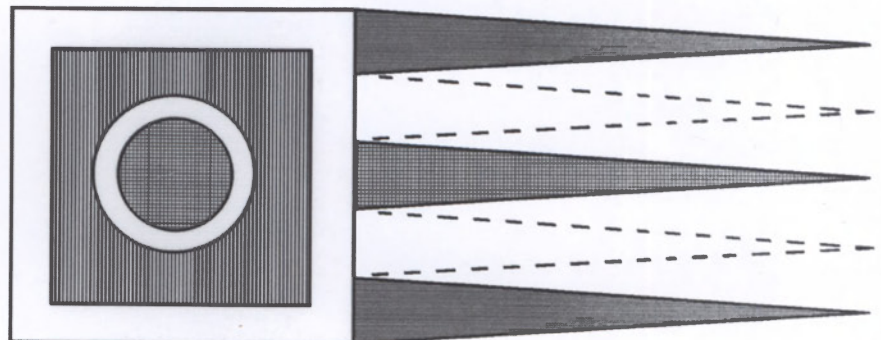


were able to commit themselves to attacking more solid enemy formations and more sustained close-quarters combat with greater confidence than before. The eleventh and twelfth centuries were a period of economic growth, and evidence suggests that this meant that across the period the army had a tendency to be somewhat better equipped than hitherto. Of course war is a voracious beast, and there are notable exceptions to this tendency, as in 1081 when Alexios Komnēnos was obliged to requisition civilian clothing to make fake surcoats in order to conceal his troops' lack of real armour. The Fourth Crusade, the consequential Latin occupation of Kōnstantinopolis lasting almost 60 years and the permanent impoverishment of the empire radically interrupted the culture of the army as much as any area of life. As one illustration, lamellar was never again seen amongst the equipment of the Roman Army.

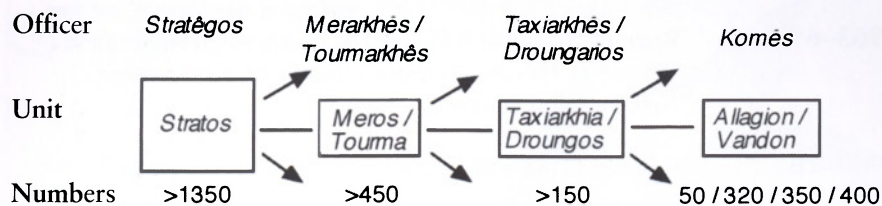
### Force structure and ranks

The *tagma* or *stratos* was any expeditionary force. Its size was determined by the nature of the campaign traded off against the economic and logistical constraints on the manpower that could be raised. It was commanded by a *stratēgos* or general. The subdivisions of the cavalry seem all to have been done by threes. Thus a *tagma* was divided into three *tourmai* or *merē*, each commanded, unsurprisingly, by a *tourmarkhēs* or *merarkhos*. Each *tourma* was split into three *droungoi* or *moirai*, led by a *droungarios* or *moirarkhos*. Below him were three *komētes* (counts), each commanding a 'banner' (*vandon*) which in the cavalry was also called *allagion*. The size of equestrian units could vary much more than that of the foot soldiers. The basic *allagion* was 50-strong, and this was apparently considered normal, but some, notably the imperial and Thracian *allagia*, could number up to 400. At the basic level, then, the units were built on *allagia* of 50, a *droungos* of 150, a *tourma* of 450 and the *tagma* of 1,350. As the larger *allagia* were, it seems, uncommon, the upper limit was probably much less than the 10,800 that such multiplications would suggest. Nikēforos Fōkas stated that 5,000 cavalry and the aid of God were all a general needed. The equestrian battle line was conventionally much like the infantry block, being 100 men wide and five lines deep, and subdivided with the same sequence of junior officers – *kentarkhoi* (the old centurion), *pentakontarkhoi* (commander of 50), *dekarkhoi* (leader of 10) and *pentarkhoi* (head of five). These officers seem to have been appointed ad hoc, although presumably the *kentarkhos* and *pentarkhos* of each line of battle were the *komētes* of the two *allagia* that made up that line. Maintaining time-honoured practice, the primary functional unit of the cavalry expeditionary army was the unit of two troopers plus groom/servant who shared a tent.

The standard form of the middle-Byzantine military banner. The body represented the *meros* or *tourma* and carried some simple, often geometric emblem. The tails were then colour-coded for each subunit. The two outer tails probably represented the *droungos*, and then the tails between (sometimes as many as five in especially large armies) bore a unique combination of colours for each 'banner' (*vandon*).

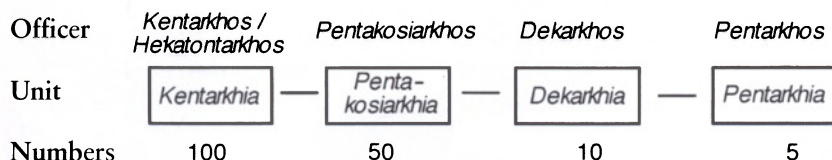


### Permanent organizational divisions



A summary of the force structure of a cavalry army of this period. The upper structure is the permanent organizational structure, while the lower is the system for a battlefield array.

### Temporary battlefield divisions



The general staff had a full range of functionary ranks. *Mandatôres* carried the orders down the chain of command. *Minsôres* or *minsouratôres* were surveyors who went ahead of the marching army to lay out the camp. There were also banner bearers (*vandoforoi*) and trumpeters (*voukinatores*). Training was supervised by drill-masters called *kampidoktores*, who carried a distinctive baton called the *kampidiktorion*.

## CHRONOLOGY

### Mid-sixth century

The adoption of the stirrup commences the process whereby the cavalry becomes established as the premier offensive segment of the Roman army. The *Stratêgikon* of Maurikios/Urbikios (c. 602) embodies the completion of this process.

628

Avars besiege Constantinople.

633–50

Loss of Roman possessions in Syria and Egypt.

668–77

Repeated Muslim sieges of Constantinople.

886–912

Leôn VI ('Leo the Wise'/*Sophos*).

c. 895

Composition of the *Taktika* of Leôn.

913–59

Kônstantinos VII ('Born in the purple'/*Porphyrogennêtos*). Kônstantinos VII presided over a veritable imperial publishing industry, including a detailed treatise on imperial military expeditions and an inventory of the *matériel* of the Cyprus expedition.

939

A large expedition is launched with the aim of taking Cyprus back from the Muslims. It is unsuccessful.

c. 950

Likely date for the composition of the *Syllogê Taktikôn*.



959–63	Reign of Rômanos II.
963–69	Reign of Nikêforos II Fôkas. The <i>Composition on Warfare</i> ( <i>Praecepta Militaria</i> ) appears to have been written while Nikêforos was emperor.
969–76	Reign of Iôannês I Tzimiskês.
976–1025	Reign of Basil II (later called ‘the Bulgar-slayer’/ <i>Bulgaroktonos</i> ), sole emperor.
999–1007	Nikêforos Ouranos serves as governor of the province of Antiokheia (Antioch) in Syria. His <i>Taktika</i> was composed during this period.
1014	Basil crushes the forces of the Bulgarian kingdom at the battle of Kleidôn. Bulgaria never again poses any serious threat to the empire.
1020s	First Norman incursions into Roman territory in southern Italy.
1025–28	Reign of Kônstantinos VIII (‘Born in the purple’/ <i>Porphyrogennêtos</i> ).
1028–34	Reign of Rômanos III Argyros.
1034–41	Mikhailos IV (‘the Paphlagonian’/ <i>Paphlagonos</i> ).
1038–43	Eastern Sicily recovered from Muslim control. Shortly afterwards it is lost again to Norman encroachment.
1042	Zôê (‘Born in the purple’/ <i>Porphyrogennêta</i> ).
1042–54	Reign of Kônstantinos IX (‘the Duellist’/ <i>Monomakhos</i> ). How this emperor got his nickname is a mystery, for he had no particular martial talent.
1045	Armenian heartland re-incorporated into the empire.
1052	Edessa and surrounding region re-incorporated into the empire.
1055–56	Reign of Theodôra (‘Born in the purple’/ <i>Porphyrogennêta</i> ).
1056–57	Reign of Mikhailos VI Bringas.
1057–59	Reign of Isaakios I Komnênos.
1059–67	Reign of Kônstantinos X Doukas.
1070s	Norman expansion begins to encroach on Roman territory in the Balkans.

The Eastern Roman Empire c. 1025  
with later eleventh century additions



1067–71

Reign of Rōmanos IV Diogenēs.

The Roman Empire around the middle of the eleventh century – at its greatest extent during the Middle Ages.

1071

Roman army severely defeated by the Seljuk Turks at Manzikert due to divisions in command. Rōmanos IV Diogenēs captured and killed shortly after. This defeat resulted in the permanent loss of most of the empire's Anatolian territory. Normans capture Bari, the last Roman outpost in Italy.

1071–78

Reign of Mikhaïlos VII Doukas. Mikhaïlos VII attempted to curb Norman incursions by diplomatic methods, particularly by a marriage alliance.

1078–81

Reign of Nikēforos III Botaneiatēs. During Botaneiatēs' reign the Normans resume their encroachments onto the Greek islands.

1081–1118

Reign of Alexios I Komnēnos. Alexios triumphed after a period of civil war that severely damaged the army, and led to a dramatic increase in the use of foreign mercenaries in preference to regular Roman troops.

1081

An army led by Alexios I is defeated by Normans at Dyrrakhion.

1098

The armies of the First Crusade arrive at Constantinople. Alexios hastens them across the Bosforos into Anatolia and sends them to recapture Nikaia from the Turks. Roman forces pre-empt the storming of the city by the crusaders by taking the



Nikaian surrender directly. This causes considerable resentment amongst the westerners, and is used as a pretext for repudiating agreements they had made, notably to return Antiokheia to the control of Kōnstantinopolis.

- 1118–43      Reign of Iōannēs II Komnēnos. Iōannēs sets out to continue the work of stabilization and reconquest begun by his father. He is noted for his equestrian skill.
- 1138      Iōannēs II leads a large army to the East, re-asserting Vyzantion's suzerainty over Armenian Kilikia and the crusader principality of Antioch. During this expedition nobles of the Constantinopolitan court compete against those of Antioch in the first recorded tournament in the East.
- 1143      John dies of septicaemia resulting from a wound from his own arrows whilst out hunting during a campaign.
- 1143–80      Reign of Manuelos I Komnēnos. Manuelos continues his father's generally effective campaigning in both the East and West, and is credited with westernizing the military methods used by the army, particularly encouraging western equipment for the cavalry. Manuelos enters into an alliance with the German 'Holy Roman Empire' against the Hohenstaufen kingdom of Sicily and Italy.
- 1147      Launching of the Second Crusade.
- 1148      Normans begin to permanently occupy territory on the Greek mainland.
- 1153–56      Imperial troops attempt to regain control of southern Italy. Initially successful, the campaign ends with defeat at Brindisi.
- 1156      Kilikian Armenians under T'oros rebel against imperial rule.
- 1158      Manuelos brings rebellious Kilikia back under the control of Kōnstantinopolis.
- 1159      In the wake of the end of the rebellion in Kilikia, Reynald de Chatillon, Prince of Antiokheia, makes submission to the emperor, who enters the city in triumph.
- 1176      Turks inflict a severe defeat on the Roman army at Myriokefalon. This ends attempts to recover the Anatolian losses of the battle of Manzikert.
- 1180–83      Reign of Alexios II Komnēnos.
- 1182      Some Western residents of Kōnstantinopolis are massacred in a riot that may have imperial backing.

- 1182–85      Reign of Andronikos I Komnēnos. He tries to reform the bureaucracy and reduce the influence of the great families and of westerners. His repressive measures alienate the aristocracy and then the populace, leading to his overthrow.
- 1184      Andronikos makes an alliance with Sala'ad-din, which would have partitioned the Levant between the empire and the Ayyubid sultanate.
- 1185–95      First reign of Isaakios II Angelos. Isaakios and his son Alexios III have no ability for, nor inclination towards, administration, and preside over a regime of excess and dissolution which further weakens the empire.
- 1195–1203      Reign of Alexios III Angelos. Friction and violence between the natives and western residents within the empire increase.
- 1203–04      Second reign of Isaakios II (his co-emperor is Alexios IV). Isaakios II is reinstated by western intervention, but the demands of the foreigners offend the populace, who reject these rulers and elevate the anti-western Alexios Mourtzouphlos.
- 1204      Reign of Alexios V Mourtzouphlos. The empire is now too weak to make any serious resistance to western forces and falls to the hijacked Fourth Crusade in August.

## RECRUITMENT

The Roman army of the middle Byzantine era necessarily drew upon a wide diversity in sources of manpower. For the cavalry arm, while this observation was true ethnically, the class composition was inevitably more restricted. Certain considerations mentioned in the manuals are timeless. Only the best physical specimens were to be preferred, and none older than 40 years of age. Recruits ought also, as far as could be determined, to be of good character and honest.

At the beginning of the tenth century the thematic forces that made up the bulk of the army were drawn from a pool of families who held *strateia*, that is, who owed military service in connection with tenure of land. While some infantry was probably derived from this source, it was overwhelmingly true for the cavalry. Fundamentally, this was because a cavalryman was expected to bring equestrian skills and experience to his term of service, and to maintain those skills between campaigns by his own means. He therefore had to maintain a mount, something which always required a significant agricultural surplus, as well as using time spared from labour on the land. *Strateia* service was hereditary, passing from one individual to another within a family. Such men were recorded on the *adnoumia*, or muster rolls, maintained by the provincial commander. In addition to age or infirmity, serious crimes were cause for the registered man to be struck off the roll. In such a case, his obligation would be transferred, in the first instance to another suitable member of his (extended) family, or if no such person was available, it would be commuted to a monetary payment, or temporarily or



permanently assigned elsewhere. Similarly, the *strateia* would be reassigned where such a family died out. Where possible, an empty *strateia* would be transferred to a stratiotic household who had gained members who could discharge the service. Otherwise, it would be assigned to another capable local family, either voluntarily or by imposition. Another option exercised from the capital was to resettle areas where there was a quantity of stratiotic lands in need of tenancy. Such settlers could be drawn from other areas within the empire, a policy that was sometimes used to alleviate overpopulation, and at others to forestall potential dissension. Resettlement was repeatedly imposed upon segments of the Armenian population for this reason. Other settlers were immigrants to the empire, such as the Arab tribe called Banu Habib who were taken in by Constantine VII, and Saxon families who fled to the empire after the Norman conquest of England. Remarkably, one last category of settler given stratiotic lands comprised prisoners of war; presumably their obligations were to be discharged in some manner that would not compromise operational security. Various authorities stipulated the value of land sufficient for a *strateia*. Nikêforos II decreed a minimum of an estate worth 16 pounds of gold, or 1,152 nomismata, in order to maintain one of his heavy *katafraktoi*. The current estimate is that such a property would have been worked by something in the vicinity of 30 families. The lighter types of horsemen were expected to have lands worth no less than about half that, and so tenants of 15 or so families. In addition to providing mounts, money and supplies, such estates must also have offered a pool of experienced manpower which might be drawn upon for support roles such as grooms, horse-doctors or baggage-beast handlers. In addition to cases of incapacity, as noted above, there was an increasing tendency through the later tenth and eleventh centuries for *strateia* obligations to be commuted into a cash equivalent; this was added to military tax revenues to fund more reliable tagmatic units or to hire mercenaries.

The sources of recruits for the standing tagmatic units were equally various. Just as in many another societies right up to today, military service must have been an attractive option for males who found themselves short of prospects. Even then, such men must have come from a more affluent social background, one that had afforded early equestrian experience, although perhaps exceptional determination and talent would have served the advancement of some from less privileged sectors of society. In the countryside, tagmatic recruitment was not so much a matter of the 'younger son syndrome' seen in the West, since inheritance of land within the empire was partitive rather than singly by primogeniture, so it must have been more a matter of choice on one hand, or dire necessity in some cases where partitive inheritance would render a farm too small to be viable. Tagmatic forces were also composed to some degree of foreign troops. It is not entirely appropriate to characterize these as 'mercenaries', since at this time such foreigners were incorporated into the Roman army's established structure and methods, rather than forming their own units, and undertook longer-term service. A better modern comparison might be the Gurkhas in the British Army, since the foreigners serving in the imperial army likewise often came from places with a long-standing and quasi-colonial relationship with Constantinople. Examples of this include, again, the Armenians, and also Georgians, Bulgarians and southern Rus'.

Just which of the three arms of the cavalry (archers, *koursôres* or *katafraktoi*) a rider joined would depend, all other things being equal, upon what gear the man brought with him to the muster. The other prime factor was, of course, his

skills and aptitudes. It must be presumed that intelligent officers would rate this more highly than gear when assigning troops, using official supply to remedy equipment deficiencies for men who showed particular courage and ability for the hand-to-hand combat roles. Men would also be assigned, and transferred while on campaign, in order to achieve an optimum balance of forces.

Soldiery was not all the army needed, of course. There was also the support staff – muleteers, wagoners, doctors for man and horse, and each pair of ‘spear companions’ had a man to serve as servant and groom. With many of these men requiring less specific skill or experience, the net could be cast much wider. For thematic expeditions, such ancillary manpower would have been levied from amongst the local population. Often, particularly for the cavalry, these functions must have been filled by youths or boys from stratiotic households who were too young to take up full military duties, or those who could be spared from tenant families, as has been noted.

## CONDITIONS OF SERVICE

The Roman forces of this era, both cavalry and infantry, were divided into two broad categories – part time and full time. The part-time troops consisted of men who belonged to families that held military lands, or *strateia*, and therefore were obliged to keep in regular training, acquire and maintain some or all of their own equipment, and muster at the first call-up. Full-time troops were those standing units maintained primarily in the capital, and smaller units based in large provincial administrative centres.

Men discharging *strateia* obligations, or *strateiomenoi*, were expected to maintain their skills by training between campaigns. The local *stratêgos* had the responsibility of supervising the ongoing training of troops on the muster lists, so presumably from time to time he would assemble the enrolled troops to revise their drills and assess their skills. *Strateiomenoi* were also required to serve for longer periods and farther afield than the infantry levies once a campaign was launched. At earlier stages, or when the expeditionary force was campaigning nearby, the estate bearing the *strateia* was expected to furnish some supplies for the man discharging the service and his mount. Thereafter, and farther afield, the troops were sustained by forage and requisitioned supplies. Roman armies of this era did not normally campaign over winter, so the *strateiomenoi* enjoyed a standard demobilization of at least three months for the low season.

Troops recruited from a given locality were grouped together in common units. This was in part to ensure that they had things in common to bind them together through the privations of service, and partly to reduce the potential for infiltration by spies and saboteurs. The cavalry equivalent of the infantry *kontouvernion* was a pair of cavalymen who shared a tent and assistance of a servant/groom, an arrangement called ‘spear companions’. When they came from the same village the troopers may well have already made an alliance prior to call-up and brought a familiar servant with them.

While officers sometimes had the benefit of campbeds, the common soldier presumably laid his bedding out on the ground in the manner of these pilgrims in the courtyard of a shrine. The motif of three unequal stripes is typical of such domestic textiles. Ordinary soldiers’ bedding must have been very similar. (Monastery of Dionysiou, Mount Athos)





Full-time troops formed the defensive garrisons of major towns, and a larger force was stationed in the capital. As well as being on hand in preparation for sudden attacks, an important role for these garrison forces must have been to form a nucleus of well-trained and drilled troops to pass on a standard of performance to the *strateiomenoi* and levies once they were mobilized. As professional soldiery with no other means of support, they were maintained by the state, although if they served elsewhere they might well have brought equipment of their own, and in any case would be sure to upgrade their gear whenever they were able, even if they had been initially equipped at state expense.

Unlike the early imperial era when a set period of service was expected, in this period the term of service seems to have been very pragmatic for both full-time soldiers and *strateiomenoi*. Men served as long as they were fit for duty, and sometimes even longer by accident, for the manuals mention the need to review the muster rolls from time to time in order to weed out men who were no longer in a position to serve, as well as to add new recruits.

All troops received some payment for their service in addition to their maintenance. There seems to have been a common tendency for pay for long-term enrolled troops to be very irregular, as witnessed by outbreaks of unrest when pay was not forthcoming, and Constantine VII's attempt to set it on a four-year cycle. On special occasions, however, pay could be much more regular and frequent. The expedition to Crete in 949 paid one (gold) nomisma per month for four months to each ordinary soldier, apparently without distinction between cavalry and infantry, while the cavalry from Thrace and Macedonia got two nomismata.

Discipline was, of course, an essential element of military service, and all the manuals have substantial sections dealing with military laws and penalties. All the offences we would expect are noted: ignoring officers and orders, disobeying orders, and desertion and betrayal to the enemy of plans or cities and fortresses. To these are added the theft, loss or unauthorized disposal of equipment and livestock, neglect of equipment, the theft of public money such as taxes and military levies, and claiming allowances dishonestly.

## B

### MEDICAL SERVICES

With a great reservoir of ancient experience to draw on, the Roman army from the tenth century onwards had medical services that were as well organized as the other aspects of its activities. The knowledge that rescue and care were available is a major factor in encouraging troops to more confident endeavours, and steadying them if the tide of battle begins to turn adversely. Yet the mobility of the cavalry arm made the provision of such services both easier and more difficult than for the infantry. Where the battle was conducted with primarily cavalry forces, or with a linear infantry front rather than in a square, the field hospital was to be located two kilometres or more behind the front. The less severely wounded horsemen who were still mounted could make their own way to treatment stations, thus easing the burden on the medical corps, but when a cavalryman was unhorsed he was likely to be farther from the field hospital. Hence, the *daipotatoi*, or ambulance men, were supplied with their own mounts for the recovery of fallen horsemen.

The manuals mention that the saddles of these horses were to be fitted with an additional stirrup on the near (left) side to allow the *daipotatos* to mount once he had the wounded man seated. They were also to carry a flask of water to help revive casualties. The field hospitals had, of course, a full staff of doctors and orderlies to tend the men, and presumably also some horse doctors to treat wounded mounts. Doubtless, the difficulty of replacing losses with appropriately trained horses while on campaign meant that they were the beneficiaries of care close to that which the troopers received.







The universal and time-honoured penalty of death was imposed for desertion and treachery. Mutilation, such as the cutting off of nose or ears, were used for serious offenses, while scourging was the basic penalty for many lesser transgressions. This punishment was normally administered by the immediate superior officer of the offender. In certain cases a trooper's immediate superior would also be punished for his fault, such as if a man neglected his arms and armour whilst on leave. The actual quantity of lashes for any offence seems to have been left to custom, or the preferences of the officers concerned. Leo advises against excessive harshness as being likely to contribute to loss of morale and unrest in the ranks. Fines were also imposed for transgressions whose effects were financial. Thus, for example, a man who dishonestly claimed an allowance, such as for mobile service while the army was in winter quarters, was required to pay back twice the amount he had falsely gained.

On the positive side, a man who was honest and competent could look forward to earning promotion, sometimes to quite eminent rank, wherever he may have started. It should be noted, though, that good family connections did ease a man's path into the upper officer class, although this must have been a much more prevalent paradigm in the cavalry, simply by virtue of its being the more glamorous and expensive arm.

### **After service**

The sources are largely silent about what became of surviving soldiers after they left service, but some conclusions can be drawn from peripheral evidence. As noted above, the holders of *strateia* were liable to be called up from their farms for as long as they were physically capable of discharging their duty. Thereafter, they simply stayed at home while a younger or fitter member of the family took on the duty or it was commuted to cash. The circumstances of demobilized tagmatic soldiers was much more diverse. The lack of any set period of service meant that a man might leave the army whilst still in his prime. Men were also, of course, invalided out of the service. Those who left in good health or not wholly disabled must have gone into any of the range of civilian labour roles that they were capable of performing. In the early empire 45 years was the age at which a man became a *senex*, an old man, and marked the point at which he was discharged from the army if he had not yet completed the standard term. Since 40 was the maximum enlistment age recorded in the period of this study, it seems likely that 45 was still the retirement point. Another continuity is that retired tagmatic troops still enjoying good health and having no other ties were settled on vacant military lands, in the hope that they might establish families that would broaden the army's pool of manpower. Men who were discharged as invalids for whatever reason necessarily turned to public or private charity. Religious institutions were the primary agencies for such support, and monasteries must have been the refuge for many disabled or infirm elderly soldiers.

## **BELIEF AND BELONGING**

The sense of identity that was embraced by the citizens of the Eastern Roman Empire can be hard for a modern Western person to understand. It was intimately bound up with religion, yet with an intensity that even medieval Westerners found hard to comprehend. For one thing, the common man of



Rômania felt fully entitled to hold and express opinions on issues of doctrine and theology, in contrast to the Western Christian church's paradigm, where such matters were thrashed out by silk-clad old men behind closed doors and then revealed to a grateful but acquiescent laity. The theologians of the Orthodox church did not particularly approve of popular involvement in theological disputation. The outcome of some church councils was as much determined by cudgels in back alleys as by elevated debate and negotiation in marble halls, and the fourth-century theologian, Gregory of Nyssa, remarked with disgust that a trip to the market or bathhouse could lead to a lecture on some obscure theological topic from such lowly fellows as the bread seller or bathhouse attendant.

The compact made with the god of Christianity by Emperor Constantine at the battle of Milvian Bridge ('In this sign you will conquer') resonated throughout society, and right through the army. Yet the idea that with Constantine's bargain the Roman Empire became the vessel through which Christianity would be most perfectly expressed ultimately acted more to the army's cost than to its advantage. On one hand, there was the idea that if it were the 'chosen realm' then God would defend it, provided its citizens were suitably pious, perhaps even without the need for terrestrial armies. This was good for the cults of military saints and the Holy Virgin, but not necessarily good for army recruitment. The concept of 'proper piety' was also not entirely helpful. The habit of soldiers of assuaging the stress of wartime service with drinking, gambling and fornication runs across cultural boundaries, and presented a constant problem within Orthodox religious parameters. Furthermore, Orthodox Christianity has never had anything like the concept of 'holy war' that was contrived by the Church of Rome to justify crusading and the military-religious orders. One result of this was that homicide remained a sin, even when the victims were non-Christian enemies of church and state. Hence, soldiers in the later Roman army spent much of their campaigning time on penance, however token, for having committed murder. Such penance obviously could not be so exacting as to impair the men's functioning, so it must have been similar to the milder monastic practices of *xerofagia* and *hydroposia*, that is, meals without meat and days without wine. Thus, being a soldier in the Eastern Roman Empire must sometimes have entailed being in a somewhat ideologically conflicting twilight zone, neither fully accepted by society, nor wholly supported by the church. This feeling would be assuaged by the fact that the daily life of the army was punctuated by religious rites designed to ensure that the troops were aware of their important role in God's appointed empire, and would not die in a state of sin.

One of the most important foci for personal spirituality in eastern Christianity has always been warrior-saints, most notably Dêmétrios, George and the two Theodores. Their cults must have had particular resonance for serving soldiers, despite the fact that most of them were martyred for refusing to fight (on behalf of pagan emperors). Warrior-saints are the subject of the most commonly surviving type of less expensive icon, those carved of soapstone, where they are depicted with a degree of contemporary realism that is quite unlike other forms of religious art. This suggests that their devotees felt a degree of affinity with them that was shared with the more remote figures of Jesus or Mary. Warrior-saints are also often found depicted on small, cast bronze crucifixes that survive in some quantity. Such cheap talismanic jewellery must have been a common accessory across the army.

The picture is further complicated by the divergent lifestyles of the tagmatic and thematic armies. The part-time soldiering of the provincial forces must have left them with a direct sense of community – they could see that it was the homes of their families and neighbours they were defending. The nature of the *tagmata* would necessarily have broken this element down, as recruits left their communities across Rômania for the detached microcosm of barracks life in and around Constantinople and major cities. The sense of detachment from the urban civilian community can only have been enhanced by the fact that it fell to units of the army to suppress outbreaks of civil unrest in the capital and major cities. Such rioting was nowhere near as severe nor as brutally repressed in the middle Byzantine period than it had been earlier in the empire, yet still they were sometimes required to slaughter fellow citizens and fellow Christians, who might even have been their neighbours or relatives.

So where did the Roman soldier of the tenth to twelfth centuries find a sense of belonging? Sometimes it undoubtedly lay in shared loyalty to the emperor, at least when he had distinguished himself as a successful military commander – but many were ephemeral and did not do so. Ultimately, for the tagmatic armies especially, the sense of belonging must have fallen upon the institution of the army itself.

## TRAINING

As noted elsewhere, the great bulk of the manpower for the empire's cavalry came from families discharging *strateia*, and commonly supplying both man and mount, with some quantity of gear and supplies. One consequence of this was that men usually arrived, even on their first mobilization, already having the essential equestrian skills, and probably some basic martial training as well. Despite all the changes in technology, the equestrian training precepts of the Hellenistic author Xenophon had remained unchallenged, and, indeed, largely continue to apply today. Xenophon declared that 'nothing serves to make so good a seat as the grip of a bare thigh on a sweaty flank.' The ancient Greek and Persian riding style involved sitting well forward with the legs turned out



### TRAINING

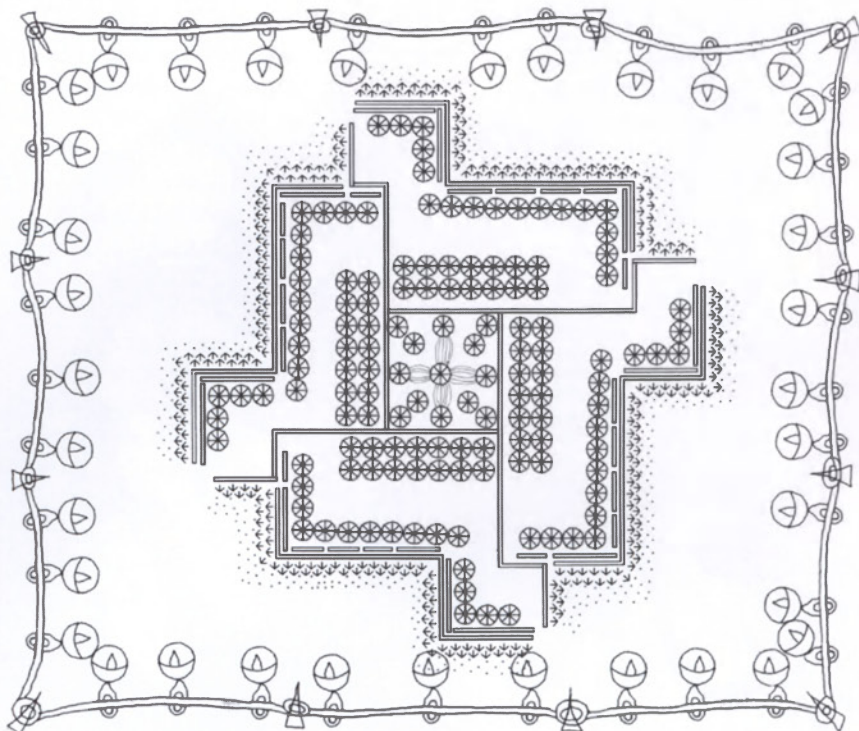
Cavalry recruits were almost always drawn either from families owing cavalry *strateia*, that is to say, an obligation of military service, or from the more affluent sector of society. Hence, they normally arrived with a basic competency in riding and some equestrian skills transferable to military use from activities like hunting and sports such as the javelin game and *tzikanion*, a very popular ball game very much like modern polocrosse. Yet, those skills would need to be polished and extended to refine them for optimum military utility. Coordinated riding in large groups would be a new skill requiring careful drilling. In archery, for example, the Parthian shot (shooting backwards while riding at speed) was an essential military skill, but of much less use in civilian equestrian activities, and so would need extra practice. Similarly, a recruit, however skilled, would need to acclimatize himself to executing all manoeuvres and actions with the extra encumbrance of armour and spare weaponry. Here on the left, a *kampidoktor*, or drill master, conducts an assessment of the archery skill of a recruit, by having him execute the standard exercise of shooting at a shaft, with a *notarios* (secretary) standing in attendance to record any comments. The archer is clad in basic light battlefield kit, while the *kampidoktor* himself wears a dress *epilôrikion* (surcoat) and carries his *kampidiktorion* or staff of office. The precise form of this baton is unknown. The garb of the *notarios* is not much different from civilian dress of the time. An assessment like this would be required to determine where a man's skills and experience would best be used – amongst the archers, the *koursôres* or skirmishers, or in the close press of the *katafraktoi*.







A schematic diagram of the layout of a marching camp according to an eleventh-century manuscript, showing that the old Roman practices continued in use. The grey outer lines represent the ditch. The black inner lines represent the bank. The triangles are caltrops sown between them. The early warning system mentioned in the manuals of bells strung on trip-lines is visible around the outside. The circles are tents. The central cluster is the residence of the commander and his staff. The cavalry were encamped in the middle cluster with the infantry outermost, to make it less likely that a surprise attack would stampede the horses, and to give them time to saddle and arm for a counterattack.



and the feet pointed down to tuck the heels in behind the forelegs. The author can attest to the effectiveness of this riding style, and it continued in use through later periods despite the advent of more substantial legwear, and the adoption of the stirrup within the empire in the late sixth century. (It even survives in the Caucasus today.) In this riding style the stirrups serve primarily as a mounting step (hence the early medieval Greek word for them: *skala* – stair, or ladder) and then, hanging quite loose on the foot, as an emergency aid. As the stirrup became fully integrated into Roman practice, and mounted archery increased in importance, the Central Asian riding style with its shorter stirrups carrying more weight became increasingly common. It allowed shooting over a wider arc, and particularly facilitated the ‘Parthian shot’ in which the archer loosed an arrow directly behind him. Greater contacts with the West from the later tenth century introduced the less-demanding European chivalric riding style with its low seat and legs thrust well forward in long stirrups. By the mid-twelfth century this method was probably dominant for the most heavily armoured horsemen who no longer employed archery, while the necessity for the widest arc of discharge for bow and javelin would have necessitated the lighter cavalry keeping to the higher and more flexible forms of seat.

With the essential equestrian and weapon skills inculcated from an early age, they were maintained during peacetime by a mixture of hunting, and sports such as the skirmish game with blunt javelins or darts known to the early Romans as *hippika gymnasia* and carried on by the Turks right up to modern times as *jirid*. Another very popular sport for honing equestrian skills in a quasi-combat situation was *tzikanion*. Imported from Persia during the early imperial period, *tzikanion* bore a great resemblance to modern ‘polocrosse’ – a leather ball was captured, carried and cast by riders each using a small net on a long stick. *Tzikanion* could be extremely violent – the death of Emperor Alexandros in 913 was attributed to exhaustion after a

particularly vigorous game, while in the thirteenth century Emperor Ióannes Axoukhos fell from his horse and was trampled to death in a match. In the wake of the Crusades, *tzikanion* had a period of popularity in the south of France as '*chicane*', giving rise to the modern expression 'playing chicken'. There must also have been some method for training and practising for the use of the *kontarion*, or lance, and sword, but these were probably done simply by attacking posts set in the ground, as per infantry drills.

Having men arrive at their muster point with these basic skills in hand allowed the *stratêgos* to concentrate on honing the riders' specifically military techniques, and in teaching them to execute familiar actions with the greater speed and precision demanded by battlefield conditions, such as mounting swiftly with the encumbrance of more complete arms and armour than the men may have been accustomed to. The manuals are quite detailed regarding some of these exercises. One exercise recommended by Emperor Leo was follows:

*In shooting from horseback [a horseman should practice] to swiftly loose one or two arrows, and then to put the strung bow away in the case, if it is wide, or otherwise in another half case, to which it fits in a suitable manner. Then he should take up the lance resting on his shoulder, and with the strung bow in its case, brandish the lance. Then [he should] quickly replace it on his shoulder, taking hold of the bow.*

Archery was to be mastered shooting in all directions at all speeds up to the gallop. The lancers were trained in the technique of protecting their mounts' heads and throats with their shields as they passed at a collected canter through the field of hostile archery.

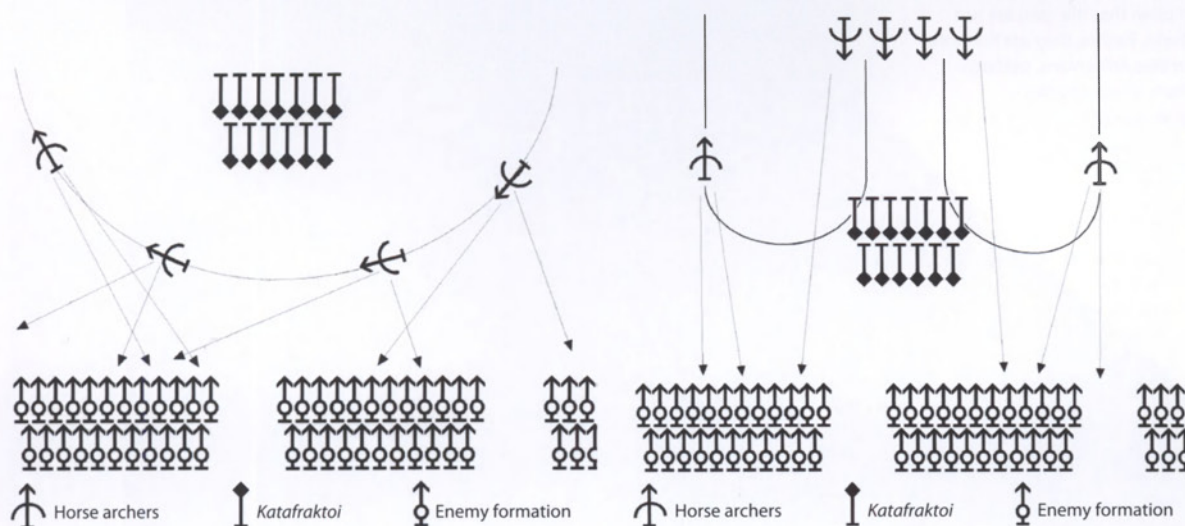
A solitary cavalryman was both ineffective and vulnerable, so the critical training once the troops were assembled was to acquaint them, or re-acquaint them, with the need for discipline and restraint in their riding in order to maintain a cohesive unit. As well as forming the equivalent of the infantry's *kontouvernion*, a pair of men known as 'spear companions' was also the smallest unit of operations for the battlefield. They were to stay together under all circumstances. Recognition of the unit banner and the need to rally to it as the default course of action were also drilled to be second nature.

#### BELOW LEFT

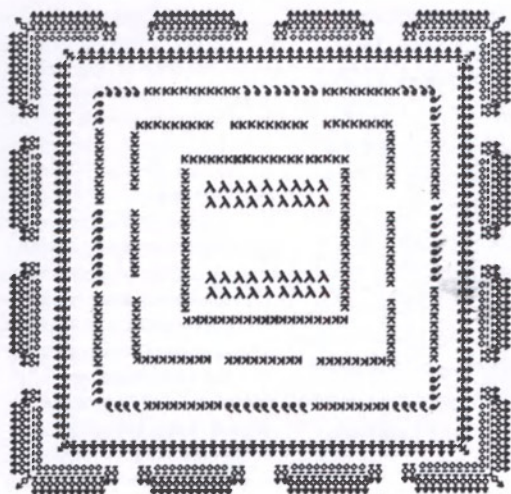
The optimum method for horse archers to attack a static formation. The horsemen can shoot all along the arc of attack, which means that their targets receive missiles from multiple directions, often onto their unshielded side. The archer at the far left is executing the famous, ancient Parthian shot, shooting backward whilst riding away, which Roman horse archers of this period were expected to master as well as any other. The diagram shows how this technique can be used in coordination with a frontal assault by heavy cavalry.

#### BELOW

Another technique for combined cavalry assault. The horse archers shoot over the heads of the *katafraktoi*, aiming to disorder the enemy ranks prior to the heavy cavalry's impact, and then continue to harass the surrounding units using the Parthian shot while turning away, thereby reducing their capacity to reinforce the area struck by the *katafraktoi*.







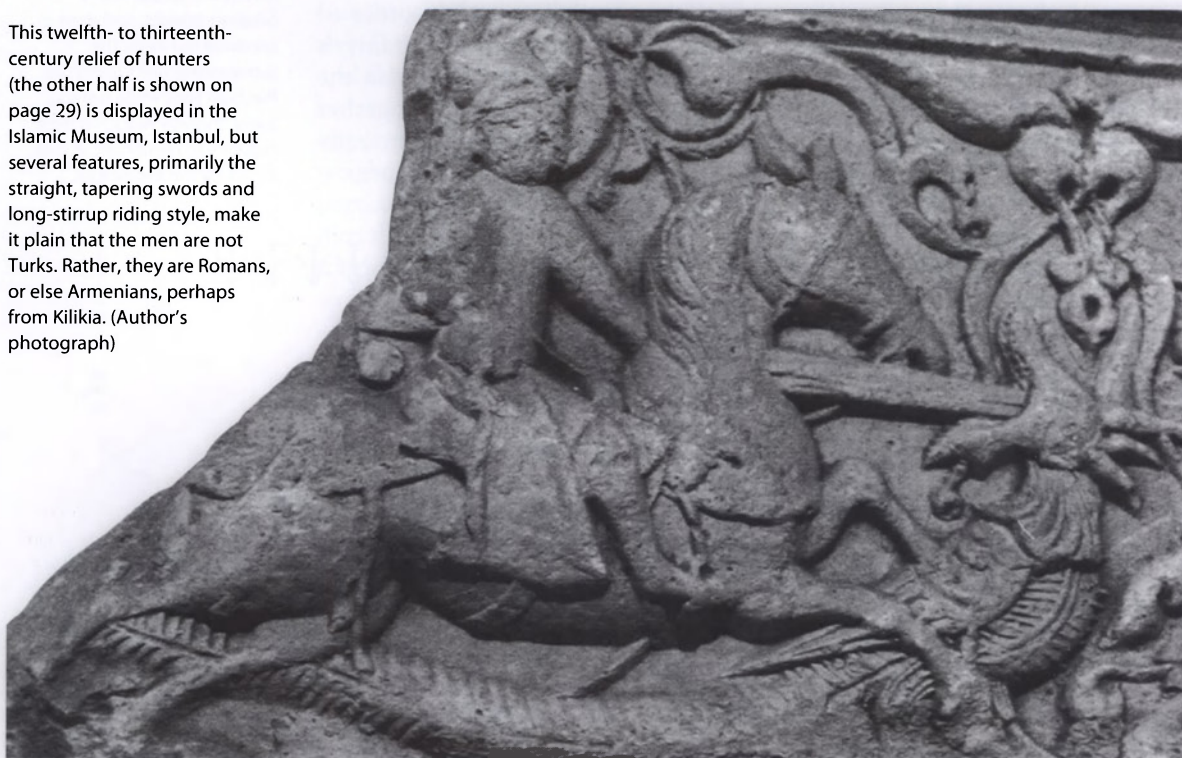
- |             |              |                 |
|-------------|--------------|-----------------|
| ♣ Hoplite   | ⚔ Archer     | ♣ Javeliner     |
| ○ Peltastes | ⚔ Cavalryman | ♣ Baggage train |

Schematic diagram of the square formation from an eleventh-century manuscript. The infantry square forms a human fortification that serves as a base for cavalry operations; they may sally out through any of the intervals.

Commands could be transmitted by various means, and the troops had to be accustomed to recognizing and responding to these in all circumstances. Any substantial group of riders in motion created a significant noise, so verbal commands would only have been used when a unit was immobile. The manuals suggest that there were several different sorts of wind instruments used to deliver different orders. If the men were to move off, a command was given verbally (*Kineson*, 'March' or *Exelte*, 'Head out'), by means of a dip of the standard or by sounding one sort of horn. When a halt was required, the order might be given by striking a shield with a weapon or by means of a trumpet (*voukina*).

Training and exercises did not cease when the expeditionary force took to the road. Manoeuvres were conducted across all sorts of terrain. Leo was more demanding than his predecessors, urging his troops to master operating in more rugged areas. As with the infantry, these exercises included mock battles with practice weapons – spears and arrows without points, and sticks in place of swords and maces. It is possible that the Roman army's habit of holding practice battles may well have contributed to the development of the European tournament. One of the earliest recorded tournaments was an encounter at Antioch between members of the imperial court and the Franco-Norman retinue of the ruler of the Crusader Principality of Antioch, in 1137. Holding such practice battles as public entertainments became quite popular in the capital later in the twelfth century.

This twelfth- to thirteenth-century relief of hunters (the other half is shown on page 29) is displayed in the Islamic Museum, Istanbul, but several features, primarily the straight, tapering swords and long-stirrup riding style, make it plain that the men are not Turks. Rather, they are Romans, or else Armenians, perhaps from Kilikia. (Author's photograph)



## APPEARANCE

The degree to which the earlier Roman army wore anything resembling uniform remains a matter of fierce debate. The evidence for the tenth century does not resolve the issue, for the military manuals have little specific to say about the dress of the troops, but by supplementing them with detail derived from other sources some confident conclusions can be drawn. The *Stratègikon* had recommended 'Avar' garments for the cavalry, which can be taken to mean tunics split in the centre, a feature already shown in the art of Late Antiquity. The manuals are unanimous in recommending that military garments were to hang no lower than the knee, in the manner of labouring men, and in contrast to the dominant civilian fashion for men of higher status to wear tunics to the ankle. The manuals stress that the appearance of the troops should be neat and well presented, observing that, just as in more recent armies, these qualities are bound up inevitably with morale, and hence combat effectiveness. Beyond these considerations, the sources do not clearly suggest a high degree of uniformity in the dress of soldiers. It is likely that it depended upon how much centralized or centrally coordinated supply could be mobilized by the officer organizing a unit. Since the times of the earlier empire there had been intricate rules that governed clothing for civilian men, especially in the court context, and these had increased over the centuries. The effect of these rules was to create blocks of uniform colour and style whenever men of similar rank were gathered together. Hence, it is most likely there was a conspicuous division between provincial thematic units and metropolitan tagmatic corps, with the former tending to diversity, and the latter to uniformity following the example set at court, particularly in view of their occasional involvement in imperial ceremonies.



Hunting has always been one of the most common ways in which a man of the equestrian fraternity maintained his skills when not committed to the battlefield. Hunting lions with hand weapons had a special kudos in the literature and art of Rōmania, just as it did in al-Islamiyya. (Author's photograph)





In addition to fine details of horse furniture, this eleventh-century ivory in the Victoria and Albert Museum shows a practice that is rarely depicted, but which must, in fact, have been the norm – that of hanging the shield from a shoulder strap. (Author's photograph)

The popularly accepted image of tunics in the Eastern Roman Empire is rather stuck in a Late Antique time warp. By the tenth century much had changed. Rather than the shapeless 'Coptic' sacks of Old Rome, a man of Constantinople commonly wore an *esôforion* (shirt) and a *roukhon* (outer tunic) tailored and fitted in quite a sophisticated manner. The neckline was round and close fitting, opening down from the left side of the neck in a style that went back to ancient Persia, and the *esôforion* was finished with a low collar fastened with a small button. The sleeves extended fully over the wrist; the cuffs were close fitting and sometimes had a short opening fastened even more tightly to the wrist with a single button. *Esôforia* were made of linen and were either white or, less often, in pastel shades. Ordinary *roukha* were made of wool or heavier linen. Rich reds and blues predominate in pictorial sources, reflecting the primacy of *kirmis* and indigo dyes.

The late-Roman writer Vegetius had recommended that the 'Pannonian' hat should be worn by soldiers when they were not wearing helmets. The hat of cylindrical appearance which is commonly associated with this term was still in use in the tenth to twelfth century, and more detailed representations of this era show that it was not a true *pyxis* (pillbox) shape but rather a deep round-ended cylinder with the closed end on the head and the open end turned up outside to conceal the crown. A variety of other hats were popular through the period, although none of these had specifically military associations. Doubtless, the thick felt caps which served as helmet linings and turban bases were worn much of the time by troops, as, indeed, must the turbans wrapped directly on the head that were common to civilian fashion.

A number of other fashions known from civilian contexts had military utility as well. The old Roman disdain for the barbarians' trousers had taken on a new lease of life with the adoption of the Persian habit of wearing leggings suspended from the trouser-cord over lighter breeches. By the tenth century, even in civilian use, the leggings could be padded with wool, cotton or even silk floss. This was simply for protection from the cold for civilians, but it would be even more valuable as a supplement to leg protection for soldiers. The likelihood of such leggings, which were originally called *kampotouva* or 'field-hose', being in common military use is confirmed by the fact that even the emperor would wear them as part of his military regalia from time to time. Pictures indicate that *kampotouva* were normally quilted in a diamond pattern, sometimes with a small motif in the middle of each.

Not surprisingly, the manuals give more attention to the troops' footwear than any other aspect of clothing – for nothing, short of starvation, is more damaging to an army on campaign than poor footwear. The fact that cavalry were not expected to travel any great distance on foot meant that the discussion focused mainly on the infantry, but the fact that cavalymen generally had greater status and wealth must have resulted in them having footwear at least as good as anything the foot soldiers possessed. From as early as the sixth century there is a surviving example of what is unmistakably a riding boot – calf-length with a stiff flap projecting up at the front to cover the kneecap. From the eleventh century there are depictions of softer thigh boots tied up to the trouser cord. These were probably invented within the empire somewhat earlier, via a ready fusion of boots with the *kampotouva* mentioned above. The ancient term *hypodimata* is used for thigh boots, while boots below the knee were *mouzakia*. Shoes (*sandalia* and *tzervoulia*) are mentioned as a poor substitute for the infantry and were probably only ever seen on the servants of the cavalry arm. The standard colours in men's footwear were, just as today, natural tan through brown and black, with a few other colours (red, orange, blue and green) being restricted by law to particular high court ranks. The archaeology of the late antique cemeteries of Egypt shows that Near Eastern footwear technology was far ahead of that of Europe. Patterns much like many still in use today were employed, and more substantial shoes and boots had thick, multi-layered soles.

When dressed for battle, the overall appearance of the troops was determined by the padded coats that formed the most extensive protection for the horse archers (*zava* or *kavadion*) and were a surcoat for the more heavily armoured cavalry (*epilōrikion*). Given their construction, and the fact that the manuals are very detailed about their form, they were probably a specialized item more commonly supplied by central arrangement, and therefore likely to be more uniform in their appearance, perhaps, like the tunics, of a common colour by unit. In the latter part of the period there are hints that the *epilōrikia* of the more eminent and wealthy cavaliers could be brightly coloured, if not patterned, or decorated with quasi-heraldic emblems, anticipating the appearance of later Western knights. Towards the end of the civil war of 1080–81 Alexios I Komnēnos requisitioned silk civilian clothing to cover up a deficit in his troops' armour. His (Roman) opponents presumably were not expected to be surprised to see such opulent fabrics on the battlefield. The eponymous hero of the romance *Digenis Akritas*, first written down around the turn of the twelfth century, is described as wearing an *epilōrikion* embroidered with a gryphon. Ample pictorial sources give the common quilting patterns used on these garments. They were normally vertical linear compartments cross-quilted in various ways to forestall slippage of the cotton wadding, but there are hints that a parade version of the surcoat (*gounion*) might have been quilted in more decorative arabesque patterns.

Officers were set apart by wearing a cloth sash tied around the chest, called a *pektorarion*. These sashes must have been colour-coded for different

Another outstanding ivory in the Victoria and Albert Museum illustrates exceptional details of tack, and fine ornamental saddle pad. This may have been used for stirrupless training, for normally the breast and rump straps shown here were secured to the saddle rather than the pad. (Author's photograph)





ranks, but unfortunately there is no record of the precise correlations, which must have been either dictated by custom or set ad hoc in a given expeditionary army.

One aspect of uniformity is explicitly recommended in the manuals, and that is that all the shields of each unit be painted the same. In addition, although not mentioned in the literature, pictorial sources quite often show similarities between the way the shields are painted and the patterning on the main field of the common form of banner. So it is possible that they were also coordinated, thus helping to further cement the cohesion of the company in battle.

One very conspicuous aspect of the troops' appearance stems from the admonition that idle time in camp was to be occupied in keeping arms and armour polished. Besides forestalling the 'devil's work', well-maintained kit, like the clothing mentioned above, was both an expression of, and a factor in, good morale.

## EQUIPMENT

Although the rider's dress and equipment is characterized by antiquarian stylization, other evidence confirms that the horse furniture shown on the Barberini Ivory is a good indication of how ornamental the best middle Byzantine era could be. (Picture courtesy Marie Lan-Nguyen)

As the elite wing of the army and the one expected to bear the brunt of the fighting in most battles, the authorities always expected the cavalry to have more and better equipment than the infantry. The degree to which such expectations were met is hard to assess, especially when a major part of the mounted arm was composed of *strateiounemnoi* who supplied their own kit to the best of their financial ability. Economic factors could be just as stringent on centralized supply as well; we know that Alexios Komnēnos requisitioned civilian clothing to fake surcoats for his horsemen towards the end of the civil war that brought him to power.

In theory, the three subdivisions of the cavalry, the archers, the *khoursôres*, and the *katafraktoi* were characterized by their armour in particular, although in practice such divisions were undoubtedly blurred.

With mobility paramount, the basic kit of the archers was a padded coat (*kavadion*) made, according to Emperor Nikēforos, of cotton padding covered with raw silk and 'as thick as may be stitched', that is, perhaps as much as five centimetres. The sleeves of these coats were full length, but mobility being optimised by an opening to pass the arms, either in the elbow according to the *Syllogē Taktikōn* and Leo's *Taktika*, or in the armpit according to the two *Nikēforoi*, with the empty part of the sleeve being fastened back behind the shoulder. Fōkas gives the very useful information that part of the skirt of the archers' coats was to cover some of the horse's rump, thus showing that they must have been made in the three-panelled form known from Caucasian archaeological finds. The archer might wear a simple *klivanion* of lamellae or a scale shirt over his coat, but only





The thirteenth-century date of this magnificent icon held in the British Museum is indicated by the stylized form of Saint George's armour. It does illustrate how Western influences, such as the high knightly saddle, began to percolate Roman practice from the late twelfth century. (Author's photograph)

covering his chest and back without the encumbrance of solid sleeves or skirts. He could also have a light helm, probably with a padded neck guard. Leo was adamant that they ought not to carry shields on account of the obstruction they could cause to shooting flexibility. The archers were not entirely helpless if they could not avoid a close-quarters clash, for they did carry a sword, generally the slightly curved, single-edged *paramêrion* either hung from a belt or a shoulder strap. Their main armament was, of course, the bow, a composite recurve with a smooth profile, rather than the Central Asian style with 'ears', carried strung in a case on the left side. The power of these bows was to be tailored to the capacity of the men rather than their being forced to work up to a higher draw weight. They carried 30 to 40 arrows at a time, contained point outmost in a cylindrical quiver hung from the belt. The point-up method allows for the most efficient loading onto the bow, but does have its dangers, as illustrated by the death of Emperor Iōānnēs (II) Komnēnos from septicaemia as a result of having accidentally pierced his hand on one of his arrowheads. Arrows for military use carried a variety of



heads from the general purpose, smooth, conical pile to heavy, multifaceted, armour-piercing bodkins. Archers carried lighter, bladed and barbed heads for hunting as well. The ubiquitous fletching method for horse archery arrows is four flights framing the nock, allowing the arrow to be nocked either way simply by touch. Flights were a symmetrical crescent shape and quite small by modern, or, indeed, Western medieval standards.

As the *koursôres* bore the burden of hand-to-hand combat, the aim was for them to have reasonably complete armour, and this must have varied considerably. At the bottom end, there must have been some who were little better-supplied than the archers, while Leo acknowledges that at the top end were, indeed, *katafraktoi*. Mail was the time-honoured default armour. Leo echoes the *Stratêgikon* by describing the cavalry *lôrikion alusidôton* as extending to the ankles. Some modern commentators have doubted this, but it is a functional arrangement presaging the European knight's mail hose, and supported by the statement that these *lôrikia* should have 'thongs and rings allowing the skirts to be caught up', that is to say, bound to the legs while riding and tied back up to the belt to facilitate walking. A mail shirt could be

## D

### EQUIPMENT

Just as with the infantry, the cavalry of the enduring Roman Empire had three classes of troops whose equipment reflected the nature, proximity and duration of the contact they were expected to have with the enemy. The lightest cavalryman was the archer (1). While he was equipped with a sword, usually the slightly curved *paramerion*, and sometimes (although Leo advised against it) with a small buckler, his primary armament was his bow. His closest contact was only expected to be returning arrows, hence his protective gear was light. At the lowest end it comprised a heavy turban over a thick cap and a padded *kavadion* (coat) made of cotton wadding in a raw silk cover 'as thick as may be stitched', as Fôkas puts it. The general's detailed description tells us that such coats must have been made in the same manner as a surviving civilian example with the skirt in three panels so that when mounted the front two covered the man's thighs and the rear afforded some protection to the horse. The sleeves, although likely to be functional for general wear, had openings either at the elbows (according to Leo) or in the armpits (according to Nikêforos Fôkas) through which the arms were placed to allow freedom of movement while in combat. The empty lower portion was fastened back to the shoulder to get it out of the way. In a particularly well-supplied army, an archer might have a light helm with a padded neckguard, and a lamellar *klivanion* covering only his chest and back. The *koursôres* were medium troops who had the most flexible and far-ranging role (2). They were expected to engage in hand-to-hand combat, but normally only with other medium to light cavalry or with small or disordered groups of infantry. Thus, they needed armour with a good level of protection, but not so heavy or cumbersome as to tire the horses during their often quite extended excursions. Over a padded *zava*, which could be either a coat or a pullover, the *koursôr* would wear a *lôrikion koinon* or *alusidôton* (mail shirt) or a *lôrikion folidôton* (a shirt of scales). The mail hood had been in use in the Roman army since at least the beginning of the seventh century. Alternatively, the helm would have had an attached mail skirt to guard his neck, but padding or leather scales were less costly options. He carried a round shield of about 80cm in diameter as his first line of defence. His initial weapons were a 2.9m lance, which Leo suggests could be worn slung across the back if he were also carrying projectile weapons, a baldric-hung sword of either type, and probably a mace or two holstered on his saddle. The *katafraktos* (3) was the tank of his day. The sheer weight of kit carried by this man and his horse meant that they were only used over the shortest distances and against the hardest and most critical targets. The full range of components of his armour according to the rationalised scheme of Nikêforos Fôkas can be seen on page 55, but here you can see the overall appearance of a fully equipped trooper with virtually all the hard gear hidden by his *epilorikion*, which was a padded coat of the same substance as the archer's *kavadion* described above. All cavalry shields were round through most of this period, until an adoption of Western practice introduced kite shields to the heavy cavalry later in the twelfth century. On his person, the *katafraktos* carried one of each type of sword, *spathion* and *paramerion*, along with up to three maces, two holstered on his saddle and the third in the hand if he was not commencing the engagement armed with the *kontarion* lance.





supplemented by a lamellar *klivanion* and limb pieces thus putting the man into the class of *katafraktos*. Scale (*lôrikion folidôton*) was a widespread alternative to mail. Scale armours could range from a simple breast and back, like the minimal *klivanion*, to a full shirt with sleeves and divided skirts like mail. Helms were to be fitted with a mail skirt, which Leo advised should cover all of the face but for the eyes. Fôkas elaborated this for his *katafraktoi* by saying that the mail skirt should be double layered. Additional limb armour was to be used wherever possible. As well as protection for the forearms (*kheiropsella*) and lower legs (*podopsella*), upper sleeves attached to the *klivanion* were all made of splinted construction; the latter is often mistaken for the ancient and long-abandoned *pteruges* in mildly stylized middle Byzantine era pictures. Solid lower leg defences (*khalkotouva*) were still in use, while later, upper arm pieces fitted to the *klivanion* and skirts could be made of scales or inverted lamellae.

*Koursôres* and *katafraktoi* were further protected by carrying a shield. Originally this was round, with the longer forms restricted to infantry, but in the twelfth century the percolation of Western practices into the army meant that the kite shield was adopted by heavier cavalry as well. Round shields (*skoutaria*) could be domed or conical in section, and up to 90cm in diameter according to the manuals, although those shown in art tend to be smaller, a more practical 75–80cm. Such shields were fitted with a pair of rope or leather handles attached separately at each end to rings fixed into the body of the shield. In combat on foot they were gripped in the fist like a buckler, but on horseback they were suspended from a shoulder strap and probably stabilized by threading the arm through one loop to have it sit in the crook of the elbow. It seems clear that these shields were commonly built on a base of cane or wickerwork like the practice shields mentioned by Vegetius.

The widest range of armament was available to these troops, and they would often be carrying multiple weapons, in part because weapons do break, but all the more because a horseman can hardly dismount in the midst of battle to recover a dropped weapon or re-arm. Lances seem oddly short to anyone familiar with later medieval European practice – no longer than the shorter infantry spear, about 2.5m, but it is clear that the lance was not considered to be so important as a cavalry weapon. Swords existed in two primary forms: the straight, double-edged *spathion* and the slightly curved, single-edged *paramêrion*. These swords could be hung either from a shoulder strap (baldric) or waist belt. In the case of the *spathion*, the choice of suspension method determined how the sword hung. The attachment points for a baldric were opposite each other on either side of the scabbard as with the old *gladius*, and so the weapon hung vertically by the leg. The attachments for the belt-hung (*zôstikion*) *spathion* were on the same side of the scabbard, and therefore the sword hung close to horizontal. Hanging points for the *paramêrion* were the same for either suspension method, on the same side of the scabbard, and hence the sword hung close to horizontal ‘beside the thigh’, a literal translation of the name. Troopers wearing the more flexible sorts of armour, archers in their *kavadia* or *koursôres* in *lôrikia alusidôta*, could use either belt or baldric suspension for their swords. Horsemen clad in lamellar or the more comprehensive form of *lôrikion folidôton* used shoulder straps as it was impractical to put a belt on or under such armour. Fôkas wanted his *katafraktoi* to carry one of each sort of sword, an entirely practical arrangement as the hilts of the vertically hanging *spathion* and the horizontally hanging *paramêrion* are well separated and one can draw either readily.



The mace was the cavalryman's weapon par excellence. Their heads are well represented in archaeology and sometimes in art. Globular forms predominate, mostly with triangular spikes of various sizes, but flanged styles also occur. In addition to the familiar arrangement of an iron head on a wooden shaft, the tenth century had already seen an innovation visible later in the West with certain maces, called *sideroravdion* and *spathovaklion*, being made with iron shafts fitted with a guard and hilt like a sword. These were even part of the regalia of certain grades of courtier. In addition to mentioning the wholly iron maces, the twelfth-century Arab writer Al-Tartusi says that some of the more common sorts could be highly ornamental with the wooden handle wrapped in fine leather with painted decoration. Axes were less favoured but still used from horseback. The main blade on battle axes varied from somewhat flared to a full, almost semicircular crescent like the later eastern *tabar*. The secondary fitting could be the same, or else could consist of a hammerhead, a spike or a blade like a spear point.

Nikêforos Fôkas seems to have made a concerted effort to increase the number of *katafraktoi* in his army. Some have suggested that he invented a new form of *katafraktos*, but a more careful comparison between him and the preceding sources shows that what Fôkas in fact did was to define a somewhat pared down and modular system for the body armour which would have made these troops cheaper and simpler to equip, at the cost of certain specific reductions in their defences. Thus, while a Leonine *katafraktos* would have strapped his lamellar and upper sleeves on over a full padded garment and mail shirt, making him more burdened and over-armoured in the chest area, but covering the chinks (armpits, elbows and so on), the Nikêforian *katafraktos* donned a *klivanion* directly over a hip-length, short-sleeved arming jacket (*zoupa*), then attached splinted upper sleeves, and padded skirts and padded lower sleeves all faced with mail. Having so much less mail represented a great labour and cost saving, but left areas like the armpits and elbow joints much less protected. This is a process precisely paralleled in European armour of the later fourteenth and early fifteenth centuries; perhaps the Romans also had the

Detail of a jug depicting the empire's most effective new enemy of the eleventh century – Seljuk Turks. Like so many, they were originally nomadic herders from Central Asia who tied their children onto the backs of goats to acclimatize themselves to riding from the earliest age. (Photo courtesy of Steven Baker.)



idea of applying the mail facings to the armpits and elbows of the arming jacket, just as the Westerners did. In any case, Fôkas' innovation may have made *katafraktoi* more common than they had been hitherto, and almost certainly more common than the curiously low numbers that have been estimated by some scholars – little more than 500 for the entire empire.

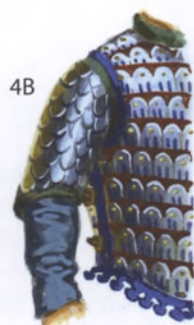
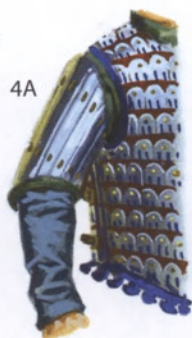
### Armour construction

Archaeological remains of helmets in this period are depressingly rare, and the artistic conventions of the time also mean that they were seldom illustrated. Such evidence there is, however, does paint a picture largely of developmental continuity with late antiquity. Most prevalent is a simplified form of the five-piece ridge helm known primarily from several fourth-century examples found at Intercisa in Germany. The barbarian spangenhelm also continued in

## E

### EQUIPMENT: THE NIKÉFORIAN KATAFRAKTOS AND BEYOND

The Roman *katafraktos* of the tenth to twelfth centuries was the equivalent of the modern main battle tank. It would be several hundred years before anyone in the West took to the battlefield so well protected. The detailed description given by General (later Emperor) Nikeforos Fôkas in the *Composition on Warfare* (traditionally known by its Latinized title *Praecepta Militaria*) represents an outstanding compromise between protection, minimal encumbrance and weight, and ease of supply. The arming sequence followed here is from an earlier manual which sought to ensure that the donning of each piece of armour was not obstructed by any previous piece, and that a man could arm himself unaided as much as possible. (1) First was the *peristhethidion* or *zoupa*, a padded jacket with short sleeves, which closely matched the size and form of the cuirass that was to go over it. Sources show these could be either button-up or pull-over types. Then came the *podopsella* or greaves (1A). These are most likely to have been splinted, although there are some indications that, at least in the latter part of the period, they could be solid tubes. Next came the *kremasmata*, a pair of padded skirts faced with mail (2A). How these, and other similar items, were attached is unknown, but a practical method in keeping with known practices of the region would be to lace them to the bottom of the *zoupa*. *Kremasmata* were later made of scales (2B) or inverted lamellae (2C). The *klivanion* was next (3). Lamellae was known, but was of marginal importance, in the early imperial Roman army. When it returned, probably in the later eighth century, its potential was rapidly realized, and Byzantine artisans introduced a series of technological refinements unique to the Eastern Roman Empire which made it cheaper and more serviceable. The pattern shown here was the second generation of those innovations, which has rows of plates fixed to a leather backing by riveting top and bottom before hanging by the traditional laces. The precise method by which the *klivanion* was secured is unknown, but the author's experiments show that a poncho arrangement fastened with straps and buckles at the sides is viable, although it does require assistance at both ends of the arming process. After this came the *manikellia*; the upper sleeves were originally also splinted (4A), which is why in the stylization of religious art they could pass for the antique Roman *pteruges*. Initially they were most probably laced directly to the *klivanion*, but as the armouring progressed a shaped shoulder-piece was fitted (4C/4D). Like the *kremasmata*, later *manikellia* could be of scales (4B) or inverted lamellae (4D). Next would normally come the helmet (5). Fôkas decrees that the mail skirt hanging from the helm should be two layers thick and cover everything but the eyes. All the body armour was enclosed in an *epilôrikion*, a padded surcoat probably identical in form to the *kavadion* worn by the archers (see plate [D] on page 35). Finally, when everything else was buckled, laced and buttoned, the *kheiropsella* or forearm defences (6) were put on. The general suggests that they should be made, like the *kremasmata*, of mail laid over padding. Again, these were probably laced to the sleeves of the *zoupa*, a point at which the trooper would need some assistance, either from his 'spear companion' or the groom they shared. As equipment was usually personally acquired by better financed troopers, it was probably quite common for a *katafraktos* to wear his *klivanion* over a full *zava* and *lorikion* like the *koursor* of plate [D] on page 35, rather than the discrete mail-faced pieces, thereby gaining additional protection, especially for vulnerable places like the armpits. The sources also mention mailed *kheïromanikia*, or gloves. On his person, the *katafraktos* carried two swords hung from shoulder straps: a straight, double-edged *spathion*, and a slightly curved, single-edged *paramerion*. He had two maces in holsters on either side of the front of his saddle to fall back on, and would commence a sally with either a spear, mace or axe in hand.

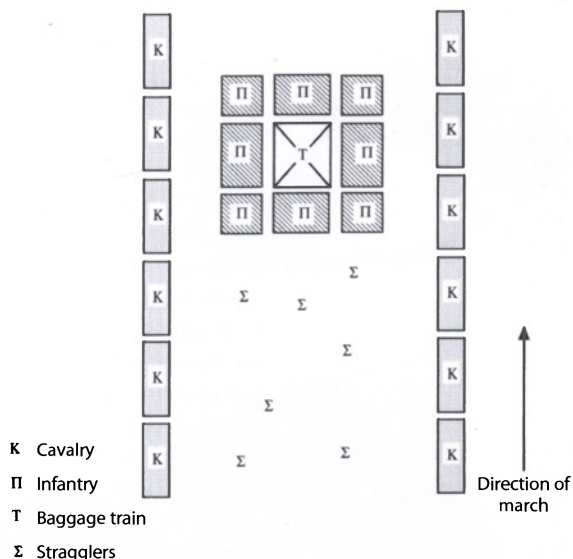
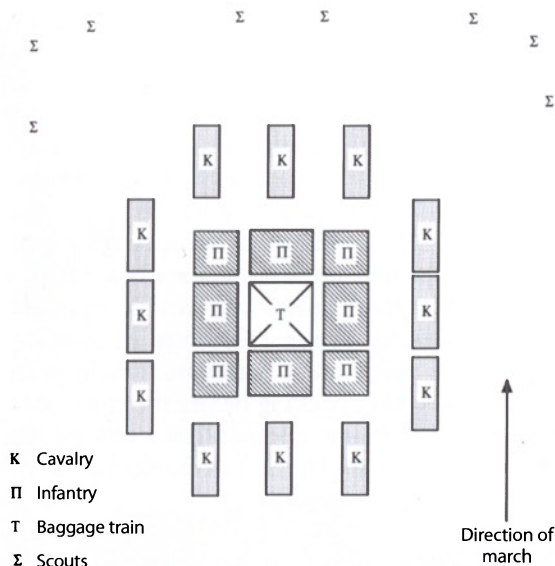




This fragment of a bowl in the Victoria and Albert Museum shows a cavalryman wearing a *klivanion* with splinted upper arm defences under an *epilôrikion* that is either faced with an ornate fabric or quilted in complex arabesque patterns rather than the prosaic linear pockets. (Author's photograph)



use, now, like the ridge helmets, bereft of cheek plates. The taller, more pointed form of spangenhelm, commonly known as 'Caucasian' due to the numerous tenth- to eleventh-century examples found in Russia and the Ukraine, was also probably in use from the beginning of the period, although examples are not found in East Roman art until the eleventh century. The unique survival known as the Yassenovo helm attributed to the ninth or tenth century is a quite different construction. Whether it is genuinely an innovation is uncertain, though. The reinforcing bands across the crown hark back to the modifications made to legionary helmets in the early third century to counter the power of the Dacian *falx*, but may just be a pragmatic response to a similar threat. Pictures in the illustrated manuscript of the chronicle of Skylitzes show that forms like the Yassenovo helm must have been almost as widespread as the ridge helm. In the twelfth century we seem to see some innovations coming in, although whether they arise within the empire, or are imported very rapidly from neighbours, or merely begin to be illustrated belatedly is not clear. One is the appearance of early forms of 'kettle hat' – one-piece helmets with a slight brim. The manifest long-term collective memory of the Roman army may mean that this was a revival based upon remembered



forms, or even that brimmed forms had never fallen completely out of use. The other innovation might also be a revival of a remembered ancient form. The Phrygian cap-style helm swept the Mediterranean in the twelfth century with no regard for cultural boundaries.

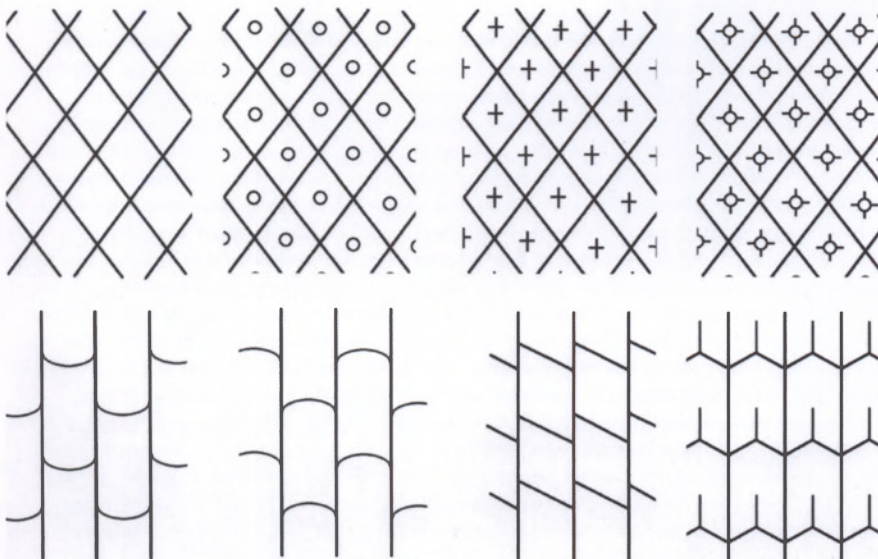
All these might be worn plain, or over a separate hood of mail, known in the Roman Empire since Late Antiquity, but they would often carry some form of attached neck protection. The ridge helms seem to have commonly borne a padded skirt at least. The quilting patterns shown on these are often suggestive of *pteruges*, and it is possible that leather *pteruges* may sometimes have been used as a low-grade substitute. Phrygian cap helms also show these forms of neck protection at times. The surviving Caucasian helms seem to have routinely carried a mail skirt, either linked on through holes punched in the rim, as with some of the early medieval European spangenhelms, or attached by a more sophisticated method whereby the edge was rolled

#### ABOVE LEFT

The basic marching formation whereby the cavalry in four units screens the faces of the infantry and baggage train.

#### ABOVE RIGHT

A marching formation for more difficult circumstances. The horsemen have formed two long lines to protect the sides of the foot soldiers and baggage train, extending back to cover stragglers such as the wounded following an unsuccessful battle.



Quilted military garments are shown in remarkable detail in pictorial sources, giving a good insight into the range of methods used. The diamond patterns were used for the jackets worn under more solid armour. The more intricate diamond-with-motif could be used for the parade coats of officers and elite units, and are sometimes seen on leggings. Long garments such as *kavadia* and *epilorikia* usually employed patterns based upon vertical panels. There are hints that very opulent *epilorikia* might be quilted in arabesques.



into a tube, then cut into a comb, with the mail strung on a wire threaded through the comb. This suspension system is also found on the Yassenovo helm. Illustrations of the early brimmed helms also show mail hangings, but without any indication as to how they were attached.

Lamellar (*klivanion*) was another armour known to the early imperial Roman army, but it seems to have fallen out of use amidst the tribulations of the fall of the West. By the beginning of the tenth century it had returned, and thereafter rapidly undergoes a series of technological refinements which produce distinctively Byzantine types which do not seem to have been known to its neighbours or clients. The widespread form with which the early Romans were acquainted was entirely laced. The tenth-century innovations start to make it into something like an inside-out brigandine, initially with rows of plates laced, then riveted, to a leather backing before the rows were suspended. The vast harm done to the economy and industrial base of the empire by the Fourth Crusade spelled the end for lamellar in the Roman army.

## Horse equipment

Sources for horse furniture in the middle Byzantine period are unfortunately confined to a relatively small number of sometimes stylized pictures, and for equine military equipment are confined solely to literary references, so there is no certainty about the fine details. In practice there is little potential for functional variety in bridles, and the only differences shown in the pictures is the presence or otherwise of a nose band. There are a few illustrations of curbed bits, but the majority show no distinctive features and must be

### F

## HORSE EQUIPMENT

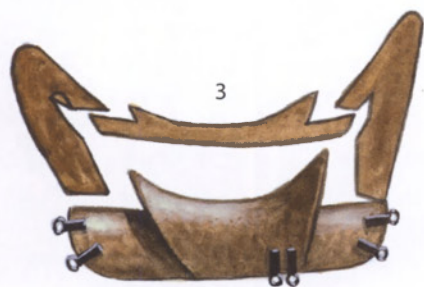
The form of much horse equipment is remarkably consistent across time and cultures. Eastern equestrian practice, even in the military, never embraced the Western chivalric enthusiasm for the energy and aggression of the stallion, preferring to use geldings and mares. One result of this was that less brutal methods were required to control mounts than were often used in the West. While curb bits (2) were in use, variants of the snaffle (1) predominated. Bridles appear scarcely to differ from those commonly in use today. The tack of wealthier riders would provide avenues for display of status, of course, with bridle straps being decorated with metal plaques, and ornamental roundels covering the junction points. Saddles of the Central Asian form with low pommel and cantle prevail across the period. They were made in four pieces – the two arches for the pommel and cantle, and the side bars curved in two dimensions to match the average horse's back and thick in the middle to form the seat (3). Basic saddles were used as is, with the rider sitting directly on the wood, while better models had a layer of upholstery to ease the discomfort. Later in the twelfth century, heavy cavalry troops who did not need the flexibility to use archery began to adopt the higher pommel and cantle saddles in use amongst Western knights. In addition to the girths, saddles were normally fitted with a breast and rump strap (4). These could be plain leather, but again might be a site for status display. Even plain ones could have a few pendant straps, while the most ornamental could have multiple figured metal roundels similar to the horse brasses of modern times. Leo recommended that every trooper had a saddlebag or bags (5) containing three days' rations as a precaution against the misadventure of being separated from his unit. The mounts of the *katafraktoi* who were expected to inflict frontal attacks on infantry formations were equipped with iron headpieces and their chests and necks protected by *klivania* of ox-hide lamellar, or coverings of laminated felt (6). The lack of surviving examples and of good depictions leaves only guesswork for the form of middle Byzantine era headpieces. General Near Eastern and Central Asian practices tended to make them more encompassing than later Western *chamfrons* generally were. Leather lamellar gained no benefit from the technological refinements pioneered in Constantinople for human armour and that applied to metal and horn forms, and so this element probably retained the elementary form of the ubiquitous hanging lamellar construction with plates laced together horizontally and then the rows suspended. Also shown is a typical stirrup (7).



5

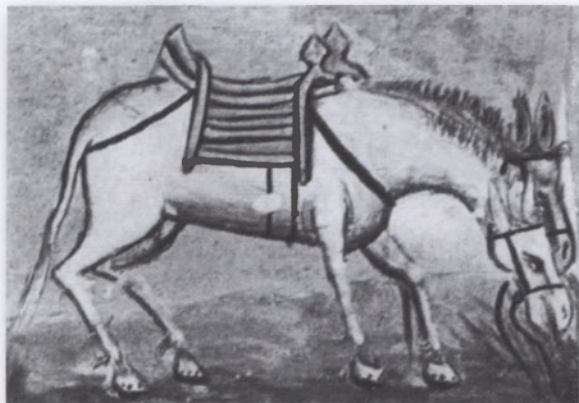
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4



*F. Rava 08*





Although the manuals mention wagons, it is clear that very often the entire army's supplies were carried on mules, for much of the Balkans in particular had very poor roads. This is a detail from an eleventh-century manuscript picture showing mules with their packsaddles. In camp, such saddles were commonly used as seats, the only furniture an ordinary soldier, or common traveller, had available. (Esphigmenou Monastery, Mt Athos)

presumed to be the snaffle type. Some decoration could be applied to bridles, most conspicuously ornamental roundels on the intersections of the pieces, and occasionally on the centre of the brow band. Saddles had a low pommel and cantle and no distinctive features in the surviving sources. Later in the twelfth century, the adoption of Western methods resulted in the use of the high cantle and pommel knightly saddle by the heavier troops. Besides the essential girth, saddles were further stabilized by straps around the breast and rump. These could be fitted with a variable number of short pendants, either plain straps or terminating in decorative roundels. In terms of

military equipment, the sources mention head defences and breast armour, although rump protection does not seem to have been as common. We must assume that the headpieces were more solid than the leather ones that survive from the early imperial period, but we have no evidence regarding their precise form. There is more information about the other armour used for the horses. Ideally the chest and neck pieces were composed of lamellae made of ox hide. The secondary option was heavy, laminated felt. A final item of horse armour which period sources attribute exclusively to the Romans is a shoe covering the entirety of the underside of the hoof to protect the animal from caltrops, a descendent of the tied-on horseshoes of the early imperial era.

## ON CAMPAIGN

The first stage of any military campaign is mobilization. When the emperor himself was to participate this was signalled by the display of a sword, mail shirt and shield hung on the outside of the Khalkê Gate of the Walls of Theodosios. Notice was sent to the *stratêgoi* or *doukes* of the regions in which the campaign was to be waged or through which it would pass so that they could commence



The thumb draw is the horseman's form of archery par excellence. Sources like this fragment of mosaic from the Great Palace in Constantinople show that the Romans adopted the method in Late Antiquity. It also shows some good detail of the type of bow in use. (Author's photograph)



The fresco of the Forty Martyrs of Seveste in the Dovecote Church at Çavusin in Kappadokhia shows both infantry and cavalry. The horsemen are armed with *kontaria* and protected by a mixture of lamellar and scale armour. (Photo courtesy of Steven Lowe)

their preparations for involvement or contribution. The primary preparations were the gathering of supplies (grain, edible livestock and other foods), the amassing of equipment (arms, armour, saddlery, tents, wagons and so on), the requisitioning of additional mounts and beasts of burden, and the summoning of the *strateiomenoi* from their farms.

The cavalry equivalent of the infantry *kontouvernion* (and probably called the same) was a pair of horsemen with a manservant/groom who shared a tent. Both round pavilions and rectangular tents were in use, and while it is clear enough that the former were probably the norm for an infantry file, it is hard to say whether one sort or the other was preferred for a cavalry mess. The greater affluence which typified cavalry troops may have meant that they could indulge themselves in such luxuries as campbeds, which are mentioned in routinely negative terms in the sources, in preference to the bedrolls of less well-off soldiers. *Strateiomenoi* also seem, at least at times, to have brought some provisions with them when they mobilized, and if they were campaigning not too far from home might have been able to restock from that source. If not, they were obliged to fall back on the basic fare of the mass of the army. Various grains formed the basis of campaign rations. They were initially carried both in prepared form and as flour. The main preparation of grain was hardtack, called *paximata* or *paximadion*. This was coarse, double-baked bread. The simplest form was made from grain alone, but better types could include dried fruits and meats. More complex prepared rations are also described in the sources composed of a mixture of vegetables, nuts, seeds and honey. A marginal



note in one tenth-century siegecraft manual describes a ration prepared from roasted sesame, honey, oil, almonds and squill, an astringently flavoured vegetable. Trials by members of the Hetaireia Palatiou confirm the source's claim that such food was 'good also for campaigning, for it is sweet and filling and does not induce thirst.' A basic hot meal could be made from milled millet cooked up as a form of porridge. In richer seasons, troops might have the benefit of a common peasant staple still eaten today, *trakhanas*. This is made of cracked wheat mixed with yoghurt, and was formed into balls or small loaves and left to dry in the sun. Like this it could keep for long periods and was boiled into a soup or stew to be eaten, often garnished with chunks of feta cheese. Well-planned expeditions doubtless set off with supplies of preserved meat as well. Fresh supplies were purchased, requisitioned or foraged as the campaign progressed. Mealtimes were announced in camp by trumpet, although in the sources there are differing opinions about how many meals there should be and when. In practice, set meals were probably a light breakfast and a dinner, with anything in between being an ad hoc affair arranged around whatever was the business of the time.

On the road various formations were adopted depending upon the composition of the army and circumstances. Whether from city or camp, the cavalry would move off first so their activities would not be obstructed by the less mobile infantry and baggage train. Commonly thereafter, where space allowed, the horsemen would divide into four to protect the four faces of the combined infantry and baggage train. In more straitened circumstances, the horsemen would split into two units which formed long lines down each side of the line of march, extending ahead to defend the front and still farther behind to protect the stragglers such as any wounded.

The army continued the ancient practice of constructing fortified marching camps. Surveyors preceded the army and laid out a camp in a suitable location, marking the places for each unit by placing their standard there. As with the legions of Old Rome, such a camp was to be surrounded with a ditch and bank with L-shaped openings on each side. In addition, a strip of land was sown with caltrops in groups of nine strung on a light chain and pegged down at one end for ease of recovery. A zone providing advance warning of surreptitious nocturnal infiltration could be created by suspending bells on cords strung tightly between pegs surrounding the ditch. Within these boundaries the tents of the various units were to be pitched together laid out

## G

### ENCAMPED IN POTENTIALLY HOSTILE TERRITORY

Literary sources indicate that the Roman army's time-honoured practice of building carefully organized marching camps protected by an earth rampart with L-shaped openings in potentially hostile territory was still the paradigm in the tenth and eleventh centuries. That this was not just an unrealistic wish of the manual writers is affirmed by numerous written sources in both Greek and Arabic, and on the negative side by the account of the debacle of 1049 when the general *raiktor* Konstantinos lost his entire force to a Patzinak surprise attack as a result of not ordering them to encamp securely. The infantry tents were placed immediately inside the perimeter, with the cavalry and their mounts nearer the centre. This was designed to minimize the chance that the enemy might contrive a means to spook the horses, therefore resulting in a destructive stampede through the camp, and to permit the infantry, who could stand to more quickly, to mount a defence against any surprise attack, thus buying time to allow the cavalry to mobilize. Once encamped, the horses were to be watered in an orderly manner rather than turned out in a mob, both for their own benefit in reducing the risk of fouling the water supply, and in the interests of security. This was to be done even in friendly territory; this was all the more imperative in less secure circumstances, where some of the cavalry always had to be held ready for action.



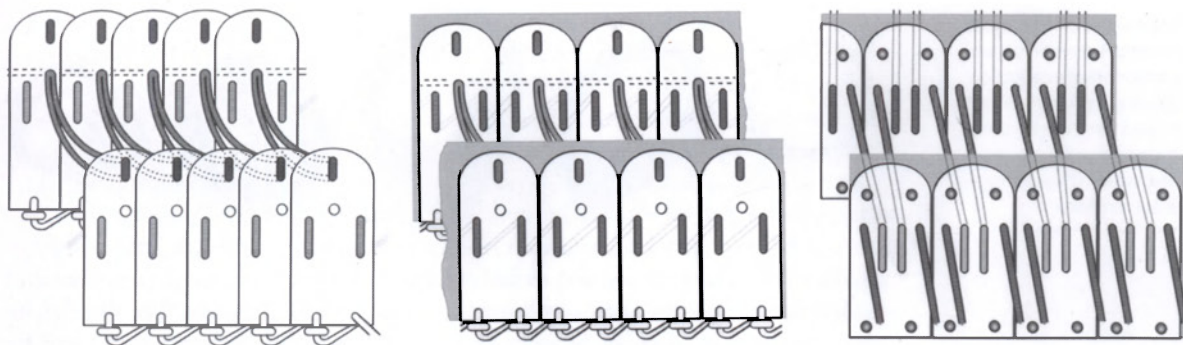




This warrior saint depicted in an eleventh-century fresco in the 'Hidden Church' at Göreme in Kappadokhia shows fine detail of his *klivanion* – two rivets securing the plates and two laces suspending them, and the splinted upper sleeves. The cloak and heavily trimmed brocade tunic show that this is parade dress of the courtly elite. (Photo courtesy of Steven Lowe)



in regular rows with streets in between. The substantial rope spread of the round pavilions was to be fully interlaced, partly to keep the camp somewhat compact, but also as a security measure to restrict all traffic to the designated streets where it could be better overseen, and where focused defence could be organized in the event of incursion. Where the army was a combined force, the layout of the camp was concentric with the infantry in the outer zone and cavalry around the commander at the centre. The reason for this was so that the foot soldiers would bear the brunt of any surprise attack, lessening the chance that the livestock would panic and stampede through the camp and giving the horsemen time to saddle and arm themselves for a counterattack. Where the army was composed entirely of cavalry, on the day of a battle the servants and other personnel who were normally non-combatant were left



with the task of defending the camp. One unit (*vandon/allagion*) of horsemen was to be left with them, charged with the responsibility of interdicting the gates of the rampart.

Once a camp was established and the day's activities were complete, the evening meal was followed by the singing of a hymn to the Trinity, the *Trisagion*, which initiated the night's curfew. Sentries were always on duty, and were doubled during the night. Passwords were required of anyone moving about the camp and were changed on a daily basis to prevent infiltration.

Expeditionary movements were evidently episodic, with several days of marching and daily encampment broken up by a day or days in one place for recuperation, repair or training exercises. There were also inevitably periods when the weather prevented planned movement. These intervals must have been quite miserable with the men mired under wet canvas, but again they would be put to whatever good uses could be contrived. Yet there is only so much gear renovation and armour polishing that can be done and one must

#### ABOVE LEFT

The most long-lived and widespread construction of lamellar which was probably used throughout the period for hide horse armour, and was the starting point for Byzantine technological advances.

#### ABOVE CENTRE

The first stage in the evolution of Byzantine lamellar from the ubiquitous form – plates laced to a leather strip rather than to each other. For the sake of clarity a slight gap is shown between the plates, but in reality they would be as close together as possible.

#### ABOVE RIGHT

One of the last stages in Byzantine lamellar evolution. Double rivets and two suspensions to and from each plate make it especially resistant to damage, while the offset plates forestall direct penetration. The left margin represents the edge of the fabric, illustrating how half-plates could be used to create a straight edge.



This twelfth-century silver plate from Constantinople shows fine details. Note the scabbard under the rider's right leg. The lack of any visible fastening is not poor draughtsmanship. Arabic manuscripts show maces being carried in a similar manner, and the author's experience confirms that the rider's weight on the stirrup is quite enough to hold a weapon under the leather without any other support. (Photograph: Sam Fogg Antiquities)



A sample of middle Byzantine-era rings for archery from a major private collection. Wearing a properly fitting ring on the thumb made drawing a more powerful bow easier. (Photo courtesy of Steven Baker)

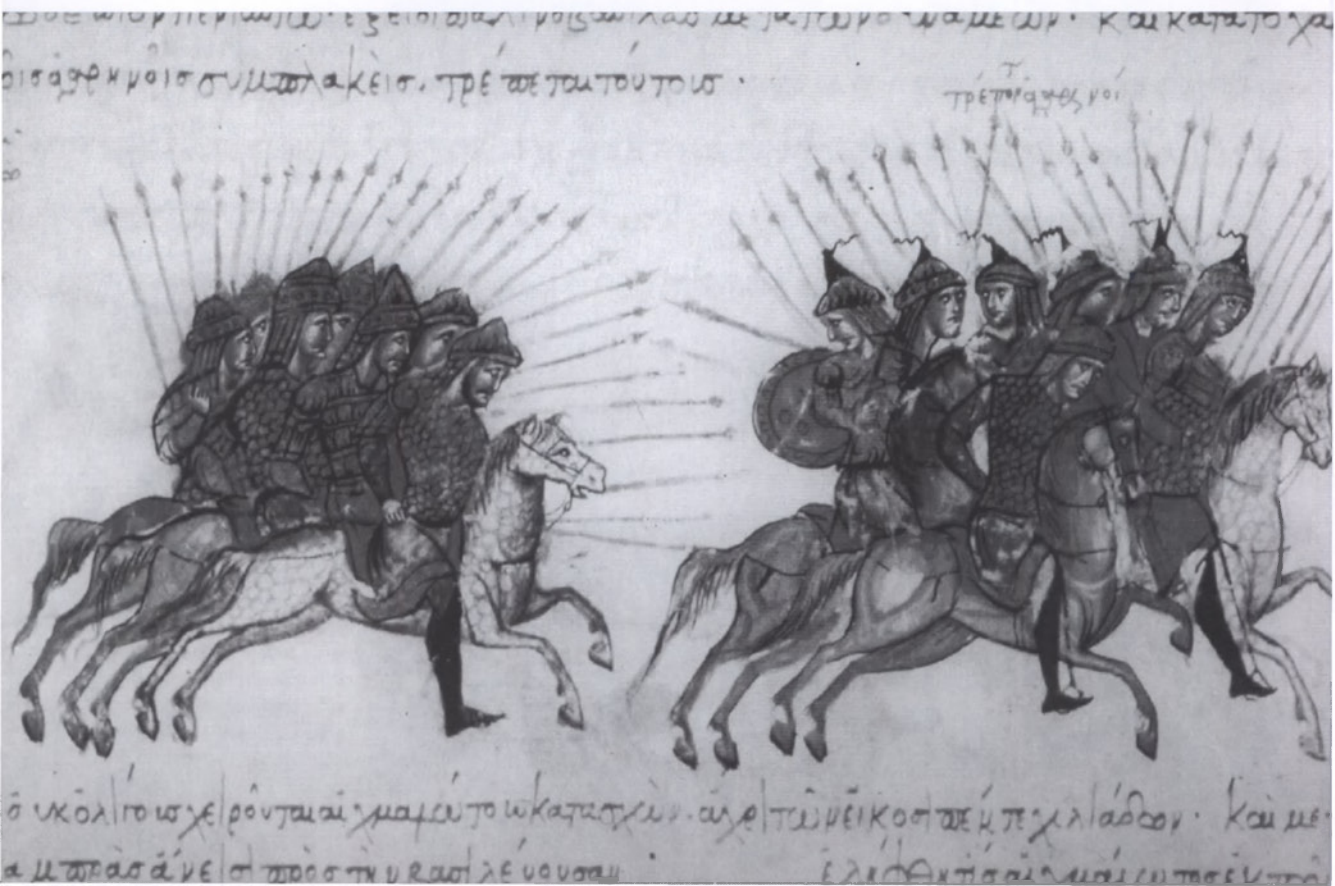


Roman troops pursuing Arabs, from the illuminated *Chronicle of Skylitzes*. Although this manuscript was illustrated in Sicily in the twelfth century, it drew heavily on East Roman sources of the previous centuries as well as contemporary observation, and can sometimes show useful detail when corroborated with other sources. Note the boots with long front flaps tied up over the knee. (Biblioteca Nazionale, Madrid)

assume that the men tended to fall back on the time-honoured recreations of soldiers – drinking and gambling. Curiously, however, the one forbidden recreation that is mentioned by name in Leo's *Taktika*, for its supposed negative effects on discipline and the troops' physique, is dancing.

The campaigning season was usually confined to the period between late spring and early autumn. Outside this time the *strateiomenoi* would usually demobilize back to their farms, while the tagmatic soldiers retired to their permanent barracks. A notable exception to this rule happened in the late tenth century when Nikēforos II decided to keep his expeditionary army in the field in Kappadokia through winter. The emperor had an entire subterranean barracks complex, comprising dormitories, refectories, storerooms and stables, cut into the rock in accordance with the ancient custom of the region. Such constructions are still commonly inhabited to this day and these cosy shelters with their raised sleeping platforms and dining benches must have been a very welcome change from the multitudinous privations of long-term life under canvas.

When the army undertook siege there was, of course, little direct involvement for the cavalry. It should not be assumed, however, that they were given a holiday. In fact they might well have had more to do, and may



have become busier the longer the siege continued. This is because one responsibility they had to take up all the more was foraging. A besieging army would soon exhaust the supplies it had carried with it and those that could be obtained in the immediate vicinity. Thereafter the long-distance mobility of the horsemen would be essential to obtaining stocks of the provisions from farther and farther afield as the siege wore on. Period accounts record units travelling hundreds of kilometres to obtain supplies for a large army. A more familiar duty of redoubled importance during a siege was long-range scouting, lest the army be taken inadequately prepared by a relieving force. Even when the heavier troopers were engaged in such activities, and so were likely to be riding out less heavily armoured than into combat, their equipment did not necessarily lie idle. The *Syllogē Taktikôn* recommends that all such surplus gear was worn about the camp in order to give the defenders the impression of the army being more heavily equipped than it was, thereby sapping the enemy's courage and will to resist.

## EXPERIENCE OF BATTLE

The battle experience of a Roman cavalryman of this era would in some respects be less variable than that of his pedestrian counterpart. The presence or absence of an infantry force would make some difference, but the main variation was between the three segments of the cavalry force. Certain practices were common across the army and served to bind its disparate elements together. The religious observances which were part of the army's daily routine were redoubled when battle was imminent. Thus, on the morning of a battle the prayer ritual was longer, and, without a doubt more

A fine example of why the illuminated *Chronicle of Skylitzes* must often be treated with considerable caution – the Romans and Arabs are completely indistinguishable. (Biblioteca Nacional, Madrid)







#### ABOVE

The author's reconstruction of a *katafraktos* prior to Nikeforos Fōkas' streamlining of the armour. The panoply lacks a surcoat (*epilōrikion*); for this same reason they are almost never illustrated in primary sources – it hides the warrior's armour and therefore his status as an elite cavalryman. It also lacks the horse armour of leather lamellar or felt that would be normal for such troops. (Author's photograph)

#### ABOVE RIGHT

Protective gear of the *katafraktos* reconstruction comprises helm, *lorikion* (full mail shirt), *klivanion*, *manikellia* (splinted upper sleeves), *podopsella* (splinted greaves) and shield. Armament here consists of a *kontarion* (lance), *spathion* and *paramērion*. To these could be added two *vardoukia* (maces) carried in holsters on each side of the saddle's pommel. (Author's photograph)

heartfelt, with more of an emphasis on repentance for sin and making peace with God in the hope that a man might go into battle unconstrained by unfinished spiritual business. With this taken care of, the troops were to be provided with a solid meal before mustering to the field.

The mobility of the participants necessarily makes a cavalry battle more episodic than an infantry clash. A horseman's effectiveness reduces rapidly and his vulnerability increases a great deal as his velocity declines. Thus, the battlefield paradigm for any group of cavalry was very much like the traditional aphorism about war itself – periods of boredom interspersed with intervals of stark terror. The contrast would have been less acute when the army was operating as a purely cavalry force, for then the command and muster location was still potentially vulnerable to direct attack from enemy cavalry, and hence a much higher level of vigilance and readiness had to be maintained. Where the army had a substantial infantry component, the horsemen had the luxury of rallying, resting and re-equipping in relative security behind the front or inside the infantry square. That situation did, however, demand more discipline to counter specific risks, as forays had to be made through the limited openings in the infantry lines cleanly and without disturbing the foot soldiers or risking becoming entangled with a returning unit. This was a little easier when the infantry formed a square and therefore had more gates available, or when a linear formation could afford the luxury of open flanks, allowing the riders to flow freely around the line as well as through the gaps.

The troopers who were the first to engage and would normally have fought most consistently throughout the entire course of the battle were the archers, coursing over much greater distances to harry the enemy's advance



and then sallying again and again to barrage the opposing forces even once close combat was under way. Riding with relatively light armoured and swiftly, the main danger to them was from returning missiles, so their experience of the most immediate press of battle would have been rare and accidental. The *prokoursatôres* were closer to the cutting edge, so to speak, taking the battle to the enemy cavalry and smaller or weaker groups of infantry. They engaged with lance, sword, mace and axe, and so were much more vulnerable to severe casualties in return.

The experience of the *katafraktoi* is scarcely imaginable. Their weight, and hence relative slowness and lack of manoeuvrability, meant that they would rarely fight other cavalry. There was no nation around that could field troops as well equipped, so other horsemen would normally have avoided a head-on clash with Roman *katafraktoi*, unless they had the opportunity to mob an isolated individual or small group. The main job of the *katafraktoi* was to smash substantial infantry formations. To this end, the ‘hurry up and wait’ aspect of warfare would predominate, as their moment would be chosen for a hopefully decisive strike once the opposing force had been softened up somewhat by encounters with the other troops. Once they were deployed, they were formed up in a blunt wedge formation twelve ranks deep, which could be as many as 20 across the front and over 500 in total. According to Fôkas, their initial armament was mixed by rank, with the first four lines armed with maces then the rest alternating swords and spears. The unit would trot in extended order with a metre between each man until they got to within a kilometre and a half of the enemy front, then they would close up the formation until the men were virtually knee to knee. Over the remaining distance the pace was increased to a collected canter, then to an extended canter just before impact. The ideal

#### ABOVE LEFT

The foot-soldier's-eye view. With his mount also encased in iron and leather, and flanked by as many as 500 companions, the sight of such a *katafraktos* approaching at speed must have been too much for any but the most resolute infantryman. (Author's photograph)

#### ABOVE

Detail of the author's reconstruction of a *katafraktos* showing how a *spathion* and a *paramerion* could both be worn simultaneously, as Nikéforos Fôkas describes, without either obstructing access to the other. (Author's photograph)



outcome was that this human and equine juggernaut would roll over the foe and wheel about to punch back through the line from behind, and this optimal scenario must have been played out reasonably often. No contemporary nation could field troops as well trained as the Roman Empire, and none was using the long pike which is the most effective against heavy cavalry, so that the weight and impact of a wedge of *katafraktoi* would have had little trouble overwhelming a formation of infantry armed only with short spears and hand weapons, unless it had improbable depth. Not that they would expect to get through entirely unscathed. The riskiest position would probably be in the centre to middle rear of the wedge, where the danger would be more from becoming entangled with a horse and rider who had themselves fallen over the bodies of enemy soldiers.

The *defensôres* would in some ways have the most wearing part to play in a battle, holding to the discipline and patience of waiting for the moment when a returning unit was pursued by hostile cavalry and they would have to sally to drive off the pursuers. If the opposing army was light on cavalry, they might pass the entire battle with nothing to do. Even when the foe were strong in their mounted arm, they would be unlikely to launch into a full-blown engagement with the *defensôres*, and so a member of that unit might only rarely come to blows. A thoughtful *stratêgos* might in the course of a long battle replace men who had begun as *prokousatôres* with those who had entered the battle as *defensôres*, thereby spreading the exertions, and testing the mettle of all his men across their duties.

However, even when the superiority of tried and tested Roman methods were manifest there were still casualties, and it is in the arrangements for dealing with them that the army's unique strength survived. When the cavalry were operating alone, or with a linear infantry screen, an equestrian field hospital was established approximately 2,000m behind the main battle line (the infantry dressing station was nearer the front.) This was staffed by doctors for man and horse and orderlies, and was served by ambulance men called *daipotatoi* or *krivantai*. The *krivantai* were provided with their own horses so that they might ride out and recover wounded horsemen who could not make their own way back. The saddles of these mounts had an additional

## H

### EXPERIENCE OF BATTLE: DYRRAKHION, 1081

An episode from the battle of Dyrrakhion in 1081 recounted by Anna Komnênê regarding her father, Emperor Alexios I, shows just how much protection Roman cavalry armour in the period could afford. Separated from the army, Alexios was attacked with lances from one side by three Norman knights. Since Alexios was protected by layers of padding, iron lamellar and possibly also mail, their weapons caused him no injury, but served only to partially unseat him, with the entanglement of his spurs in his horse's trapping preventing him from falling entirely. Another group of Normans charged at him in a similar way from the other side, also driving their spears at his body, yet they only succeeded in pushing him back into his saddle. At this point Alexios made his escape (Anna claims his horse bolted) with several of the Normans' lances still entangled in his *epilôrikion*. Tests conducted by the author confirm the likelihood of this account, for even when a spear point manages to slip between the plates, the outer layer tends to bind the blade, while the inner layer, commonly offset by half, like scales or roof tiles, stops the point entirely. As per the manuals, Alexios' horse is armoured with an iron headpiece, but with a chest barding made of oxhide lamellar. The construction of the horse's armour employs the original ubiquitous form of hanging lamellae as it existed before the refinements in manufacture that began to be applied to metal *klivania* for human use in the ninth century. Although both the manuals and other literary sources refer to iron headpieces for the horses of the heavy cavalry, we have neither surviving examples nor good pictures to tell us what they looked like in middle Byzantine Romania.







This magnificent icon of Saints Sergios and Bakhos from the turn of the thirteenth century shows exquisite realistic detail of their equipment – full scale shirts, high boots, horn-nocked recurve bows, a fine array of arrowheads corroborating those found in archaeology, and their horse furniture. Note the European-style high saddles and the so-called ‘St. George cross’ pennon. (Monastery of St. Catherine, Sinai)



stirrup attached to the near side rear arch to allow the *daipotatos* to mount once he had the injured trooper settled. He also carried a flask of water to help revive the wounded. The pattern of injuries probably remained pretty consistent through the length of the engagement. It would begin and continue with arrow wounds, although as horsemen were moving targets, these were probably less common than amongst the infantry. It must have had a very steadying effect for the troops to see casualties being removed systematically from the combat area and from time to time returning after treatment to bolster the units. It would be in dramatic contrast to virtually all of their enemies, amongst whom the wounded and dead merely lay where they fell, remaining in the midst of the fighting for the duration of the battle.

The first item on the agenda after a victory was the ritual of thanksgiving to God, and the burying of the dead. Some time afterwards came a parade where the events were reviewed, and soldiers who had been seen to distinguish themselves in the battle were rewarded. It appears there was some system of citation in existence, as the manuals mention both ‘honours and gifts’. Amongst the physical rewards mentioned are arms and armour and

shares in the booty. The officers of units that performed well were rewarded with promotion. On the other hand, men who had failed to do their duty were punished. Extreme cowardice received the universal sanction of death, while flogging, mutilation and fines were imposed for lesser failings.

Scholars have estimated that a casualty rate of 15–20 per cent was the point at which a medieval European army broke and ran. This figure must have been higher for a Roman army of this era, if only because the retrieval of the injured would somewhat disguise the issue. Of course, there were defeats. Literature of the period tends to make more of the notorious and catastrophic defeats than the 'routine' victories, yet generally these disasters were the result of failures at the command level or, as with the battle of Manzikert in 1071, a consequence of political dissension spilling over from the capital onto the battlefield. The capacity of a cavalryman to flee in the case of a reverse is, of course, much greater than that of a foot soldier, but in a combined army their discipline was all the more important, for a defeated infantry force abandoned by its cavalry is effectively doomed. The manuals go into considerable detail about steps to take in the event of a defeat, and these often hinge upon a disciplined mounted arm protecting a disordered and less capable infantry.

The javelin game known to the ancients has never fallen out of favour in Anatolia. This picture, taken in Turkey in the 1960s, shows both its enduring popularity, and the fact that the audience might be as much at risk as the players. (© National Geographic Society)





## COLLECTING, MUSEUMS AND REENACTMENT

Most of the core territory of the Eastern Roman Empire in this era is now contained within the boundaries of the modern state of Turkey. Modern Turks are ambivalent, to say the least, about this portion of the Roman Empire, seeing it as 'tainted' with Hellenism, and as a result the archaeology of non-Turkish material in Anatolia is often neglected. In any case, the export of all archaeological antiquities is prohibited. Greece and the Balkans does yield a certain amount of material, but little of substance makes it onto the open market. Hence, while small and non-specific items such as buckles are often available to collectors, nothing of military significance (except, perhaps, the occasional arrowhead) is to be found on the antiquities market.

By the same token, authenticated material in museum collections is also somewhat sparse. The qualification 'authenticated' is used advisedly, as the common cultural practices of the Balkans and Caucasus and the fluid borders of the empire often make it very difficult to say with any certainty which ethnic group was likely to have originated or used any given artefact. The maritime museum at Bodrum in Turkey holds the significant assemblage from the eleventh-century Serçe Limani shipwreck, which includes some spearheads, the hilt of a sword and tools. Other weaponry is very rare, save for a considerable array of mace heads in various Bulgarian collections. Examples of the most common sort of spiked mace head have turned up from time to time in antiquities dealerships. There are just two surviving authenticated helms of the

The bronze horses looted from Constantinople and taken to Venice in 1204 represent a paradigm of the finely conformed and spirited beasts Roman horse-breeders sought to create for both the hippodrome and the battlefield. (Photograph courtesy Yann Kervran)





*Koursoures in pursuit, from a late-tenth-century manuscript made in the region of Italy that remained in Roman control until the rise of the Normans in the mid-eleventh century. (Monte Cassino Monastery library)*

period. The tenth-century Yassenovo helm is held in the archaeological museum at Kazanlik, Bulgaria, while a thirteenth-century parade kettle-hat inlaid with busts of saints is kept in the Hermitage Museum, St Petersburg. Weapons and pieces of lamellar found in the ruins of the Great Palace by a British excavation in the 1930s are held in the Byzantine Museum in Istanbul, but may not presently be on display.

In contrast, the physical bulwarks of the empire necessarily survive extensively. The walls of Constantinople have been subject to extensive restoration in recent years (although this has sometimes distorted the form of certain elements) and are extensively accessible over most of their length. There is a substantial and interesting later fortress at the north end of the Bosphoros readily visited by regular ferries, while Nikaia (modern Iznik) and Thessaloniki retain extensive remains of their city walls. The citadel of Ankyra (modern Ankara), built in the ninth century, is a fascinating study of the extensive re-use of antique marble, and has a distinctive form. Kappadokia has a number of fortresses, and a subterranean barracks complex built in the tenth century. Kilikia has a wide array of quite well preserved buildings of this era with military character ranging from stronghouses to major fortresses, although generally their present form derives from Armenian work.

The hitherto low public profile of this era and area of history means that there are still relatively few avenues for re-enactment or recreation of the Roman Empire of this period, although the number is growing. Larger, broad-spectrum groups such as 'The Vikings' (UK and USA) and the 'Society for Creative Anachronism' (USA and international) embrace it as a minority interest. The 'New Varangian Guard' (Australia and elsewhere) is one well-established group with a Byzantine focus, although, as its name indicates, it leans more to the mercenary forces that converged upon the city than on native Romans. The 'Hetaireia Palatiou', or 'Palace Company', is a group in Britain that recreates aspects of the court milieu in the tenth to twelfth centuries, including ceremonial and military guard activities. In France, '1186' embraces the entire Levant in the early Crusades era, while 'La Tagma de Byzance' focuses on the Palaiologian period. 'Les Poulaines', 'I Cavalieri delle Terre Tarentine' and other groups in Italy incorporate aspects of Byzantine influence in southern Italy into their activities.



## GLOSSARY

The transliteration of Greek in modern times has been traditionally contaminated by influences imported from post-Classical Latin. In this volume, the transliteration has been based upon the pronunciation of Greek as it was spoken in the period covered by this volume, which was already largely similar to modern usage. Hence beta = v and eta (ê) and omega (ô) are pronounced as 'i' and 'o' respectively. 'Kh' is a fricative or heavily accented aspirant like the 'ch' in the Scottish 'loch'. The forms given are singular. The main Greek plurals are -os>-oi, -on>-a, -a>-ai.

Allagion	The smallest unit of cavalry normally 50, but in certain cases 320, 350 or 400. Commanded by a <i>komês</i> . Otherwise called <i>vandon</i> (banner).
Daipotatos	(Latin: <i>deputatus</i> ) Field medics who recovered the wounded and returned them to treatment centres. Also <i>despotatos</i> , <i>dipotatês</i> and <i>krivantês</i> .
Defensôr	A <i>koursôr</i> providing a protective screen for other troopers returning from extended operations to a camp or infantry formation. See also <i>prokoursatôr</i> .
Droungarios	Commander of a <i>droungos</i> .
Droungos	A unit of 150 or more cavalrymen. Commanded by a <i>droungarios</i> . Also <i>taxiarkhia</i> .
Doux	In the Komnenian era, a provincial governor superior in rank to a <i>stratêgos</i> .
Epilôrikion	Padded surcoat worn by cavalry, as distinct in use from <i>zava/kavadion</i> , but often similar in form.
Esôforion	Shirt or under-tunic, of usually plain, undyed linen, but sometimes striped in more fashionable use.
Gounion	Padded arming coat worn by infantry in lieu of solid armour. Parade versions were worn in imperial ceremonies by units stationed in the capital. Synonymous with <i>kavadion</i> and the earlier <i>zava</i> .
Hetaireia	Greek for 'company'. Units of the metropolitan <i>tagma</i> . Previously called <i>skhola</i> .
Hypodimata	General term for footwear, but commonly boots in this period.
Iatros	Doctor.
Kampotouva	Padded leggings.
Katafraktos	Heavy-impact cavalry. Ideally comprehensively armoured with lamellar, mail, limb pieces and <i>epilôrikion</i> , and armed with multiple weapons.



A replica of a *katabrakos* helmet using the construction of the tenth-century example found at Yassenovo in Bulgaria. The horizontally segmented construction is also illustrated in the Madrid Skylitzes manuscript. The mail skirt is suspended by a method also used on other surviving Caucasian helmets whereby the rings are supported by a wire running through a slotted channel in the brim. (Author's photograph)

- Kavadion** Padded coat worn by infantry in lieu of solid armour. This term was also applied to civilian coats. See **gounion** and **zava**.
- Klivanion** 1. A corselet of lamellar. 2. Lamellar as a fabric of armour.
- Komês** 'Count'; commander of a **vandon/allagion**.
- Kontarion** Spear or lance. Cavalry *kontaria* were about 2.7m long.



<b>Koursôr</b>	Medium cavalry. Commonly armoured in mail or scale. Such men performed the roles of <b>prokoursatôr</b> or <b>defensôr</b> . This is the origin of the later European term and troop type 'Hussar'.
<b>Krivantês</b>	Field medics who recovered the wounded and returned them to treatment centres. Also <b>daipotatos</b> , <i>despotatos</i> and <i>dipotatês</i> .
<b>Lamellar</b>	Armour made of plates of metal, horn or leather fastened together with cordage, or, in the Eastern Roman Empire uniquely, a mixture of rivets and cordage, in which the rows of plates overlap upwards in normal use. Sometimes used on limb pieces inverted, thus overlapping downwards but still with the same construction, as distinct from <b>scale armour</b> .
<b>Lôrikion</b>	Usually a mail shirt. <i>Alusidôton</i> : literally 'chain armour'. <i>Folidôton</i> : a garment of scales.
<b>Mandatôr</b>	Functionary who carried orders from the high command to front-line officers.
<b>Matzouka</b>	An impact weapon with a metal head on a wooden shaft – mace. See <b>spathovaklion</b> and <b>sideroravdion</b> .
<b>Meros</b>	See <b>tourma</b> .
<b>Minsouratôr</b>	A surveyor sent ahead of the army on campaign to lay out the campsite. Also <i>minsôr</i> .
<b>Paramêrion</b>	A single-edged slightly curved sword hung horizontally from a shoulder strap or belt and used by all types of troops.
<b>Paximata</b>	Also <i>paximadion</i> . Hardtack made of course-ground wholemeal flour double baked, and possibly also containing other dried foods such as fruit and meat.
<b>Pektorarion</b>	A coloured cloth band tied around the chest to signal rank.
<b>Prokoursatôr</b>	A <b>koursôr</b> engaged in extended operations, such as scouting or pursuing and harassing smaller or detached groups of enemy.
<b>Roukhon</b>	Main body garment – tunic.
<b>Sideroravdion</b>	A shafted impact weapon (mace) made entirely of iron. Probably synonymous with <b>spathovaklion</b> .
<b>Spathion</b>	(Latin: <i>spatha</i> ) A double-edged straight sword used by all types of troops. The standard form was hung vertically from a shoulder strap like the ancient <i>gladius</i> . Another type used for lighter armoured troops and for parade purposes was hung horizontally from a belt: <i>zôstikion</i> .

Spathovaklion	A shafted impact weapon (mace) made entirely of iron with a guard and hilt like a sword. Probably synonymous with <i>sideroravdion</i> .
Strateia	The obligation to provide a soldier, other military services or money in exchange for tenure of land. See <i>strateioumenos</i> .
Strateioumenos	A man discharging the service obligations of <i>strateia</i> .
Stratos	The army overall.
Tagma	A unit of the army, or the army in general. Plural: <i>tagmata</i> .
Taxiarkhia	See <i>droungos</i> .
Taxiarkhês	Commander of a <i>taxiarkhia</i> .
Therapeutês	A (male) nurse or orderly in a field hospital or dressing station.
Tourma	A unit of 1,350 or more horsemen. Commanded by a <i>Tourmarkhês</i> .
Tourmarkhês	Commander of a <i>tourma</i> .
Tzangia	Calf-length boots.
Tzervoulia	Sturdy, rustic shoes.
Tzikourion	A battleaxe, commonly with one standard blade and a hammer, spike or knife-like blade.
Skoutarion	General term for a shield.
Stratêgos	'General'. Commonly a <i>stratêgos</i> served as a provincial governor in the earlier part of the period (see <i>thêma</i> , <i>doux</i> ), but might serve in a purely military capacity.
Thêma	A province. By the middle Byzantine period thematic organization was somewhat tenuous, but a thematic <i>stratêgos</i> or <i>doux</i> was still expected to raise troops for a campaign in his region.
Vandon	'Banner'. In addition to a flag, this term also refers to a unit. See <i>allagion</i> .
Voukinatôr	(Latin: <i>bucinator</i> ) Trumpeter.
Zava	In earlier usage, flexible body armour, which might be a padded arming coat worn in lieu of solid armour, or a shirt of mail or scales. By the tenth century it had been supplanted by consistent use of more specific terms – <i>kavadion</i> , <i>lôrikion</i> etc – and had come to mean mail pieces used to supplement more solid armour, usually for cavalry.



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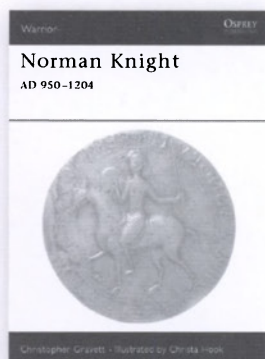
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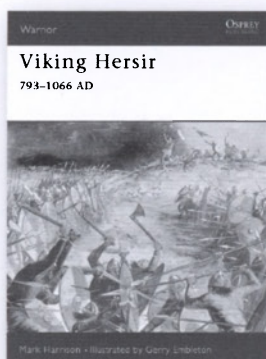
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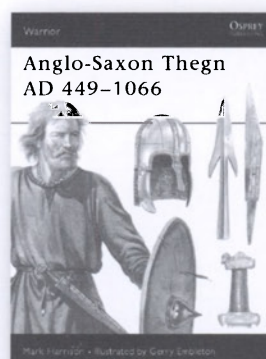
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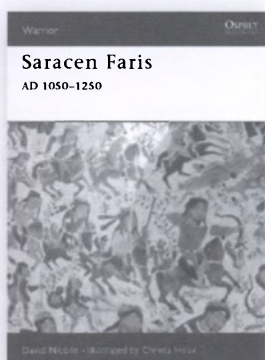
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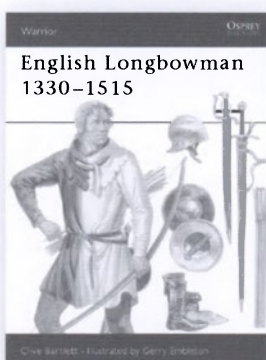
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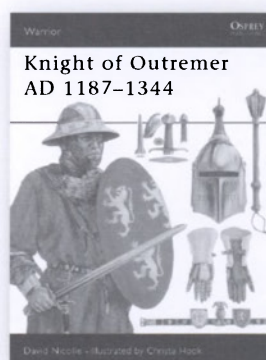
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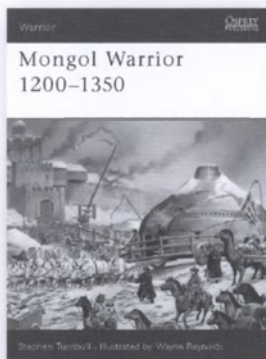
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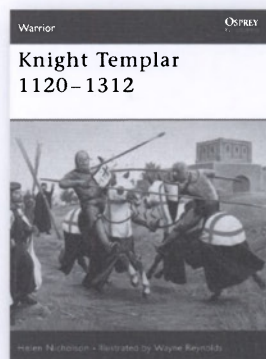
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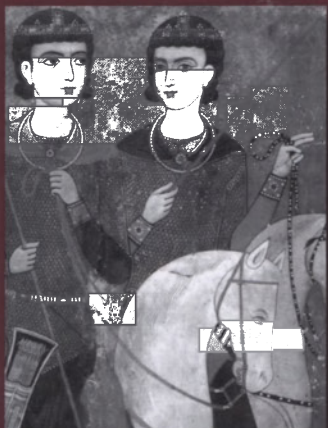
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