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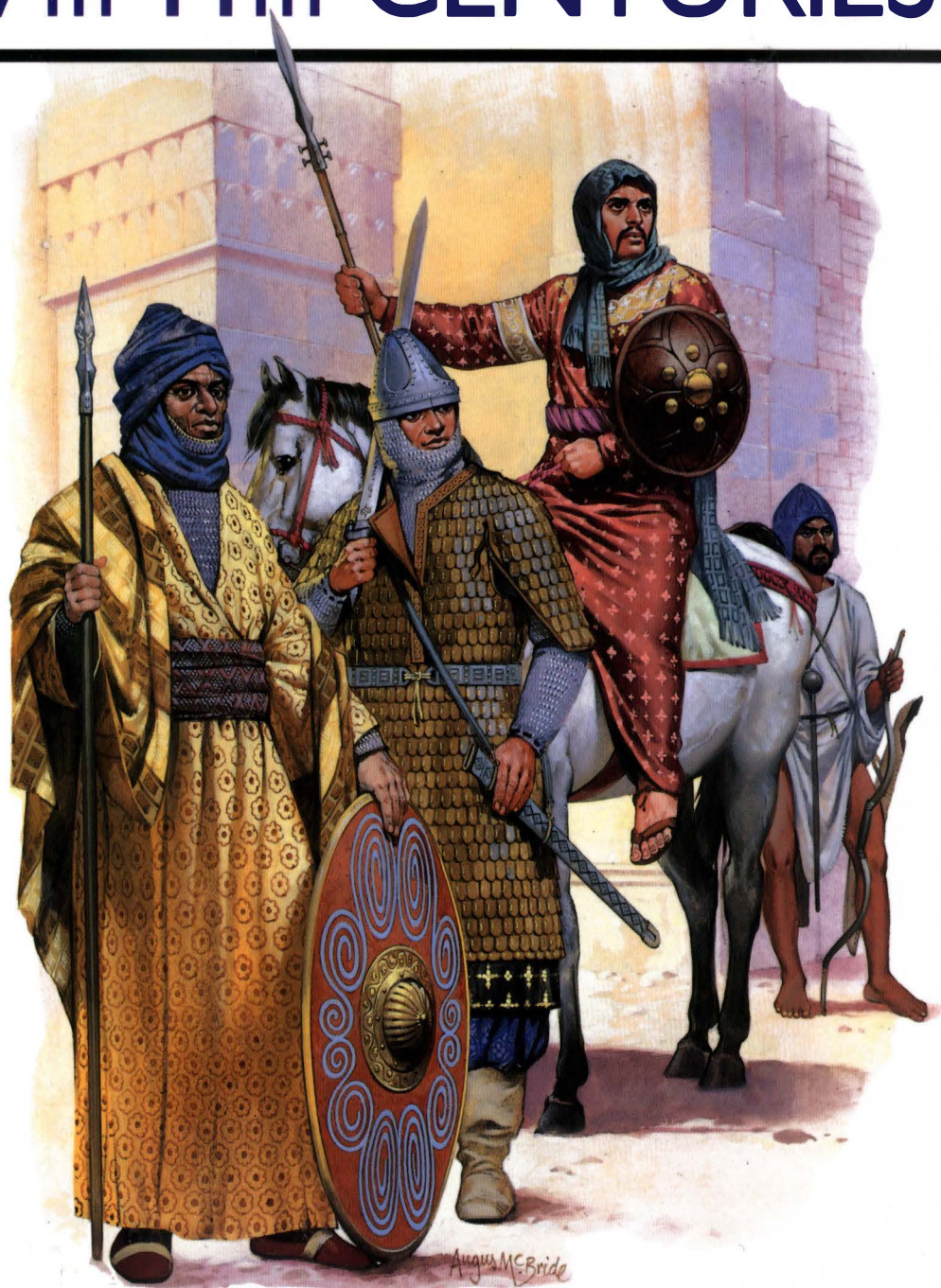
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# THE ARMIES OF ISLAM 7TH-11TH CENTURIES



DAVID NICOLLE ANGUS McBRIDE

EDITOR: MARTIN WINDROW

**OSPREY**  
MILITARY

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**125**

# THE ARMIES OF ISLAM 7<sup>TH</sup>-11<sup>TH</sup> CENTURIES

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## Chronology

(Battles described in the text are in *italics*.)

### 7th century

#### ARABIA AND THE FERTILE CRESCENT

**570(?)–632** Life of the Prophet Muhammad.

**632–661** Rashidun or 'Right Guided' Caliphs: Abu Bakr, Umar, Uthman, Ali.

**633** Risings crushed in Yamamah, Oman, Najran, Yemen.

**633–640** Conquest of Palestine, Syria, Iraq.

**636** *Second Battle of Yarmuk*.

**657** *Battle of Siffin*.

**661** Establishment of Umayyad dynasty as Caliphs (661–750).

**685–686** Kharaji fundamentalists invade Iraq—first of many attacks.

#### EGYPT AND NORTH AFRICA

**639–642** Conquest of Egypt.

**643–c.707** Conquest of North Africa.

#### IRAN

**638–650** Conquest of Iran, except southern Caspian coast.

**652** Death of last recognised Sassanian Emperor of Iran.

#### BYZANTIUM

**670–677** First Muslim siege of Constantinople.

#### CENTRAL ASIA

**c.650** First Muslim raid across river Amu Darya (Oxus).

**674–715** Conquest of Transoxania, establishment of a frontier.

### 8th century

#### ARABIA AND THE FERTILE CRESCENT

**744–748** Widespread Kharaji rebellions.

**749–750** Abbasids invade Iraq, Syria, overthrow Umayyads to establish Abbasid dynasty of Caliphs.

**763** Foundation of Baghdad.

#### EGYPT AND NORTH AFRICA

**788** Independent Idrisid dynasty in Morocco.

#### IRAN

**747** Start of Abbasid revolution in Khurasan.

#### BYZANTIUM

**712–717** Second Muslim attack on Constantinople.



Illustrations of pre-Islamic Arab warriors are rare; the clearest come from neighbouring civilisations, and in Byzantine art Arab bedouin appear in the biblical story of Joseph. In these small mid-6th century ivory panels, probably from Syria or Egypt, the tribesmen buy Joseph from his brothers (*above*) and sell him to the Egyptian officer Potiphar (*below*). Note long plaited hair characteristic of pre-Islamic Saraceni; they are armed with bows and short spears or javelins. (Throne of Archbishop Maximian, Cathedral Museum, Ravenna)





The massive keep of the fortress at Rustaq in Oman, the Qalat al Kisra; probably a late Sassanian or very early Islamic construction, it could represent the primitive type of fortification seen in Arabia at the time of the Prophet. Its triangular plan may be dictated by the shape of the rock around which it is built. The structure is solid, apart from a sloping, covered entrance passage.

#### CENTRAL ASIA AND INDIA

- 710–713** Conquest of lower Indus valley.
- 737** Turks invade Muslim Transoxania, *Battle of Juzjan*

#### WESTERN EUROPE

- 711–713** Conquest of Iberia, creation of Muslim al Andalus.
- 732** *Battle of Poitiers.*
- 755–756** Surviving Umayyad prince, Abd al Rahman, seized al Andalus, first province to break from central control of Caliphs.

#### 9th century

##### ARABIA AND THE FERTILE CRESCENT

- 812–813** *Siege of Baghdad* during Abbasid civil war.
- 819** Independent Ziyadid dynasty in Yemen.
- 836** Abbasid capital moved to Samarra.
- 877** Tulunid governors of Egypt occupy Syria.

##### EGYPT AND NORTH AFRICA

- 800** Autonomous Aghlabid dynasty in Tunisia.
- 809** Aghlabids conquer Sardinia.

- 827–901** Aghlabids conquer Sicily; raid Corsica, Italy, France.

**846** *Aghlabids sack Rome.*

#### IRAN

- 820** Autonomous Tahirid dynasty in Khurasan.
- 825** Autonomous Dulayfid dynasty in Kurdistan.
- 864** Independent Alid dynasty in north-western Iran.
- 867–872** Independent Saffarid dynasty conquers eastern Iran, Afghanistan; defeats Tahirids, occupies all Iran.
- 898–930** Revival of Abbasid authority in western Iran.

#### BYZANTIUM

- 9th century** Muslim-Byzantine frontier largely stabilised.

#### CENTRAL ASIA AND INDIA

- 9th–10th centuries** Local Arab governors in Indus valley remain loyal to Abbasid Caliphs.
- 874** Autonomous Samanid dynasty in Transoxania.

#### WESTERN EUROPE

- 9th century** Muslim-Christian frontier of al Andalus largely stabilised.

Various orders of battle were traditionally associated with different peoples in Islam. Some were out of date by the time they appeared in surviving manuscripts, but these probably reflected previous military practice. The four schematic battle-arrays shown above are based upon plans in an early 13th-century Persian manuscript written in Muslim India by a certain Fakhr-i Mudabbir. Top to bottom:

*Battle array of the Turks (entire tribe, not a raiding party)*

(A) Cavalry and infantry (B) Leader, advisers and armoury (C) Cavalry and infantry (D) Defensive cavalry and infantry (E) Artificers, harem and herds (F) Offensive cavalry (G) Spare horses with defensive cavalry and infantry (H) Hostages with cavalry escort (I) Infirm with cavalry escort.

*Persian battle array*

(A) Cavalry, spare horses and cattle (B) Chief Minister and armoury (C) Leader, harem and treasury (D) Infantry with prisoners (E) Infantry with baggage and hospital.

*Yemeni (pre-Islamic) battle array*

(A) Left front line (B) Right front line (C) Left wing (D) Right wing (E) Centre with leader, chief minister and advisers (F) Left flank (G) Right flank (H) Cavalry (I) Harem, treasury and armoury (J) Cavalry (K) Herds and baggage (L) Bazaar (M) Invalids with infantry escort.

*Indian battle array*

(A) Left advance guard (B) Right advance guard (C) Infantry archers with shields (D) Shock troops (E) Armoured elephants and sword-armed infantry (F) Spear-armed cavalry with horse-armour.

## 10th century

### ARABIA AND THE FERTILE CRESCENT

**10th century** Central Arabia under Qarmati fundamentalists, Hijaz under governors of Egypt, Yemen and Oman under local dynasties.

**905** Abbasid Caliphs regain control of Fertile Crescent.

**929** Autonomous Hamdanid dynasty in Syria and northern Mesopotamia.

**941** Ikhshidid governors of Egypt occupy Palestine.

**945** Buyids from Iran occupy Iraq, Abbasid Caliphs confined to palace.

**969** Byzantines capture Antioch.

**971** Buyids of Iran occupy Oman which thence remains under dynasties of Iran.

**990** Autonomous Marwanid dynasty in northern Mesopotamia (Diyarbakr).

**991** Buyids of Iran invade northern Mesopotamia.

**996** Autonomous Uqaylid dynasty in northern Mesopotamia (Mosul).

### EGYPT AND NORTH AFRICA

**909** Fatimids establish rival dynasty of Caliphs in Tunisia; occupy Sicily, Sardinia.

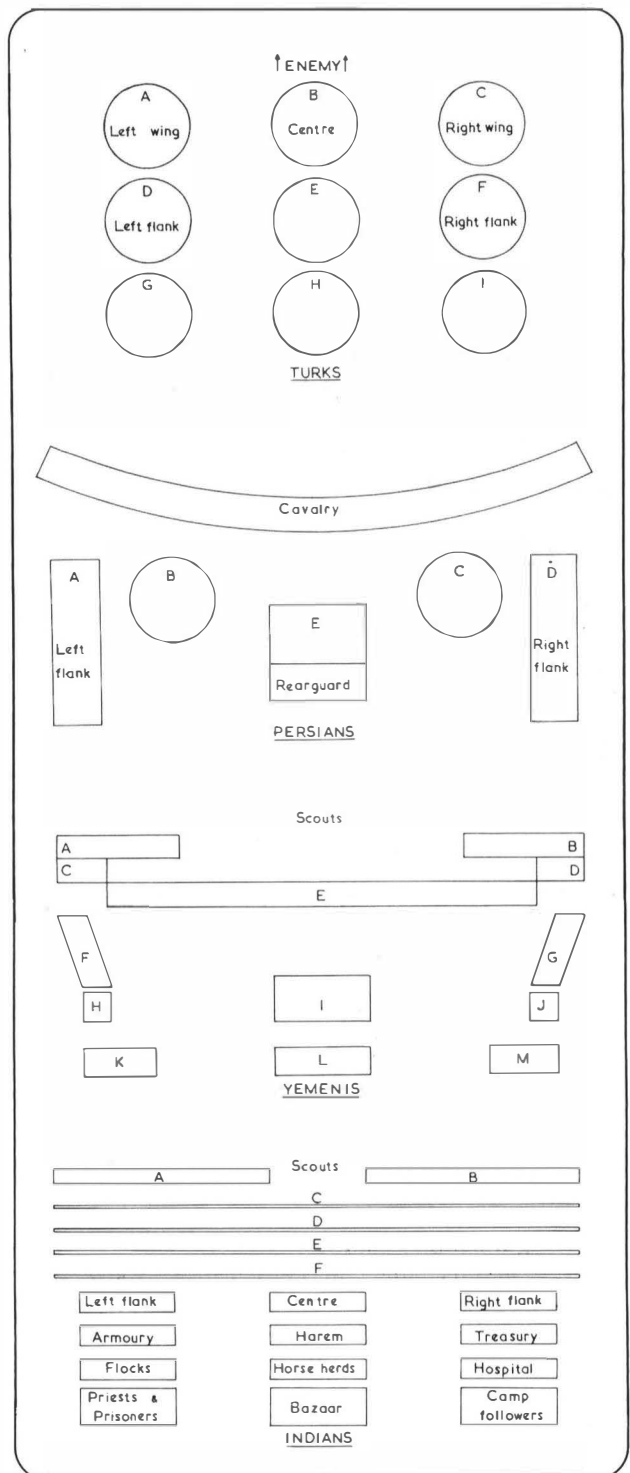
**935** Autonomous Ikhshidid dynasty in Egypt.

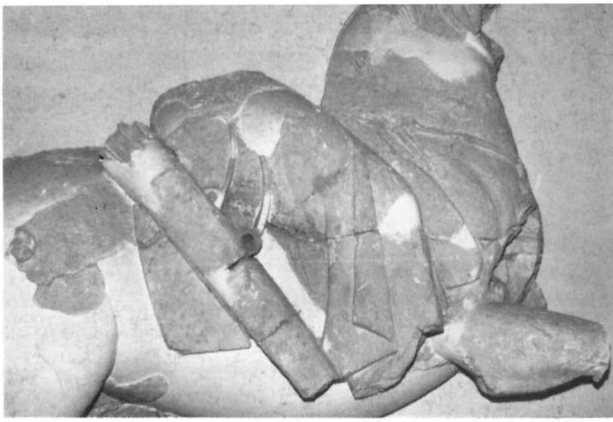
**969** Fatimid Caliphs conquer Egypt.

**972** Autonomous Zirid dynasty inherits ex-Fatimid provinces in North Africa, Sicily, Sardinia.

**975** *Battle of Sidon.*

**985** Idrisid dynasty in Morocco extinguished by local Berber tribes.





Umayyad art shows many cultural influences. Note Iranian-style quiver on this fragmented early 9th century statue of a horse-archer, from the desert palace of Qasr al Hayr al Gharbi. (National Museum, Damascus)

## IRAN

- 928** Samanids of Khurasan crush Alids of northern Iran but immediately lose area to autonomous Ziyarid dynasty.
- 932** Buyids break with Ziyarids, conquer western Iran, establish independent dynasty.
- 957** *Battle of Arbaq.*
- 959** Autonomous Hasanwahid dynasty in Kurdistan.

## BYZANTIUM

- 928-969** Byzantine military revival—capture Erzerum (928), Malatya (934), Samsat (958), Cyprus and Adana (964), Tarsus (965), Antioch (969).

## CENTRAL ASIA AND INDIA

- 962** Independent Ghaznawid dynasty in Afghanistan, subsequently raid Indian Punjab and occupy eastern Iran.
- 999** Newly Islamicised Khara Khans from Chinese Turkestan defeat Samanids, occupy Transoxania.

## WESTERN EUROPE

- 929** Umayyad ruler Abd al Rahman III declares himself and successors Caliphs (now three rival Caliphs: Abbasid, Fatimid, Umayyad).

## 11th century

### ARABIA AND THE FERTILE CRESCENT

- 11th century** Central Arabia under Qarmati fundamentalists.
- 1007** Autonomous Kakwayhid dynasty in Kurdistan.
- 1012** Autonomous Mazyadid dynasty in western Iraq.

- 1018-1173** Yemen divided between various shifting independent dynasties.
- 1023** Autonomous Mirdasid dynasty in northern Syria.
- 1094-1096** Saljuq Turks crush all local dynasties except Mazyadids, confine Fatimids to Syrian coastal towns.
- 1097** First Crusade invades Syria.
- 1098** Fatimids re-occupy Palestine.
- 1099** Crusaders conquer Palestine and Jerusalem.

## EGYPT AND NORTH AFRICA

- 1007** Autonomous Hammadid dynasty in Algeria.
- 1050** Creation of Almoravid movement in Mauritania; raid Ghana (1054); conquer Morocco (1056-1069), Algeria (1082).
- 1050-1057** Nomad Banu Hilal tribes migrate westward, occupy Libya, Tunisia.

## IRAN

- 1037-1051** Saljuq Turks conquer Iran.

## BYZANTIUM

- 1071** Saljuqs defeat Byzantines at Manzikert.
- 1072** Saljuqs invited into Anatolia as allies during Byzantine civil war.
- 1077** Autonomous Saljuq sub-dynasty in Rum (central Anatolia).
- 1097** Independent Danishmandid dynasty in eastern Anatolia.

## CENTRAL ASIA AND INDIA

- 11th century** Khara Khans rule Transoxania, latterly as Saljuq vassals.
- 1001-1024** Ghaznawids of Afghanistan raid India, conquer Indus valley (now Pakistan) and western part of Ganges plain.

## WESTERN EUROPE

- 1031** Collapse of Umayyad Caliphate and establishment of 15 minor independent dynasties throughout Muslim al Andalus.
- 1085** Defeat of Dhu al Nun dynasty and fall of Toledo to Alfonso VI of Leon.
- 1086** Almoravids of Morocco send help to al Andalus, *Battle of Zallaca*.
- 1090-1091** Almoravids occupy all al Andalus except Saragossa and Balearic Islands, which remain under Hudid dynasty.

# Introduction

During the Middle Ages Islam was Christian Europe's only civilised neighbour. Saracen and Turk were a perennial foe, their culture a fundamental rival, and as such they played a vital rôle in Western consciousness during Europe's most formative centuries.

Muslim military styles should, therefore, be better known than they are. Unfortunately those romantic notions that long bedevilled the study of medieval Europe persist where the realm of the Caliphs is concerned. The culture with which the Crusades collided in the 12th century was highly developed, already possessing many distinctive characteristics; yet it was still busily absorbing new features and new peoples. This eclecticism was, in fact, one of Islam's most obvious qualities.

Similarly, those tribesmen who erupted from the Arabian Peninsula in the 7th century were not the uncultivated barbarians that they were once thought to be, although many of the lands they overran or now neighboured boasted civilisations in advance of their own. Muslim culture grew from a fusion of these differing traditions. It continued to develop as Islam's frontiers broadened, as its traders ventured further afield, and as new peoples were drawn into the Muslim orbit.

The study of Islamic arms, armour and military organisation can certainly throw light on these cultural comings and goings. By the time the Frankish Crusaders reached the Middle East at the end of the 11th century Islam had already incorporated three major ethnic ingredients: Arabs, Persians and Turks. Each contributed in the military field, though none was autonomous and all displayed characteristics adopted from neighbouring peoples. Other influences included the Berber, Kurdish, Armenian, western European and, of course, the Byzantine. The rôle of the latter has been considered fundamental to the development of Muslim military techniques, though this is now questionable.

The biggest problem in the study of Muslim military history remains that of terminology. The terminology of the equipment involved is far from clear and seems likely to remain so until archaeology uncovers more surviving artefacts, as it has



**Fresco from Qasr al Hayr, showing a horse-archer of Transoxanian type. The original shows some detail of heavy stirrups, quiver, an unstrung bow in a decorative case, and Turkish-style decorative pendants from his belt. Our detail here shows the characteristic thumb-draw used to pull a Central Asian composite bow. (National Museum, Damascus)**

already done for the study of medieval European arms and armour. A study of terminology alone cannot answer all questions relating to the structure, development and changing appearance of weapons. Surviving illustrations can help, particularly if they are reasonably naturalistic, but inevitably they must remain a second-best alternative to surviving pieces.

None the less, the study of known terminology does suggest certain important conclusions. Iranian influences were probably stronger in pre-Islamic Arabia than were those from the Mediterranean. This remained true of both the arms and armour of the early Muslim period, although the impact of Iranianised and Turkish Central Asia was increasingly important. Central Asian influences may even have come to dominate

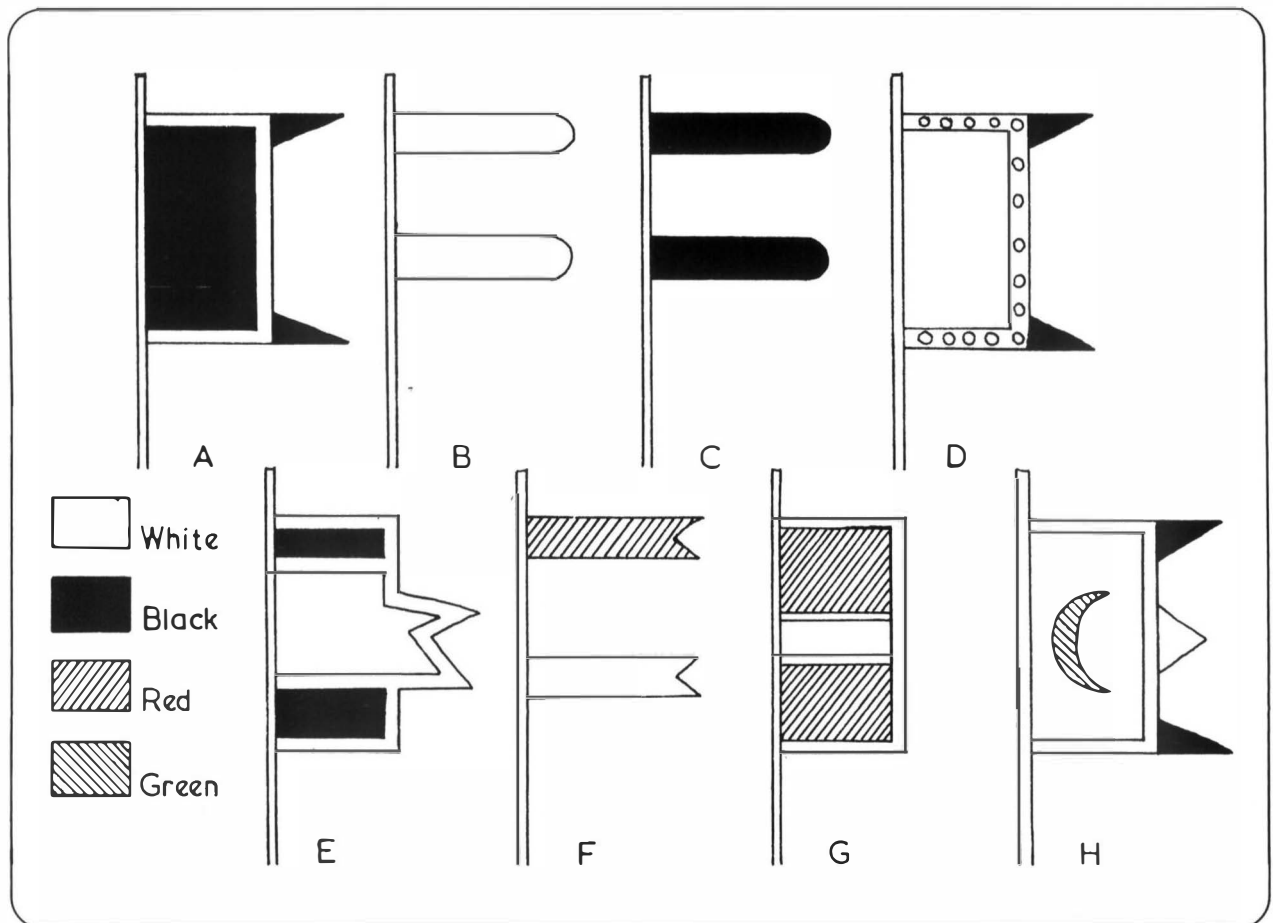
in all regions except North Africa and Spain before the more dramatic rise of Turkish fashions following the Saljuq conquests in the 11th century. But Central Asian styles did not reflect the supposedly backward nomadic culture of the steppes. Rather they reflected a combination of advanced metallurgical techniques stemming both from the settled communities in the Central Asian highlands and from the nomadic metalworkers, plus the advanced tactical concepts developed in these regions.

To the west, in Andalusia and to a lesser extent North Africa, Europe predominated among external influences. It would be wrong, however, to

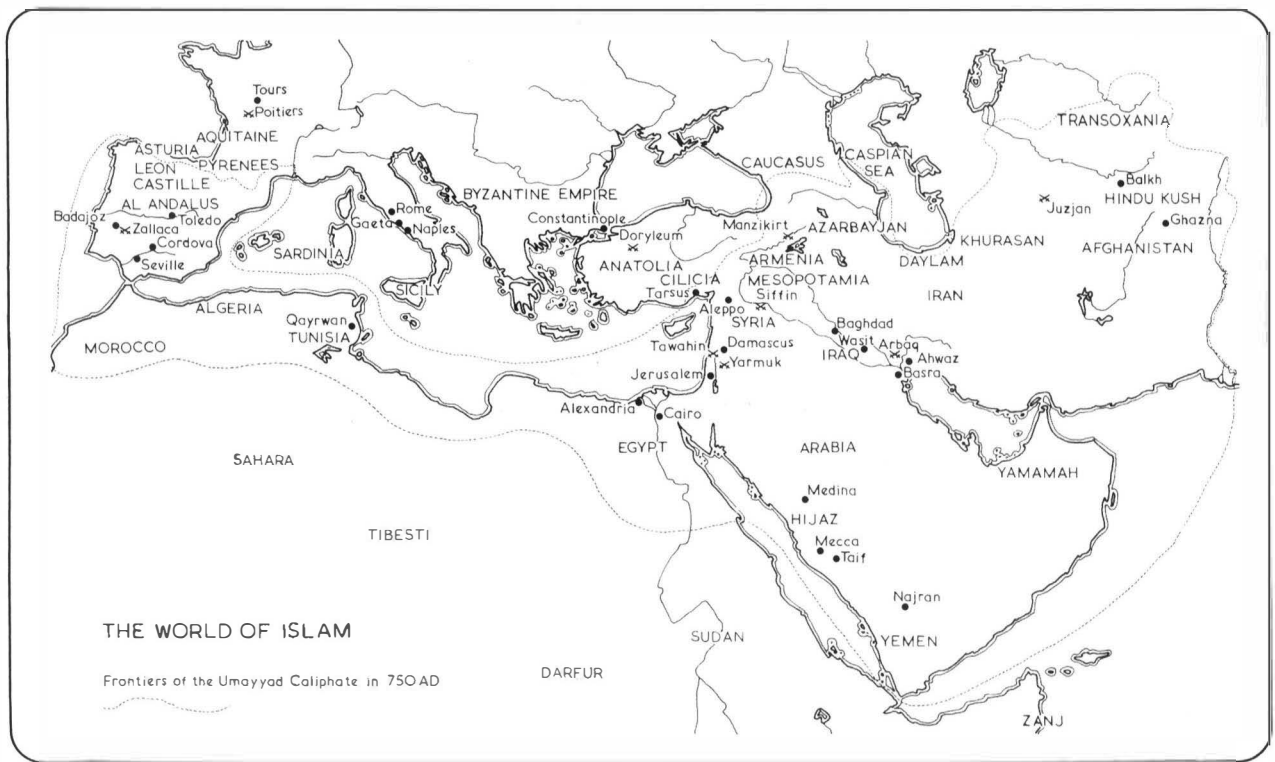
see these western provinces merely as absorbers of military and technological innovation. North Africa and Muslim Spain were still part of a wider Mediterranean material culture, and during the early Middle Ages the metallurgical industries of both expanded under Islamic rule. In fact these regions probably influenced their Christian neighbours as much as they were themselves influenced. Such a two-way flow of ideas would also seem to have been true in those provinces bordering Byzantium, although here both sides were also adopting numerous Central Asian styles.

Certain aspects of military technology reflected one source of influence more than others. For example, Indian technology was probably the most important external influence on Arab swords during the first decades of Islam, while Central Asian fashions, manifesting themselves most obviously in the curved sabre, came to predominate towards the end of our period. Somewhat surprisingly, Muslim archery may have

**Some flags used at the battle of Siffin, 657AD, as reconstructed by Martin Hinds (Al Abhath, XXIV, 1971). 'Liwa' were banners of military command, while 'raya' indicated tribal or other units. (A) Liwa of the Prophet, used by the Caliph (B) Raya of the Prophet (C) Liwa of the Quraysh tribe from the Hijaz (D) Raya of the Quraysh (E) Raya of the 'ansar' or first helpers of Muhammad (F) Liwa of the Umayyad Caliph Muawiya (G) Raya of Ghassan tribe from Syria (H) Raya of the Hadramaut in southern Arabia.**







followed Byzantine fashions at first, though again Central Asia soon came to dominate.

Armour and helmets represent more complicated fields. The Arabs may themselves have preserved styles, such as the scale hauberk, that had declined elsewhere. They may then have been responsible for a revival in such fashions in parts of Europe. Mail was already too widespread easily to reflect the influences of one or other military culture. Lamellar armour is more straightforward. Although it was almost certainly invented in the Middle East many centuries before the coming of Islam, it equally clearly became more widely popular in this area as a result of Central Asian influences during the early Muslim period.

## *The first Muslim Armies*

It is generally agreed that Muslim armies developed considerably from the time of Muhammad to the Abbasid revolution (750AD), and that the reforms of Marwan II, the last Umayyad Caliph

of Damascus, marked a change from primitive Arab tribal armies to more professional forces. Yet a closer investigation suggests that Marwan's reforms reflected military changes rather than stimulating them. The death of the Caliph Ali in 661AD and the consequent establishment of the Umayyad Caliphate as a dynastic state might provide a more appropriate watershed.

It has recently been suggested that 7th-century Arabia was not poor in weapons, considering its small population and the fact that a high proportion of these were warriors. The merchant bourgeoisie of the Hijaz lived in houses that were veritable arsenals, and these clan or tribal weapons stores ensured domination of vital trade routes across bedouin-controlled territory. Such arsenals were also increased by tribute from subordinate families and by steady imports of arms. Apart from locally made iron weaponry, other equipment such as felt armour and shields of various leathers were produced in and around Arabia.

Although early Arab verses cannot be regarded as a literal guide to the military situation in 6th- and 7th-century Arabia, statistics based upon poetry suggest that armour was common although

helmets were rare. These also indicate that sword and spear dominated the battlefield.

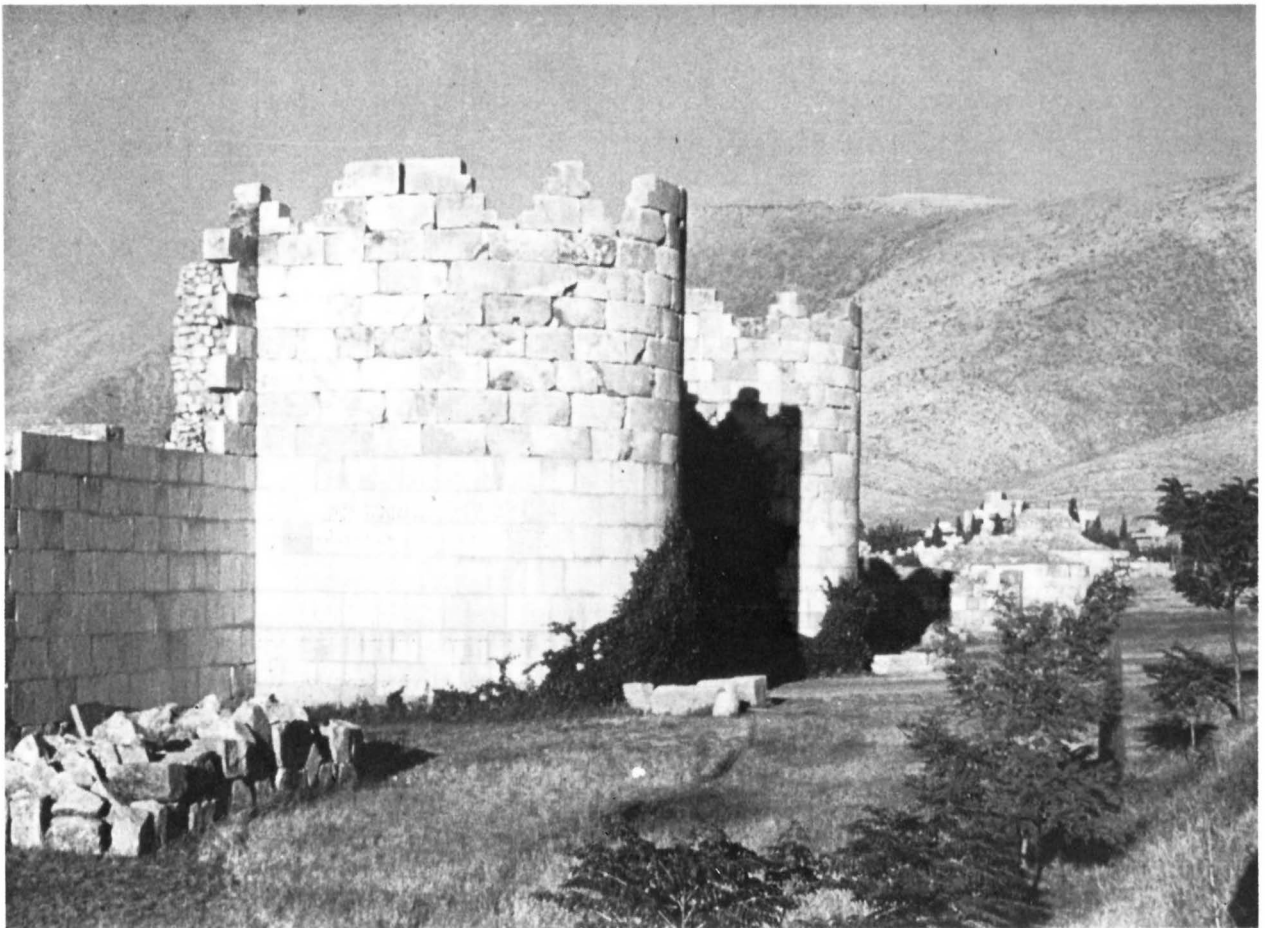
Few would dispute that Arabia was acutely short of horses. Yemen and Oman, both under nominal Iranian rule, were better off. When Yemeni Najran fell to the Muslims horses were demanded as tribute in similar numbers to camels and armours. Horses were also demanded from Yamamah on the Gulf coast.

The first Muslims apparently fought in close ranks for moral support. By this means Muhammad's outnumbered warriors defeated their pagan foes. Such disciplined formations, which almost inevitably led to higher casualties, were normal in the professional armies of Byzantium and Iran, but

were contrary to previous Arab practice. Javelins were sometimes used before the opposing forces came into physical contact. Such tactics were almost certainly inspired by the re-organised armies of 6th-century Byzantium, although in Islam the infantry bow may have been preferred to the javelin. According to the earliest surviving biography of the Prophet the rôle of the archers was for such skirmishing, as well as protecting the infantry's flanks against enemy cavalry. Again, the tactical concept is comparable to that evolved in Byzantium.

The rôle of cavalry in Muhammad's first armies could not mirror that of existing Middle Eastern empires. So valuable were war-horses that they were generally led to battle and only mounted for the combat itself. Normally the horsemen would hover on the flanks of the opposing infantry, ready to take advantage of any loss of cohesion among the enemy. In such situations the lance was con-

**Anjar in Lebanon, one of the new cities founded by the Umayyads in an effort to revive prosperity in the war-ravaged ex-Byzantine province of Syria. The huge rectangular site, surrounded by strong walls, was laid out for the Caliph al Walid I early in the 8th century; these massive towers flank the north gate.**



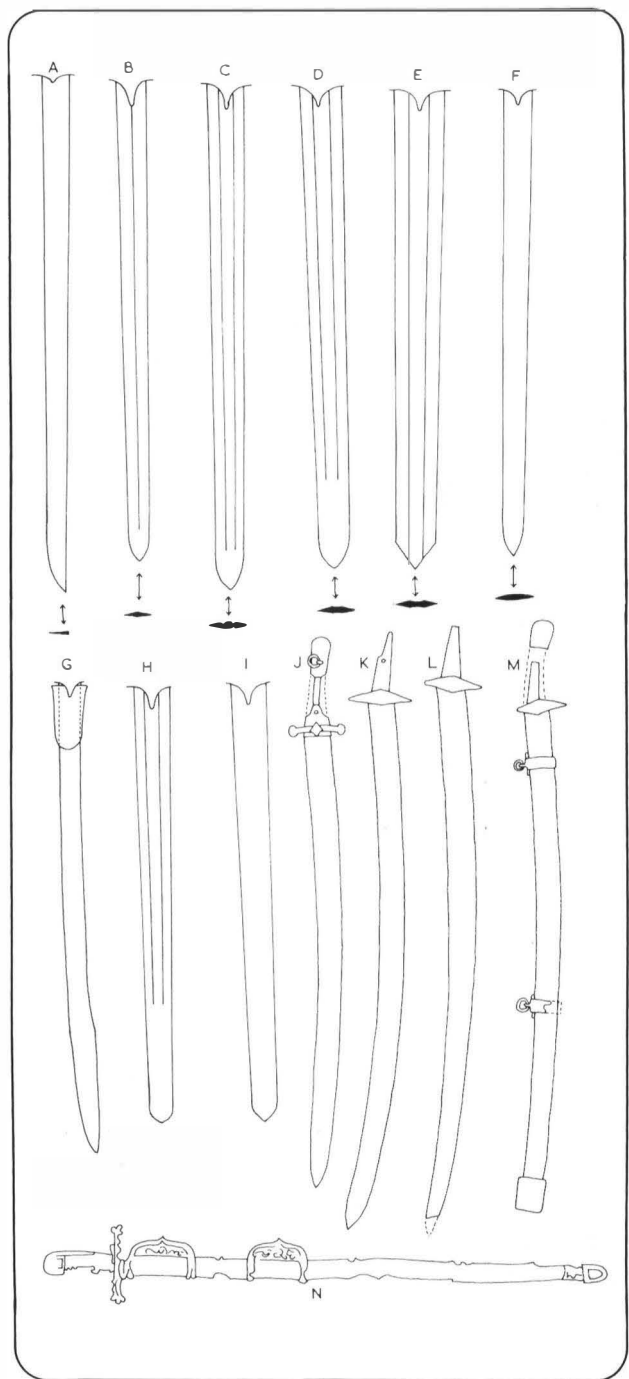
sidered the best cavalry weapon. Among the bedouin it would probably have come in two styles, the normal weapon of five cubits' length and a much longer 11-cubit weapon. (A cubit was the length of the forearm.) Clearly the Muslims needed more horses before copying Byzantine cavalry tactics, and the Prophet was obviously aware of this. By the purchase of horses and, where possible, the levying of animals as tribute Islam was eventually able to counterattack its foes.

Once Islam went on to the offensive new problems arose, but at first some specifically Arab tactics enabled the Muslims to bypass the problems of fortified towns and numerical inferiority. Their superior strategy, based upon a widespread use of the camel, enabled their mounted infantry to outmanoeuvre their foes and thus give battle at times and places of their own choosing. This usually entailed forcing the enemy to attack Arab infantry when the latter was established in a good defensive position.

While the early Muslims were undeniably inferior to most of their foes in terms of siege engineering, they were not ignorant of the art. During the siege of Taif Muhammad's men used both a mantlet of cowhide and a man-powered mangonel. The latter may have been learned from the Sassanian Iranians in Yemen. Primitive as such engines might sound, they were clearly seen as an improvement over the torsion engines of the Roman world, although these also continued in use for some centuries.

While Islam, with its urban merchant élite, could assimilate the weapons and technologies of its foes, the problem of manpower was not so easily solved. The situation was apparently getting serious by the mid-7th century, and the recruitment of Islam's defeated foes was now encouraged. The *junds*, or regional armies, were also established, not merely to garrison a vast new empire but also to make effective use of limited Arab manpower.

As the area under Muslim control widened so an increasing number of horse-raising territories was acquired. The Muslims also soon possessed the finest cavalry mount available—the Syrian-Arab crossbreed. This combined the advantages of the small but strong North African Barb and the heavier Iranian horse. Full equipment for a 7th-century Arab horseman going on a raid was



Various swords survive from the early Islamic era; although their association with historic figures remains doubtful, they are clearly very early blades. Those in the Topkapu Museum, Istanbul (A-I) have been given later hilts. (A) Sword of Caliph Uthman, 644–56AD (B) Caliph Abu Bakr, 632–34AD (C) Caliph Umar, 634–44AD (D) Caliph Ali, 656–61AD (E) Caliph Uthman, 644–56AD (F) The Prophet Muhammad (G) Sabre of the Prophet Muhammad—of Central Asian origin (H) Sword of Zayn al Abidin, early 8th century (I) Khalid ibn al Walid, mid-7th century (J–M) Turkish sabres from the Ukraine, 9th–13th centuries (State Historical Museum, Moscow) (N) Turkish sword from the Altai Mountains, 8th century (Hermitage, Leningrad)



The palace or small town of Qasr al Hayr al Gharbi was built in the Syrian desert for the Caliph Hisham in 727AD. It consists of two fortified enclosures, although the defences were more decorative than functional. Here the mud-brick main gate, built on a dressed stone foundation, has been reconstructed in Damascus. (National Museum, Damascus)

listed as shield, hauberk, helmet, packing needle, five small needles, linen thread, awl, scissors, horse's nose-bag and a feed-basket. In 656AD other horse-riding warriors were described as armed with swords on baldrics and 'bristling' with iron armour, but these men may have been mounted infantry. Other specifically cavalry troops were armed with lances, while some also had iron armour. Whereas in Byzantium such heavy cavalry were trained to fight as once-only shock-troops, Arab armoured horsemen could fight just as effectively on foot in ranks, and would do so if surrounded or outnumbered.

Nevertheless, infantry still dominated the battlefield. Abundant as armour might have been among the early Muslims, it was clearly not universal; nor was it worn by all infantry. Like their Byzantine foes, the Arabs put armoured infantry in the front ranks to protect those not so armoured. An analysis of the wounds most often mentioned in written sources shows that legs and feet suffered most, and shoulders, hands and bodies least. Arrow wounds in the face were also

common. This would not conflict with the tactics so far described.

### The Rise of Heavy Cavalry

Throughout most of the Umayyad era cavalry was divided into armoured and unarmoured units, with the former gathered together as a small élite of shock-troops. The remainder were normally reserved for the destruction of already disorganised or broken infantry. It was this system that Marwan II's reforms altered or regularised in the middle of the 8th century.

The bulk of Muslim cavalry now seem to have been armoured, with light horsemen relegated to reconnaissance. Marwan's forces were sub-divided into smaller units, each including heavy infantry, bowmen and heavy cavalry. The latter's rôle was to make rapid, selective and repeated charges from behind the security of its own infantry. This infantry would in turn halt enemy cavalry attacks. Thus the majority of horsemen were using shock tactics. Although this seems to reflect Byzantine influence, the consistently-defeated Byzantines were themselves now abandoning such tactics, at least in the East. Umayyad cavalry were always prepared to dismount and fight defensively, however, using their spears as pikes.

One reason why the victorious Arabs apparently copied their defeated Greek and Persian predecessors may have been that they now faced the same tactical problems vis-à-vis Central Asian horse-archers. Byzantines, Sassanians and Muslims all sought another solution to the problem by recruiting Asiatic horse-archers into their own ranks. The equipment of domestic forces also reflected the challenge; and one particular item, namely horse-armour, may illustrate this fact. Bards of felt became common since they were light, effective against most arrows and could be constructed from readily available materials. Nor was horse-armour limited to regular troops during the Umayyad Caliphate. It was recorded in use by Kharaji rebels in 696–7AD, most of whom were Arabs. Some wore hauberk, coif, arm-defences and carried lances. A widespread use of felt horse-armour might have contributed to the Arab and Persian horsemen's reputation for being heavier than their Turkish foes in Transoxania.

Traditional accounts of Umayyad heroes tend

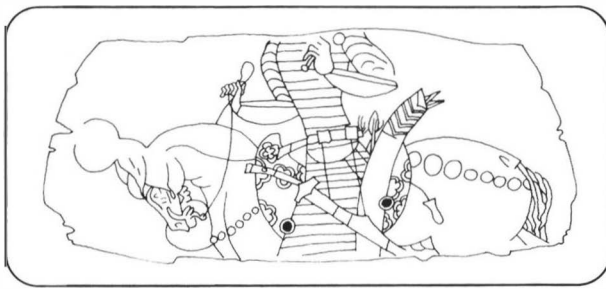
to portray them as horsemen armed with lance, mace and, in some cases, two swords. This latter feature probably recalls the wearing of a large *khanjar* dagger in addition to a sword. Other sources mention bows, though making it clear that these were often laid aside.

The Umayyad era was also a transitional one as far as stirrups were concerned. Those of the leather-loop variety were already known, though they were generally despised as signs of weakness. Arabs met iron stirrups in Khurasan, where the Muslim governor is recorded as having obliged his troops to adopt them at the close of the 7th century.

Arab troops played a dominant rôle in overthrowing the Umayyads, although some native Khurasani troops were also involved. Most of these Arabs came from the East, of course, and the Eastern *jund* armies had probably already adopted many Iranian features. No major changes in tactics are recorded, and early Abbasid cavalry still co-operated with their infantry in the same

**Carved altar screen from Tsebelda in Georgia, sometimes regarded as 6th–7th century; but the mounted figure of St Eustace on the lower border is clearly later. His turban with its long trailing 'rafrat', his heavy stirrups and his large, rounded saddle cloth probably date the piece to the 9th or 10th centuries, when Georgia was under Muslim rule and its armies reflected Iranian influence. (State Museum of Georgia, Tbilisi)**





**Upper part of a round, leather-covered wooden shield from western Turkestan; it has two holes—of the original four—for small bosses, and is decorated with a mounted warrior wearing lamellar armour. The shield was found in the castle of Mug, which was sacked after rebelling against Muslim rule in the 8th century. (Hermitage, Leningrad)**

manner as had the later Umayyads. Again, the cavalry was quite prepared to dismount and fight defensively, and even in the early 9th century an Arab military leader was still advising that cavalry also be trained to fight on foot. Meanwhile, western Arab troops in Syria and along the Byzantine frontier were described as fighting with spear, sword and shield—on one occasion shields made of Tibetan leather.

In fact, while the prestige of Arab troops declined at the centre of Abbasid power in Iraq, they persisted on the Anatolian frontier and among numerous rebel or heretical groupings. Such warriors relied primarily on their lances, though they would also use the bow. Above all, they retained the strategic mobility of early Muslim armies.

On the Anatolian frontier there was already a blurring of identities between Byzantine and Arab emirs and emirs. This was, of course, an era when Byzantium was on the defensive and there is much evidence to suggest that, contrary to popular belief, Islam fielded more heavy cavalry than did the defending Christian forces.

The Abbasid Caliphate was already beginning to fragment when Ahmad ibn Tulun became governor of Egypt in 868AD. There he found the original Arab *jund*, or regional army, to have largely been replaced by Turkish *ghulams*, or regular troops. Further west this had not occurred, and an Arab militia still formed the core of Aghlabid power in what is now Tunisia and Sicily during the 9th century. Despite the maritime orientation of Aghlabid ambitions, cavalry still played an important part in their military

calculations, sometimes being shipped overseas in their hundreds. Most Berber warriors seem, however, to have been infantry, while their minority of horsemen fought with javelins or large-bladed spears, bareback as their ancestors had done.

Al Mamun's victory over his brother Amin in the Abbasid civil war of 811–813AD, set in motion a series of military changes. His victory was largely the work of Eastern troops, generally referred to as 'Khurasanis' but apparently consisting largely of Iranians and Turks from Transoxania. These fought as armoured horse-archers, wearing lamellar cuirasses, hauberks, arm-defences, and carrying lances and Tibetan leather shields, while their horses wore bards of felt. From now on cavalry were clearly dominant in Abbasid armies. Nevertheless they still co-operated with infantry units, whose defensive rôle remained vital, even in open battle. Iranians formed a major part of these new forces, and although Arab and other units did not disappear the Khurasanis enjoyed a brief period of dominance before they and their predecessors were both relegated to a second-class status by a newly recruited force of Turkish captives.

Al Jahiz of Basra described these Khurasanis as better equipped than other troops. They wore clothing similar to that of Eastern Christian monks, and had beards and long hair. They are said to have been almost identical to the Turks, although they may have placed a greater reliance on swords than on bows and lances. These swords were apparently slightly curved. Other weapons included maces, small battle-axes and single-edged short-swords. They also proudly stressed their use of true stirrups.

### **The Age of the 'Ghulams'**

The political rôle of the so-called 'Turkish 'slave army' in the decline of the Abbasid Caliphate is well known. This force of *ghulams* often acted like the Praetorian Guard of later Imperial Rome, but less attention has been given to the military characteristics of these troops.

Unlike Khurasani warriors, these *ghulams* were recruited as captives from beyond the Muslim frontier in Transoxania. During the early 9th century many adult warriors were taken prisoner, even including aristocratic leaders of established



reputation. Only later were *ghulams* purchased as children to be trained and then freed as Muslim warriors. In Baghdad they formed a new corps, theoretically owing loyalty solely to the Caliph. Unfortunately, such loyalty tended to focus upon their own commanders. Although this élite rarely took part in operations against Islam's external foes, it was crucial in the increasing internal conflicts.

Written evidence shows the *ghulams* to have been heavy horse-archers, who added the traditions of their Central Asian homelands to those of their predecessors within Islam. Early in the 9th century the first such troops were described as having exceptionally obedient horses and carrying two or even three bows, plus a lasoo. They were generally slower and more heavily armoured than the Arabs, but were similarly skilled with the lance. Their horse-archery was typically Turkish, as they were able to shoot forward and to the rear while galloping.

Little seems to have changed by the mid-10th century, when the *ghulams* of Iraq and Iran used traditional Arab tactics of repeated attack and retreat, though shooting with Turkish arrows rather than closing with Arab lances. Second-rate or junior *ghulams* wore broad-sleeved, probably quilted, hauberks and rode horses with felt bards. First-rate troops were more effectively armoured, as in Syria where, at much the same time, an army of *ghulams* was operating independently. They rode armoured horses while their leader, in armour and wielding lance and sword, rode a horse whose bard was 'charged with mirrors'—perhaps being of scales or lamellar.

Meanwhile, up on the Anatolian frontier it was difficult to state who was influencing whom. While the appearance of large numbers of heavily armoured cavalry in Europe might have obliged the Byzantine Emperor Nikephorus Phokas to enlarge his corps of comparable troops, the style of equipment in question might originally have been of Byzantine inspiration. It is even possible that the kite-shaped so-called Norman shield was of Byzantine origin, ultimately being a development of an Iranian infantry shield. While the importance of heavily armoured cavalry in Byzantium's push against the Muslim frontier is reflected in Byzantine art, some sources indicate

that influences were still mutual. These new troops made their attacks from the protection of an infantry formation—such tactics must recall those used by Marwan II when Islam was on the offensive. The horse-armour used by Byzantine heavy cavalry was of layered and glued felt, or of iron, cuir-bouilli or horn lamellar. Mail horse-armour is mentioned but is likely to have remained rare. Metallic horse-armour of mail or lamellar was similarly employed by those Arabs who faced the Byzantine offensive.

According to the Emperor Leo VI's *Tactica*, Muslim armies still used their cavalry from within the protection of a rectangular infantry formation, while such horsemen were equipped 'like the Romans', meaning the Byzantines. In this instance Leo was probably referring to the Tulunid army from Egypt that crushed a Byzantine force

**The large lamellar cuirasses of Turkestan figure in much Central Asian art. This style of armour had a profound influence on Islamic fashions. This 9th century stucco figure from eastern Turkestan has a splinted spangenhelm with a short nasal, and a long cuirass probably of leather lamellar. The shield on the left is associated with this figure. (British Museum)**



near Tarsus in 883AD. The fact that Muslim cavalry were expected to be competent with both lance and bow, as in earlier periods, is confirmed in Arab sources. The limited pictorial evidence emphasises the sword above both these weapons, however.

There seems to have been a concentration of Muslim military effort in Cilicia before it fell to the Byzantines in the mid-10th century. In 947–8AD the Abbasid Caliph sent a large contingent of eastern Iranian and Turkish troops to Tarsus in an effort to stem the Christian advance. Cilicia was already known for the manufacture of various items of armour, arms and harness, while one unit of *ghulams* stationed in Tarsus was specifically equipped with armour for man and horse, plus Tibetan leather shields, maces and helmets.

**While most Syrian and Anatolian fortifications were of stone, those in Iraq and Mesopotamia were generally of brick. Two-thirds of such a brick-built gateway survives at Raqqa, once a flourishing city in the Euphrates valley, founded by al Mansur, Caliph of Baghdad 754–75AD. This eastern gate probably dates from the same period.**



## The Successor States

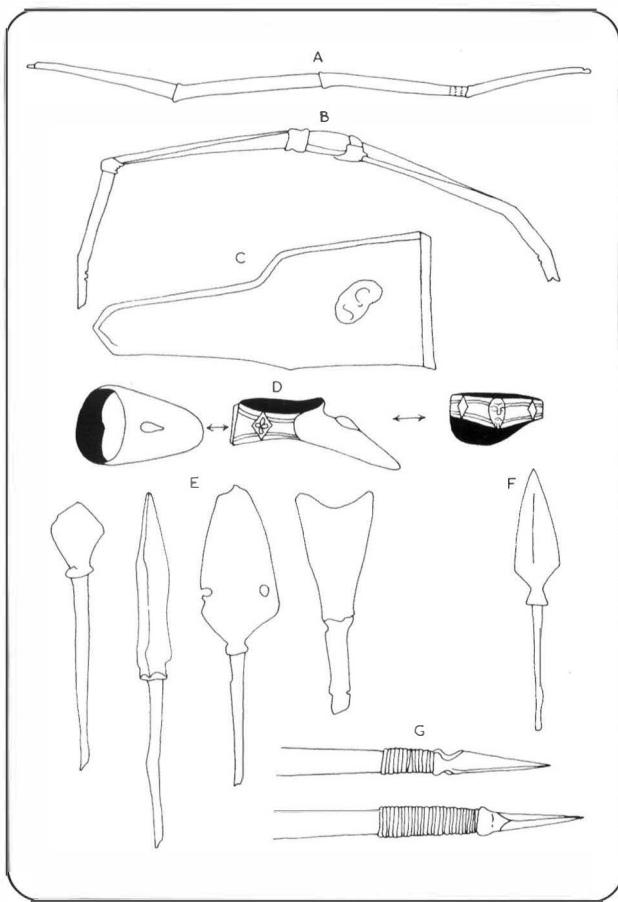
The minor states that emerged from the fragmentation of the Abbasid Caliphate mostly modelled their armies on those of the Caliphs. Local conditions naturally led to modifications, but some time was to pass before the Abbasid tradition of heavy cavalry declined.

The court of the Hamdanids of Syria was famed for a flowering of Arabic literature as well as for its fierce resistance to Byzantine expansion. The degree of similarity between Byzantine and Hamdanid armies was also far greater than that between Byzantium and its other neighbours, and could be seen in heavy cavalry, fortifications and tactics. But this similarity was not complete. Hamdanid preference for the traditional long Arab lance and hauberk, and a general association of archery with their Byzantine foes is indicated in the poetry of the period. It is worth noting that an Arab cavalryman who had lost his lance was fearful of another so armed, even though he retained other weapons. An identical attitude would be reflected four centuries later in the earliest surviving Arabic military training manuals.

How far such equipment was government issue, as it had been under the 9th and 10th century Abbasid Caliphate, remains unknown. It would seem more likely that Arab warriors purchased their own weaponry in such well-established manufacturing centres as Aleppo.

With or without horse-armour, a Hamdanid cavalryman's equipment could be so heavy that it was difficult to remount a horse in the heat of battle. This is not surprising when one reads descriptions of mid-10th century Arab cavalry in this area. The Banu Habib tribe, for example, was a rival of the Hamdanids. Their horsemen were armed with swords and bamboo lances, hauberks, gilded lamellar cuirasses and brocade-covered coifs.

Kurdish tribes were reasserting their separate existence in the 10th and 11th centuries. Their warriors generally appear as sword-armed horsemen, often more heavily armoured than the tribal Arabs and riding heavier, presumably Persian, horses.



(A) Bamboo bow, said to have belonged to the Prophet Muhammad (Topkapu Museum, Istanbul). (B) Composite bow from the Caucasus, 8th-9th centuries (Ethnographical Museum, Leningrad). (C) Leather bow-case for a strung bow; Caucasus, 8th-9th centuries (Ethnogr. Museum, Leningrad). (D) Archer's bronze thumb-ring from Eustat, Egypt, 750-850AD (Museum of Islamic Art, Cairo). (E) Turkish arrowheads from Mongolia, 7th-10th centuries. (F) Turkish arrowhead from eastern Turkestan, 9th-10th centuries (Berlin). (G) Arrowhead from Aleppo, Syria, 11th-13th centuries (Nat. Mus. no. 0326-9-4, Damascus).

The emphasis on heavy horsemen in Syria and Egypt during the break-up of the Abbasid Caliphate did not mean that light cavalry ceased to exist. Indeed the increasing political confusion and a probable decline in arms-manufacturing capability seem to have led to their revival in many areas. The second Tulunid governor of Egypt, the fabulously wealthy Khumarawayh, selected one unit of personal guards from the warlike bedouin of the eastern Delta area, who appear to have been light cavalry.

The Mirdasids who ruled northern Syria after the collapse of the Hamdanids seem to have had more immediate bedouin origins and their army was more obviously tribal than was that of their

predecessors. Yet it was effective enough to defeat a sizeable Byzantine force in 1030AD. Here many Mirdasid light cavalrymen still did not employ stirrups. Such bedouin horsemen, described by a Byzantine chronicler as 'daring bare-back riders', would make a similar impact in Ghaznavid eastern Iran, where they were known as 'dare-devil riders'.

The decline of Abbasid power in the East during the mid-9th century similarly led to the establishment of independent states. The army of the Saffarids, who ruled eastern Iran, saw a re-assertion of native Iranian cavalry traditions. Arab and Indian mercenaries were also employed, although it does seem that the local Arab tribes, while preserving their identity, had declined in military effectiveness.

The Iranian revival was even more pronounced and self-conscious under the subsequent Samanid dynasty, which, from its power-base in Transoxania, conquered most of eastern Islam in the 10th century. Samanid armies are probably described in the famous *Shahnamah* epic, for although the story is clearly pre-Islamic, the military details are likely to have reflected contemporary practice. Here a young nobleman was trained to ride and use both bow and lasoo. His equipment varied but could include a mail hauberk, a padded gambeson, differing forms of helmet, plus lance, lasoo, bow and mace. Lances seem to have been used first, followed by swords and finally maces. It is also clear that the reins were slackened and knees and stirrups tightened as a horseman attacked so that these, rather than the saddle as later in Europe, took the strain of impact.

The Samanid battle array, as portrayed in the *Shahnamah*, similarly retained earlier traditions. In front stood the infantry with their spears used as pikes. Behind were other infantry wearing cuirasses and throwing javelins or shooting with bows. Cavalry were ranged behind these foot soldiers, while war-elephants, if available, brought up the rear. Heavy cavalry of the *ghulam* type almost certainly played a dominant rôle. Horse-armour is frequently mentioned and is sometimes specifically of mail. Elsewhere it could have been of felt, as it was easily severed with a sword-blow. Cumbersome horse-armour could also be cut loose to enable a rider to outstrip pursuers.



10th century pottery excavated at Nishapur, Khurasan often portrays armoured warriors, probably from the Samanid army. Most, though not all, are mounted. Here a footsoldier with two javelins and a large shield follows a horseman wearing a short lamellar cuirass over a mail hauberk. (Mus. of Oriental Art, no. 2629/3258, Rome)

Much the same troops formed the core of the Ghaznavid army in eastern Islam in the 11th century, although there was a greater emphasis on horse-archery, the mace and the curved *qalachur* sabre.

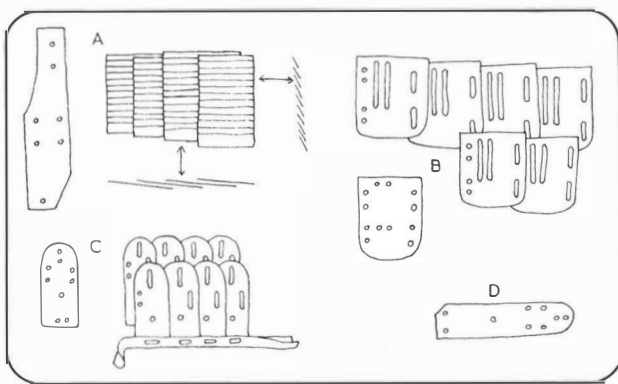
Heavy cavalry, in particular those fighting with the sword from armoured horses, also remained effective in north-west Iran and the Caucasus. The peoples of this area rarely made much political impact but emerged now and then, for example in the *Gesta Francorum* chronicle of the First Crusade. This stated that the Turkish army at Doryleum contained a number of *Agulani*, probably Aghovanians from northern Azarbayjan, who fought only with swords, wore iron scale or lamellar armour and rode horses similarly protected.

In the West the Abbasid collapse had more complicated military results than elsewhere.

There was no immediate revival of indigenous Berber institutions, which seem to have remained relatively backward. Instead there was a revival of Arab tactics, both among the Arabs themselves and among those Berbers who had adopted Arab customs.

Little is known about the military equipment of Islamic Sicily, but lightly equipped troops seem to have predominated, although mail hauberts were not uncommon. The mace remained popular even among 12th-century Muslims under later Norman rule and it had already appeared in southern Italian sources showing strong Islamic influence. The mace would seem to have been characteristically Arab, for it was not recorded among those Berbers who bore the brunt of Fatimid expansionist wars in the 10th century.

These Berbers still made wide use of the javelin, but soon proved unable to stand against *ghulam* cavalry. Nevertheless, they continued to play a major rôle until defeated during the Fatimid civil wars of the mid-11th century. Perhaps it was their lack of heavy cavalry that limited Berber horsemen to a secondary rôle even in early Fatimid



Very few pieces of armour survive from early Islam, but more is available from neighbouring cultures using similar equipment. (A) Single lamell, and arrangement of mixed bronze and iron lamellae found at Qasr-i Abu Nasr, SW Iran, mid-7th century (Metropolitan Museum, New York). (B) Laced leather lamellae and a single lamell from Miram, SE Turkestan, late 8th–early 9th centuries (British Museum). (C) Single lamell and laced edge of lamellar cuirass from San Pao, E Turkestan, 10th–13th centuries. (D) Single lamell from Etsin Gol, E Turkestan, 10th–13th centuries.

forces. Some Berbers had, of course, adopted Arab horses and bows by the late 9th century, but equally clearly the nomads of the Sahara possessed few horses even by the mid-11th century. Wealthier tribes, such as the Sanhaja, could field a mixed cavalry and infantry army, but only a small minority would seem to have been armoured. In all these North African and Egyptian forces tactical co-operation between infantry and cavalry still prevailed. One Berber variation might have been the initial infantry charge covered by cavalry, unlike the Arab tendency to await an enemy attack.

Turkish *ghulam* cavalry, both those inherited from previous governors and those newly recruited in Syria, soon had a profound effect on Fatimid military thinking. They must also have influenced non-*ghulam* horsemen in the Fatimid state—for example in 991AD Egypt's heavy cavalry was described as wearing hauberks and helmets and riding armoured horses. Half a century later all the élite cavalry appearing on parade were so protected although, of course, one may assume that the remainder were not so well equipped.

An increase in cavalry armour perhaps also accounted for an abandonment of the javelin by Fatimid cavalry in the late 11th century. None the less it was light cavalry that continued to predominate in the rest of North Africa, and this

became even more apparent after the invasion of the Arab Banu Hilal tribes. Bedouin warriors had long been employed in Egypt as cavalry auxiliaries. They seem to have been effective and well-trained troops, though lightly armed. Many were encouraged to migrate westward during the 11th century, although their total fighting strength still appears to have been small. The loss of Berber territories in North Africa and the drying up of Eastern recruitment following the Saljuq Turkish conquest of Iran, Iraq and Syria, meant a more serious loss of military manpower for the Fatimids. An increased enlistment of Armenian mercenaries and freed African slaves, and the encouragement of urban militias or *ahdath* in Syria, provided small compensation. The bulk of the Egyptian population was of course still Christian. It was, in fact, their lack of troops that led the Fatimids to rely so heavily on naval power, for such a strategy enabled them rapidly to transfer small numbers of well-equipped troops to threatened areas.

### The Rôle of the Infantry

Infantry served in almost all Muslim forces from the 7th to 11th centuries. Early in the 8th century,



Armenia was largely under Muslim overlordship in the 9th–10th centuries, and this is reflected in depictions of its armies, although Byzantine traditions also persist. The early 10th century church of Gagik has many fine carvings; one of the lesser known is this mounted saint wearing a scale hauberk of a type that was probably common along the war-torn Anatolian frontier. (Church of Gagik, Lake Van)

for example, tribal Berbers fought virtually naked, armed only with slings. Local volunteers or *muttawi'ah* also fought on foot against infidels and heretics, usually only for a limited period, on many fronts. So did part-time city militias, or *ahdaths*. First appearing in northern Mesopotamia and Iraq in the 9th century, their duty was to defend their city, and although they included some horsemen most fought on foot.

*Ahdath* militias also became important in Syria in the 10th century, when they faced Byzantine expansion. Part-time troops served in other provinces, including Egypt, where a local Muslim police force played a prominent rôle in late Umayyad and early Abbasid times. Local Egyptian levies probably played some part, even under the Tulunids, while the later Fatimids once tried

**Fine relief at Gagik showing Goliath, heavily armoured with a mail coif or cape over a scale or lamellar cuirass and laminated vambraces. The sword is almost identical to a recently discovered early 11th century example. (Church of Gagik, Lake Van)**



to overcome their lack of troops by arming the peasant labour corps.

Professional infantry troops were, however, generally recruited on an ethnic basis. At first the most important such group were the Arabs. Late in the Umayyad era the old system of five divisions—van, rear, centre and two wings—was broken down into smaller squadrons or *kardus* which acted in close co-operation with the cavalry. Throughout Umayyad times unarmoured infantry archers seem to have remained as a separate unit, perhaps to be moved rapidly in support of whichever armoured, spear-carrying infantry unit was under greatest pressure. Maces may also have been used by infantry, particularly when attacking armoured infantry if the latter had formed a shield-wall.

Early Abbasid infantry continued in this same vein, except that they were soon joined by a specialist corps of *naffatin* armed with Greek Fire projectors and naphtha grenades. Infantry remained vital for those regular Muslim incursions into Byzantine territory. During a small raid they protected the cavalry as it passed through the mountains, then remained near the passes to maintain a line of retreat. During a major assault their aim was to find and destroy the Byzantine army.

The most detailed available information concerns one of the most prestigious infantry corps in the Abbasid army. These *abna* were based in Baghdad, though their equipment is unlikely to have differed much from other Abbasid infantry. In defence the *abna* were trained to maintain ranks behind their long pikes and broadswords however hard the enemy pressed, and then to fight hand-to-hand with short-swords and daggers. In attack a short spear or javelin seems to have replaced the pike, and a mace might also have been added. Although *abna* were often armoured, they would also fight without cuirass or even shield.

Another nation of infantry warriors was now coming to the fore. The Daylamis, from mountains south of the Caspian Sea, served the Umayyad and Abbasid Caliphs as mercenaries even though some remained pagan. The reputation of these warlike mountaineers, with their hairy appearance, liking for garlic, large brightly painted shields and *z̤hupin* javelins, was clearly





established by the 10th century. Fighting as very mobile mounted infantry with mules to carry their equipment, they also employed younger men or boys as shield-bearers. To have these shields burned after a defeat was the mark of ultimate disgrace for a Daylami.

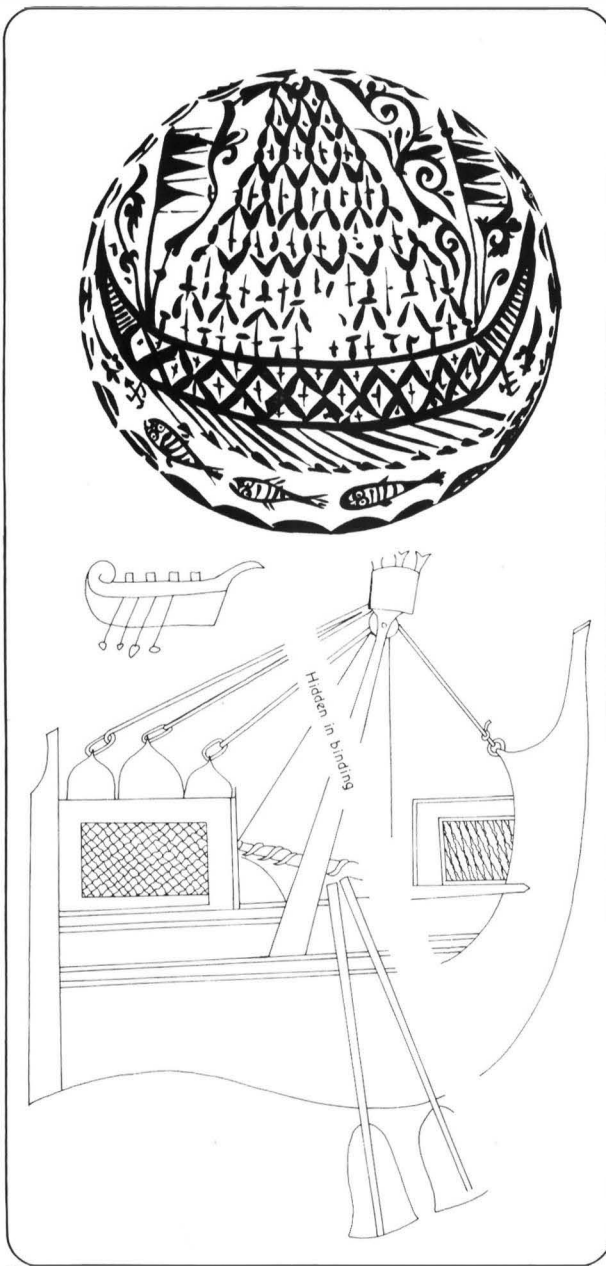
As their fame grew so their equipment became more varied. Battle-axes and bows appeared, with the latter using an arrow-guide to shoot short arrows known as *husban* or *javalduz*. Daylami tactics remained the same, however: a steady advance as a moving shield-wall, followed by javelins to disrupt the foe and then close combat with battle-axes. During the later 10th and 11th centuries Daylami infantry were most successful when co-operating with cavalry, usually Turkish *ghulams*, in both Iran and Egypt. Under the Fatimids of Cairo, however, a tall oval or kite-shaped shield entered the Daylami armoury.

The Daylamis were not the only professional infantry from Iran. The people of Khurasan were also noted foot soldiers, particularly in siege warfare and mining operations. Many were sent to the Byzantine frontier, where their descendants still lived and were renowned for their manufacture of siege equipment in the late 10th century. The best picture of such Khurasani infantry is again found

**The palace of Qasr al Ashiq faces the huge ruined Abbasid city of Samarra from the west bank of the Tigris. Unlike other fortifications at Samarra, these were meant for war rather than for show. They were probably built for the Caliph al Mutamid late in the 9th century, to be garrisoned by his new force of Turkish ghulams. The walls are now being restored.**

in the *Shahnamah* epic, although most details refer to open battle rather than sieges. Khurasani infantry are described as advancing with shield and bow, supported by spearmen. Elsewhere those armed with spears and protected by shields and lamellar cuirasses formed the front rank while archers and javelin-men stood behind. In a third variation the infantry brought up the rear behind cavalry and crossbowmen.

Whereas in eastern Islam most infantry was drawn from backward mountainous areas, in North Africa most came from regions that were poor in horses for economic or climatic reasons. Negro infantry were, for example, not all enlisted as slaves, to be freed on completion of their training. They certainly fought as free men in the first Muslim armies. Nevertheless, the bulk of black troops serving later North African dynasties were of slave origin. In Aghlabid Tunisia and Tulunid Egypt they took a leading rôle as naval troops. Many freeborn Muslim Negro infantry, mostly from the Saharan regions, served the Fatimids in



20

Illustrations of early Islamic shipping are rare and highly stylised. (Top) 9th century dish from Egypt showing a galley with a lateen sail, numerous oars, anchors fore and aft, and flags flying (Mus. of Islamic Art, Cairo). (Bottom) Ship from an Arabic astronomical table dated 1009-1010 AD. It probably depicts a vessel from the Gulf region, and may be the earliest representation of a stern-rudder. Its oars may be an artistic convention demanded by the shape of the constellation Argus. Note deck-houses walled with rush matting, and the lateen sail, which is more clearly shown elsewhere in the manuscript (*Suwar al Kawakib*, Bodleian Lib. Ms Marsh 144, Oxford). Between these drawings is an even more stylised representation of an Iberian war galley of the mid-10th-century. (Beatus Ms, Pierpoint Morgan Lib. Ms 644, New York)

the 10th century, fighting with spear and sword. Thereafter they garrisoned many Syrian fortresses. Freed Sudanese ex-slaves increased in numbers, however, until they formed almost half of the Fatimid army by the year 1000 AD; and at the very end of the 11th century 300 black guardsmen paraded, each with a pair of decorated javelins and shields with silvered bosses, during Egypt's New Year celebrations.

Information about such troops in their original homelands indicates that in the late 10th century the people of Darfur and the Tibesti mountains fought only on foot with large white leather shields similar to those used in Morocco, plus short spears or javelins and poor-quality local swords. They may also have worn long, quilted, protective garments. The tribes of north-eastern Sudan fought as archers and javelin throwers but used no shields. Shields were, however, exported from that stretch of East African coast known to the Arabs as 'Zanj', and were said to be of elephant hide.

Fatimid armies always contained a high proportion of infantry, who were drawn up in battle by tribal unit or national origin. Their weapons generally consisted of large leather shields, javelins, bows and swords that probably included slightly curved Iranian *qalachur* sabres. Many infantry were also armoured. Long bills or *sabarbarah* were five cubits long, of which three cubits formed a broad iron blade, and had iron butts. Crossbows were known but seem to have been reserved for naval troops.

The next wave of North African conquerors relied on infantry to an even greater extent. These were the Murabitin from southern Morocco. Unlike other Berber warriors of the mid-11th century, they refused to indulge in traditional repeated attack and retreat tactics. Instead they took up a position and then obliged their foes to make every initiative. Nor would they pursue a beaten foe. Their name probably recalls such tactics, since they made a *ribat* or strongpoint out of their own closely packed and immovable battle-array. Such steadfast tactics certainly appalled their Spanish enemies at the battle of Zallaca in 1086 AD, but they differed little from other North African or Egyptian armies in equipment.

A large Christian contingent helped the Fatimids conquer Egypt, and this may have come

from Sicily or Sardinia. Later, during the last decades of Muslim rule in Sicily, the island's warriors were very mixed. Most were lightly armed but, judging by their performance under subsequent Norman rulers, they would seem to have been exceptionally skilled in siege warfare.

Christians also played a rôle in various central Muslim lands. Not all Eastern Christian communities were involved, for many had lost their military traditions; but the Armenians had not, and although many accepted Islam the majority remained Christian even when serving Islam. Armenian mercenaries were employed in small numbers by the Egyptian Tulunids late in the 9th century, but most seem to have been Muslim. Armenian troops also appear in Hamdanid, Mirdasid and Fatimid forces.

A major change took place when Byzantium occupied almost all Armenia in the early 11th century. Armenians, including many Christians, now migrated to Egypt in some numbers and formed a large corps of infantry archers under

Muslim Armenian leadership. The country's turbulent politics even enabled Armenian troops to seize control of Cairo in 1073–4AD. When their leader became the Fatimid's chief minister he recruited even larger numbers of his countrymen. Only with the Saljuq and Crusader conquests in Anatolia and Syria was Egyptian recruitment of Armenians reduced.

### **The Triumph of Horse-Archery**

The influence of nomadic Central Asian horse-archery on Muslim armies was relatively slight until the 11th century. Turks entered Islam either as slaves to be trained in Muslim warfare or as mercenaries fighting alongside others who used different tactics. The Saljuqs, who were part of the Ghuzz Turkish people, broke this pattern by

**Shipping in the early medieval Mediterranean would have been similar whether it sailed from Muslim or Christian ports. The artist who carved the story of Jonah on this very Islamic-style altar of the 11th–12th century at Santa Maria in Valle Porclaneta clearly knew about ships. The church is near Amalfi, one of the main trading gateways to the Arab world.**



defeating their Ghaznawid employers and then taking over most of eastern Islam. With the Saljuq tribal warriors came their Turcoman families and flocks. Thus these nomads brought not only their own culture but also the means of perpetuating it.

At this stage Turcoman nomadic horse-archers formed the bulk of Saljuq armies, and the effectiveness of their tactics is well recorded. Unlike the European longbow the Central Asian composite bow may have relied on powerful and regular tension, rather than the weight of the arrow, for its effect. These archers could shoot a great distance, which enabled them to drop light 'flight arrows' into a designated area such as the interior of a fortress. By contrast their heavier arrows, when shot from close range, had exceptional penetrating power. The rate of shooting achieved by these nomads was also very high. Another important feature of nomad horse-archery in the 11th century was a widespread use of the arrow-guide to shoot short, dart-like arrows.

Although the Saljuqs employed massed horse-archers very successfully, this rarely brought victory on its own, so that a final charge and close-combat were generally also needed. This would similarly be the case if the Turcomans found themselves beaten or trapped. The defeat of a huge Byzantine army at Manzikirt in 1071 AD was largely the work of the Great Saljuq sultan's professional, rather than Turcoman, army. During the battle the sultan put aside his bow, took mace and sword and donned a coif and helmet before making the final charge. Crusader chroniclers state, however, that before coming to close combat the Turks hung their bows on their shoulders rather than using bow-cases. This would seem to identify them as *ghulams* instead of nomadic Turcomans. Such warriors would then seize mace or sword and perhaps throw their light lances as javelins before the final shock.

By this time the nomadic Turcomans had largely been relegated to the frontiers because they had proved so politically turbulent to the Saljuq sultans. They then continued to use their martial energies as *ghazis* or Fighters for the Faith. The state established by the Saljuqs of Rum in Anatolia was, in fact, such a Turcoman *ghazi* province.

While the Turcomans of Rum were soon down-

graded in the face of Byzantine influence, those of Iran and the Fertile Crescent enjoyed an even briefer era of supremacy. The huge realm of the Great Saljuqs started to fragment late in the 11th century, before the Crusaders appeared in the Middle East, and large areas fell to various successor dynasties. These, however, generally continued the Saljuq system in their own forces. Yet it would be wrong to see such a system as Turcoman. Saljuq armies had already been divided into two parts, a small *askar* or professional force of *ghulams* and mercenaries, and a larger element of tribal auxiliaries, which included the Turcomans. The *askar* formed a standing army while the auxiliaries would only be summoned for a specific campaign. Many auxiliaries were also recruited from the Arab bedouin.

A comparable decline in the importance of Turcoman horse-archery does not appear to have taken place in the eastern provinces of Islam until the mid-12th century; such regions were, of course, closer to the Turks' original Central Asian homelands.

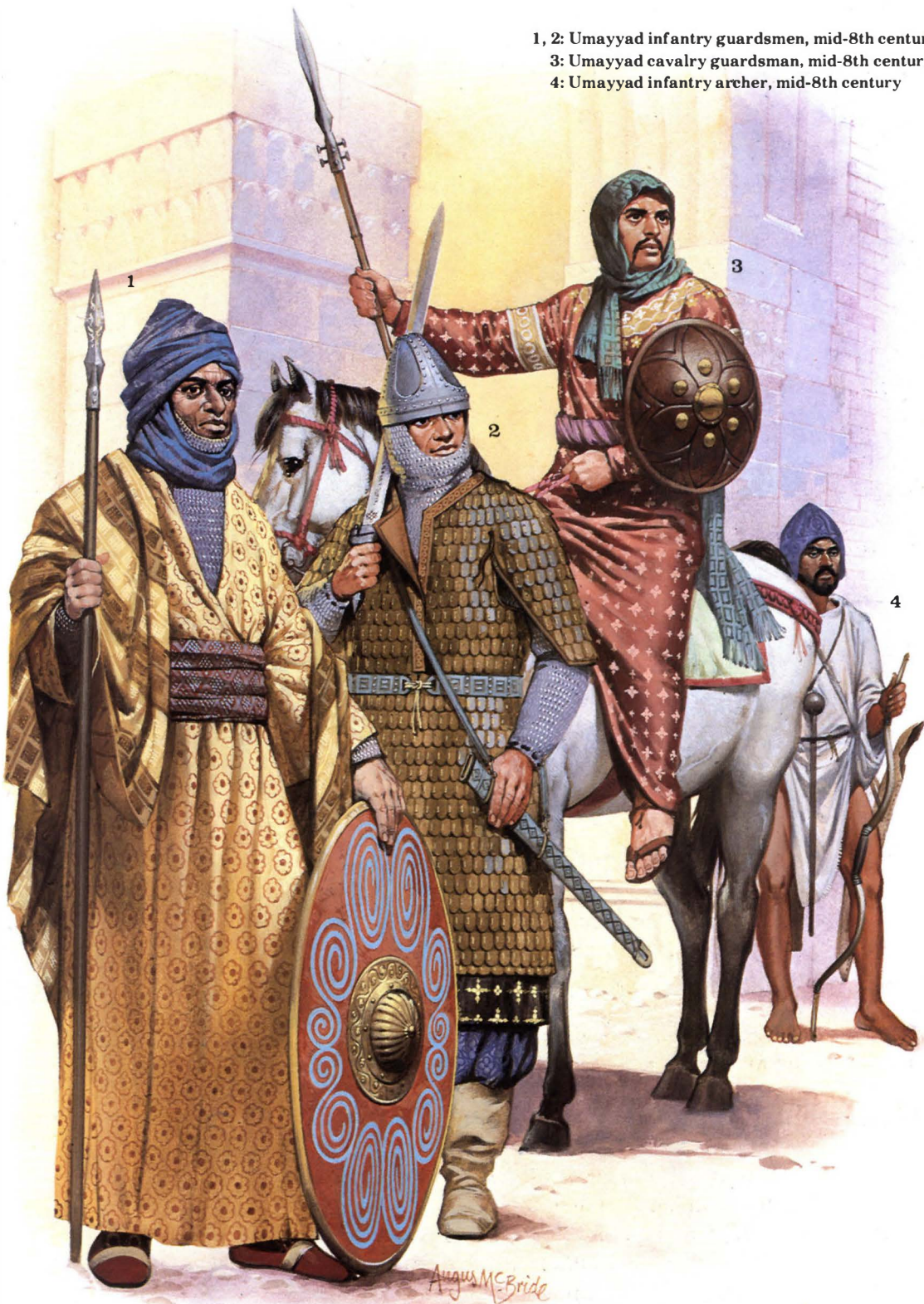
## *European Influence in al Andalus*

Cavalry probably continued to flourish in the Iberian peninsula throughout the Dark Ages, since compared with its neighbours the area was rich in horses. This was bound to affect its Muslim conquerors in the 8th century. Although the Arabs and Berbers were poor in cavalry during the first phase of their invasion, such a state of affairs is unlikely to have persisted for long.

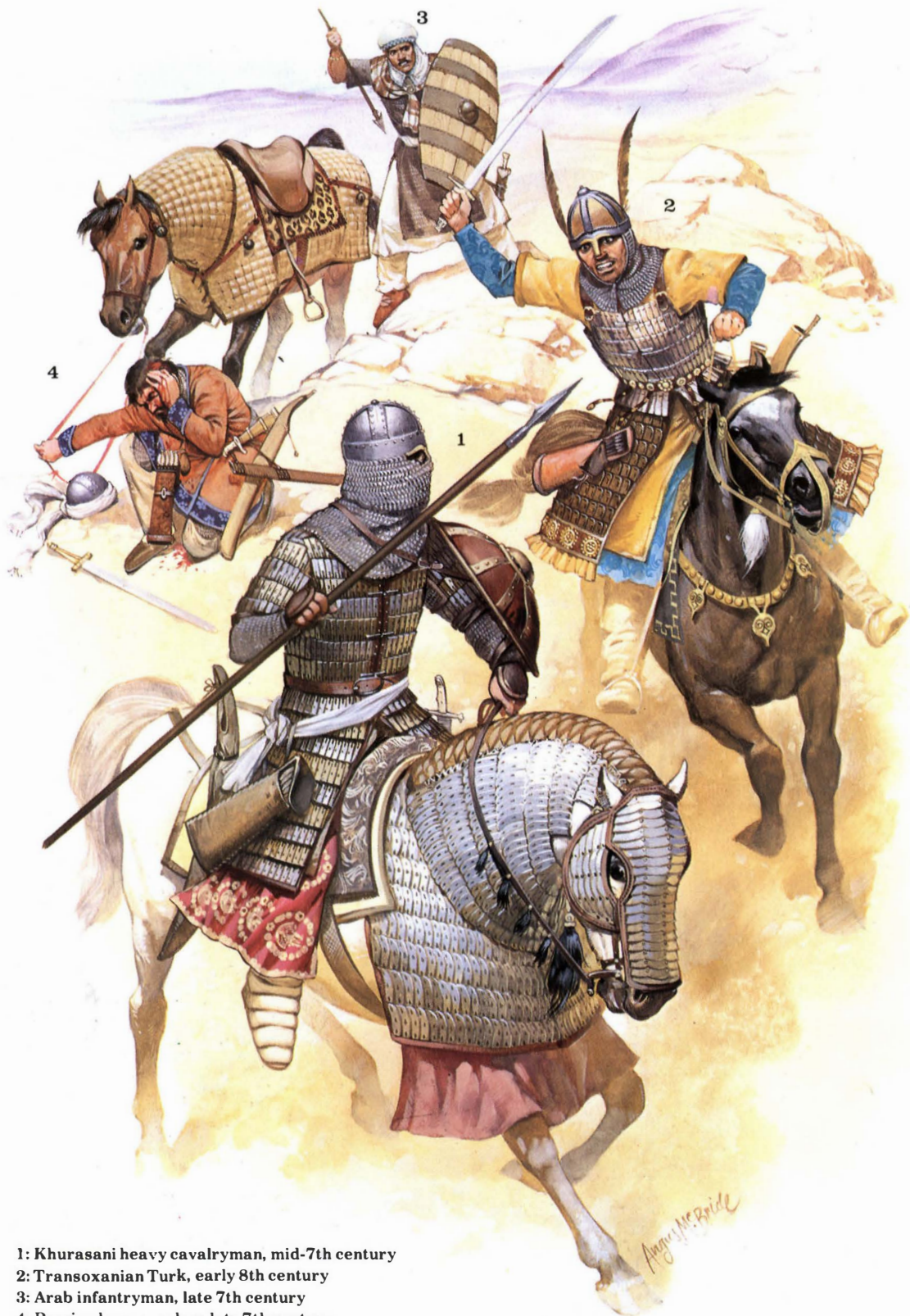
Cavalry or mounted infantry took an important part in Muslim raids north of the Pyrenees, and this trend must have been reinforced by the rapid enlistment of many local warriors, both Christians and converts to Islam. Captives from the north and Spanish prisoners of war were first recruited in al Andalus—Muslim Iberia—by the Umayyad governor Hakam I in the late 8th and early 9th centuries. Some were converted to Islam while others were not. Spanish mercenaries serving Hakam's successors almost certainly retained



- 1, 2: Umayyad infantry guardsmen, mid-8th century  
3: Umayyad cavalry guardsman, mid-8th century  
4: Umayyad infantry archer, mid-8th century



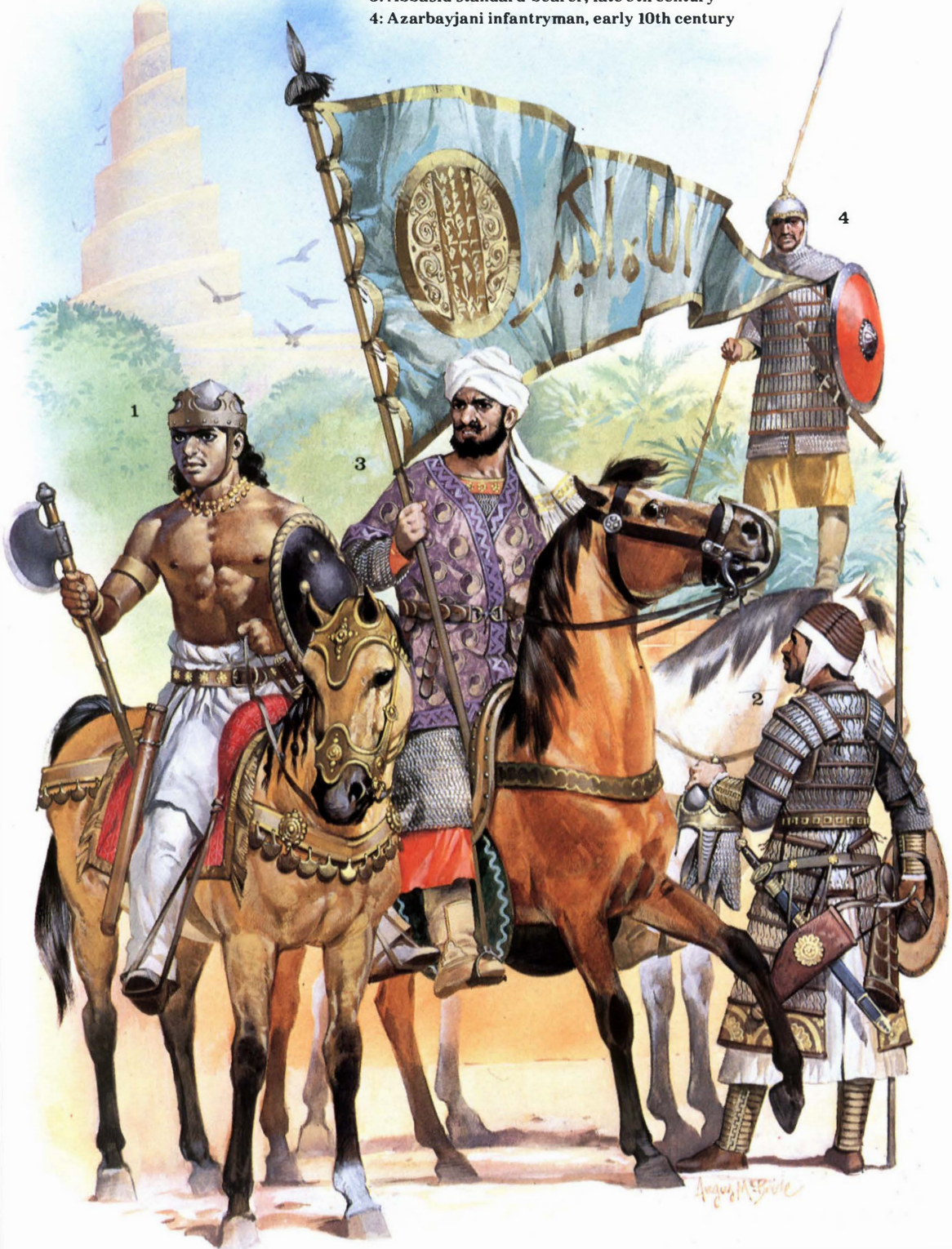




- 1: Khurasani heavy cavalryman, mid-7th century  
2: Transoxanian Turk, early 8th century  
3: Arab infantryman, late 7th century  
4: Persian horse-archer, late 7th century

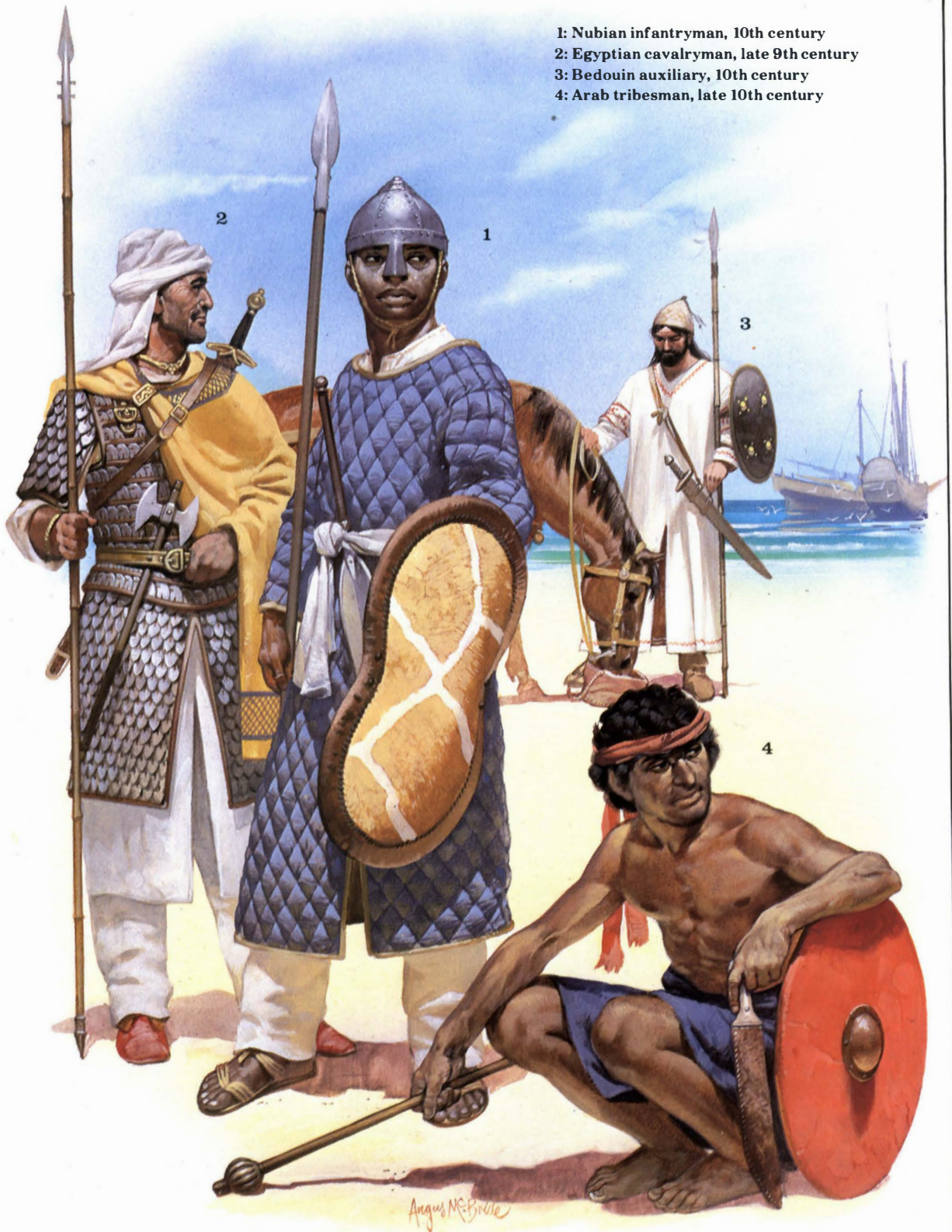


- 1: Sindi horseman, 9th century
- 2: Transoxanian horse-archer, late 9th century
- 3: Abbasid standard-bearer, late 9th century
- 4: Azarbayjani infantryman, early 10th century





- 1: Nubian infantryman, 10th century  
2: Egyptian cavalryman, late 9th century  
3: Bedouin auxiliary, 10th century  
4: Arab tribesman, late 10th century







1: Samanid cavalryman, 10th century  
2: Buyid horseman, 10th century

3: Daylami infantryman, early 11th century  
4: Ghaznawid guardsman, mid-11th century





- 1: Andalusian infantryman, 10th century  
 2: Andalusian cavalryman, 11th century  
 3: Berber-Andalusian light cavalryman, 10th century  
 4: Andalusian infantry archer, 11th century





1: Fatimid Caliphal guard, early 11th century  
2: Saharan tribal cavalry, mid-11th century

3: Fatimid horseman, 11th century  
4: Fatimid city militiaman, late 11th century





- 1: Hamdanid cavalryman, late 10th century
- 2: Muslim-Armenian frontiersman, 10th century
- 3: Frontier warrior, Malatya, late 10th century
- 4: Saljuq Turcoman horse-archer, late 11th century

their Christianity. In the mid-10th century European ex-slaves were equipped as armoured cavalry with helmets, hauberks and cuirasses, spears, small shields and gilded buffalo horns.

The Christian states of northern Spain were probably poor in armour, while wealthy al Andalus was known to manufacture much military equipment. Nevertheless, basic styles probably remained almost identical throughout the peninsula. Muslims and Christians both fielded infantry, armoured and light cavalry. Some of the latter carried bows as well as spears and swords in the early 10th century. A conscious clinging to Visigothic tradition characterised Christian Asturia-Leon in the early medieval period; so perhaps its similarities with Cordova indicate a comparable, though unconscious, persistence of Visigothic tradition in the Muslim south. Building on a Visigothic foundation, the states of both Muslim and Christian Iberia developed a quasi-feudal structure which produced armies in which a small élite of professional warriors bore the brunt of almost continuous warfare. The rest of male society had a real, though only occasional, military obligation. The military capabilities of the various troops differed considerably. The aristocratic or professional élite were experienced and effective warriors. The rest, despite the fact that many more were mounted than was the case in feudal Europe, were of a much lower quality. The steady down-grading of such levies on the Muslim side of the frontier, and their replacement by mercenaries from North Africa and Europe, must have reinforced such inferior capabilities.

Religious enthusiasm could build big armies, but these were often inexperienced, consisting of volunteers who served for only one campaign. Frontier fighting, in which the *ghazis* participated on a long-term basis, was an entirely separate issue.

Once a frontier was established between Muslim and Christian Iberia in the late 8th century, very little territory changed hands for 300 years. Warfare generally consisted of raid and reprisal in which large levies were usually outfought by a minority of seasoned troops.

Despite its Visigothic legacy, which gave the Iberian peninsula a head-start in cavalry, the region soon seems to have been overtaken by

developments elsewhere in the Muslim world. In fact al Andalus may have stagnated while eastern Islam adopted new styles from Central Asia. The cavalry of Umayyad Spain seems, for example, to have been very slow to adopt the stirrup and framed saddle—although such backwardness did not apply to the horse's bit. The curb bit, giving a rider far more control over his mount, was in widespread use from the 10th century and had been known since the 8th, when it was probably introduced by the Muslims. Although adopted by the Byzantines in the 10th century it was not known in western Europe, outside Spain and Sicily, until the 11th century.

In al Andalus only the full-time élite, or the dedicated frontier *ghazi*, were likely to have worn full helmet and hauberk in the 10th century; but armour of felt, buff-leather or quilted material may have been common and have remained in fashion well into the 13th century. The small shield or buckler seems to have been used by all troops, though cavalry do not appear to have employed it while fighting with the spear. Another weapon that appeared in 10th century Spain was a long-hafted mace.

From the 11th century onwards a series of major changes led to many indigenous Andalusian traditions being swamped beneath a tide of French influence. This followed a shift in the balance of power away from Muslim al Andalus towards the expanding Christian state of Castille. A relatively straight-legged riding position with a high saddle was the most obvious example. At first only the small élite was affected. These now fought in mail or scale hauberks with swords, heavier shields, mail coifs hiding most of the face, and helmets large or small. Perhaps the only feature that set such Andalusian cavalry apart from their European counterparts was the continued use, by some, of a traditional Arab bow. Their adoption of a heavy spear or *qanah* presumably indicated a European couched style of lance-play.

Another fashion of obvious European origin was the wearing of a mail hauberk as a top layer of dress. In North Africa and the Middle East it was normal to hide the hauberk under a surcoat or *burud*. Nevertheless, the majority of Andalusian cavalry would still not have owned hauberks,



**Amida—now Diyarbakir—was a major strongpoint on the Muslim frontier defences of eastern Anatolia. Its basically Byzantine fortifications were constantly improved under Muslim rule. The Harput or northern gate was built by the Abbasid Caliph al Muqtadir late in the 10th century but was strengthened by the local Marwanid ruler Abu Nasr Ahmad early in the 11th.**

although they may have worn earlier forms of felt or leather armour.

Berber influence on military developments in al Andalus is more difficult to chart than the European. Berbers had formed the bulk of those Muslim armies that conquered Iberia in the 8th century. Berbers were recruited as mercenaries in the 9th century, and this process was accelerated in the late 9th and early 10th centuries by the Vizir al Mansur and his successors. Now, however, whole tribal divisions were recruited; yet even they would be given Andalusian equipment by their employers. During this period the light cavalry of Morocco and Algeria fought with lances and swords, much as did traditional Andalusian horsemen. The Murabitin were Berbers, of course, but with their reliance on infantry and their relatively short-lived occupation of the

southern three-quarters of al Andalus their impact on military styles seems to have been minimal.

The minor Andalusian states of the later 11th century seem to have used traditional Muslim tactics. Infantry co-operated with cavalry and stood in ranks to receive the shock of an advancing foe. Early in the 12th century a certain al Turtushi described these as normal Andalusian practice. Infantry knelt behind large shields which rested on the ground, while their long spears were similarly thrust into the earth as pikes. Some also held javelins, while behind stood archers in support. Next came the cavalry, who would charge at an enemy when their own infantry drew aside.

Bows would still appear to have been used occasionally from horseback, probably while at rest, in the old Arab style. A small number of Turkish Ghuzz horse-archers had been recruited by the Murabitin during the late 11th century and they would certainly have employed Central Asian horse-archery tactics.



# Tactics and Styles of Combat

## Second Yarmuk (636AD): infantry in defence and attack

Some historians believe that the Byzantines were on the defensive at the second battle of Yarmuk in 636AD, but now it seems likely that the Muslims were holding the Der'aa Gap between the cliffs of the Yarmuk valley and the Hawran lava plain.

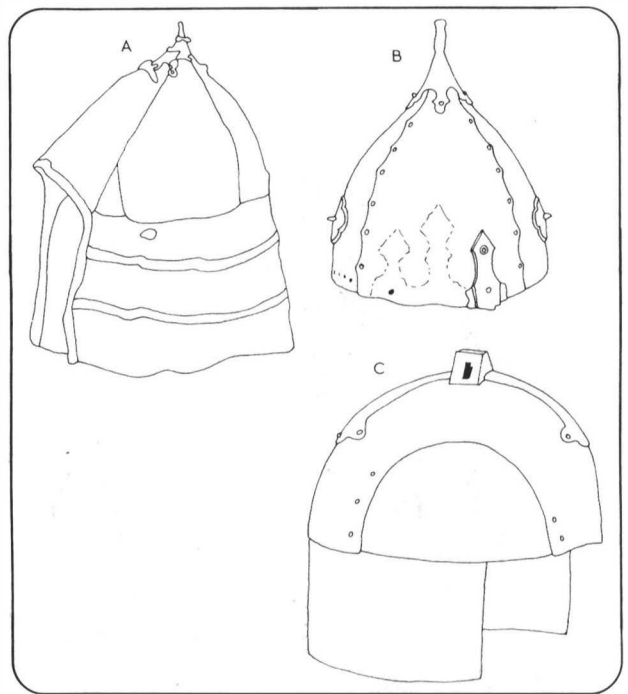
The Byzantine army, including many Armenians and Christian Arabs from the Ghassan tribe, were attempting to drive the invading Muslims out of Syria. They in turn had retreated south as far as Der'aa, where their outnumbered and largely infantry army of peasants and townsfolk hobbled their camels and took up defensive positions. The Byzantines attacked somewhat halfheartedly. Four months of stalemate then ensued, during which Muslim reinforcements arrived from Arabia. The Muslims now sent raiding parties across the Yarmuk and through the lava plain around both flanks, some of which included the Muslim army's few bedouin horsemen.

A sandstorm blew up from the south, perhaps on 19 August, and on the following day, under cover of dust still blowing in their enemies' faces, the Muslim infantry attacked. The bridge over the Wadi al Ruqqad to the north had already been seized, so the Byzantines were trapped. They put up a feeble resistance, and their losses were so great that the army defending Syria virtually ceased to exist.

## Siffin (657AD): the rôle of champions

At the battle of Siffin during the first Muslim civil war both sides consisted of similarly equipped Arab veterans. They met on the flat floor of the Euphrates valley between Syria and Iraq. The majority were clearly unhappy about fighting and although skirmishes continued for some months, so did negotiations.

Occasionally more serious fighting broke out, though the end result was a truce. Champions from both sides did indulge in single combat,



(A) Leather helmet or cap covered with silk, from the Caucasus, 8th-9th centuries (Ethnogr. Mus., Leningrad). (B) Spangenhelm of Turkish Central Asian form from Chernigov, Ukraine, c.960AD (State Hist. Mus., Moscow). (C) Iron helmet, supposedly of 10th-11th century Fatimid origin (Regional Museum, Qayrawan).

however, and one such fight took place between Abbas ibn Rabiah and Irar ibn Adham. Both wore scale hauberks and both had dismounted, which obliged Abbas to tuck his hauberk up into his belt. Abbas also wore a coif covering most of his face and carried a Yemeni sword. Their hauberks resisted all sword blows until Abbas noticed a gap in Irar's armour. This he pulled open with his hand, perhaps tearing the scale armour's linen base, to expose his foe's chest. Abbas then struck Irar across the breast and slew him.

## Poitiers (732AD): mobile raiding forces

Charles Martel's victory at Poitiers looms large in Christian history but was in reality an unsuccessful large-scale Muslim raid. Previous raids were encouraging a rapid change from infantry to mounted armies in France, although this process was incomplete by 732AD.

The Arabs and Berbers had acquired many horses in Spain, and probably welcomed many Visigoth converts into their ranks, yet the course

of this battle does not suggest much fighting on horseback. The raiders, heavily laden with booty from Aquitaine, were advancing up the Roman road towards Tours, with its rich basilica. Charles Martel blocked their path some 20 kilometres north-east of Poitiers, near the borders of Aquitaine. This area seems to have been forested well into the 11th century.

The Muslims attacked repeatedly but were unable to break the Frankish infantry's shield-wall. They then fled in disorder towards the south-east, not back along the road. Both sides suffered heavy casualties, which on the Muslim side included their commander and the bulk of his army. Their inability to escape, despite the Franks' lack of cavalry, suggests that the Muslims were also largely fighting on foot and found themselves at a disadvantage in unfamiliar wooded terrain.

**Carved wooden panels from the ruined 11th century Caliphal palace in Cairo, originally coated with a layer of detailed stucco sculpture; the basic wooden reliefs still show huntsmen and warriors. Here a footsoldier with a large round shield on his back carries a short spear as he runs ahead of a mounted falconer. (Mus. of Islamic Art, Cairo)**

**Three magnificent city gates survive from Fatimid Cairo, all built late in the 11th century by the Caliph's chief minister, Badr al Gamali. This is the Bab al Futuh, one of a pair of gates in the northern wall; it is in mixed Syrian/Byzantine style, paralleling al Gamali's own Armenian origins.**

### **Juzjan (737AD): strategy in defence**

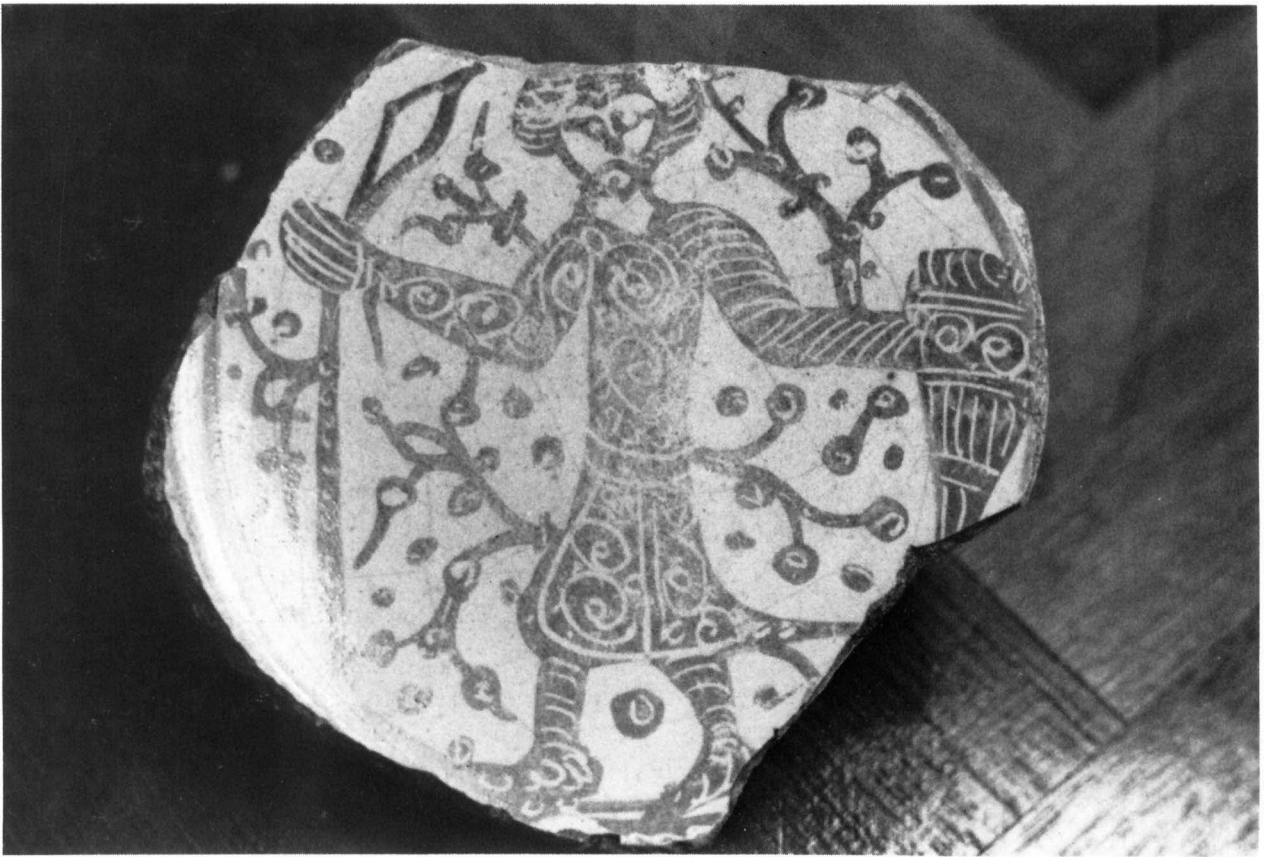
The army in Khurasan had been re-organised a generation earlier. Many Daylamis and Khurasanis, plus levies from the Transoxanian cities and northern Afghanistan, now complemented the Arab garrisons. Most of their foes, the Western Turks, were more lightly armoured horsemen. Turkish infantry was also mobile, riding slow Bactrian camels. Unlike the Muslims, however, they would not generally make an entrenched camp if forced onto the defensive in open country.

During the late summer of 737AD a Muslim punitive column had crossed into eastern Transoxania. This was surprised by a larger Turkish force under the Khaqan of the Western Turks as it prepared to recross the Oxus River in October. Many camp-followers were lost, along with flocks of sheep that had been seized during the raid; but









The kite-shaped shield is generally regarded as a European development, but may have appeared in the Middle East and Byzantium as an infantry shield before being adopted by the horsemen of the West. A small kite-shaped buckler is shown on this 10th–11th century Fatimid plate from Egypt. Many Armenian mercenaries served the Fatimids, and some of the earliest representations of such shields are found in or near Armenia. (Victoria & Albert Mus., London)

the Arabs did establish a new fortified position south of the river.

The Turks pressed on to capture the Muslim baggage train, which had gone ahead. The Muslim force then followed and, using the city of Balkh as a base, requested reinforcements from Iran. Khurasan was left to the Turks, who were soon obliged to scatter in search of food as winter closed in. In December the Muslims suddenly and secretly marched from Balkh to attack the Khaqan's camp in Juzjan. The Turkish leader escaped with only 400 horsemen, some prisoners and loot, and fled into the Hindu Kush mountains. There he was caught again by a small Arab cavalry force which attacked his camp at night, rescuing the remaining Muslim camp-followers

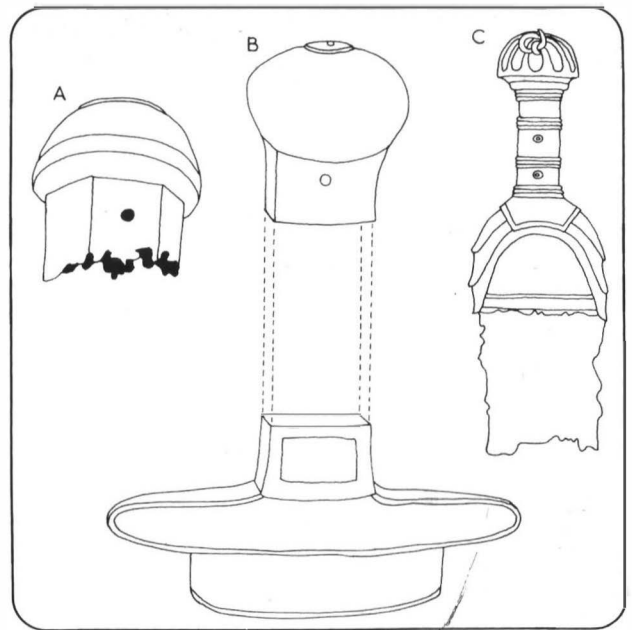
and capturing the enemy's own women, although the Khaqan himself again escaped.

### **Baghdad (812–813AD): a major siege**

The siege of Baghdad and the defeat of the Caliph al Amin by his brother, the rival Caliph al Mumin, involved a variety of troops. Baghdad was already an enormous city with suburbs on both banks of the Tigris. At the centre stood the fortified Round City, containing the main palace, government offices and barracks.

Al Mumin's invading army largely consisted of Khurasanis, although these now played a secondary rôle for political reasons. A minority of Arabs from the eastern garrisons, Persian infantry, and Turkish troops (including both horse and infantry archers from Transoxania) probably took a more active part. The burden of defence fell upon al Amin's *abna*, the élite infantry garrison of Baghdad, who were themselves of Khurasani descent. Other defending forces included Arab garrison troops, Arab tribal forces and, towards the end, the *urat*. This body of citizens, some armed with

(A) Pommel of a dagger, western Iran, 10th century, inscribed with the name of a Buyid prince, Abi'l Ghanaim Mansur Billah. (B) Bronze sword pommel and quillons, Egypt, 9th–10th centuries, inscribed with Koranic inscription specifically critical of certain Christian dogmas (Louvre, Paris). (C) Bronze sword hilt with fragment of iron blade, from an early 11th century Muslim shipwreck. Its very Indian decorative style suggests eastern Islamic origins. (Castle Museum, Bodrum)



slings, may also have included the local Iraqi militia.

Baghdad was rapidly invested, and in September 812AD, ballistae and mangonels opened the bombardment. The north-western suburb was burned down, but for a full year there were numerous sorties and intermittent street fighting. In this the *abna*, with their short swords and long pikes, excelled. But the attackers worked slowly forward, fortifying each street as they went. Khurasani cavalry did take part, fighting as ranks of horse-archers and apparently shooting at rest rather than on the move. In September 813AD al Mumin's troops pressed their assault, capturing the eastern and southern suburbs until al Amin held only the Round City. The siege ended when al Amin attempted to escape but was caught and killed.

### Rome (846AD): seaborne raid

The raid on Rome in 846AD demonstrates normal Muslim offensive tactics as well as the strategic initiative then enjoyed by the Aghlabid rulers of Tunisia and Sicily. It was probably intended to demoralise Christendom by striking at its heart.

A fleet of some 73 ships, 11,000 men and 500 horses gathered off Sardinia before sailing to the Tiber estuary. They captured the new fortifications protecting Ostia on 23 August, and next day defeated a force of north European pilgrims that attacked them. Marching down the Via Aurelia towards Rome, they next overtook and dispersed the main Papal army. The basilica of St Peter's lay undefended outside Rome's fortifications and was consequently pillaged.

The Arabs and Berbers probably adopted the static, rectangular infantry formation with which they had conquered Sicily when they now resisted an assault by Romano-Lombard infantry militia on the northern slope of the Vatican Hill. But a subsequent attempt to storm Rome's walls

failed. A Frankish relief army then followed the raiders as they marched southwards, laden with booty. Naples seems to have maintained an unofficial alliance with the Muslims, who had a nearby base at Cap Miseno. The Muslim fleet had meanwhile sailed to Gaeta but was soon dislodged, perhaps by the Frankish relief force, and subsequently lost some ships in a storm near the Straits of Messina.

### Arbaq (957AD): Daylami infantry versus 'ghulam' cavalry

Iran's Buyid rulers owed their initial success to Daylami infantry from the south Caspian mountains, but by conquering Iraq they also inherited large forces of Turkish *ghulam* cavalry from their predecessors. These two forces often took opposing sides during Buyid internal conflicts.

One such clash was at the Bridge of Arbaq in January 957AD, on the road from Ahwaz to Wasit. It probably spanned the Karkhel River, which would have been in spate at that time of year. Ruzbahan, the rebel, was encamped with a large force of Daylami infantry south of the bridge. Muizz al Dawla, the Buyid ruler, was uncertain of the loyalty of his own Daylamis, so he left them north of the bridge, which he then crossed with his Turkish *ghulams*. The elite *ghulams* of his household repeatedly attacked the rebels with archery, but by sunset their arrows were spent. Muizz now

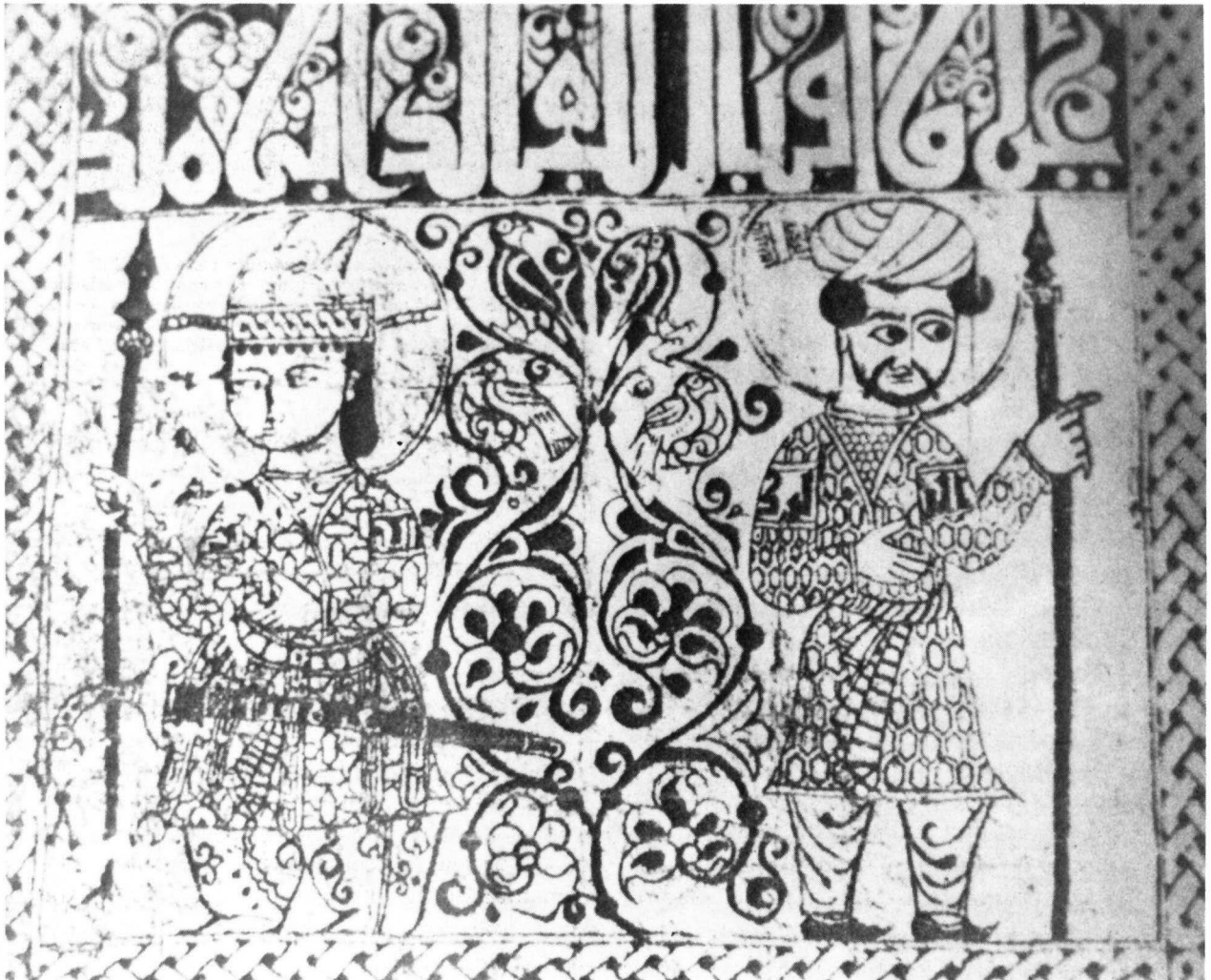
feared being caught between two Daylami forces, so he sent a message to the remaining, supposedly inferior, *ghulams* telling them to give their ammunition to his household troops. They misunderstood, however, and promptly charged the Daylami rebels without using their bows. The enemy infantry were also tiring and their ranks broke, so Muizz al Dawla led his household *ghulams* forward and dispersed the Daylamis.

One of the clearest painted fragments found in Egypt shows two 11th or early 12th century warriors. The dismounted horseman on the left is a Turk; he wears soft leather boots, and his straight sword hangs from a belt with similar decorative pendants to those seen in the Qasr al Hayr horse-archer fresco. The infantryman on the right, probably a Berber or Arab, seems to wear a mail shirt under his tunic. (Mus. of Islamic Art, Cairo)

### **Sidon (975<sup>AD</sup>): Tribal Berbers versus Turkish 'ghulams'**

This battle probably took place a few kilometres south of Sidon. The Fatimid Caliphs of Egypt were restoring their authority in Syria after a ruinous Byzantine invasion, but the area was in a state of near anarchy and a large force of unemployed Turkish *ghulam* cavalry, led by an ex-Abbasid officer named Alftekin, held Damascus.

A flying column of these troops, mostly riding armoured horses and commanded by Alftekin himself, captured the coastal towns of Palestine and then attacked Sidon. Here they were baulked by a Fatimid army largely consisting of Berber infantry from the Kitama tribe. When the Turks withdrew southward this Fatimid force followed



and caught up with Alfitekin at a river, probably the Zaharani, where the road to Banyas turns eastward. When the Berbers attacked Alfitekin's rearguard the *ghulams* turned upon them with maces. The Fatimid infantry's ranks were split open by the armoured horses, whereupon the Turks drew swords and pursued the broken Berbers southwards to Tyre.

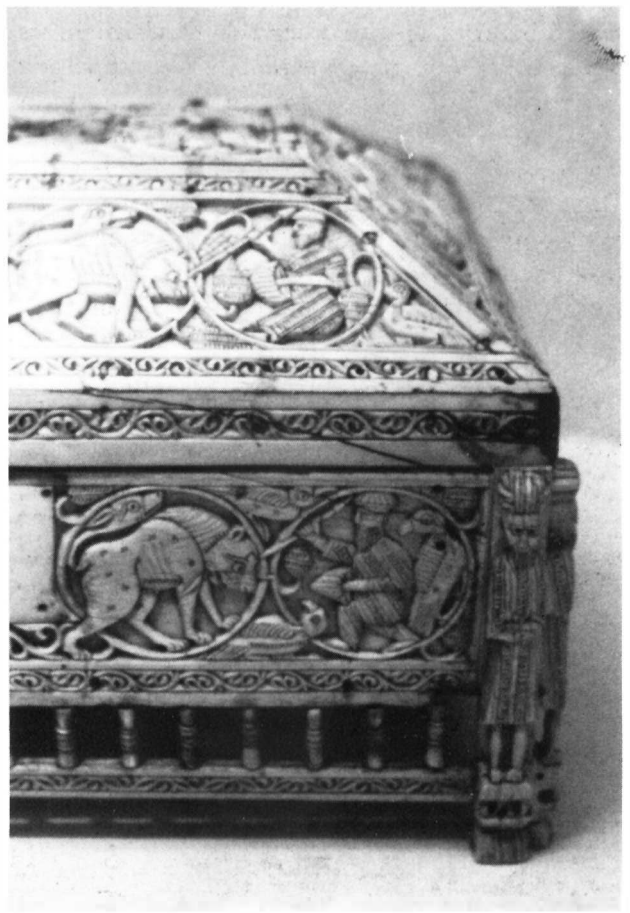
### **Zallaca (1086AD): Western Islamic tactics**

The battle of Zallaca took place some miles east of Badajoz. A Christian Spanish army was camped on the northern bank of the Guadiana River, a slightly smaller Muslim force on the southern bank.

On Friday 23 October the Christians tried to achieve surprise by a dawn attack on the Muslim Sabbath. They were seen by a forward cavalry vedette from the Sevillian contingent, one of the small Andalusian forces allied to the Moroccan Murabit army which were holding the hills facing the river. On learning of this attack the Murabit leader, whose forces were within a pallisaded and entrenched camp to the rear of these hills, sent a small body of Murabit infantry to reinforce the Andalusians. This enabled the Sevillians to hold their ground, although the other Andalusian contingents were driven back towards Badajoz, pursued by Spanish cavalry.

The second division of the Christian army then attacked the main Murabit position. Most of the Spaniards seem to have been mounted, while the bulk of the Muslims, particularly the Murabitin, fought as infantry. Although the Spaniards broke into the enemy encampment they were soon bogged down. This enabled the Murabit commander to further reinforce the Sevillians with Berber cavalry and Murabit infantry. He also led a similar force across the river to attack the Spanish camp.

The Christians now withdrew across the river to defend their camp, which they reached despite confusion caused by the roar of North African war-drums. These had recently been re-introduced into the Murabit army because of their moral effect on inexperienced Christian foes. The Spanish cavalry returned from pursuing the Andalusians towards Badajoz but chose not to re-enter the fight. Many of those same Andalusians



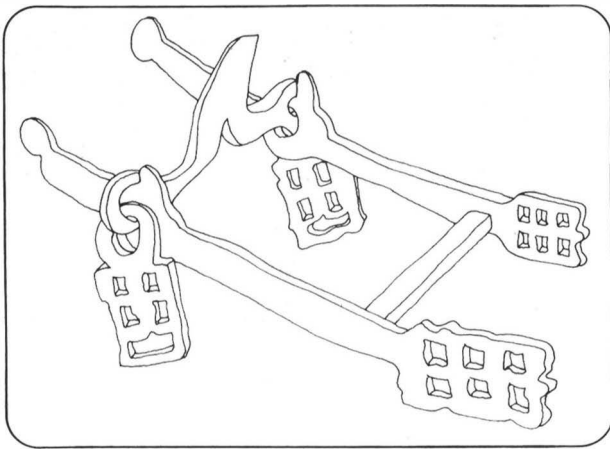
**This carved ivory box was probably made in Sicily shortly before the 11th century Norman conquest of the island. At its corners stand turbaned guards with swords; on the lid and sides are huntsmen with long mail hauberks, short spears, and small buckler-type shields. (Met. Mus. no. 17190.241, New York)**

did rejoin the battle, however, so that the main Christian army was now surrounded. It was driven from its camp on to a nearby hill until, when darkness fell, the Christian king slipped away towards Toledo with some 500 surviving horsemen.

## *The Plates*

*A1, 2: Umayyad infantry guardsmen, mid-8th century*  
The Caliphate soon became one of the world's richest states, and literary sources confirm that this was reflected in its élite palace troops. The man on the left has a pointed helmet beneath his turban, and would fight in the ranks behind a firm shield-wall. His comrade wears a Persian





**Horse's curb bit from Andalusia, early 8th century or later. The curb bit was introduced into Europe from Asia, probably via Islam, and replaced the earlier snaffle bit for war horses. (Met. Mus. no. 47.100.24, New York)**

helmet and, with his scale hauberk, may be one of the single-combat champions who preceded an army into battle. (Fresco at Qusayr Anra, *in situ* Jordan; statues from Khirbat al Mafjir, Palestine Archaeological Museum, East Jerusalem; coin of Khalif Abd al Malik 694/5AD, private collection.)

*A3: Umayyad cavalry guardsman, mid-8th century*

The bedouin aristocracy provided most early Muslim cavalry, but their rôle remained peripheral until the adoption of the stirrup. This unarmoured man seems to be equipped only for scouting or skirmishing. (Frescoes at Qusayr Anra, *in situ* Jordan; Coptic bronze statuette, 6th–8th century, private collection.)

*A4: Umayyad infantry archer, mid-8th century*

This Arab tribesman wears a cloth-covered segmented helmet, and is armed with a heavy mace in addition to an early form of composite bow which he carries, unstrung, in his bowcase. (Statues and fresco-fragment from Khirbat al Mafjir, Palestine Archaeological Museum, East Jerusalem; Syrian silver dish found at Perm, Hermitage, Leningrad.)

*B1: K'horasani heavy cavalryman, mid-7th century*

This man's equipment is essentially the same as that of his late-Sassanian predecessors. Many Iranians still had not adopted the stirrup, although its use was spreading from the East. His mail and his horse's lamellar bard are of iron,

while his own lamellar cuirass mixes iron and bronze lamellae. (Late-Sassanian rock-cut statue, *in situ* Taq-i Bustan, Iran; silver dish from Kulagysh, Hermitage, Leningrad; fragment of cuirass from Kasr-i Abu Nasr, Met. Museum, New York.)

*B2: Transoxanian Turk, early 8th century*

Turkish cavalry equipment was more advanced than that of the Iranians or Arabs. This man uses proper stirrups, wields an early form of sabre and wears a cuirass partly of iron and partly of hardened leather lamellae. (Fresco and statue from Qasr al Hayr, National Museum, Damascus; painted shield from Mug and frescoes from Piandjikent, Hermitage, Leningrad.)

**Muslim warriors often appear in Christian Spanish art, but more rarely in Islamic. An exception are some carved ivory boxes made in Cordoba. This early 11th century example shows a huntsman—note heavy stirrups, and the tasselled saddle cloth. (Victoria & Albert Mus., London)**





*B3: Arab infantryman, late 7th century*

This javelin thrower wears a padded coif under his head-cloth and has acquired an Indian sword. (Glazed ewer from Hamadan, ex-Demotte Coll., Paris; stucco head from Chal Tarkhan Ishqabad, Bustan Museum, Tehran.)

*B4: Persian horse-archer, late 7th century*

Although he himself is lightly armoured, this Iranian rides a horse with a *tijfaj* bard. Such horse-armour is often mentioned but very rarely illustrated. (Stucco plaques, Met. Museum, New York and Islamic Art Museum, West Berlin; silver dish from Khurasan, Hermitage, Leningrad; Chinese statuette of a western merchant, Royal Ontario Museum, Toronto.)

*C1: Sindi horseman, 9th century*

The military equipment of Muslim Sind, west of the River Indus, seems to have remained much the same as that of Hindu Hind, or India, to the east. This man wields a large *nachakh* cavalry-axe and uses primitive leather 'loop stirrups' of a type long known in India. (Ivory

**A number of superb 11th century ivory drinking horns and boxes survive, probably made in Muslim Sicily or southern Italy. Most show warriors and hunters with very convex hand-held bucklers, mail shirts, and broadswords without visible quillons. This was typical Arab or Berber gear, and could be seen as far east as Baghdad. (Victoria & Albert Mus., London)**

chess-piece, Cabinet des Medailles, Bib. Nat., Paris.)

*C2: Transoxanian horse-archer, late 9th century*

The Muslim conquest of Transoxania introduced Central Asian fashions into Islam rather than the other way around. This man's equipment is much the same as that of the previous century (see Plates B1 and B2), although his bowcase for a strung rather than an unstrung bow, and the bow itself, with curved rather than angled 'ears', are new features introduced from further east. (Silver dishes from Turkistan and Khurasan, Hermitage, Leningrad; fresco at Ustrukhana, *in situ* Tadzhikistan.)

*C3: Abbasid standard-bearer, late 9th century*

Few illustrated sources survive from the Iraqi heartland of the Abbasid Caliphate, but written



**The castle that dominates Silves in southern Portugal has often been restored but is still essentially Muslim. Andalusian military architecture developed out of Roman fortification. Silves was a major Atlantic naval base and played a vital part in protecting al Andalus from Viking attacks.**

sources describe a very rich court with magnificently equipped palace troops. The peculiar muzzle worn by this and other horses comes from Transoxania, and was probably to stop the animal nibbling things. (Lustre ceramics from Iraq, Louvre Paris, Freer Gallery Washington and Keir Collection London; coin and medal of Khalif al Muqtadir Billah, National Museum, Baghdad; fresco fragments from Samarra, Islamic Art Museum, West Berlin.)

*C4: Azarbayjani infantryman, early 10th century*

Muslim troops facing the Byzantines along their mountainous frontier in eastern Anatolia and Armenia had much in common with their foes, with both making great use of mail and lamellar armour. ('Goliath', relief on Armenian church of Gagik, *in situ* Lake Van, Turkey; coin of Yazid ibn Muhallab, American Numismatic Society.)

*D1: Nubian infantryman, 10th century*

African warriors, either free or as slaves, fought in most Muslim Egyptian armies. This man's equipment is entirely African, except for his helmet. Quilted protections, as shown here, would continue to be used by Saharan peoples until the 19th century. (Nubian frescoes from Faras Cathedral and the Church of Abd Allah Nirqi, National Museum, Khartoum and National Museum, Warsaw.)

*D2: Egyptian cavalryman, late 9th century*

Many Armenian mercenaries served in Egypt, and their traditional equipment, such as the double-headed axe shown here, soon appeared in Egyptian art. This man's lamellar cuirass looks Byzantine and his scale hauberk Arab, while his heavy cloak might have provided a rudimentary shield, as seen elsewhere around the Mediterranean. (Carved door panels, *in situ* Church of Abu Sarga, Cairo; Coptic manuscripts of warrior saints, Pierpoint Morgan Library New York, Vatican Library Rome, British Library London.)

*D3: Bedouin auxiliary, 10th century*

This Arab tribesman has simple and rather old-fashioned equipment. Bedouin now had only a minor military rôle outside Arabia and parts of North Africa. His horse would probably have the sort of leather or rope 'loop stirrups' seen in Plate C1. (Papyrus fragment, Rainer Coll., Nat. Library, Vienna.)

*D4: Arab tribesman, late 10th century*

Nomadic Arab tribes still raided their neighbours as they had done in pre-Islamic times. Those excluded from political power in Syria or Egypt often remained poor, and their warriors inadequately equipped. (Fatimid ceramic fragment, Museum of Islamic Art, Cairo; 'Smyrna Octateuch', Byzantine manuscript, Vatican Library, Rome.)

*E1: Samanid cavalryman, 10th century*

This dismounted horseman from Khurasan wears armour that betrays the many Central Asian and even Chinese influences being felt in Islam. His mail hauberk probably had a padded lining, while his small lamellar cuirass is of

hardened leather. He also wears heavy leather gaiters over his shins. (Ceramic plates, etc., from Nishapur, Archaeological Museum Tehran, Oriental Art Museum Rome, Met. Museum New York; fresco from Nishapur, Archaeological Museum, Tehran; silver dish showing siege, Hermitage, Leningrad.)

*E2: Buyid horseman, 10th century*

This man is of Arab origin, though living in western Iran. Use of the baldric rather than the sword-belt was still typically Arab, while his long and rounded saddle-cloth was a west Iranian and Caucasian fashion. ('St Eustace' on a Georgian altar-screen, S.N. Djanashiya Museum, Tbilisi; bronze horse from Daghestan, Hermitage, Leningrad.)

*E3: Daylami infantryman, early 11th century*

The javelin-armed infantry from Daylam, south of the Caspian Sea, were the most successful Muslim foot-soldiers of their day, yet their

defensive equipment was even then considered inadequate. Primarily they relied on a large, brightly-painted shield which was usually larger than shown here, plus their heavy *zhupin* javelins. (Plate from Nishapur, Oriental Art Museum, Rome; 'Book of Fixed Stars', Bodleian Library, Oxford.)

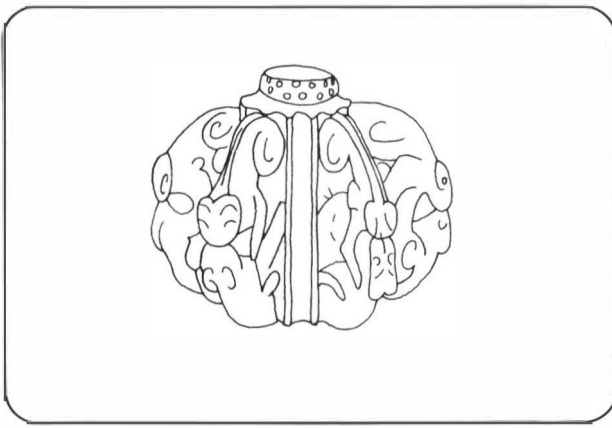
*E4: Ghaznawid guardsman, mid-11th century*

Palace troops were often extremely richly dressed, wearing jewellery, gilded leather crowns and belts, and tunics of brocade. (Fresco *in situ* Lashkar-i Bazar, Afghanistan; medal of Adud al Dawla, Freer Gallery, Washington.)

**Arab influence was very strong in southern Italy, and this frieze over the door of a late 11th century Apulian church is in a strongly Islamic style. The huntsman at left wears the heavily quilted type of soft-armour associated with North Africa. (Church of San Bernadetto, Brindisi)**







**Iron mace-head, Iran, 11th–13th centuries. This winged or flanged form passed from the East via Islam to Europe. (British Museum no. 838–89)**

*F1 : Andalusian infantryman, 10th century*

The military equipment of Muslim Spain had more in common with Christian southern Europe than with North Africa. Armour of felt and buff leather, as seen here, was also widespread. Such a style probably means this man was a frontiersman or religious volunteer rather than a professional soldier. (Mozarab manuscripts, British Library, London and Cathedral of San Isidoro, Leon; Andalusian carved ivories, Cathedral Treasury Pamplona, Victoria and Albert Museum London; fresco from San Baudelio, Prado, Madrid.)

*F2 : Andalusian cavalryman, 11th century*

This man's equipment is almost entirely European. Only his round shield, the kerchief around his helmet and the pommel of his sword betray his Andalusian origins. (Ceramic fragment, Madina al Zahra Museum, Spain; '*Beatus Commentaries*', British Library, London and Cathedral Museum, Gerona.)

*F3 : Berber-Andalusian light cavalryman, 10th century*

Many Andalusian horsemen, especially the light cavalry, failed to adopt stirrups long after they were normal equipment elsewhere. They also clung to the javelin, which had been abandoned as a cavalry weapon in most of western Europe. (Andalusian carved ivory, Cathedral Treasury, Pamplona; Mozarab manuscripts, Cathedral Museum, Gerona and National Library, Madrid.)

*F4 : Andalusian infantry archer, 11th century*

Saragossa, under the Banu Hud, was the only part of Muslim Spain to escape Berber Almoravid occupation. Here the essentially European styles characteristic of Andalusia persisted. (Carved ivory box from Cuenca, Archaeological Museum, Burgos; Mozarab manuscripts, Cathedral Museum, Gerona and National Library, Madrid.)

*G1 : Fatimid Caliphal guard, early 11th century*

This man is probably of Daylami origin. He carries the two javelins traditional among his people, and also has the kite-shaped shield that was clearly known in the Middle East before it was carried there by the Normans of the First Crusade—such shields probably had a Byzantine origin. (Carved ivory panel, Louvre, Paris; ceramic fragment, Victoria and Albert Museum, London; painted paper fragments from Fustat, Museum of Islamic Art, Cairo and Louvre, Paris.)

*G2 : Saharan tribal cavalry, mid-11th century*

The Berber nomads of the Sahara fought for all North African Muslim armies. Their dark blue face-covering turbans gave them the name of 'veiled men', and they were the cultural ancestors of today's Tuareg. (Paper fragment from Fustat, Museum of Islamic Art, Cairo; carved ablution basin, Archaeological Museum, Jativa, Spain; wooden panel from the Church of Sitt Barbara, Coptic Museum, Cairo.)

*G3 : Fatimid horseman, 11th century*

The settled Arab and 'Arabized' peoples of North Africa and Egypt provided the Fatimid Caliphate with many cavalrymen. This man's equipment of iron helmet, mail hauberk and leather lamellar cuirass is within a well-established Muslim Middle Eastern tradition, but the cut of his surcoat shows a revival of older Coptic fashions under Fatimid rule. (Painted paper fragment, Keir Coll., London; Fatimid carved wooden panels, Museum of Islamic Art, Cairo and Louvre, Paris.)

*G4 : Fatimid city militiaman, late 11th century*

The *ahdath*, or citizen militia, played a vital defensive rôle in many cities, though not apparently in Egypt itself. This man wears a quilted

protective coat and wields an early form of glaive, probably the *sabarbarah* described in written sources. (Syrian Christian Gospel, British Library, London; carved wooden panels, Museum of Islamic Art, Cairo; carved ivory panels, Met. Museum New York, Episcopal Museum Le Puy, Victoria and Albert Museum, London; ceramic plaque from Sabra, Bardo Museum, Tunis.)

*H1: Hamdanid cavalryman, late 10th century*

Written sources confirm a continuing similarity between Muslim and Byzantine troops in Anatolia. This man wears a stiff cuirass of iron scales, divided at the abdomen to make riding possible. (Frescoes in 'Dovecote Church', Cavusin, Turkey; Iranian bronze mirror, Louvre, Paris; carved relief, *in situ* Nicorzminda, Georgia.)

*H2: Muslim-Armenian frontiersman, 10th century*

The tough peasants of the Taurus Mountains seem to have favoured the axe, and to have worn a version of the quilted or felt armour seen elsewhere in Islam. (Frescoes in Cappadocian rock-cut churches, *in situ* Tokali Kilise Goreme, Bahattin Kilisesi Peristrema; carved relief from Daghestan, Louvre, Paris.)

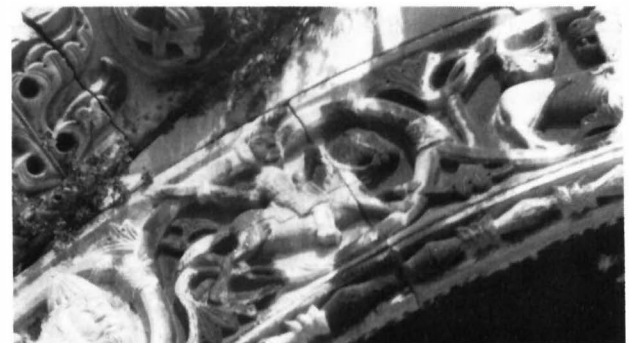
*H3: Frontier warrior from Malatya, late 10th century*

Many Islamic military fashions appear in the art of the Christian side of the Taurus frontier and we must rely on this for most information about the Muslim side. Here a warrior wears heavy felt armour, including greaves, and has a Byzantine-style single-edged sword. (Fresco in 'Dovecote Church', Cavusin, Turkey; Byzantine ivory panels, Cathedral Treasury, Sens and Victoria and Albert Museum, London.)

*H4: Saljuq Turcoman horse-archer, late 11th century*

Turkish nomads had raided Byzantium for centuries, but the Saljuq tribes came to stay. This warrior's equipment is still purely eastern Turkish, almost Mongolian, in style and betrays very few Islamic features. His shield is of silk-bound cane with a large bronze boss. Although he wears no armour his weapons are of the best quality, and he might also carry a second sword under the right side of his saddle. (Carved reliefs from Daghestan, Hermitage, Leningrad and Met. Museum, New

York; Iranian ceramic figure, Museum of Islamic Art, Cairo; east Iranian reliefs, Kabul Museum and Louvre, Paris.)



**These little-known carvings over the north and west doors of the church of St Nicolas at Bari, southern Italy, probably depict the capture of Jerusalem by the First Crusade, and were executed within a few years of the event. Muslim defenders are shown fighting against advancing Christian horsemen (top, centre); most wear scale or lamellar armour, sometimes over mail hauberks. The horseman (bottom) also wears a mixture of lamellar or scale and mail.**

## Notes sur les planches en couleur

**A1, A2** Les troupes d'élite du palais du Caliphat, un des territoires les plus riches. Le soldat de gauche porte un casque pointu autour duquel est drapé le turban. L'homme de droite, en casque persan, est peut-être un des champions de combat singulier, qui précédaient l'armée sur le champ de bataille. **A3** Cavalier bédouin, utilisé seulement pour les reconnaissances et les harcèlements. **A4** Membre d'une tribu arabe, avec le casque recouvert de tissu et un arc.

**B1** L'étrier, importé de l'Est, était de plus en plus utilisé, mais pas encore par tous les cavaliers. Cette de mailles en fer; armure en 'écailles' faites dans un alliage de fer et bronze. **B2** Equipement de cavalerie turque plus évolué, avec étriers, et cuirasse faite de cuir et de fer. **B3** Protection matelassée portée sous la coiffure de tissu; épée indienne. **B4** Exemple rare d'armure pour cheval.

**C1** Hache de cavalerie, ou nachakh; étriers en boucles de cuir, que les Indiens utilisaient depuis longtemps. **C2** La conquête islamique de l'Asie centrale facilita l'introduction de modes locaux au sein de la culture islamique plutôt que le contraire. **C3** Les troupes du palais d'Abbasid étaient magnifiquement équipées, comme le décrivent de nombreux témoignages contemporains. Notez la bizarre muselière de cheval, venant d'au-delà du Taurus. **C4** Les troupes musulmanes qui se battaient contre celles de Byzance à la frontière d'Anatolie orientale étaient équipées de façon très similaire.

**D1** Equipement africain, sauf le casque. L'armure capitonnée était encore utilisée dans le Sahara au 19<sup>ème</sup> siècle. **D2** Equipement traditionnel d'un mercenaire arménien, influencé par Byzance, et des régions variées d'Islam et de la Méditerranée. **D3** Equipement simple et archaïque, où les étriers de Ci seraient utilisés. **D4** Les tribus pauvres sans liens avec les pouvoirs centraux d'Egypte et de Syrie avaient peu évolué depuis les temps préislamiques.

**E1** Cavalier du Khurasan, démonté, avec un équipement révélant des influences chinoises et d'Asie centrale. **E2** L'usage du baudrier au lieu d'un ceinturon était caractéristique de l'influence arabe auprès des habitants de la Perse occidentale, alors que la couverture de selle est une mode locale et caucasienne. **E3** Les lanceurs de javelot du sud de la Caspienne étaient les meilleurs fantassins musulmans de l'époque. Ils portaient un équipement léger, comptant sur la protection de leur bouchier. **E4** Tenue très riche des troupes du palais, comme d'habitude, avec des bijoux, du cuir argenté et des vêtements en étoffe brochée.

**F1** L'équipement utilisé en Espagne musulmane révèle de fortes influences d'Europe du sud. **F2** Seuls le bouchier rond, le foulard du casque et le pommeau de l'épée trahissent une origine andalouse plutôt qu'Européenne. **F3** La cavalerie andalouse avait conservé le javelot et continué d'ignorer l'usage des étriers longtemps après que les Européens occidentaux aient modifié leurs habitudes. **F4** L'influence constante des Européens sur Saragosse a fait que cette cité fut la seule de l'Espagne musulmane à ne pas être occupée par les Berbères Almoravides.

**G1** Cet homme, probablement d'origine daylamite, porte traditionnellement une paire de javelots; le bouchier en forme de cerf-volant des Musulmans est antérieur à celui des Normands. **G2** Ancêtre culturel des Tuareg, les Berbères nomades ont combattu dans toutes les armées musulmanes d'Afrique du Nord; le voile bleu indigo masquant le visage est d'origine très ancienne. **G3** Les Arabes et les populations arabisées d'Afrique du Nord fournissaient de nombreux cavaliers au Caliphat Fatimide. Le casque de fer, la cuirasse de cuir et la veste de cotte de mailles sont typiques, mais la forme de la veste est preuve d'un renouveau de l'ancienne mode copte. **G4** Le milicien, ah'dath, jouait un rôle défensif important; sa veste est capitonnée et cette forme de glaive vaut d'être notée.

**H1** Remarque la constante similarité des styles byzantins et musulmans en Anatolie. **H2** La hache était une arme favorite dans les montagnes du Taurus.

**H3** Notez la lourde armure de feutre, y compris les jambières. **H4** Costume de Turquie orientale, montrant des influences mongoles; les éléments islamiques ne sont pas visibles. Le bouchier est fait de bambou attaché avec de la soie. Une deuxième épée était souvent placée sous le côté droit de la selle.

## Farbtafeln

**A1, A2** Elite Palasttruppen des Kalifats, eines der reichsten Staaten der Welt. Der Soldat links hat einen spitzen Helm unter dem Turban; der Mann rechts, im persischen Helm, könnte einer der Einzelkämpfhelden sein, die der Armee in den Kampf vorangingen. **A3** Beduinenkavallerie, nur zum Kundschaften und Scharmützeln benutzt. **A4** Arabischer Stammesmann mit tuchbedecktem Helm und zusammengesetztem Bogen.

**B1** Die Benutzung des Steigbügels hat sich nunmehr vom Osten her verbreitet, war jedoch nicht einheitlich. Eisenrüstung; gemischte Eisen-Bronze-Schuppenrüstung. **B2** Etwas fortgeschrittenere türkische Kavallerieausrüstung mit Steigbügel; Kürass von gemischter Eisen- und Lederkonstruktion. **B3** Wattierter Kopfschutz unter der Tuchkopfbdeckung; indisches Schwert. **B4** Seltenes Exemplar einer Pferderüstung.

**C1** Nachakh Kavallerieast; Ledersteigbügel in Schlaufenform, lange in Indien benutzt. **C2** Die Moslem-Eroberung von Zentralasien führte vielmehr die örtliche Mode in den Islam ein als umgekehrt. **C3** Prachtvoll ausgestattete Abbasid Palasttruppen sind in schriftlichen Quellen beschrieben. Bemerkte den eigenartigen Pferdemaulkorb von transoxanischem Ursprung. **C4** Die Moslemtruppen, die mit Byzanz an der ostanatolischen Grenze kämpften, ähneln in den Entwürfen der Kriegsgegenstände stark ihrem Feind.

**D1** Afrikanische Ausrüstung, ausser dem Helm; wattierte Rüstung war bis zum 19. Jahrhundert immer noch in der Sahara benutzt. **D2** Traditionelle Ausrüstung der armenischen Soldner mit byzantinischen, arabischen und mittelmehrandischen Einflüssen am Kostüm zu sehen. **D3** Einfache und altertümliche Ausrüstung; die Steigbügel in Schlaufenform von Ci würden benutzt werden. **D4** Arme Stimme, die keine Verbindung mit den Machtzentren von Syrien und Egypten haben, hatten sich nur wenig seit der Zeit vor dem Islam verändert.

**E1** Abgesessener Reiter von Khurasan, seine Ausstattung reflektiert zentralasiatische und chinesische Einflüsse. **E2** Der Gebrauch der Schärpe anstelle des Gürtels waren typisch für den arabischen Einfluss unter den Leuten, die damals den Westiran bewohnten, während die Satteldecke von örtlicher und kaukasischer Art ist. **E3** Die besten Moslem-Fussoldaten ihrer Zeit, diese Speermänner von südlich des Kaspischen Meeres waren leicht ausgerüstet, sich auf den Schild zum Schutz verlassend. **E4** Typische reiche Erscheinung der Palasttruppen, mit Schmuck, vergoldeter Lederarbeit und brokatener Kleidung.

**F1** Die Ausrüstung, benutzt im Moslem-Spanien, zeigt starken süd-europäischen Einfluss. **F2** Nur das runde Schild, der Helmschal und die Schwertpommel verraten andalusischen anstelle europäischen Ursprung. **F3** Die leichte Kavallerie in Andalusien behielt den Speer und ignorierte den Steigbügel, lange nachdem solche Stile in Westeuropa altertümlich wurden. **F4** Fortgesetzter europäischer Einfluss in Saragosse machte seinen Status bemerkbar, als der einzige Teil des muslimischen Spaniens, der der Berber Almoravid Besetzung entgehen konnte.

**G1** Wahrscheinlich von Daylami Ursprung, dieser Mann hat das traditionelle Speerenpaar; die Benutzung des drachenförmigen Schildes im Islam ist vor der der Normannen datiert. **G2** Die kulturellen Vorfahren der Tuareg, der Berbernomade, kämpfte in allen nordafrikanischen Moslem-Armeeen; das dunkelblaue Gesichtstuch ist von altertümlichem Ursprung. **G3** Die arabischen und 'arabisch gemachten' Völker in Nordafrika stellten viel Kavallerie für das Fatimid Kalifat. Der eiserne Helm, lederne Kürass und Kettenpanzermantel sind typisch, obwohl die Form des Übermantels eine Erneuerung alter koptischer Arten zeigt. **G4** Der ah'dath Melitzmann spielt eine wichtige verteidigende Rolle; der Mantel ist zum Schutz wattiert und die frühe Form des 'glaive' ist bemerkenswert.

**H1** Bemerkte die fortlaufende Ähnlichkeit zwischen byzantinischen und muslimanischen Stilen in Anatolien. **H2** Die Axt war eine bevorzugte Waffe in den Taurus Bergen. **H3** Bemerkte die schwere Rüstung aus Filz, einschliesslich Beinschutzes. **H4** Osttürkisches Kostüm mit mongolischen Einflüssen; islamische Merkmale sind nicht offensichtlich. Der Schild ist mit Seide gebundener Rohrstock. Ein zweites Schwert wurde oft unter der rechten Seite des Sattels getragen.

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