

ARMIES OF THE CARTHAGINIAN WARS 265-146 BC



TERENCE WISE RICHARD HOOK

EDITOR: MARTIN WINDROW

OSPREY
MILITARY

MEN-AT-ARMS SERIES

121

ARMIES OF THE CARTHAGINIAN WARS 265-146^{BC}

Text by

TERENCE WISE

Colour plates by

RICHARD HOOK

First published in Great Britain in 1982
by Osprey, an imprint of Reed Consumer Books Limited
Michelin House, 81 Fulham Road
London SW3 6RB
and Auckland, Melbourne, Singapore and Toronto

© 1982 Reed International Books Limited

Reprinted 1982, 1983, 1984, 1985, 1987 (twice), 1988,
1990, 1991, 1992, 1993

All rights reserved. Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright Designs and Patents Act, 1988, no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, electrical, chemical, mechanical, optical, photocopying, recording or otherwise, without the prior permission of the copyright owner. Enquiries should be addressed to the Publishers.

ISBN 0 85045 430 1

Filmset in Great Britain
Printed in Hong Kong

Armies of the Carthaginian Wars 265-146 BC

Chronology

B.C.

- 265 Outbreak of 1st Punic War between Rome and Carthage over control of Sicily.
- 262 Siege and battle of Agrigentum, which gave Rome control of most of Sicily.
- 260 Battle of the Lipara Islands: Roman naval squadron defeated. Battle of Mylae: decisive naval victory for Romans using new methods of naval warfare.

256

Battle of Cape Ecnomus: decisive naval victory for Romans, followed by their invasion of Africa.

Battle of Adys: Carthaginians, defeated, sued for peace, but terms too severe.

255

Battle of Tunes: Roman army defeated and most of fleet lost in storm soon after.

254

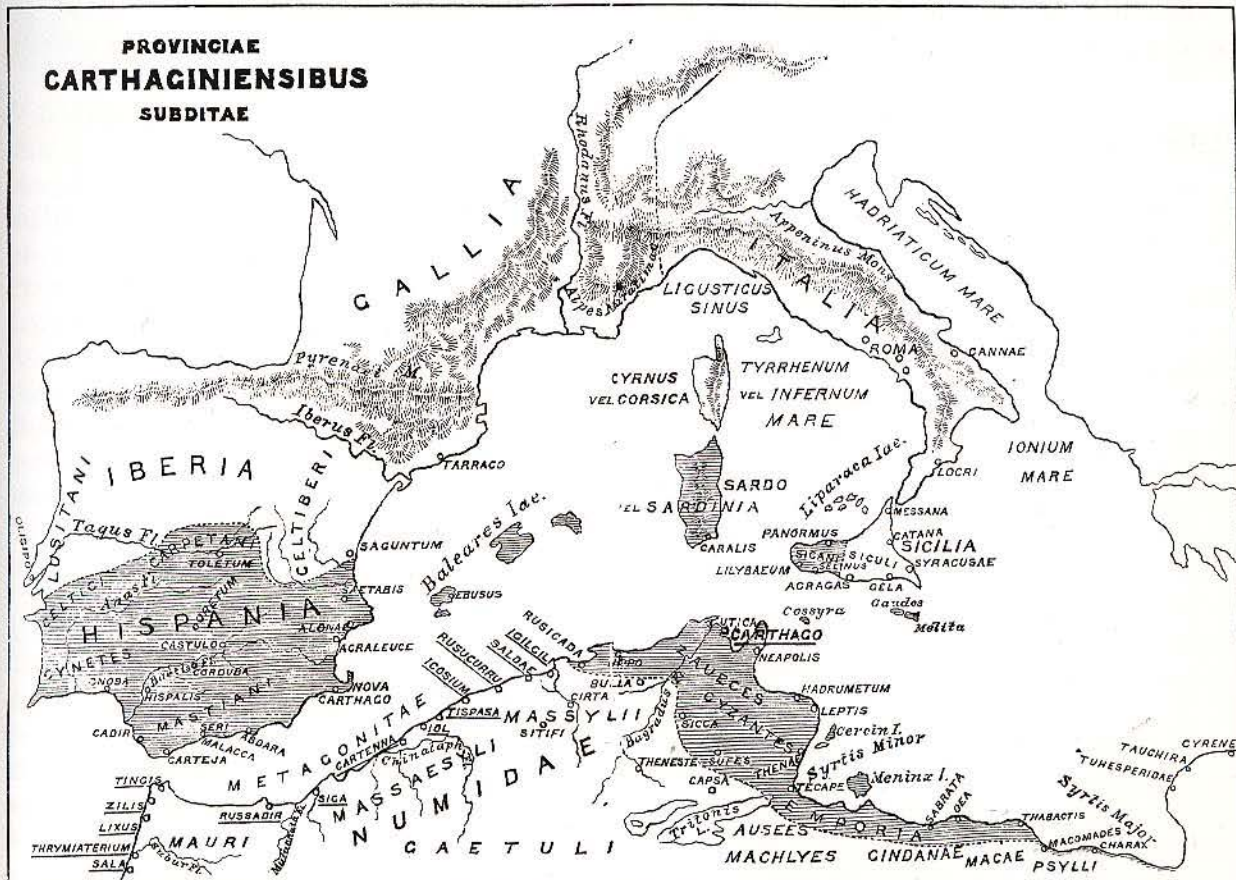
Carthaginians returned to Sicily in strength.

251

Battle of Panormus: Roman victory in Sicily.

249

Battle of Drepanum (Trapani): naval defeat for Romans. Land and sea attacks on Sicily failed, and most of



- Roman fleet lost in storm.
- 247-242** Hamilcar Barca repulsed all efforts by Romans to retake Sicily.
- 242** Carthaginian strongholds of Lilybaeum and Drepanum on Sicily fell to Romans.
- 241** Battle of the Aegates Islands: Carthaginian fleet defeated. Carthage sued for peace and evacuated Sicily.
- 238** Rome seized Sardinia.
- 225-222** Gallic invasion of central Italy defeated.
- 219** Siege of Saguntum, a Greek city and Roman ally in Spain, sparked off 2nd Punic War. Saguntum fell after an eight-month siege by Hannibal.
- 218** Hannibal crossed Pyrenees and Alps with an army to invade Italy.
Battle of the Ticinus (November): consul Scipio defeated.
Battle of the Trebia (December): decisive victory for Hannibal over Roman consuls.
- 217** Hannibal advanced into central Italy. Battle of Lake Trasimene (April): Romans heavily defeated by Hannibal. Battle of Geronium (summer): inconclusive.
- 216** Battle of Cannae (August): disastrous defeat of Roman consuls by Hannibal. Battle of Nola: Hannibal repulsed in Campania.
- 215** 2nd battle of Nola: Hannibal repulsed again. Stalemate in Campania.
- 215-205** 1st Macedonian War: Macedonia allied with Carthage against Rome.
- 214** 3rd battle of Nola: inconclusive.
- 213-211** Siege of Syracuse by Romans.
- 212** Tarentum fell to Hannibal. Capua besieged by Romans. Praetorian armies defeated at battles of Capua and Herdonia.
- 211** Two Roman armies defeated in Spain: all Spain south of the Ebro controlled by Carthage.
Siege and 2nd battle of Capua. Hannibal marched on Rome, without effect. Capua surrendered to Romans.
- 210** 2nd battle of Herdonia: proconsular army destroyed by Hannibal.
- Battle of Numistro: another Roman army defeated.
- 209** Scipio Africanus captured New Carthage.
- Battle of Asculum: Romans under Marcellus defeated by Hannibal.
- Tarentum fell to Rome.
- 208** Battle of Baecula in Spain: Hasdrubal defeated by Scipio.
- 207** Hasdrubal crossed Alps.
Battle of Grumentum: Romans failed to prevent Hannibal marching north to meet Hasdrubal.
Battle of the Metaurus: Hasdrubal's army destroyed.
- 206** Battle of Ilipa: Carthaginians decisively defeated by Scipio. End of Carthaginian rule in Spain.
- 204** Battle of Crotona: Hannibal survived against tremendous odds in Bruttium. Invasion of Africa by Scipio.
- 203** Battles near Utica: two Carthaginian armies defeated. Hannibal landed with his Italian army.
- 202** Battle of Zama: Hannibal decisively defeated, Carthage sued for peace.
- 200-196** 2nd Macedonian War between Philip V of Macedonia and Rome.
- 195** Revolt in Spain quelled by consul.
- 192-188** Rome at war with Antiochus III of Syria.
- 172-167** 3rd Macedonian War.
- 152-146** 4th Macedonian 'War' (uprisings).
- 149** Outbreak of 3rd Punic War.
- 147** Land and sea blockade of Carthage.
- 146** Fall of Carthage after nine-tenths of population died of starvation, disease or in battle. City razed and survivors sold as slaves.

The Carthaginians

The city of Carthage was founded in Tunisia *circa* 814 B.C. by people from Palestine (probably from the city of Tyre) – Canaanites whom the Greeks called Phoenicians, meaning 'dark-skinned'. The Romans called them Poeni, or Puni, hence 'the Punic Wars'.



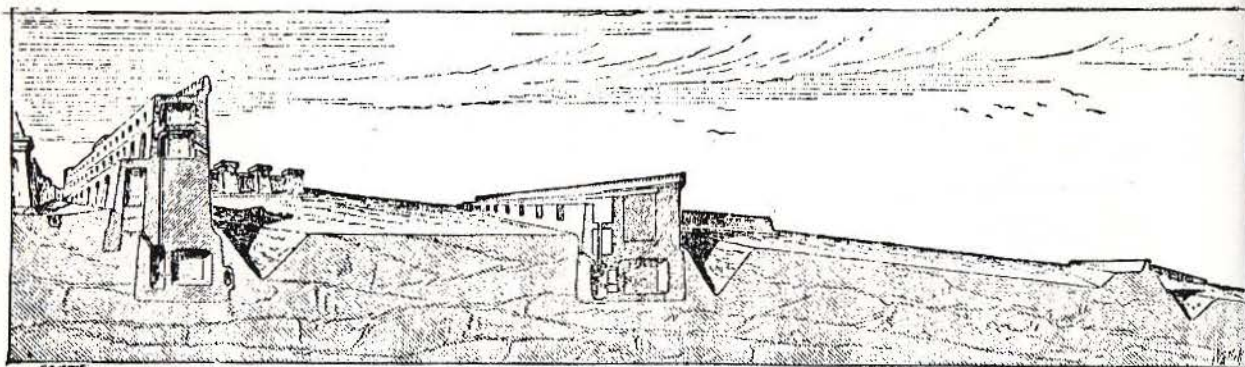
The destruction of Tyre by Nebuchadrezzar of Babylon (see *Men at Arms* No. 109, *Ancient Armies of the Middle East*) in the first half of the 6th century enabled Carthage to take that city's place as mistress of the Mediterranean, and other Phoenician cities founded before or by Carthage – Leptis Major, Leptis Minor, Hippo Zarytus, and Adrumetum – were now compelled to pull down their walls and submit to the rule of Carthage. The single exception to this treatment was Utica, traditionally founded some 300 years before Carthage and second in size only to its powerful neighbour: this city was allowed to keep its walls and was granted equal rights.

Phoenician colonies founded in Spain and Sicily by Tyre and Sidon were threatened by Greek expansion soon after the fall of Tyre, and they turned to Carthage for help. As a result the Greek colonisation of Sicily was checked, and Carthage established colonies of her own on Sicily and neighbouring islands as far as the Balearic Islands and the coast of Spain. Subsequently Carthage conquered almost all of

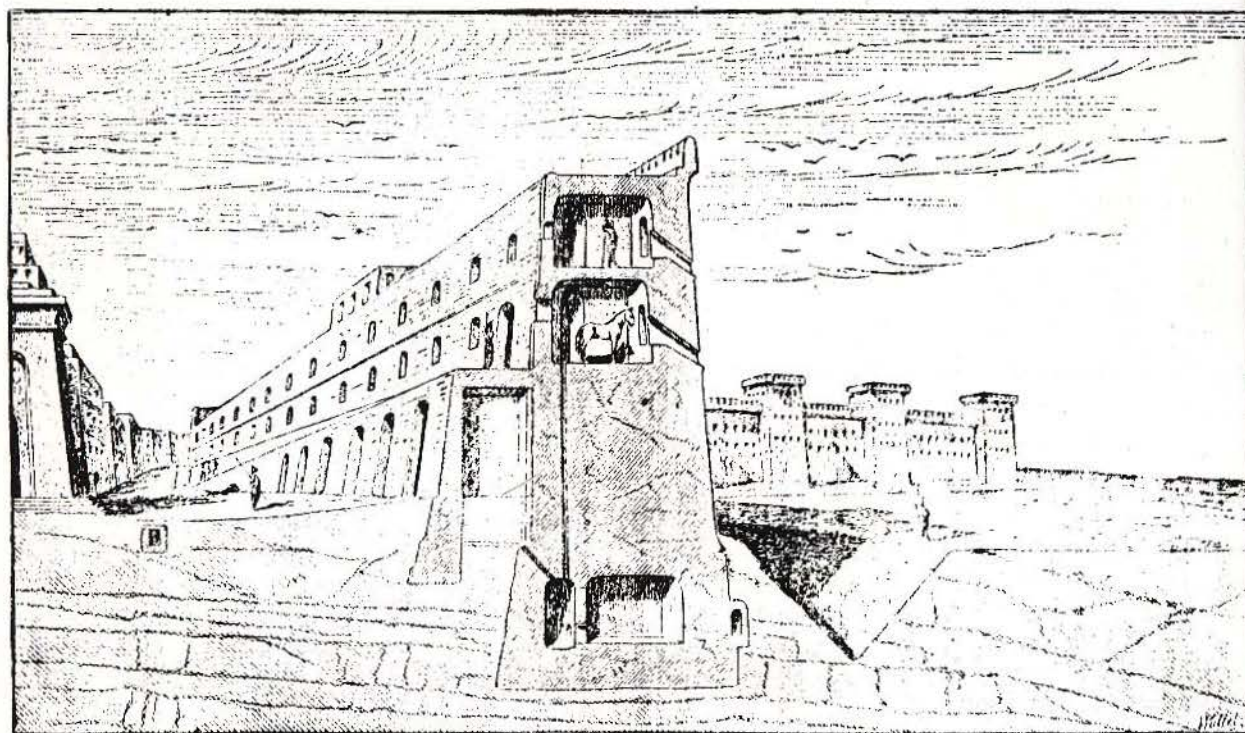
Carthage from the *Byrsa* (citadel), showing remains of the great harbour. Excavations have shown that Appian's description of the military harbour and its sheds for 200 ships is fundamentally correct. (University of Michigan)

Sicily, Sardinia and the Balearic Islands, and started settlements along the coast of Libya and Algeria. Circa 520 B.C. a voyage of exploration through the Straits of Gibraltar founded more settlements along the West African coast of Morocco and Mauritania, Senegal and Guinea, and even in Madeira and the Canary Islands. Men, women and children, the surplus population of the thriving city, went out to found these settlements; but eventually, over a period of many years, mixed marriages with the native Africans resulted in the creation of a separate people, known as the Liby-Phoenicians.

Carthage and its empire were ruled by two 'kings', a senate and an assembly. All offices were held by the aristocracy, membership of which was determined by wealth rather than birth. The kings, or judges – their power was chiefly judicial –



THE TRIPLE WALL OF THAPSUS.



Appian describes the walls of Carthage as three walls of equal height and breadth, but as this would prevent the walls from supporting each other it is more likely they were progressively higher. Traces of such a system have been found at Thapsus near Syracuse and a reconstruction is shown here. The walls of Carthage were about 18 miles in circumference, single on the sea side but triple on the land side. (Author's collection)

Bottom: Detail of the innermost wall at Thapsus. Appian says the main wall at Carthage was 15m high by ten wide, with a four storey tower every 60m. Within the wall itself were stables for 300 elephants, with fodder rooms below, and above them stables for 4,000 horses and barracks for 24,000 men, plus store rooms. (Author's collection)

were elected annually to preside over the senate and control civil administration. There was no limit to re-election; Hannibal, for example, was re-elected for 22 years. The judges were called *Shofets* – *suffetes* in Latin.

The senate consisted of 300 aristocrats, with a permanent inner council of 30 which elected the army and navy commanders (who remained in office until replaced) and which was the chief governing body, aiding and controlling the *Shofets*. The offices of general or admiral and *Shofet* might be held jointly, but a *Shofet* did not command an army or fleet unless specifically appointed to the post. A deputy from the senate accompanied each military commander in the field.

This inner council was subsequently replaced by a high court of 104 judges, called The Hundred, which maintained law and order and called to account the military commanders – many of whom were crucified for failure in the field. The Hundred came to control the senate, and gradually became a tyrannical inquisition, frequently meeting secretly at night. The Hundred was elected annually, but the same men were continually re-elected; consequently foreign policy, in particular, was practically unchanged over a period of a century or more during the peak of the empire.

The popular assembly consisted of all citizens possessing a certain qualification in property. It had to ratify the election of the *Shofets* but had little other power. It was almost always in opposition to the senate, and this was one of the chief causes of the downfall of Carthage.

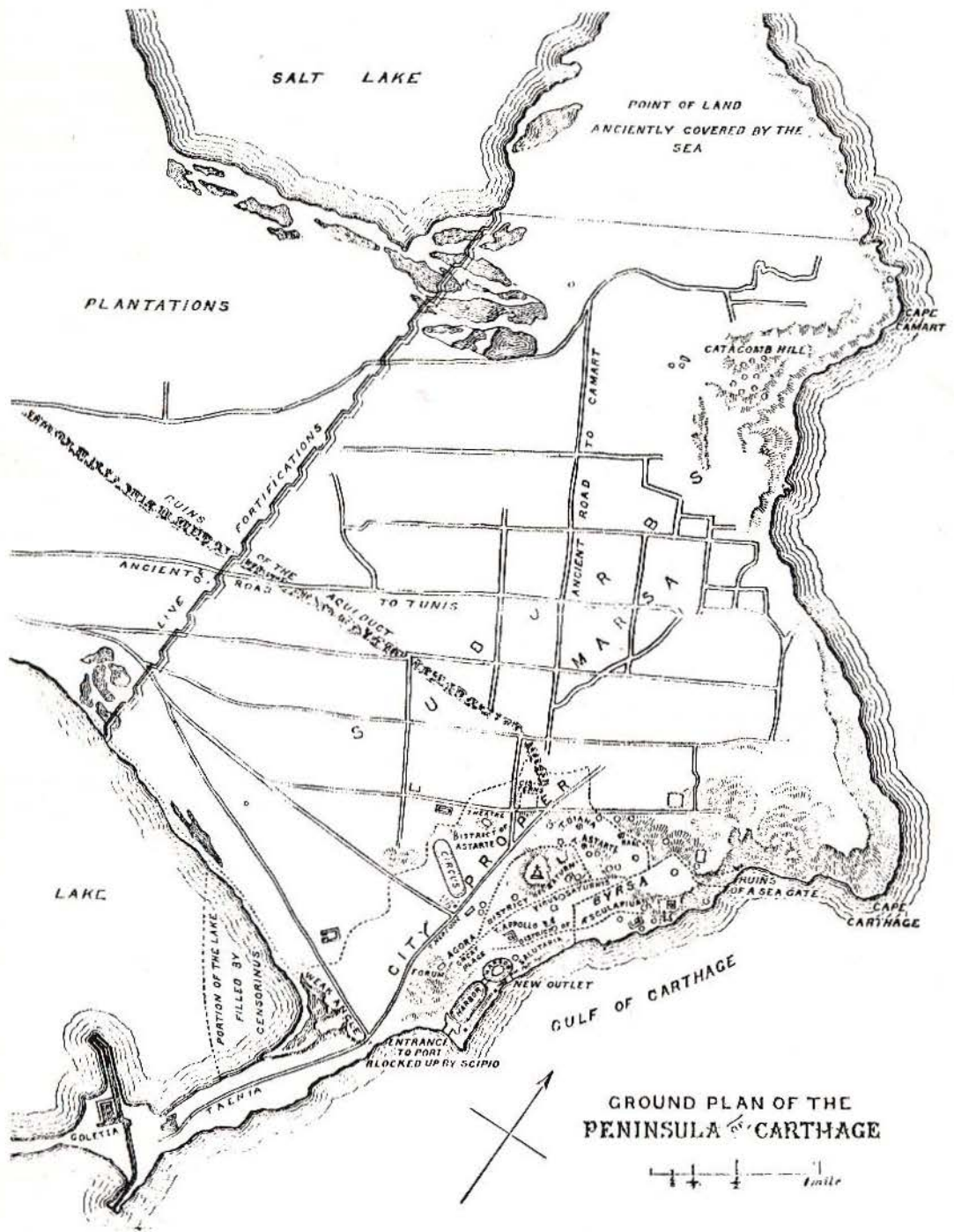
During its early history Carthage had only a citizen militia for its defence, raised in time of need and disbanded as soon as that need disappeared. After the 5th century B.C. there was no longer any such militia, and the only military personnel of Carthaginian birth were some 2,500 young men drawn from the best families who formed the Sacred Band, an élite cavalry corps which also served as a training unit for the officers who commanded all other parts of the armed forces. All other Phoenician cities were forbidden to possess military forces of their own and were totally dependent upon Carthage for protection.

For home defence, expansion, and ultimately the defence of her empire, Carthage relied almost

entirely on soldiers levied from vassal states and allies, and on hired mercenaries. To pay for these armies Carthage exacted tribute from all her African colonies and the native tribes of the interior, the latter being particularly rich in gold and precious stones. Her overseas possessions also paid in kind – there were rich mines in Spain and Corsica – part being paid direct to Carthage, and the rest being spent locally on the support of the troops stationed there. Some parts of the empire contributed troops and tribute, particularly south and south-east Spain, corresponding roughly to Andalusia and Murcia. Cities such as Utica and Gades (Cadiz), although ranked as equals, still had to contribute both troops and tribute.

The Libyans, in whose land Carthage was founded, were reduced to slaves under Carthaginian rule as the city grew stronger, but by the middle of the 3rd century B.C. they had been raised to the status of tributary free cultivators, and thereafter had to yield one-quarter of their produce in tribute and provide large numbers of soldiers for the Carthaginian army: an army sent to Sicily in late 252 or early 251 B.C. is described as consisting mostly of Libyans. These may be the 'African infantry' of the ancient sources, but it is more likely that this term was applied to the Liby-Phoenician troops levied from the various Carthaginian colonies in Africa. Polybius says they formed the nucleus of both the infantry and cavalry arms, but does not mention their number. Barracks in the walls of Carthage itself could house 24,000 troops, 4,000 horses and 300 elephants. These figures might give some guidance on the number of African (that is Libyan and Liby-Phoenician) troops in the armies.

In the 3rd century B.C. Carthage also began to recruit extensive numbers of Numidian cavalry, and, later, Moorish troops from Mauritania: these troops were supplied by Numidian and Moorish princes who were more or less independent allies, and did not pay tribute. In addition to these allied troops and contingents from vassal states, mercenaries were hired from outside the empire by sending senators to the trading centres throughout the known world to contract with the local kings and princes for officers and men. Thus a Carthaginian army of the Punic Wars period might contain a core of Liby-Phoenicians and



GROUND PLAN OF THE PENINSULA OF CARTHAGE

Carthage was built on a promontory with an isthmus 4.5km wide and a ditch some 20m deep in front of the walls. (Author's collection)

native Libyans, Numidians, Moors and perhaps some of the Sacred Band, all from Africa; Iberians, Celt-Iberians and Balearic Islanders from the Iberian peninsula and its islands; Ligurians and Celts from the Alps, south-west France and north-east Italy; half-caste Greeks (mainly deserters and runaway slaves) and Greek mercenaries from the various Greek states. During the 2nd Punic War (219–202 B.C.) allies were recruited in Italy and Macedonia, and when the war moved to Africa and Carthage itself was threatened – in both the 2nd and 3rd Punic Wars – the citizens of Carthage also took the field.

At the start of the 2nd Punic War the population of Carthage is estimated to have been one million people. Approximately 12,000 Carthaginians and African levies were raised for the battle of Zama at the end of that war. In the 3rd Punic War (149–146 B.C.) 25,000 infantry and 400 mounted nobles were raised from citizens and Libyan subjects. After the 1st Punic War (265–241 B.C.) Carthage was able to raise 10,000 citizen soldiers to fight in the Mamertine War (a revolt by unpaid mercenaries – including Libyans), and at the battle of Crimessus in Sicily in 340 B.C. there were 10,000 native Carthaginians out of an army of 70,000. All this suggests Carthage could produce a maximum of 10,000 raw levies in emergencies. Carthaginian troops are also mentioned at the battles of Ibera and Ilipa in Spain in the 2nd Punic War: these were probably citizens of Gades and Cartagena, not of Carthage itself, although they were, of course, of Carthaginian origin.

All these troops were commanded by their native princes or chieftains, under the overall command of Carthaginian officers. It would appear some Liby-Phoenicians may also have held high rank: the Liby-Phoenician Mutines was given command of a guerilla force of Numidians in Sicily c.212 B.C., but his appointment was resented by Hanno, commander-in-chief in Sicily, who eventually suspended him. (Mutines's Numidians were so enraged by this action that they opened communications with the Romans and threw open the gates of Agrigentum to the enemy.)

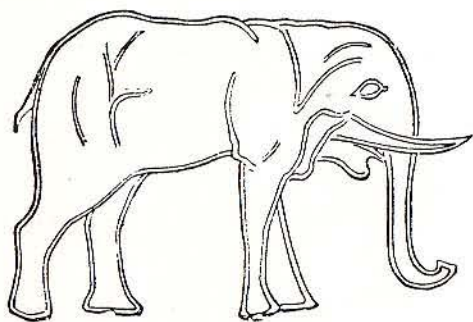
No attempt was made to organise this heterogeneous mass of troops into a uniform army.



Silver double shekel struck at Carthage circa 220 B.C., showing a head generally regarded as that of Hannibal. (British Museum)

Punic silver coin of Hannibal's time showing what is believed to be a war elephant: the rider helps us to visualise the smallness of the Carthaginian elephant. (British Museum)





Elephant from a Carthaginian votive stele, showing the main differences between the forest and Indian elephants: concave back, large ears, flat forehead and hind quarters. (Author's collection)

Each native group fought in its own way and to its best advantage, and to a large degree the success of Carthaginian arms depended on the quality of the general and his ability to hold these forces together and use them in the most effective way. It was these abilities which made Hannibal such an outstanding commander: in all his 15 years of fighting in Italy there were only two occasions when he lost absolute control, and even then only small units deserted.

The Carthaginians and Liby-Phoenicians

Prior to the 1st Punic War the native Carthaginians are described (at the Battle of Crimessus) as splendidly armed with iron breastplates and brazen helmets, bearing great white shields covering most of their bodies, and marching in a slow and orderly fashion. This suggests a phalanx formation. They were supported by four-horse chariots – the invention of which weapon is attributed to their Canaanite ancestors. (See *Men at Arms* No. 109, *Ancient Armies of the Middle East* for more information on the Canaanites and their weaponry.)

At the beginning of the 1st Punic War the Carthaginians were twice defeated by the Roman consul Regulus in Africa: we must assume they were still fighting in the phalanx formation, a natural assumption as we know they were armoured and equipped in the manner of the late Greek infantryman – metal helmet and greaves,

linen cuirass (perhaps metal-plated for the front rank men), round shield about 60cm in diameter, two-handed pike between five and seven metres long, and a short sword.

At about this time a Spartan adventurer, Xanthippus, arrived at Carthage with a band of Greek mercenaries. His criticisms of the Carthaginian army came to the ears of The Hundred, and Xanthippus found himself appointed commander of that army! During the winter of 256–255 B.C. Xanthippus is said to have re-organised the army in the Greek style and to have drilled it to perfection. This would have meant a series of phalanxes, each of some 4,000 men in 256 files each 16 men deep. Spaniards and native Libyans seem to have been included in these phalanxes, also armed in the Greek style. (At the beginning of the 3rd Punic War, when considerably poorer than in the 3rd century B.C., Carthage is said to have surrendered to Rome from her armouries no less than 200,000 complete sets of heavy infantry equipment.)

However, apart from improvements in drill and discipline – and therefore probably morale also – it is likely that Xanthippus's success in the spring of 255 B.C. at the battle of Tunes came not from any dramatic re-organisation of the Carthaginian army, but rather from his tactics. Placing 100 elephants in the front line to break up the legions, he positioned the cavalry and light troops on the flanks with the heavy infantry phalanxes extended across the whole battlefield. As the phalanxes on the flanks were concealed by the cavalry and light troops, the Romans did not realise their own heavy infantry line was outflanked. Shattered by the elephants and outflanked on both wings, the Roman army was completely defeated, losing some 15,000 men out of 20,000.

The African infantry of Carthage continued to be armed and to fight in this manner until after the battle of Lake Trasimene (217 B.C.), when we are told Hannibal re-armed his heavy infantry with Roman weapons and equipment and incorporated in their drill all the best features of Roman training and tactics. This process continued after the massive Roman defeat at Cannae the next year, by which time the Spanish infantry and possibly at least some of the Celtic heavy infantry must also have been re-equipped, some

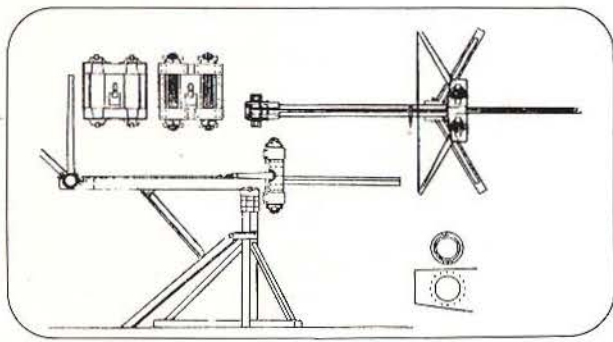
92,000 Romans troops having been killed or captured in the two battles. It is most likely that the main changes were the adoption of mail armour, and possibly the introduction of the *pilum* as a missile weapon for at least some heavy infantry in place of the long spear or pike. This probably caused changes in deployment, the phalanx being abandoned in favour of the Roman system of lines in maniples, with the rear line

retaining the pike as the equivalent of the *triarii* (see Roman section for details).

The African infantry with Hannibal in Italy was gradually reduced in numbers and the losses were not made good: Hannibal received only one reinforcement from Africa during his 15

Entrevaux in the Basses-Alpes, about 50 miles south of Hannibal's believed route, but giving some idea of the terrain his army faced. (French Government Tourist Office)





Reconstruction of a catapult found at Ampurias and dated circa 150 B.C. Effective range was probably 300m. (Museo Arqueológico, Barcelona)

years in Italy – 4,000 Numidian cavalry and some elephants. The gaps in his ranks were filled instead with Celts and Italians, who were not of the same calibre, but who would still have been armed with the *pilum* and large shield, and would have worn mail armour and helmet.

Light troops would have been provided by the Libyans and Moors – Moorish bowmen are mentioned at Zama in 202 B.C. and by implication at Trebia in 218 B.C. (see under Roman mercenaries). The Carthaginians themselves, being of Semitic origin, should have been familiar with the composite bow. No mention is made of other African troops armed with the bow, but it is safe to assume there must have been some Carthaginian archers armed with the composite bow, for the Carthaginians had brought other Canaanite weapons such as the chariot from Palestine. These bowmen would probably have been used only when the citizens were levied in 202 B.C. and again in 150 B.C. Cretan archers would certainly have been used, and are mentioned amongst the Carthaginian defenders of Syracuse in 211 B.C. during the siege by Marcellus.

Out of the 40,000 infantry at Cannae, Hannibal had about 4,000 African light infantry and 8,000 African heavy infantry – the two phalanxes used on either flank of his centre.

Mention has already been made of chariots and elephants. The Carthaginians were introduced to the elephant by Pyrrhus, king of Epirus 295–272 B.C., and promptly abandoned their Tyrean war chariots in favour of it. They first used the elephant against the Romans at Agrigentum in Sicily in 262 B.C.

Carthage had no direct contact with India and therefore relied mainly on the now-extinct African forest elephant, which was to be found at that date in Morocco, Algeria, and on the edge of the Sahara desert. This elephant should not be likened to the Indian elephant or the great African bush elephant of central and southern Africa – both these species are considerably larger. The Indian elephant averages three metres in height at the shoulder, the African bush elephant 3.5 metres, and the African forest elephant less than 2.5 metres.

The forest elephant used by the Carthaginians was really too small to carry a 'turret' and there is no evidence of either a howdah or warriors being mounted on its back. There is a coin which shows a war elephant being ridden bareback by a cloaked driver, and it is almost certain that the elephant itself was the weapon: it could have a devastating effect on horses which were unaccustomed to it, while the elephant was used with decisive effect against Roman infantry and cavalry in 262 B.C. and 255 B.C.

As early as 274 B.C. (the battle of Maleventum) the Romans had perfected tactics for dealing with elephants – light troops waving torches of burning straw. However, it would appear that each generation of soldiers had to encounter elephants at least once before being able to stand up to them successfully, so the elephant should really be regarded as a terror weapon, liable to cause chaos in an army which had never fought it before, but as likely to cause chaos in its own army when facing troops accustomed to dealing with it.

In fact, despite two notable successes in the 1st Punic War, elephants were of little use in the second and third wars. Of the 34 which Hannibal tried to take to Italy all but seven died during the crossing of the Alps, and only one survived the bitter winter which followed.

It seems likely that Hannibal may have had one or more Indian elephants, obtained via Egypt (Ptolemy II lent Carthage large sums of money for the first war, and a stable of Indian elephants may also have been built up by means of gifts of Indian elephants from him) and these would probably have carried warriors with or without a 'turret'. However, the seven surviving elephants were only used in battle once, at Trebia in 218

B.C., and then only in a minor rôle, as the cavalry they faced was already massively outnumbered.

Hannibal received more elephants in 215 B.C. but seems to have used them primarily to frighten native tribes who had never seen elephants before, or against cavalry whose horses had not been trained to meet them.

By the time of Zama no trained elephants remained in Carthage's stables, and we hear of a man called Hanno being sent to procure fresh ones not long before this battle. The approximately 80 elephants used at Zama were probably all untrained African ones, and this would explain why they did as much damage to their own side as to the enemy. Such an event had been foreseen, and the drivers were equipped with a mallet and chisel, to be hammered into the animal's head or neck, but this idea seems to have been about as effective as the elephants themselves in this particular battle.

The Carthaginians were also well equipped with an artillery arm, which followed the Hellenistic style also copied by the Romans. When Scipio Africanus took Cartagena in 209 B.C., he captured 120 large catapults, 281 smaller catapults, 23 large ballistae, and 52 smaller ballistae from the arsenal there, while in 150 B.C. part of the military stores surrendered to Rome in an attempt to avert the 3rd Punic War were 2,000 artillery pieces of various types.

The Numidians

The Numidians were nomadic tribesmen from modern Algeria: they and their land were so named by the Romans, Numidia meaning land of the nomads. The camel had not been introduced into North Africa in the period of the Punic Wars, and these nomadic tribes relied exclusively on the horse as a means of transport – as a result their warriors were born horsemen, living on horseback from an early age. They used neither bit nor bridle, and rode bareback with only a neck strap of plaited rope for harness, using voice and a stick to guide their mount. The horses themselves were small but sturdy, accustomed to negotiating rough terrain, and were extremely agile and fast.

The tribesmen wore only their normal dress when in battle; a simple, short, sleeveless tunic, gathered at the waist by a belt, often of plaited



Numidian coin showing head of King Syphax. (British Museum)

Hasdrubal Barca, Hannibal's brother, who commanded in Spain. (British Museum)





Numidian coin showing head of Masinissa, king of Maesulian Numidia, modern Algeria. (British Museum)

rope. No doubt at night, and in the colder climate of northern Italy, the tunic was supplemented by a blanket or cloak of animal skin, probably with a hood, but this is not shown in any surviving representation, either on themselves or carried on their horses. Their only protection when fighting was a small, light, round shield and their own agility.

They were armed with javelins and light spears: iron javelin heads and pointed iron butts have been found in a 2nd century B.C. prince's grave in Algeria. They do not seem to have had a secondary weapon, though no doubt they would have carried some form of knife or dagger in their belt. Excavations at Numantia in Spain (centre of Celt-Iberian resistance to Rome during the Numantian War of 137–132 B.C., besieged and taken in 134 B.C.) have revealed slingshots of lead, baked clay and iron, some of them stamped and marked. Some of these are Roman, but others have been attributed to Numidian troops in the Roman army. The Numidians often fought dismounted, either in ambush or when overwhelming an enemy's cavalry by weight of numbers, and it seems likely they may have used the sling as a missile weapon in some circumstances – certainly their light javelins would have been of little use in a siege. In his *Gallic Wars*,

Caesar mentions the use of Numidian and Cretan archers during the campaign against the Belgae (57 B.C.). However, this is a century after the 3rd Punic War, and there is no contemporary mention of the Numidians using the bow during the Punic Wars.

The Numidians were the classic light horse, using their speed and agility to dart towards the enemy with great dash, hurl their javelins, then retreat before the enemy could strike back or make contact. They were extremely adept at using cover, and time and time again lured their enemies into ambushes, or employed ruses to surprise their foes. They were superb in all these rôles or in pursuit, but were of little use as shock troops. At Cannae they were unable to break Rome's allied cavalry on their own, but once it had been broken by the Spanish and Celtic cavalry they were left to conduct the pursuit, which they did with the utmost effect.

Rome had no answer to the Numidian light horse, and one of Scipio Africanus' greatest achievements was in persuading a Numidian prince to change sides. Syphax, king of the Masaesydes tribe, was attempting to unite the tribes to create a single Numidian kingdom, and around 214 B.C. he withdrew his support from Carthage and opened negotiations with Scipio in Spain. Scipio sent a centurion to Numidia to train Syphax's men in infantry fighting (6,000 Numidian infantry fought for the Romans at Zama) and in return Syphax brought about the desertion of many Numidians from the Carthaginian army in Spain. The Carthaginian commander, Hasdrubal, therefore encouraged Syphax's eastern neighbour and chief rival, King Gaia of the Massyles tribe, to make war on him, and by the end of 212 B.C. Syphax appears to have returned to his allegiance. Gaia's son, Masinissa, now went to Spain with a body of Numidian cavalry to support Hasdrubal.

In 206 B.C. Scipio went to Africa and negotiated another alliance, this time with Masinissa, now king of the Massyles. Syphax and Hasdrubal also made an alliance, cemented by Syphax's marriage to Hasdrubal's daughter. At Zama, therefore, for the first time the Romans had the assistance of the Numidian light cavalry, with 4,000 cavalry and 6,000 infantry under Masinissa

fighting for Scipio, and about 4,000 cavalry fighting for Hannibal.

In the third war some 6,000 Numidians sided with Carthage to fight against Rome, while the now-aged Masinissa again allied himself with Rome.

The Celts

Known to the Romans as Gauls, the Celts originated in southern Germany, but gradually spread across western Europe until by the 3rd century B.C. they had overrun and settled in Belgium, Austria, Switzerland, northern Italy, Bohemia, Hungary, Illyria, parts of France, Spain and Britain, and crossed into Asia to settle in Turkey.

The Celtic tribes first attacked Rome in 390 B.C., when they sacked the city. Over the next hundred years they invaded central Italy again and again; they allied themselves with the

Samnites in their last war against Rome, and in 225 B.C., only seven years before Hannibal crossed the Alps, 70,000 Celts had once again crossed the Apennines in an attempt to stem Roman expansion. Consequently, during the Punic Wars, the Carthaginians found the Celts willing allies, and Hannibal's army arriving in Italy consisted of over 40 per cent Celts.

The upper and middle classes of the Celtic tribes were a warrior class – they lived only for war. Like most such warriors, they were fiercely proud and undisciplined: to a Celt a battle consisted of simply charging straight for your enemy (preferably down a slope) and defeating him face to face, man to man, in a sword fight. They were excellent swordsmen, and when con-

Ampurias, a Greek city in Gerona, where Hannibal stopped prior to crossing the Pyrenees. (Spanish National Tourist Office)





Avignon on the Rhône. Hannibal passed through here and turned north for the final stage of his journey into Italy. Experts differ as to which route he took over the Alps, but it is most likely he turned east where the River Drôme flows into the Rhône south of Valence, and followed the course of the Drôme. (French Government Tourist Office)

trolled by a general such as Hannibal proved to be valuable soldiers – in the Carthaginian armies they were probably organised into small companies under their own chiefs, for Polybius, referring to alternate Spanish and Celtic infantry ‘companies’ at Cannae, calls them ‘maniples’. This is backed up to some extent by the number of standards used in battle.

The chieftains and richest warriors often wore armour, particularly after contact with the Greeks and Romans, whose armour they adopted, but in earlier times most Celtic warriors scorned the use of armour and preferred to fight naked. Some Celtic tribes still fought naked at the battle of Telamon (255 B.C.), and at the time of the 2nd Punic War it is reasonably certain that many of

the Celts still fought in this traditional manner. Strange to relate, therefore, that the Celts were manufacturing mail shirts from c.300 B.C.: the high cost of manufacture was probably the main factor which restricted its use to the aristocracy.

After the battles of Trebia (218 B.C.) and Lake Trasimene (217 B.C.) many of the Celts were probably equipped with mail shirts taken from the Roman dead, and this was almost certainly the case after the battle of Cannae (216 B.C.). Yet whether wearing a mail shirt or not the Celtic warrior was essentially a heavy infantryman, equipped with helmet, large shield and long sword. Even when totally unprotected except for a shield, he fought in the main body of the heavy infantry, not as a skirmisher, although some of the youngest and most inexperienced warriors were probably used as light troops, armed with javelins.

The Celt’s sword was his prime weapon, between 75–80cm long, double edged, and with a somewhat rounded point. It was used as a slashing

weapon, swinging from side to side, or by whirling it round the head and bringing it down like an axe. Its length and method of use required space, and the Celtic warrior fought independently as an individual, relying mainly on agility as a defence. It was this method of fighting which at first struck fear into the hearts of his opponents; but the Romans soon came to realise that their disciplined ranks and the use of reserves could defeat the best Celtic warriors, and Hannibal at least seems to have used his Celts mainly as a softening-up force to break the Roman ranks before launching his prime troops – the African infantry. Despite heavy losses the Celts accepted this rôle, for it gave them the position of honour.

The Celtic shield was usually oval, though examples of round, rectangular and hexagonal shields do occur; about 1.1 metres long, it was about 1.2cm thick at the centre, tapering towards the edges. Made of oak planks, it was reinforced by a covering of felt or hide, and sometimes had metal binding on the upper rim. It weighed between six and seven kilos. A wooden, spindle-shaped boss covered a central hollow for a hand grip, and this boss was sometimes reinforced by a broad strip of iron nailed to the planking. The outer face was frequently painted with animal or geometric designs.

The large shield was essential for the unarmoured Celtic swordsman in hand-to-hand combat, but could also be used in close order when receiving the customary hail of missiles from a Roman legion. The Celts did not make much use of the spear and javelin themselves, though examples have been found in Switzerland which are nearly 2.5 metres long. The typical Celtic spear head seems to have curved inwards between tip and the widest point of the blade, which ranged in length from 10cm (javelin?) to 50cm. However, whenever they came up against the Roman legions, they soon adopted the light *pilum* as a counter-missile weapon.

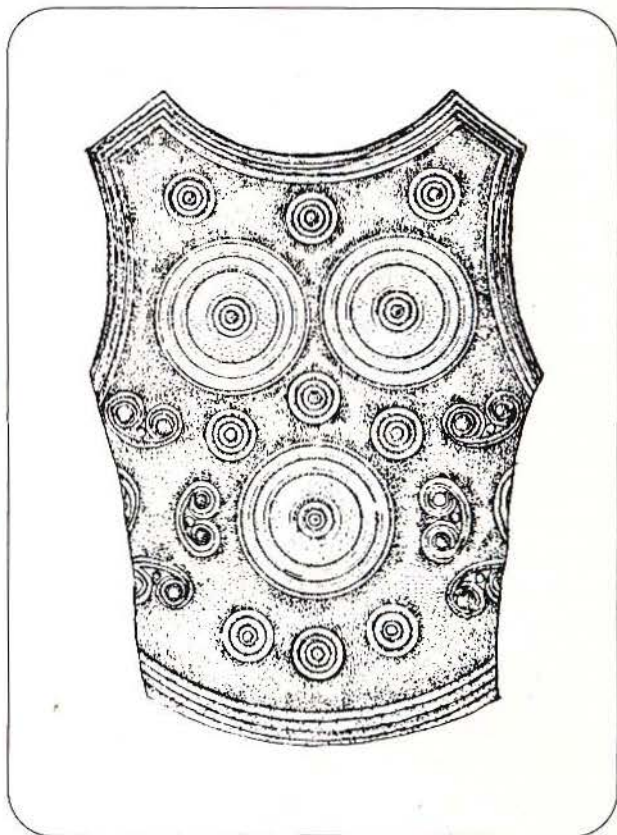
The Celtic cavalryman was armed and equipped much as his infantry counterpart, except that his shield was round. Chariots are mentioned at the Battle of Telamon in 225 B.C. but are not referred to during the Punic Wars, and are not encountered again until Caesar's invasion of Britain in 55 B.C.

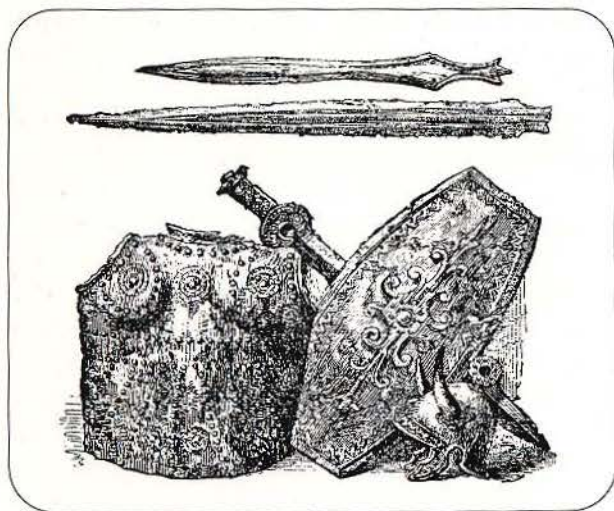
At Cannae Hannibal's army of 40,000 infantry and 10,000 cavalry included 4,000 Celtic nobles fighting as heavy cavalry, 14,000 heavy infantry, and 6,000 light troops. It is possible that the distinction between heavy and light was made only because by now many Celts must have been wearing captured mail shirts, for 6,000 seems far too large a number to be entirely young men armed with javelins.

The Spanish Troops

There is some confusion over the precise identity of the 'Spanish' troops that fought in the Punic Wars. The original inhabitants of the Iberian peninsula were the Iberians, a Caucasoid people who were famed as warriors, and who served as mercenaries in many parts of the Mediterranean world – by the 5th century B.C. they were to be found serving in wars all over the Mediterranean, including Sicily, Athens and Egypt. They had their own unique weapons and equipment, in-

Celtic cuirass of bronze, from a tumulus at Les Ferreres, Calaceite. (Museo Arqueológico of Mahón)





Celtic shield, cuirass, swords and helmet from the sculpture on the triumphal arch at Orange, southern France. The horned helmet was probably a ceremonial one. (Author's collection)

fluenced by their experiences abroad, by the Greeks and Phoenicians in the south and east of the peninsula, and by the Celtic invasions of the north in the 8th and 6th centuries. They served as mercenaries in the Carthaginian armies from at least 342 B.C.

By the 3rd century B.C. the Celts and Iberians had merged to form a distinctive new people in the north-east and central plateau of the peninsula, known as the Celt-Iberians. This people included the Arevaci, Pelendones, Berones and four or five other tribes, and was known as the most warlike people in the peninsula. The Celt-Iberians fought for Carthage in the Punic Wars and it seems likely that, although in the north and west the original inhabitants preserved much of their own distinctive customs, weapons, etc., the Iberian and Celt-Iberian soldiery were somewhat similar in appearance and equipment by the time of the 2nd Punic War. In the following descriptions of arms and armour I have made a point of distinguishing between Iberian and Celt-Iberian items, though this does not necessarily mean that Celtic weapons were used only by the Celt-Iberians and Iberian weapons only by the Iberians.

Polybius says both infantry and cavalry wore a short white tunic with short sleeves, having a purple (probably crimson) border at hem, neck

and sleeves. It was gathered at the waist by a wide leather belt. Vase paintings of Iberian soldiers show them wearing the peasant's short tunic, probably of leather or wool, but there are also many representations of soldiers wearing tunics as described by Polybius, including the borders at hem, neck and sleeves. The Celt-Iberians are commonly stated to have worn also a rough-haired black cloak.

The Iberians did wear bronze helmets, sometimes of Greek – almost Corinthian – shape, with either a low or high crest, but few have been found and they seem to have been rare. They were probably worn only by the leaders. The crests are said to have been purple: again, this probably means crimson. A more common headwear seems to have been a simple helmet of bronze or leather, occasionally extended at the back to form a neckguard and with cheek guards added at the sides. Strabo says the Lusitanians (on the west coast) wore helmets of sinew with a crest, and sculptures in southern Spain and south-west France do show some form of crested cap or hood. These have been well illustrated in reconstruction form by Connolly. Diodorus Siculus says the Celt-Iberians wore helmets of brass or copper with red plumes, but we really know next to nothing on this subject. It is probable that simple metal or leather 'bascinet' were used by the ordinary soldier, metal helmets of Celtic design by the chieftains.

We know little more of the body armour worn – if any. Again, it would seem from the limited evidence found that it was only the chieftains who wore mail armour. Ancient sources, particularly Strabo, say the Celt-Iberians used a linen cuirass, probably of the Greek style. On the other hand a number of vase paintings clearly show Iberian infantrymen wearing cuirasses of mail armour, with leather straps hanging down to protect the abdomen. The Celts used a cuirass of leather or fabric, reinforced and adorned with discs of metal, and such cuirasses may also have been used by some Celt-Iberians.

The Iberians do not seem to have worn greaves, but Strabo says the Celt-Iberians did, and a number of reliefs do show infantrymen wearing greaves and short boots. These may have been of metal or leather, but the ordinary soldier prob-

ably had greaves of felt: no examples have yet been found. The cavalrymen wore long boots, which helped to protect their legs, with plain spurs attached.

All heavy infantrymen were also protected by a large oblong shield of the same design as the Roman and Celtic *scutum*, the origin of which is obscure. The light infantry used a distinctively Spanish shield, a light round buckler of leather, wicker or wood called the *caetra*. The shield was slightly convex, its face decorated with painted ornaments, often with a metal boss and a metal grip. The *caetra* was used in conjunction with the *falcata* sword (see below) and the Spanish light infantry were famous for their ability, speed and agility in this type of sword-and-buckler fighting. When not in use the *caetra* was suspended over the left shoulder by a strap, and hung on the back behind the right arm.

The main weapon of the Iberians was a long,

slightly curved sword called the *falcata*. Single-edged for the first half or two-thirds of its 55–63cm long blade, which was 5cm broad at its widest point, the remainder of the blade was double-edged and sharply pointed at its end. The blade, which tapered to its point, had a thick, heavy back in the single-edged section, making it an excellent weapon for cut and thrust work, and it was used thus by both the infantry and cavalry. The hilt was forged as one piece with the blade, and curved round and back towards the blade to protect the hand. The end of this hilt was usually in the shape of an animal's head, and rare examples are richly inlaid with copper, silver and sometimes gold wire. Wood, bone or horn were used for the grip, which was riveted to the hilt tang. The oldest examples have an extra extension between pommel and blade, enclosing the hand within a circle of metal; the later examples sometimes having a ring attached to the pommel





Bronze figurine of Iberian foot soldier, wearing a heavy cloak over a short tunic, and with the hilt of his *falcata* just visible. (Museo Arqueologico Nacional, Madrid)

to take a thin chain or leather strap.

The *falcata* was in general use in the peninsula before 400 B.C., and was still in use up to the end of the 1st century B.C. It was carried in a wooden or leather scabbard suspended by rings from a waist belt, though it is also frequently illustrated stuck diagonally through the belt at the front – perhaps without a scabbard. Other examples are shown suspended from a thin leather strap over the right shoulder, so that the sword hung on the left side. The scabbards also had little side pockets which housed a knife in the shape of a small *falcata*, rather in the style of the modern Gurkha kukris.

The Celt-Iberian's main weapon was a characteristically Celtic double-edged slashing sword with a solid and strong point. It was apparently based on the La Tène I type, which had arrived in the peninsula around 350 B.C. but had been developed and improved by the local smiths so that it looked more like the La Tène II type (300–150 B.C.) except for being shorter – 60cm was the average length, compared to 75–80cm for the Celtic swords. However, the main improvement lay not in the design but in the exceptional

purity of Spanish iron and the high quality of manufacture, which included cold hammering. Poseidonius, Strabo's source, says the Celt-Iberians used a double-edged sword of excellent iron which was so strong and sharp that it cut everything it hit – shields, helmets, right through to the very bone. An artillery manual (*Belpoieica*) written by Philon around 250 B.C., when talking about the making of bronze springs for artillery, describes the Spanish sword blade thus:

'The workmanship required for the aforementioned plates has been observed in what are called Celtic and Spanish swords. When they wish to test the excellence of these, they grasp the hilt in the right hand and the end of the blade in the left: then, laying it horizontally on their heads, they pull down at each end until they [i.e. the ends] touch their shoulders. Next, they let go sharply, removing both hands. When released, it straightens itself out again and so resumes its original shape, without retaining a suspicion of a bend. Though they repeat this frequently, the swords remain straight.'

During his campaigns in Spain Hannibal noted the effect of these swords in the hands of his Spanish mercenaries, and adopted them for his own troops. In fact the Carthaginian victory at Cannae is often attributed in part to the superiority of the Spanish sword over the short swords of Greek origin still being used by the Romans. Scipio the Elder noted the quality of the Spanish swords when he landed in Ampurias in 128 B.C.; and Scipio Africanus, after he took Cartagena in 209 B.C., captured numerous Spanish swordsmiths there and forced them to manufacture weapons for his own troops. The Romans called this sword *gladius hispanicus* – sword of Spain. Some authorities say the Roman legions were using swords of this design perhaps as early as the 1st Punic War, but these would have been copies, not of the same quality as the Spanish-made ones. Certainly the *gladius hispanicus* was in use in the Roman legions by 200 B.C., when it was used against the Macedonians. This would have been the true *gladius hispanicus*, as described for the Celt-Iberians. Prior to this date it is likely that only Scipio Africanus's legions, invading Africa in 204 B.C., would have had the true *gladius hispanicus*.

The *falcata* is illustrated on numerous Iberian coins, vases, figurines, and is found in graves – in some places together with Celtic swords. From this it can be seen that the Celtic sword was used by some Iberians, while the *falcata* is found occasionally amongst the Celt-Iberian weapons.

Like the Celts, the Spanish heavy infantry of Hannibal's army appear to have been organised in small companies under their own chiefs, and at Cannae fought in maniples, alternated with maniples of Celts. They probably wore leather or fabric cuirasses, or captured Roman mail shirts. The Iberian swordsman with *falcata* and *caetra* should not be excluded from the heavy infantry, for, despite his lack of defensive equipment, his style of sword-fighting verged on the acrobatic, and his *caetra* and *falcata* made him more than the equal of any Roman legionary in a straight sword fight.

Another characteristically Iberian weapon was the *soliferreum*, a slim javelin made entirely of iron, with a small leaf-shaped head which was usually barbed. Various shapes and sizes have been found, but the average length was 180–190cm. Pictorial sources show the *soliferreum* being used as a missile weapon, and according to Strabo it could penetrate helmet, shield and body armour. It would have been the equivalent of the Roman heavy *pilum*, designed to kill or to render the target's shield useless. The Celt-Iberians also used the *soliferreum*, but it was not so common among them, and they probably abandoned it during the 2nd century B.C. They much preferred a short, light javelin with a socketed head, rather like the Roman light *pilum*, with which they were very skilful.

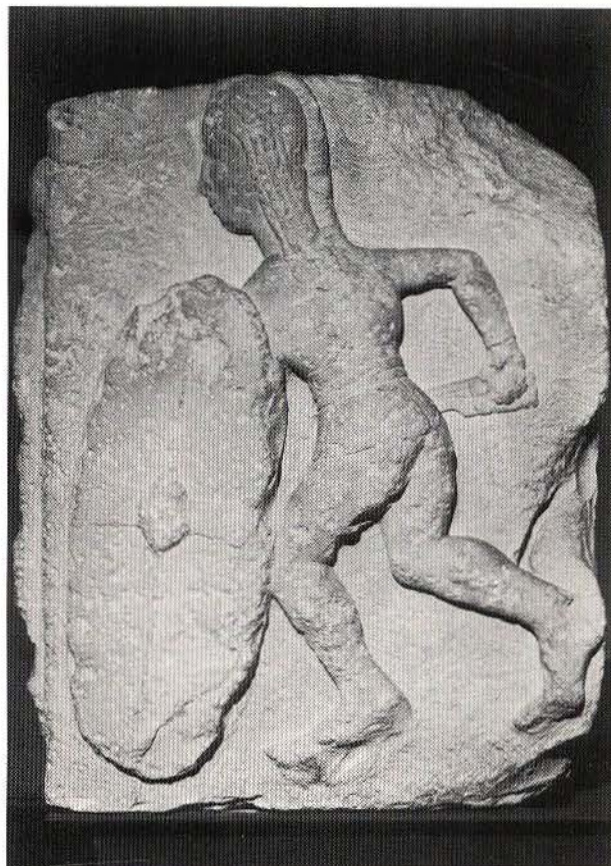
Another Iberian missile weapon was the *falárica*, described by Livy as a shaft of pine wood with a long iron head, around the end of which was frequently a wrapping of tow and pitch, creating an incendiary weapon. The *falárica* was used with great effect by the Saguntines when besieged by Hannibal in 219 B.C., and like so many other Spanish weapons it eventually entered the Roman arsenal as an artillery incendiary arrow.

Infantrymen also carried a dagger, of which there were a number of types, mostly shorter versions of swords, but the true Iberian dagger

was so broad at the base of the blade as to be almost triangular. It was subsequently adopted by the Romans as their *parazonium*. The hilt was seven to eight centimetres long, and the blade around 20cm long and eight centimetres wide at the broadest point, although lengths of up to 45cm are known.

The bow was used in the peninsula but was not, apparently, considered a military weapon. Arrowheads have been found, but are rare. The other main missile weapon was the sling – slingers from the Balearic Islands having been used in Carthaginian armies since at least 337 B.C. These slingers formed an important part of the Carthaginian armies, giving them a decided advantage in skirmishes with javelin-armed light troops, such as the Roman *velites*, for the sling had a greater range and effectiveness. They were also

Lusitanian warrior with helmet of sinew (leather with horse hair crest?), Celtic-style shield and *falcata*. Relief slab from the monument from Osuno, near Seville, dated circa 50 B.C. (Museo Arqueológico Nacional, Madrid)





Iberian warriors in scale (?) armour and helmets, with Celtic-style shields, on the 'warrior's vase' from Liria. (Museo de Bellas Artes, Valencia)

superior to the best contemporary archers. The slingers are said to have been organised in corps of 2,000, but one reads more often of bodies of 500 or 800 plus.

The Spanish cavalry (*jinetes*) used the small round *caetra* for defence; their main offensive weapon was the lance, a long weapon with a leaf-shaped socketed head, between 30–56cm in length, with a socket 10–25cm long continuing as a rib through the middle of the greater part of the blade. An iron ferrule was fixed to the butt, generally being long and pointed, but sometimes terminating in a ball. The cavalryman was also armed with a *falcata*, and is frequently mentioned as dismounting to fight alongside the infantry when necessary, or even as carrying another man, armed with *falcata* and *caetra*, on the back of his horse into battle, when the second man would dismount to fight on foot.

The Iberian peninsula was famous for its horse-breeding and the Spanish horse was accustomed to difficult and mountainous terrain. Consequently the *jinetes* rivalled the Numidian cavalry in swiftness and skill, though they seem always to have been deployed in the rôle of heavy cavalry on the battlefield.

Saddles do not appear to have been widely used, only a broad girth with a blanket, though sometimes a saddle of the Hellenistic type does

appear in representations. A bridle and bit were also used, the latter usually of the snaffle type, with crescent-shaped bars. The horse's head was often protected by some form of chamfron, probably of metal.

The Spanish troops were a vital part of Carthaginian armies during the 2nd Punic War, and at Cannae Hannibal's army of 40,000 infantry and 10,000 cavalry included 2,000 Spanish cavalry, 6,000 swordsmen (heavy infantry), and 2,000 light troops. They were sorely missed after the battle of Ilipa (206 B.C.), when many of Carthage's most powerful Spanish allies went over to the Romans.

Italian Allies

Rome had brought all southern Italy under her control in the years immediately preceding the 1st Punic War, and there is no mention of any revolts whilst this war was fought. However, during the 2nd Punic War many Italian Greeks and natives of southern Italy – Samnites, Lucanians, Apulians and Bruttians – joined Hannibal in his fight against Rome. These peoples had fought for both Greece and Carthage in the Sicilian Wars of the preceding century, and the Samnites in particular had been hostile to Rome virtually up to the outbreak of the 1st Punic War, fighting three wars against Rome in 343–341, 327–304 and 298–290 B.C., with a final rebellion in 269 B.C. After the battle of Cannae in 216 B.C. the first city in Campania to go over to the Carthaginians was Capua, chief city of that region. The greater part of central and southern Italy followed her example – all the Samnites with the exception of a single tribe (the Pentri), the Lucanians, Bruttians, and many Greek cities in the south. Capua surrendered to Rome again in 211 B.C. and her population was sold into slavery, but others – the Bruttians especially – continued to fight for Carthage even after their own lands were lost.

The value of these Italian allies should not be underestimated. After the battle of Asculum in 208 B.C. Hannibal had an army of about 40,000, most of whom were Italians. The Lucanians alone raised a separate army of 20,000 men, commanded by Hanno and supported by over 1,000 African cavalry, and when Hannibal re-

turned to Africa in 203 B.C. some 18,000 men went with him – most of whom were Italians. At the battle of Zama the following year some 12,000 of these allies, predominantly Bruttians, formed Hannibal's third and most reliable line, where they stood firm when the rest of the Carthaginian army crumbled, and fought to the death.

We have no details of the armies of these peoples at this date, but by now they probably fought in the Roman manner, in lines and maniples rather than phalanx. The Samnites had an excellent cavalry arm and, when not fighting the Romans, provided the backbone of the Roman cavalry force during the 3rd and 2nd centuries B.C. Some armour may still have followed the Greek style, as the Greek influence was very strong in southern Italy, but much of the arms and armour was probably in the Roman style. The Apulians were also influenced by the Celtic invasions of the 4th century, and their armour shows some Celtic influence. However, Samnites, Apulians and Lucanians could be distinguished by their broad bronze belts, which were always worn, being a symbol of manhood.

Greek and Macedonian Troops

Greek mercenaries fought for Carthage in the 1st Punic War. They would have been armed and armoured in the late Greek style and fought in phalanx. During the 2nd Punic War Hannibal succeeded in persuading Philip of Macedonia to join him in an alliance against Rome (the 1st Macedonian War of 215–205 B.C.), and Philip threatened to invade Italy, but the overall results were negligible. However, a contingent of 4,000 Macedonians under Sopater did fight at the battle of Zama. They would have been armed and armoured in the traditional Macedonian way, with long pike, small round shield, short sword, helmet, linen cuirass, and greaves. Although still fighting in phalanx formation 16 ranks deep – the figure of 4,000 is significant in this respect – by this date the phalanx was sub-divided into 16 units each of 256 men, i.e. 16 files each of 16 ranks, a total of 4,096 men.



Bronze statuette of Iberian infantryman with *caetra* and *falcata*, and wearing the bordered tunic described by Polybius. From the sanctuary at Jaen. (Museo Arqueológico Nacional, Madrid)

The Romans

According to tradition Rome was founded by Romulus in 753 B.C., as a group of villages on the seven hills on the east bank of the Tiber. It was ruled until 510 B.C. by seven kings, of whom the last three are thought to have been Etruscan. After the last of these (Tarquinius Superbus) had been expelled, a republic was set up in 510 B.C.

The republic was ruled by a senate and two consuls – chief magistrates or judges in the Biblical sense – the consuls being elected annually. The dominant power of the patrician or aristocratic party in the senate was increasingly challenged by the plebeians or common people, until by 300 B.C. the latter had obtained the right to hold any office. The political organisation was extended to include *tribunes* (originally to protect the plebeians' rights against the patricians, but later military officers), *quaestors* (prosecutors or judges, later treasurers or paymasters), *aediles* (magistrates responsible for supervising public buildings and games, the police and the corn supply), *censors* (responsible for taking the census of citizens and regulating taxes), and *praetors* (magistrates junior to the consuls).

Rome gradually extended her powers to neighbouring peoples during the 5th and 4th centuries B.C., and by 270 B.C., with the capture of Rhegium in the extreme south, had brought all of central and southern Italy under her control. After defeating a Samnite rebellion in 269 B.C. Rome was unchallenged mistress of all Italy south of the Arno River – roughly a line Pisa-Florence-Ancona. In the north the Celts had been decisively defeated, and Rome now turned her attention to the narrow Straits of Messina and to Sicily. Expansion southwards inevitably led to a head-on collision with the great naval power of the Mediterranean – Carthage, which had colonised western Sicily. In 264 B.C. a Roman army crossed the Straits of Messina to assist a group of Italian mercenaries, the Mamertines – who had established themselves as brigands in Messina – in a war with Hiero II of Syracuse, but unfortunately another faction of the Mamertines had sent to Carthage for help, and the Carthaginians, arriving first, occupied Messina. When

the Romans arrived they attacked and drove the Carthaginians out, and thus began the first of the three Punic Wars, which were to bring Rome almost to her knees and to cost the lives of over half a million of her men.

During her early history Rome had depended entirely upon a citizen militia to protect herself and to conquer the local tribes. This levy, or *legio* – which gave the legion its name – was called up only in times of emergency and was discharged as soon as that emergency ended. The men were primarily farmers and traders, and served for a few weeks or a month or two per year at most. They provided their own arms, armour and equipment, though the state did pay them a small allowance to compensate for loss of earnings, and they fought because as citizens they had a vested interest in the security and expansion of Rome. The militia was divided into classes according to wealth, and of some 200 centuries (i.e. 20,000 men) the first 18 consisted of citizens wealthy enough to own a horse, the *equites* or so-called 'knights', who served as cavalry, while the remainder were divided into five classes and provided the infantry. The division into classes by wealth meant the richer classes were all well armed and equipped, while the poorest class was poorly equipped; this wealth classification thus determined their rôle in battle, the poorest class providing the light troops, the others the heavy infantry, with the wealthiest and best-equipped men providing the front ranks.

Until the sack of Rome by the Celts in 390 B.C. the army had been deployed in phalanx, but their experiences against the Celts, and subsequent lessons learned fighting in the rough terrain of the Samnites, taught them to abandon such a rigid formation. By c.300 B.C. there had evolved the flexible formation of three separate lines, each divided into maniples (literally 'handfuls'), still based on the original centuries which were now reduced to between 70 and 80 men each, although still called centuries.

By the time of the 1st Punic War a new type of levy, based on the tribe – there were four urban and 16 rural tribes of Rome – had been introduced in an attempt to ease the burden on the wealthier classes of Rome and to ensure a more equal distribution of the load amongst those

citizens who had obtained their citizenship in more recent times. At the beginning of each year the two consuls were elected, and their first task was to appoint 24 military tribunes, six for each of the four legions of Rome. On specially appointed days all male citizens between the ages of 17 and 46 and who owned property above the value of 11,000 asses had to assemble on Capitoline Hill, where they were arranged by height and age group. The men were then brought forward four at a time for selection by the tribunes of each legion, the legions taking it in turn to have first choice in order to ensure that the experienced men and those of the best physical condition were evenly distributed amongst the legions. One recruit then swore an oath of obedience, and all the others said *Idem in me* – ‘the same for me’. They were given a date and place of assembly, and then dismissed. Men between the ages of 47 and 60 were also enrolled in times of need to serve as garrison troops. Those citizens who fell below the minimum wealth level, called *proletarii*, were under no obligation to serve in the army, although they were sometimes levied during the Punic Wars.

The men in each legion were divided into four classes according to age and experience: *triarii* (singular *triarius*), consisting of the oldest men and therefore the most experienced or veteran troops (for Rome was continually at war), who provided a reserve and a steadying influence: the *principes* and *hastati* (singular *princeps* and *hastatus*), men in the prime of life who had seen service before, mature, tough and experienced – the main strength of any legion – and *velites* (singular *veles*), light troops or skirmishers consisting of the poorest and youngest citizens who had little or no experience in warfare.

Although, theoretically, the legionaries were still expected to provide their own arms and armour, by the time of the Punic Wars these were normally purchased from the state, giving a uniformity of armour and weapons which was now essential because of the manipular formation, which required that all men within the *hastati* and *principes* classes be armed and armoured in a similar fashion. The first known example of the state providing armour occurs in 281 B.C.: the introduction of the manipular formation was

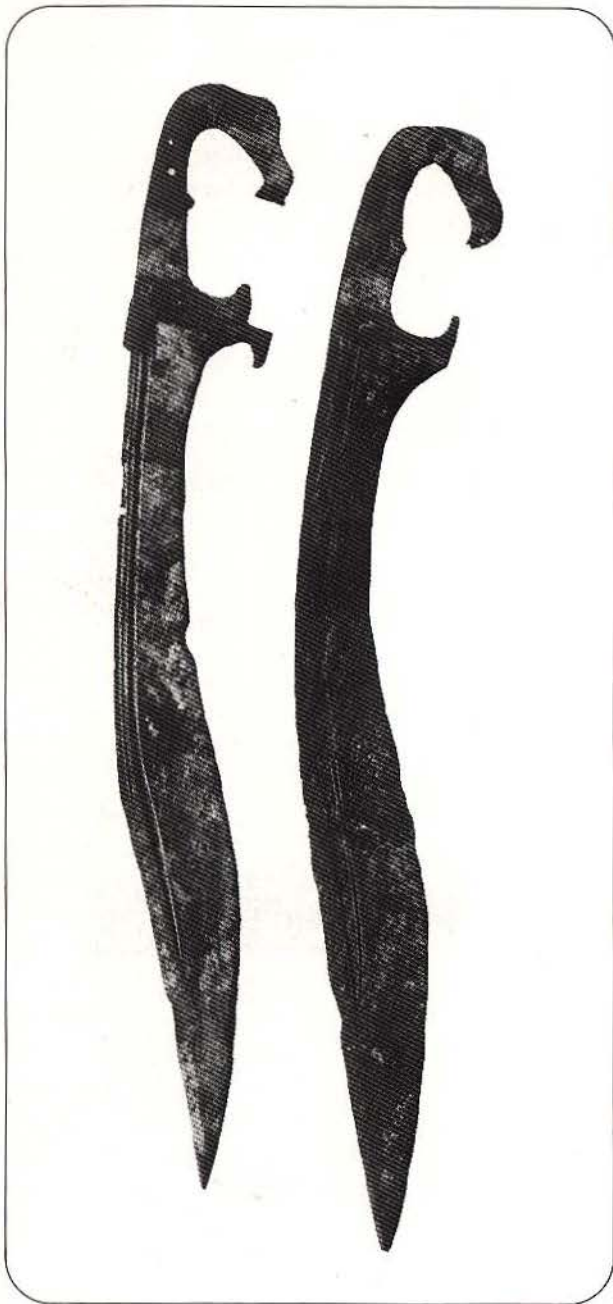
c.300 B.C. As a result of the state supplying the men's armour, the citizen militia was stripped of its class character, and from these dates onwards the legionaries were armed and armoured very much alike, the only real distinction remaining being between the heavy infantry, armed in the hoplite fashion, and the unarmoured light troops.

The legion was divided into ten maniples of *hastati*, ten maniples of *principes*, and ten maniples of *triarii*. A maniple contained two centuries of between 70 and 80 men, giving a total of from 140 to 160 men. The *hastati* formed the front line, armed with two *pila* (singular *pilum*), a large oval shield and a short sword, and wearing helmet, cuirass and possibly greaves. The *principes* formed the second line, armed and armoured in a similar fashion. We do not have a contemporary source for the precise organisation of the legion during the period 265 B.C. to c.200 B.C., the usual source quoted being Polybius, who describes the legion after the 2nd Punic War ended in 202 B.C. Important changes were instituted during the course of that war, and a legion as described by Polybius would have been rather different to one fighting during the period 219–216 B.C., or even 216–205 B.C. It is probable, but by no means certain, that in the period 265 B.C.–circa 215 B.C. the maniples of the *triarii* also contained two centuries: one of *velites* armed with javelins, a small round shield, and completely unarmoured except for a helmet, and one of *triarii* armed much as the *hastati* and *principes*, but with the long spear of the earlier phalanx retained in place of the two *pila*. The *velites* fought as skirmishers initially, but then normally returned to the rear rank and joined the *triarii* in reserve, thus providing these spearmen with a missile back-up if necessary.

This gives a legionary strength of between 4,200 minimum and 4,800: 4,200 seems to have been the normal establishment, but in times of war this was increased to 4,500 or even on occasions to 5,000.

In addition each legion also had 300 cavalry or *equites* attached to it, divided into ten *turmae* (singular *turma*) of 30 men, which in turn were divided into three groups of ten, each commanded by a *decurion* with an *optio* as second in command.

The legion itself elected its centurions, 30 in



Iberian *falcata* with stylised horse-head hilts.

number, to command each of the 30 maniples. Each of these centurions then nominated a second centurion to command the other century in his maniple, and each of these 60 centurions chose his own 'second in command' (*optio*), standard bearer (*signifer*), trumpeter (*cornicen*), and a *tesserarius*, who each night in the field received the password written on a tablet (*tessera*). The 30 elected centurions were the senior cen-

turions in the maniples and were called *prior centurions*, the second centurions being called *posterior centurions*, not *secundus* as one would expect, which suggests the two centuries were not deployed side by side but one behind the other. The first of the 30 centurions to be elected was the senior centurion, *primus pilus*, in the legion.

The six military tribunes commanded the legion, taking it in turns for two months at a time to be in overall command. They received their orders from the consuls. This was not a very convenient method of command for a state fighting for survival, as was Rome during the 2nd Punic War; at some point during that war the consuls began appointing *legates* from amongst the experienced soldiers on their staff, and these men took overall command of a legion, with the six military tribunes under them.

The 'standing army' of Rome was four legions plus their cavalry – a total of some 20,000 men at most – yet her adult male population has been estimated at 325,000 in 215 B.C., of whom some 240,000 would have been available for military service. (A census of 225 B.C. shows there were 250,000 citizens qualified to serve in the infantry, 23,000 in the cavalry.) This does not include the *proletarii* who were below the minimum wealth required for service, and who were normally employed in the navy in time of war. Rome did indeed field considerably larger armies – a maximum of 25 legions after Cannae, a total of at least 120,000 men, yet even this was only half her potential military strength. Not even in her most perilous hour did Rome mobilize her full military potential. To understand the reason for this it is necessary to look at two things: the political structure of republican Rome and her citizen army, and the rôle of her allies.

Each of the two consuls took command of two Roman legions in time of war. In ordinary circumstances they operated in different theatres, or one went on campaign while the other stayed in Rome with his legions, but in emergencies they might join forces. In these circumstances command of the four legions had to be divided equally between them, so each consul commanded the four legions for 24 hours at a time. This had disastrous results in the 2nd Punic War, notably at Cannae, prior to which the experienced consul

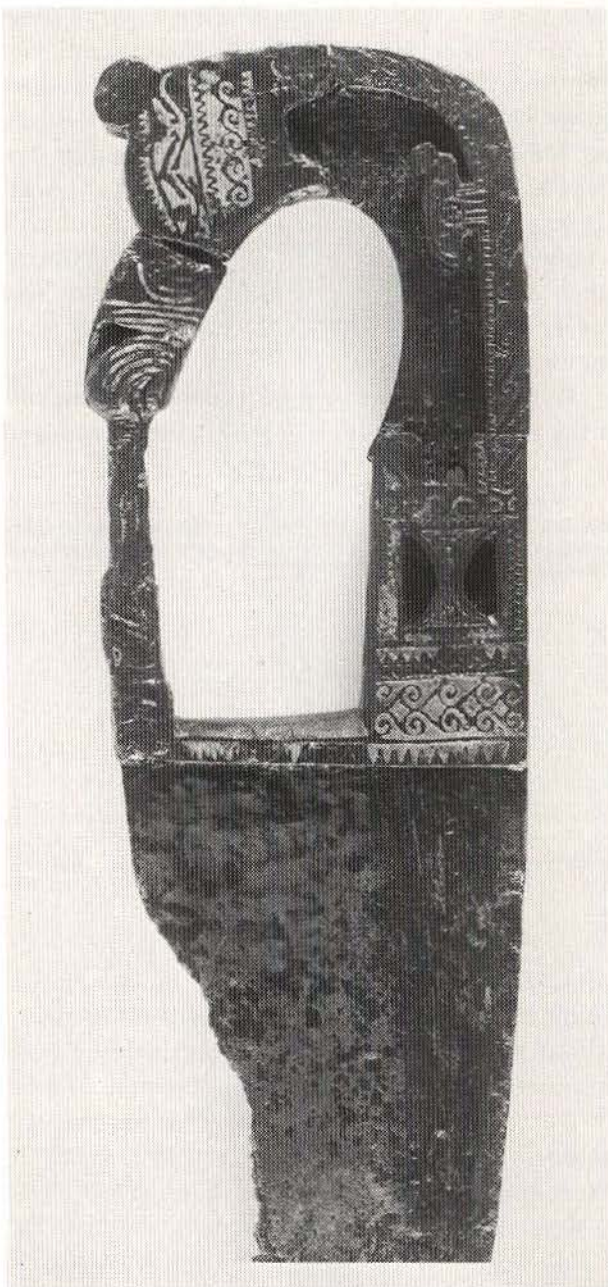
Paullus had avoided the traps set by Hannibal, only for the inexperienced consul Varro, fretting at what he considered Paullus' unnecessary caution, to lead some 60,000 men to their deaths through his impetuosity.

After the battle of Trebia (218 B.C.) the senate had authorized the mobilization of 90,000 citizens (not counting two legions already in Spain under one of the consuls), but even so the two consuls were still limited to the command of only two legions each, and almost half of this massive force was tied up as a garrison for Rome. The only other action available under this system was the despatch of single legions under the command of the four praetors, but this measure was undertaken only in exceptional circumstances.

Obviously such a system of command was totally unsuited to the large armies needed for the complicated campaigns of the 2nd Punic War; yet the only way to get all eight legions under one commander during the republican period was to elect a dictator – a step the Romans were most reluctant to take, and even then a dictator was normally in office for only six months. Under a dictatorship it was possible for one man to be in theoretical command of all the military forces mobilised, with the dictator himself commanding the largest field force and the former consuls, now called pro-consuls, commanding their separate armies of two Roman legions under his overall direction.

However, in this period of Roman history, reference to a 'legion' always meant a Roman legion *and* an equal number of allies, thus giving a consular army of four legions (20,000 men maximum), and a praetorian army of two legions (10,000 men maximum). If all these were brought together, an army of 80,000 men could be fielded as one force.

When the legionaries were recruited at the beginning of each year, recruiting officers were also despatched to the Latin colonies and allied cities of Italy to ensure that their contingents were also up to strength. In 218 B.C. the 30 Latin colonies, ranging from Placentia (Piacenza) and Cremona in the north to Brundisium in the south, could supply 80,000 infantry and 5,000 cavalry. The Italian allies, all other states in the Italian peninsula under Roman control, could provide



Falcata hilt (11.5cm) richly decorated with silver inlay, from Almedinilla, Córdoba. (Museo Arqueológico Nacional, Madrid)

another 250,000 infantry and 26,000 cavalry. This gave a total manpower of over 600,000 men.

The actual proportion of Roman citizens to allies varied from campaign to campaign, but during the 2nd Punic War was never less than 1:1, and sometimes a greater proportion of allies was provided. It is also probable that during that war Rome relied more heavily on the Latin

colonies than on her Italian allies: not one of these Latin colonies went over to the Carthaginians – not even after Cannae, when many of the Italian allies changed sides – and this provided Rome with a series of reliable strongholds running the length and breadth of Italy throughout the war. It was only in 209 B.C. that 12 of the 30 colonies refused to contribute their quota of men (claiming they had none left), and even then there was never any suggestion of helping the Carthaginians in any way.

It is difficult to tell exactly how the contingents from the colonies and allies were organised and

Falcata with metal fittings from scabbard, illustrating method of suspension. (Museo Arqueologico Nacional, Madrid)



armed. The various contingents were commanded by their own officers, and each 'legion' was under the overall command of three Roman officers called *praefecti*, who were nominated by the consuls. It is reasonably certain that the men were organised and armed very much in the Roman fashion, for it was normal practice to have Roman and allied legions arrayed side by side, which would have made the army difficult to control, and rendered the Roman legions' method of fighting much less effective, if the legions were organised and armed differently. This is particularly true of the battles of Great Plains and Zama, where the interaction of the three lines would have been totally ineffective, if not impossible, if the various contingents had not been organised and armed in a similar manner.

The allied cavalry was supplied by the aristocracy, as in the Roman legions, except that there were considerably more per legion. Some sources give 30 *turmae* (900 men), others 20 *turmae* (600 men), the confusion perhaps arising from the allies being said to provide twice (or three times) the number of cavalry – i.e. 600 plus 300 Roman = 900 per 'Roman-plus-allies legion'. Six hundred per allied legion seems the most likely figure, bearing in mind the relative numbers of men available for cavalry service quoted above.

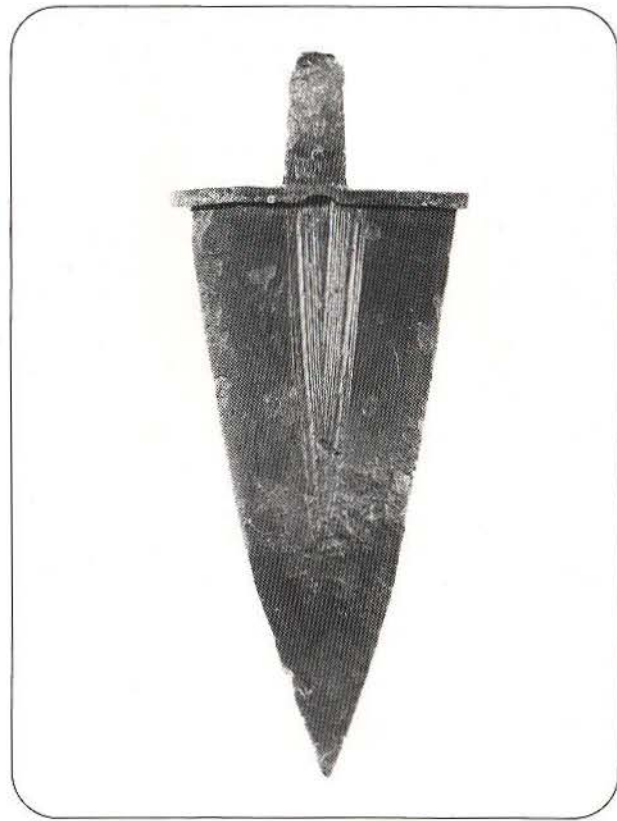
Some authorities believe the allies were not organised in the formal manner of the legions, and that each Roman legion was merely supported by an approximately equal number of allied troops, whose largest formal organisation was the cohort. It is not possible to be precise; we do know the allied infantry was organised in *cohortes* of about 600 men by 205 B.C. at the latest. The cohort appears to have been introduced into the Roman legion as a result of experience gained when fighting the 2nd and 3rd Macedonian Wars (200–196 B.C. and 172–167 B.C.), so would have been used in the 3rd Punic War. It is possible that the cohort was introduced earlier, by Scipio Africanus when re-organising and training his legions for the invasion of Africa in 204 B.C., but we cannot be certain. In the Roman legion of the Macedonian Wars period the cohort consisted of between 450 and 570 men – two centuries (120–160 men) each of *velites*, *hastati* and *principes*, one century (60–80 men) of *triarii*, and a *turma* of 30

cavalry – although the cavalry rarely fought with the cohort, the *turmae* normally being gathered together in larger formations.

Under the levy system the legionaries were enrolled for the year, but would normally have been mustered for only one short campaign, after which they returned home. When the men were selected for service the next year they would have formed completely new legions, so the legions of this period had no lasting identity as did those of Imperial times. However, during the Punic Wars, as the campaigns moved further and further from Rome, the length of service necessary rose accordingly, and it became increasingly difficult to recruit men and hold them in the ranks – being farmers and businessmen, reliant on these concerns for their main income, the men were not keen on extended periods of service and were forever agitating for their discharge. By the 2nd Punic War legions were being mobilised for an entire year at a time and it was necessary to institute a *rota* system, with front-line troops being regularly replaced by men from home. The annual levy was then reduced to merely bringing the legions up to strength, and some kind of permanent legion did exist, though its content was constantly changing. The *rota* system was another reason why the total manpower of Rome was never utilised at any one time.

Due to the appalling casualties suffered at the battles of Trebia, Trasimene and Cannae, measures had also to be taken to replace the losses in men available for military service. After Cannae 8,000 volunteer slaves (*volones*) were purchased at public expense from their owners and armed by the state, creating two extra legions. Some of these men were subsequently given their freedom in return for their services. Two urban legions were also raised by recruiting youths below the military age, and some 6,000 debtors and criminals were accepted as volunteers and armed with weapons from the Celtic victories of Flaminius.

Mercenaries were also employed. After the disaster at Trebia, the preparations for the next campaign included an appeal for help to King Hiero of Syracuse, who sent '1,000 archers and slingers, a force well adapted to cope with Moors and Baliares and other tribes which fought with missiles'. So far as we can tell, the battle of Lake



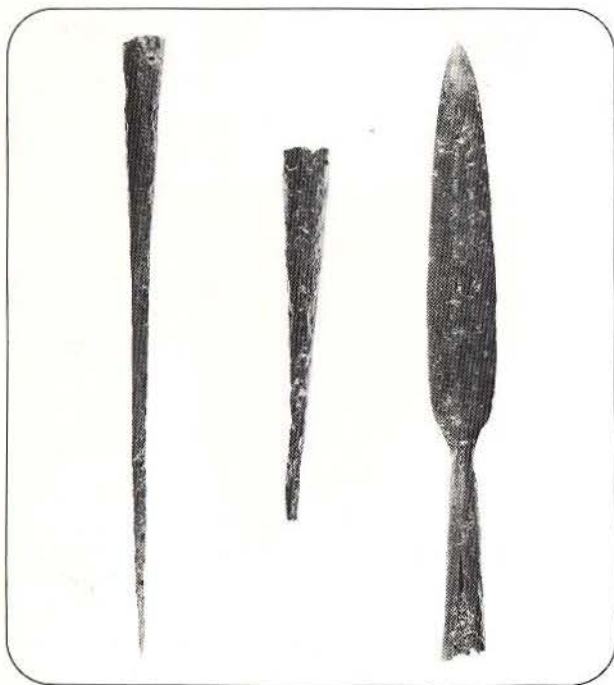
Iberian dagger from Almedinilla. (Museo Arqueológico Nacional, Madrid)

Trasimene in June 217 B.C. therefore saw the debut of the archer in the Roman army, although they are not mentioned in reports of that battle. The Cretan archers would have been armed with the composite bow.

There were certainly archers in the Roman force besieging Syracuse in 211 B.C., and 3,000 archers were sent to Rome from Sicily in 207 B.C.

After the fall of Cartagena in 209 B.C. the Romans gradually recruited more and more mercenaries – Celts, Spanish cavalry and infantry and, of course, the famous Balearic slingers; and for the battle of Zama in 202 B.C. (and again in the 3rd Punic War) the Romans also obtained many Numidian allies, both infantry and cavalry. The proportion of men supplied by the Latin colonies and Italian allies was also increased after Cannae.

About the same date, or at least by 215 or 214 B.C. at the latest, the property qualification for army service was lowered drastically from 11,000



Iberian lance head and ferrules from Almedinilla. (Museo Arqueológico Nacional, Madrid)

to 4,000 asses. This meant a substantial number of the *proletarii* were suddenly available for service in the legions, possibly as many as between 75,000 and 100,000 men. As mentioned earlier, the *proletarii* had been levied for service in the past, mainly to provide rowers for the navy, but occasionally to serve in the army in times of grave danger; then they were armed at public expense and served in non-regular units quite separate from the legionary order of battle. (The first such enrolment of the *proletarii* dates from 281–280 B.C.)

It is even possible that the *proletarii* were levied prior to Cannae, when six new legions were raised, for the senate is hardly likely to have resorted to recruiting slaves, criminals and youths of 16 and younger when many thousands of adult *proletarii* citizens were still available. This is supported to some extent by the facts that in 217 B.C. the *proletarii* were levied to form ships' crews, but that in 214 B.C. the use of slaves was authorised for manning the fleet. There is also firm evidence of the *proletarii* serving in Capua in 212–211 B.C. as *velites*.

Ancient sources record that after Cannae there

were drastic reforms in the army, the most notable of which was a complete re-organisation of the light troops. The importance of this change is somewhat lessened if we accept for the period prior to Cannae the legion as described by Polybius – who describes the legion of c.200 B.C. and later. In fact the legion prior to Cannae probably had only ten centuries of *velites*, a total of some 600 to 800 men.

In Polybius's later legion – which was probably introduced after Cannae – the organisation was as follows: ten maniples of *hastati*, each of between 120 and 160 men, together with 50 to 60 *velites*; ten maniples of *principes* with the same organisation; and ten maniples of *triarii*, each of a single century of from 60 to 80 men, together with some 30 *velites*. This gives totals of 4,300 to 5,500 men per legion, with 1,300 and 1,500 *velites* respectively. In other words, 30 per cent and 28 per cent respectively of these legions consisted of light troops – hardly the picture one usually has of the solid, sturdy, slow-moving Roman legion of predominantly heavy infantry. Compare these percentages with the 14–15 per cent of the earlier legion, and we can see that after Cannae the proportion of light troops per legion was doubled – and this must have been where many of the *proletarii* served.

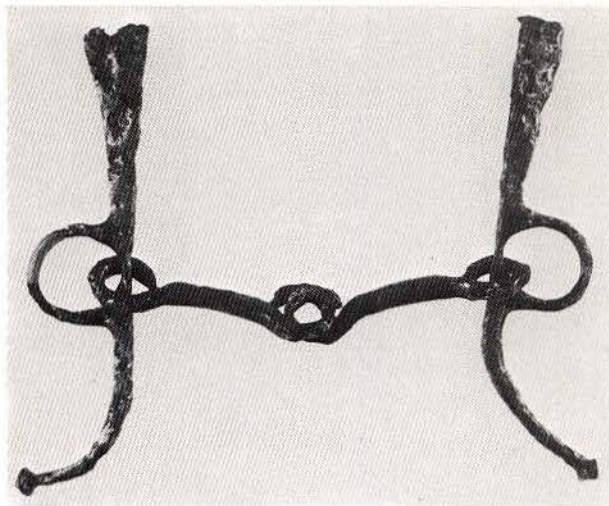
Another less dramatic change occurred when Scipio Africanus took Cartagena in 209 B.C. A considerable number of Spanish sword-smiths were captured, and set to work producing the excellent *gladius hispanicus* for which they were famous. (See more detail of this weapon in the Carthaginian section.) This weapon may possibly have been copied by the Romans at an earlier date, but they had never been able to achieve the extremely high-quality forging which was the main value of the weapon: now Scipio not only had Spanish smiths, but he forced them to teach his own smiths their secrets. Consequently, the Roman army which landed in Africa in 204 B.C. was entirely equipped with the true *gladius hispanicus*, and had been thoroughly trained and exercised by Scipio in its correct use. The new sword almost certainly contributed to Scipio's African victories.

When deployed for battle the legion formed three lines of *hastati*, *principes* and *triarii*, with the

velites deployed as skirmishers in front and the cavalry on the flanks. There was about 100 metres between each of the lines of infantry. In a consular army the four legions might be deployed with the two Roman ones in the centre and the allied ones on the flanks, with the combined cavalry (in a maximum depth of eight ranks) on the extreme flanks, or Roman and allied legions might be alternated.

Each line of infantry was divided into its separate maniples, with a gap slightly wider than a maniple's frontage between each pair of maniples. The maniples of the *principes* covered the gaps in the line of *hastati*, and the *triarii* covered those in the line of *principes*, creating the well-known 'chequer-board' formation. It is most likely that the legionaries within each maniple were (at least initially) drawn up in open order, with a frontage of two metres per man, and that each successive rank covered the gaps in the rank in front. The number of ranks per maniple varied considerably, depending on the depth of the enemy's formation, and might range from six to 12, with a norm of eight or ten. Open order was necessary for the discharge of the *pila*, and for the men to be able to fight in their traditional manner as swordsmen once at close quarters. The men could change to close order by every other rank advancing into the gaps in the rank in front of it: this would have been necessary when on the defensive, receiving a missile attack, and possibly when receiving a charge. Open order in the sword fighting phase would enable tired front-rank men to fall back as they killed their man, being replaced instantly by the man behind and to one side of their position. Sword fighting would have been restricted to stabbing motions from behind the shield when in close order, as there would have been insufficient room to swing the sword or to use the shield offensively.

The main weapon of the legions, however, was the *pilum*, of which there were two distinct types: a light one with a socketed head, which had a maximum range of about 30 metres in the hands of an expert, and a heavier one with an overall length of three metres, of which half consisted of a barbed iron head on a long, thin iron shaft. The spear of the *triarii* was about four metres long. The *velites* used light, short javelins, and the

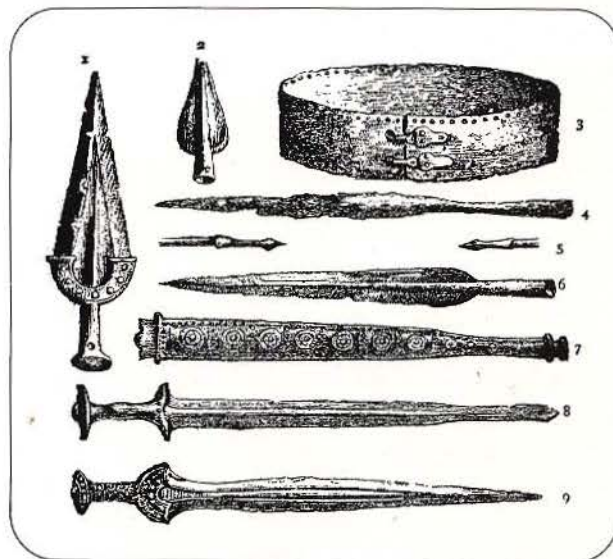


Iberian horse-bit of iron. (Museo Arqueologico Nacional, Madrid)

cavalry had a Greek spear with a pointed iron ferrule which could be used as a weapon if the spear was broken in combat. All infantry and cavalry carried the short iron sword, about 60cm long by 50mm wide, with double edge and an obtuse point. It was carried in a scabbard on the right side in the Greek fashion.

The *pila* were the most important weapon of the legions; they were discharged at close range – the light one first, then the heavy one – during

Greek weapons: dagger or *parazonium* (1), javelin head (2), bronze belt (3), lance (4 & 6) and arrow (5) heads, sword scabbard (7) and swords (8 & 9). (Author's collection)





Philip V of Macedonia, 238–179 B.C. (British Museum)

the advance to attack. In the confusion caused by this hail of missiles, which not only inflicted casualties in the enemy's line but also rendered many opponents' shields useless because of the *pila* impaling them, the legionaries charged the final few yards and attacked with sword and shield. The *velites* would have withdrawn through the gaps in the line of *hastati* before the discharge of the *pila*, either retiring to wait in reserve with the *triarii* or, if necessary, moving outwards to the flanks between the lines of infantry to reinforce the cavalry.

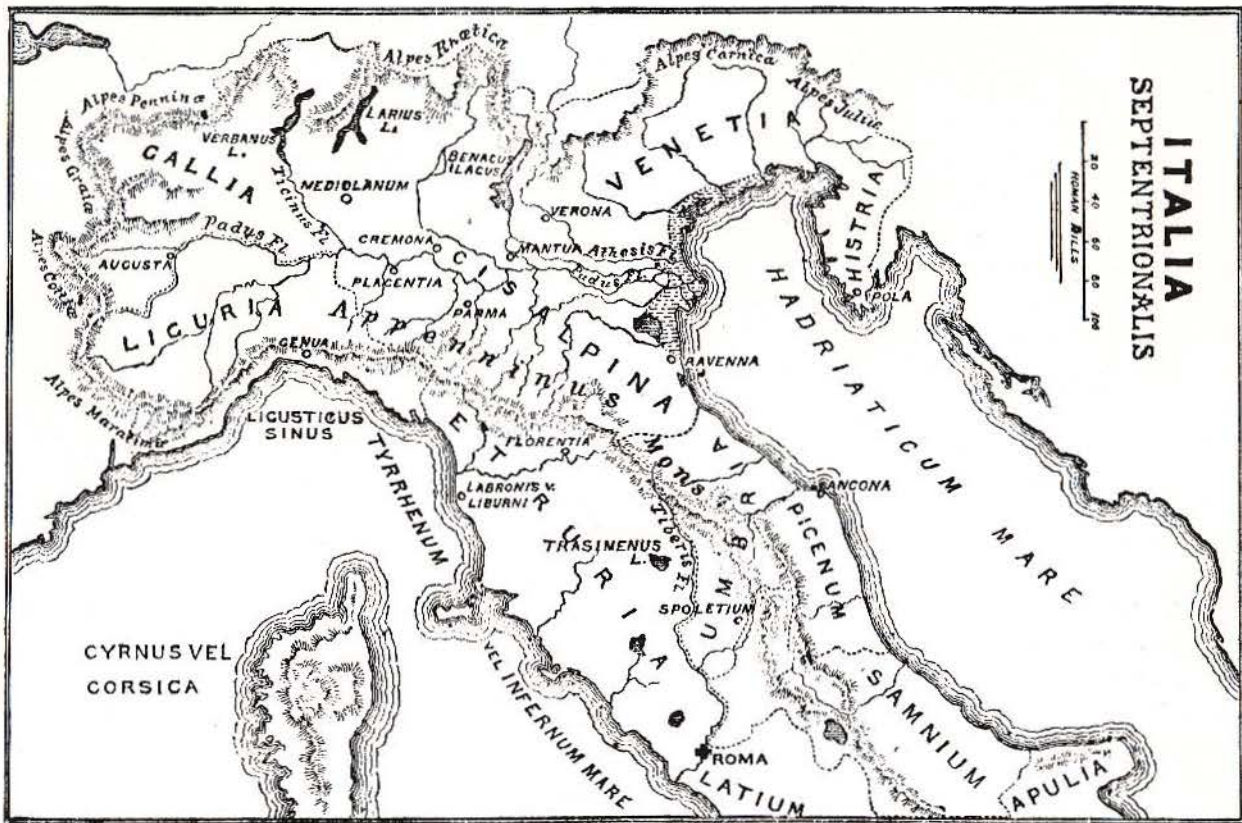
Punic coin showing what is believed to be the head of Hamilcar Barca, Hannibal's father, commander in Sicily during the 1st Punic War, and subsequently leader of Carthage. (British Museum)



Anyone who studies sketches of such a deployment, which was standard throughout the Roman army in this period, or who has tried such tactics with a wargames army, must have been left wondering – but what about the gaps between the maniples of *hastati*? The *pila* of the *hastati* would only have hit the enemy immediately to their front, and those facing the gaps in their line would be left untouched to rush forward and start outflanking each individual maniple. Some have suggested that the *principes* would advance into these gaps, so presenting a solid line. But this would reduce the Roman legion to a phalanx again; and in any case, how would the *principes* get to discharge both their *pila* under such circumstances? And why not advance *with* the *hastati* in the first place and so hit the enemy with all missiles at once? Ancient sources repeatedly mention the ability of the three lines to withdraw through each other in order to bring forward fresh troops – it was this ability to manoeuvre during the battle which gave the Romans the edge in so many of their battles. How was this done?

The only clue seems to be the naming of the two centurions within each maniple, mentioned earlier: *prior* and *posterior*. This implies that the two centuries were deployed one behind the other. If this were so, then all three lines could retain their manipular formation to enable the various lines to be manoeuvred as required, but when the *hastati* advanced to the attack, or prepared to receive an attack, under normal circumstances each maniple's second century would be advanced into the gaps, forming a solid line which would then hit the enemy as described above. And I say under normal circumstances because at Zama, Scipio used the manipular formation to allow the Carthaginian elephants to pass right through these gaps in his lines, and only closed them afterwards: with the manipular formation the Roman commander could at all times keep his options open, and react to the particular circumstances of the moment.

Should the *hastati* fail to break the enemy line they could be withdrawn through the gaps in the line of *principes* at a signal, and at the same time the *principes* could begin their own advance to take the place of the *hastati*, at the right moment



advancing their second centuries to form a solid line. If necessary, this could be repeated with the *principes* retiring through the *triarii*, though the latter were seldom used; and the expression 'the battle came to the *triarii*' was used by the Romans to describe a desperate situation. In fact the *triarii* were normally held in reserve, kneeling on one knee, with their shields resting on the ground and slanting back against their shoulder, and their long spears tilted towards the enemy. They could be used in flank attacks, or to cover the retreat or re-organisation of defeated *hastati* and *principes*; but it has been suggested that by the time of Cannae it had become customary to leave the *triarii* to guard the camp, as the generals did not consider they needed them. This could explain why the encirclement at Cannae was so disastrous for the Romans, who would have had no third line in reserve to counter such a move. (At Cannae, the *triarii*, numbering about 9,600, were probably the troops referred to as the 10,000 left in camp.)

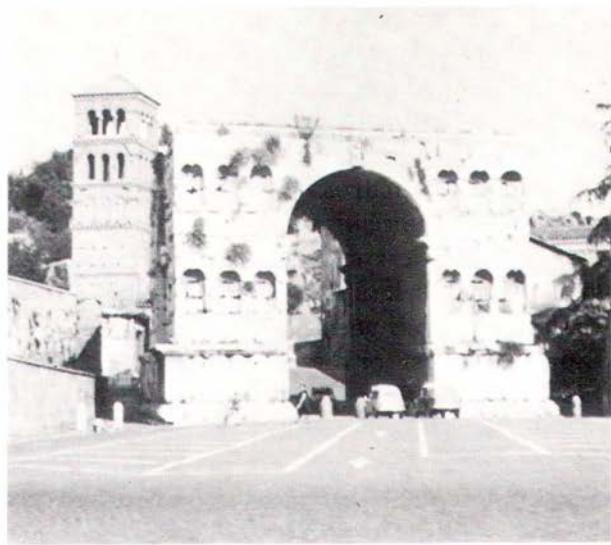
On the march one-fifth of the allied infantry and one-third of the allied cavalry were detached



from their legions for special duties and were known as *extraordinarii*. Part of the *extraordinarii* formed a vanguard for an army, and in a consular army would probably have been followed by troops in the following order: right wing allied legion, allies' baggage guarded by allied cavalry, Roman legion, Roman baggage guarded by Roman cavalry, second Roman legion, left wing allied legion, and more *extraordinarii* forming a



Coin showing the temple and ramparts of Eryx, one of the best Carthaginian strongholds in Sicily, which, under Hamilcar Barca, held out for five years during the 1st Punic War. (Author's collection)



The arch of Janus in Rome, whose gates were only closed in time of peace. The first recorded closure in Rome's history was 235 B.C., following the seizure of Sardinia and prior to the 1st Illyrian War in 229 B.C. (Author's collection)

rearguard. This was in fact the line of battle in column formation. When battle was imminent the infantry of the various legions marched in three parallel columns of *hastati*, *principes* and *triarii*, with the baggage between the files, so that the column could be formed into a battle line instantly.

The Romans also made extensive use of siege and artillery weapons, which had been part of their arsenal since c.282 B.C. This arsenal included rams, ballistae and catapults: the ratio of heavy catapults and ballistae to light was about 1:6.

The Plates

A1: Numidian horseman

Our only source for the appearance of the Numidian warriors is Trajan's Column in Rome, erected some 150 years after the end of the 3rd Punic War. However, it would seem that the Numidian horsemen portrayed on that column were no different from their predecessors – unarmoured and extremely mobile light cavalry, armed only with javelins and a small, light shield.

A2: Roman Equites

Our illustration is based on a number of 1st and 2nd century B.C. sculptures which reveal that the *equites* of the 2nd and 3rd Punic Wars were heavy cavalymen, protected by a mail shirt. *Equites* of the 1st Punic War may have resembled more the Greek or Macedonian cavalymen, with bronze cuirass. The rest of the man's weapons and equipment still bear a strong Greek influence, though the blade of his sword is more pointed than that of a Greek sword, showing the Spanish influence felt during the 2nd Punic War. His helmet is of the Boeotian type, and other helmets shown in the sculptures are also of Greek design. Bronze greaves may have been worn, but no archaeological find has yet confirmed this.

B1: Roman tribune

The altar of Domitius Ahenobarbus, dated second half of the 1st century B.C. and now in the Louvre, forms the basis for this figure. In the sculpture the man is shown holding a spear of the Greek type, and the round shield shown here – probably of the hoplite type. His armament is completely different to that of the legionary, being much more Greek than Roman. The sash round his waist is the symbol of his rank, while the colour of his cloak and tunic border indicate

his aristocratic origins – almost certainly the son of a senator.

B2: Roman signifer

In Republican times each maniple had a standard-bearer. Emblems ranged from the popular one of a hand, illustrated here, to a horse, wolf, bear, eagle or other animal: it was not until the reforms of Marius, almost half a century after the end of the Punic Wars, that the eagle became the solitary emblem of the Roman legions. It is not definite that the cross bar carried a legion number at this date, though it is probable that it did.

B3: Roman legate or consul

The armour on this figure is taken from a 3rd century B.C. statue found on Rhodes, but panoplies of this style were worn by Roman 'generals' throughout the period of the republic.

C1: Roman triarius

Our figure is based on the earliest surviving sculptures showing legionaries: the altar of

Ahenobarbus, and a monument erected at Delphi by Aemilius Paullus to celebrate his victory at Pydna in 168 B.C. We know small square breast plates were worn prior to the Punic Wars, and Polybius claims they were still in use in his day, but it seems reasonably certain that by the 1st Punic War all legionaries except the *velites* were protected by the same type of defences – a mail shirt of iron and a large oval shield. Both Polybius and Arrian state that a greave was also worn on the leading (left) leg.

C2: Roman hastatus or princeps

The mail shoulder guards worn over the mail shirt would have been backed by leather to maintain their shape and position: they were made separate from the shirt, of a square form with a large 'U' cut out for the neck, the straight edge being permanently fastened to the back of

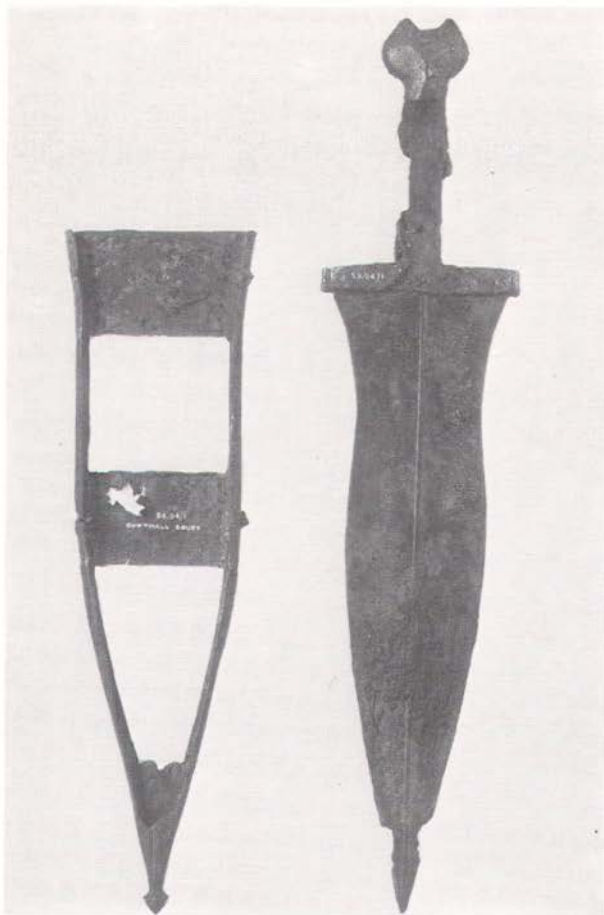
Part of a relief from the Temple of Fortuna at Praeneste, showing a Roman warship of the type built to establish sea-power over Carthage, and also giving some indication of arms and armour. 2nd to 1st century B.C. (Musei Vaticani)





Lake Trasimeno from the high ground, showing the area in which the Romans were trapped. (Italian State Tourist Office)

Roman dagger and scabbard, 1st century A.D. but of the type adopted at the same time as the *gladius hispanicus* (circa 204 B.C.)



the shirt, the arms of the U being pulled over the shoulders to be secured by studs on a strap attached to the chest (as illustrated). They are obviously based on the design of the Greek linen cuirass. These mail shirts weighed between 20 and 25 pounds. The helmet is of the Montefortino type, which was mass-produced and is considered inferior in quality to the type shown on the *triarius*. The *pilum* is based on a surviving example, the thickness at the joint between iron and wood being caused by a plate at the base of the head through which securing rivets passed; the extra weight at this point also improved the throwing and flight characteristics of the *pilum*.

C3: Roman *velites*

Supplied by the poorer citizens, this arm was completely unarmoured, with only agility and a light shield for defence. A simple 'bascinet' type of helmet of bronze or leather may have been worn by some *velites*. The javelins were about 1.7 metres long.

D1: Campanian cavalryman

Paintings of Campanian horsemen found at Capua and Paestum (in Lucania) form the basis for this figure, although the paintings show men unarmoured except for helmet and belt, and carrying two spears but no shield. However, the Paestum painting shows the horse with a bronze peytral and chamfron, and it seems likely that, as the aristocracy provided the cavalry, some if

not the majority would have been armoured heavy cavalry as shown here. Both horse and rider's armour are based on surviving items from Apulia. Samnite cavalry would have looked much the same, apart from a distinctive triple-disc cuirass: see D2.

D2: Samnite heavy infantryman

This figure is based on 4th century B.C. wall paintings, and on surviving armour from Lucania dated c.300 B.C. The triple-disc cuirass is always associated with the Samnites, though the origins of its form are unknown. The warrior is armed and armoured much as a Greek hoplite of the 4th century B.C., except for having two short spears. Some warriors were probably still equipped in this fashion during the Punic Wars, but others – fighting either for or against the Romans – would have adopted mail armour of the Roman style.

D3: Lucanian heavy infantryman

Based on a wall painting from Paestum dated 390–273 B.C., and surviving armour from the same area of c.375 B.C., though Polybius describes such breastplates as still in use in the Roman army in the 2nd century B.C. The shield is conjectural, but based on those used by Apulians, Samnites and Campanians.

E1: Liby-Phoenician heavy infantryman

The African heavy infantry was equipped in the Greek hoplite style until c.217 B.C., when many were re-armed with captured Roman mail shirts, shields and *pila*. The rear ranks probably retained the earlier long pike, thus corresponding to the Roman *triarius*, and our figure shows such a soldier, with Roman mail but with the pike, shield and helmet of the Macedonian type believed to have been adopted by the Carthaginians.

E2: Carthaginian standard-bearer of the Sacred Band

This shows the typical armament of a native Carthaginian or Liby-Phoenician soldier prior to c.217 B.C.: infantry would have had a long pike, cavalry a Greek spear, and both would have had a short sword of the Greek style. The standard shown is now believed to be an accurate representation of the Carthaginian standard: earlier



Iberian jinete holding falcata, from La Bastida, Mogente. (Museo de Bellas Artes, Valencia)

reconstructions have often shown a circular device rather than the crescent-and-disc, but this was due to misinterpretation of the sources. Lamellar horse armour appeared during the late Greek-Macedonian era, and it is logical to assume at least some members of the Sacred Band would have used it.

F1: Iberian horseman

The horse and its harness are based on contemporary sculptures, the rider on vase paintings, and his weapons on detail from coins and surviving examples. The tunic is as described in ancient sources. This type of horseman was essentially a light cavalryman (*jinete*). Some Celt-Iberian horsemen may have worn armour of the Celtic or Greek styles, and provided a heavy cavalry.

F2: Celt-Iberian heavy infantryman

Based on vase paintings and reliefs of warriors, this figure shows a Spanish heavy infantryman with definite Celtic influence on dress, arms and armour. This particular figure would be a noble or chieftain, for most warriors are shown wearing simple helmets of bascinet shape (as F3) of either metal or leather, and are without greaves. Lusitanians of the west coast wore helmets of sinew with a crest: these have been well illustrated in Connolly's excellent *Hannibal & the Enemies of Rome*.

Saguntum from the east. It was Hannibal's siege of this city, lasting eight months, which provoked the 2nd Punic War. The medieval walls and castle probably follow the lines of the ancient walls and citadel. (Spanish National Tourist Office)

F3: Iberian swordsman

The Iberian swordsman, armed with sword and buckler and completely unarmoured, is well described in ancient texts and is also well represented in many bronze figurines of warriors found in Iberian sanctuaries. The figure shown here has the typical Iberian *falcata* and *caetra*, with a tunic much as described by Livy. The all-iron javelin at his feet, peculiar to the Iberians, provided missile power. The helmet is of a common type, though many such caps may have been of leather.

G1: Celtic Chieftain

This figure is based on various sculptures and surviving artefacts of the Punic Wars period. Only the aristocracy is likely to have been so completely armoured. The mail shirt, although



similar to the Roman one, differs in that the shoulders are protected by a separate cape which is not fastened to the shirt in any way: this was probably because of the whirling, slashing motions used with the long Celtic sword.

G2: Celtic horn blower

A more common Celtic warrior type, in everyday clothes, with his hair thickened with lime for war. Diodorus says the hair was 'combed back from forehead to nape of neck', and others describe it as 'like a horse's mane'. A sculpture from northern Italy shows a horn blower with spear and shield close to hand, as illustrated here, and it is probable that these men joined in the fighting after sounding the initial blasts.

G3: Celtic standard bearer

Many Celtic warriors would have looked like this, lacking any body armour, though their helmets would probably have been less elaborate. The cloak would have been discarded for battle. After c.217 B.C. many of these men would have worn captured Roman mail shirts.

H1: Celtic horseman

This figure is based on a number of sculptures and on surviving arms and armour of the 200–150 B.C. period, and is typically Celtic – helmet, mail cape, shield, a sword like those on Plate G, and horse harness are all of Celtic design. In the preceding century – certainly prior to the Roman disasters at Trebia and Trasimene – the majority of riders would have lacked the mail shirt. The severed head was an important object to the Celts, who liked to display these trophies at the entrances to their temples. Warriors would sometimes allow head collecting to interfere with the fighting – the collection of the head of a slain enemy being more vital than the killing of another live one!

H2: Celtic swordsman

Many other Celtic warriors would have looked like this, and as late as 255 B.C. some tribes still fought in the traditional manner – completely naked, relying entirely on shield, agility and skill with their sword for defence.



Carthage was razed to the ground in 146 B.C. and very little of the great city is now visible. Perhaps the most striking relics are these cisterns, part of the city's original reservoirs, consisting of 17 great barrel vaults. (Author's collection)

Sources:

Appian. *History of Rome (Romaica)*, trans. H. White. London 1899.
 Beer, Sir G. de. *Hannibal*. London 1969.
 Caven, B. *The Punic Wars*. London 1980.
 Church, A. J. *Carthage*. London 1888.
 Connolly, P. *Hannibal & the Enemies of Rome*. London 1978.
 Connolly, P. *The Roman Army*. London 1975.
 Gabba, E. *Republican Rome, the Army & the Allies*, trans. P. J. Cuff. Oxford 1976.
 Heath, E. G. *Archery, a military history*. London 1980.
 Hoffmeyer, A. B. de. *Arms & Armour in Spain*, Vol. 1. Cáceres 1972.
 Lazenby, J. F. *Hannibal's War*. Warminster 1978.
 Livy. *The War with Hannibal*. Harmondsworth 1965.
 Plutarch. *Makers of Rome*. Harmondsworth 1965.
 Polybius. *The Histories of Polybius*, trans. E. S. Shuckburgh. London 1889.
 Scullard, H. H. *Scipio Africanus in the 2nd Punic War*. Cambridge 1930.
 Shuckburgh, E. S. *History of Rome*. London 1916.
 Webster, G. *The Roman Imperial Army*. London 1969.

A1 Cette figure s'inspire de sources plus tardives, telles que la colonne de Trajanne. **A2** D'après les sculptures, la cotte de mailles des 2ème et 3ème guerres puniques a remplacé la cuirasse de style grec de la lère, mais le casque boëtien a été conservé, ainsi que d'autres modèles grecs.

B1 D'après l'autel funéraire de Domitius Ahenobarbus, au Louvre. Le costume est encore très grec. L'écharpe à la taille indique le grade tandis que la couleur de la cape et celle de la bordure de la tunique indiquent le rang social. **B2** Une grande variété d'étendards était courante sous la République. L'aigle de la Légion ne devint dominant qu'au temps de Marius. Chaque 'maniple' avait son propre étendard, dont il existait de nombreux modèles différents. Les peaux d'animaux des prêtres remontent à l'époque néolithique et en quelque sorte les porte-étendards descendaient directement des prêtres des cultures tribales. **B3** Commandant en chef typique de la Rome républicaine, d'après une statue du 2ème siècle av. J.-C., de Rhodos.

C1 D'après l'autel funéraire de D. Ahenobarbus et du monument érigé par Aemilius Paullus à Delphes en 168 av. J.-C. pour célébrer la victoire de Pydna. L'ancienne petite plaque de poitrine carrée a dû être remplacée par des cottes de mailles à l'époque de la lère guerre punique, sauf peut-être chez les 'vérites'. Seule une jambe est protégée au combat. **C2** La cotte de mailles s'inspire de la cuirasse grecque en étoffe. Le casque de type Montefortino, modèle considéré comme étant de qualité inférieure, était fabriqué à la chaîne. **C3** Cet soldat simple n'a pas d'armure. Il doit compter sur son bouclier – et son agilité.

D1 Les fresques de Capoue et de Paestum ne contiennent pas de figures en armure mais ces nobles, qui avaient sans doute des armures élaborées pour leurs chevaux, devaient eux-mêmes porter une armure de style grec. **D2** D'après des fresques et des armures des 4ème et 3ème siècles av. J.-C. La cuirasse à trois disques est toujours associée aux Samnites. **D3** D'après une fresque de Paestum, environ 390–273 av. J.-C. et une armure de 375 av. J.-C. environ, bien que Polybios décrive des cuirasses similaires utilisées par les Romains au 2ème siècle av. J.-C.

E1 Le style des hoplites grecs fut remplacé par les cottes de mailles après 217 av. J.-C. environ, suivant la capture d'une grande quantité d'équipement romain. **E2** Soldat carthaginois ou libyen-phénicien typique d'avant 217 av. J.-C. L'infanterie aurait eu de longues piques, la cavalerie des lances grecques et tous des épées de modèle grec.

F1 L'équipement du cheval s'inspire d'une sculpture contemporaine; le cavalier, de peintures de vases et ses armes, de médailles et de spécimens d'origine. La tunique a été décrite dans des textes antiques. **F2** Hibernique de l'infanterie lourde, d'influence celte, peut-être un chef de tribu. D'après des fresques et des bas-reliefs. **F3** Ce sabreur est décrit dans des textes antiques et des statuettes de bronze le représentent. Un javelin de fer repose à ses pieds.

G1 Probablement un noble portant un complet équipement de combat. Reconstitution effectuée à partir de sculptures et de fragments antiques. **G2** Type celte plus courant, dont les cheveux sont traditionnellement épaissis à la chaux et peignes en arrière en temps de guerre. **G3** Guerrier probablement typique, bien armé, avec un beau casque mais pas d'armure.

H1 Typiquement celte. Etabli d'après de nombreux spécimens d'entre 200 et 150 av. J.-C. qui ont survécu. Les têtes des ennemis étaient une prise de guerre importante chez les Celtes. **H2** Guerrier moins favorisé, armé seulement d'un bouclier et d'une épée. Même tardivement, vers 255 av. J.-C., certaines tribus se battaient encore de façon traditionnelle, nus, comptant sur leur épée, leur bouclier et leur valeur au combat.

A1: Von späteren Quellen, wie z.B. der Säule Trajans, leiten wir diese Interpretation ab. **A2:** Skulpturen zeigen, dass der Kürass im griechischen Stil des ersten punischen Krieges, dem Kettenhemd, dargestellt von den 2. und 3. Kriegen, Platz machte, obwohl der 'Boeotian' Helm – und andere griechische Stiltarten – beibehalten wurden.

B1: Vom Altar des Domitius Ahenobarbus, nunmehr im Louvre. Das Kostüm ist immer noch sehr griechisch. Die Taillenschärpe zeigt den militärischen Rang, die Farbe des Umhangs und Borte der Tunika den sozialen Rang an. **B2:** Viele verschiedene Standarten wurden in republikanischer Zeit benutzt, der Adler Legion nahm nur eine wichtige Zentralstellung während der Tage des Marius ein. Jeder maniple hatte seine eigene Standarte, die Formen unterschieden sich beträchtlich. Der Gebrauch von Tierhäuten durch Priester hat einen neolithischen Ursprung und die Standartenräger waren, so können wir sagen, in direkter Erbfolge zu den Priestern in den Stammeskulturen. **B3:** Von einem Standbild des 3. Jahrhunderts v. Chr. auf Rhodos, typisch für einen General der römischen Republik.

C1: Vom Altar des Ahenobarbus und dem Delphi Monument, errichtet von Aemilius Paullus um den Sieg bei Pydna 168 v. Chr. zu feiern. Wahrscheinlich war die alte Benutzung eines kleinen quadratischen Brustpanzers von dem Kettenhemd durch den 1. punischen Krieg ersetzt worden, ausser vielleicht von den velites. Beachte den nur links getragenen Beinschutz, das 'vordere Bein' schützend, wenn in typischer Kampfsituation. **C2:** Das Kettenhemd ist offensichtlich ein Nachfolger des griechischen Leinenkürass im allgemeinen Entwurf. Der Helm des Montefortino-Typ, als nicht so guter Entwurf angesehen, wurde in Massenproduktion hergestellt. **C3:** Dieser arme Bürger hat keine Rüstung und verlässt sich auf sein Schutzschild und seine Beweglichkeit.

D1: Gemälde bei Capua und Paestum zeigen Figuren, die keine Rüstung an hatten, jedoch mussten diese Aristokraten, die sicherlich aufwendige Rüstung für ihre Pferde benutzten, gleichermaßen einigen Gebrauch der Körperrüstung im griechischen Stil gemacht haben. **D2:** Von Wandgemälden und noch vorhandenem Rüstzeug, 4. bis 3. Jahrhundert v. Chr., der drei-Scheiben-Kürass wird immer mit den Samniten in Zusammenhang gebracht. **D3:** Von einem Wandgemälde, Paestum, ca. 390–273 v. Chr. und erhaltenem Rüstzeug von ca. 375 v. Chr., obwohl Polybios solche Brustplatten als noch in römischen Gebrauch im 2. Jahrhundert v. Chr. beschreibt.

E1: Der griechische 'hoplite' Stil machte den römischen Kettenhemden nach ca. 217 v. Chr. Platz, als eine riesige Anzahl römischer Ausstattung erbeutet wurde. **E2:** Man nimmt an, dass dies typisch für einen einheimischen carthagischen oder liby-phoenizischen Soldaten vor ca. 217 v. Chr. ist; die Infanterie würde eine lange Pike, die Kavallerie einen griechischen Speer und beide Schwerter im griechischen Stil tragen.

F1: Das Pferd ist auf zeitgenössischer Skulptur, der Reiter auf Vasenmalerei, seine Waffen an erhaltenen Beispielen und Münzenprägungen basiert. Die Tunika ist in altertümlichen Quellen beschrieben. **F2:** Auf Gemälden und Reliefbildern basiert – ein spanischer schwerer Infanterist, der besonderen keltischen Einfluss zeigt und vielleicht ein Häuptling ist. **F3:** Dieser Fechter ist in altertümlichen Texten beschrieben und von erhaltenen Bronze-Statuetten dargestellt. Beachte den Speer, ganz aus Eisen, zu seinen Füßen.

G1: Wahrscheinlich ein Aristokrat mit vollkommenem Schlachtharnisch. Wir entnehmen ihn von verschiedenen Kunstgegenständen und Skulpturen. **G2:** Ein gewöhnlicher keltischer Typ, sein Haar mit Kalklösung verdickt und zurückgekämmt – ein Brauch in Kriegzeiten. **G3:** Wahrscheinlich ein typischer gut bewaffneter Stammesmann mit einem schönen Helm, jedoch keiner Rüstung.

H1: Auf vielen überlieferten Quellen um ca. 200–150 v. Chr. basiert und typisch keltisch. Das Sammeln feindlicher Häupter spielte eine sehr wichtige Rolle in der keltischen Kriegsführung. **H2:** Ein ärmerer Krieger Typ, nur mit Schwert und Schild bewaffnet. Selbst noch im Jahr 255 v. Chr. kämpften einige Stämme auf traditionelle Weise – nackt, sich vollkommen auf das Schwert, den Schild und ihre Geschicklichkeit verlassend.

Continued from back cover

- 160 Nap's Guard Infantry (2)
44 Nap's German Allies (1)
43 Nap's German Allies (2)
90 Nap's German Allies (3)
106 Nap's German Allies (4)
122 Nap's German Allies (5)
199 Nap's Specialist Troops
211 Nap's Overseas Army
227 Nap's Sea Soldiers
88 Nap's Italian Troops
176 Austrian Army (1): Infantry
181 Austrian Army (2): Cavalry
223 Austrian Specialist Troops
152 Prussian Line Infantry
149 Prussian Light Infantry
192 Prussian Reserve & Irregulars
162 Prussian Cavalry 1792-1807
172 Prussian Cavalry 1807-15
185 Russian Army (1): Infantry
189 Russian Army (2): Cavalry
84 Wellington's Generals
114 Wellington's Infantry (1)
119 Wellington's Infantry (2)
253 Wellington's Highlanders
126 Wellington's Light Cavalry
130 Wellington's Heavy Cavalry
204 Wellington's Specialist Troops
167 Brunswick Troops 1809-15
98 Dutch-Belgian Troops
206 Hanoverian Army 1792-1816
226 The American War 1812-14
96 Artillery Equipments
77 Flags of the Nap Wars (1)
78 Flags of the Nap Wars (2)
115 Flags of the Nap Wars (3)
- 19TH CENTURY**
232 Bolivar and San Martin
173 Alamo & Texan War 1835-6
56 Mexican-American War 1846-8
63 American-Indian Wars 1860-90
170 American Civil War Armies:
(1): Confederate
177 (2): Union
179 (3): Staff, Specialists, Maritime
190 (4): State Troops
207 (5): Volunteer Militia
37 Army of Northern Virginia
38 Army of the Potomac
252 Flags of the American Civil War:
(1): Confederate
258 (2): Union
265 (3): State & Volunteer
163 American Plains Indians
186 The Apaches
168 US Cavalry 1850-90
241 Russian Army of the Crimean War
193 British Army on Campaign:
(1): 1816-1853
196 (2): The Crimea, 1854-56
198 (3): 1857-81
201 (4): 1882-1902
212 Victoria's Enemies:
(1): Southern Africa
215 (2): Northern Africa
219 (3): India
224 (4): Asia
249 Canadian Campaigns 1860-70
67 The Indian Mutiny
91 Bengal Cavalry Regiments
92 Indian Infantry Regiments
233 French Army 1870-71 (1)
237 French Army 1870-71 (2)
57 The Zulu War
59 Sudan Campaigns 1881-98

- 230 US Army 1890-1920
95 The Boxer Rebellion

THE WORLD WARS

- 80 The German Army 1914-18
81 The British Army 1914-18
245 British Territorial Units 1914-18
208 Lawrence and the Arab Revolts
182 British Battle Insignia:
(1) 1914-18
187 (2) 1939-45
74 The Spanish Civil War
117 The Polish Army 1939-45
112 British Battledress 1937-61
120 Allied Commanders of WW2
225 The Royal Air Force
70 US Army 1941-45
216 The Red Army 1941-45
246 The Romanian Army
220 The SA 1921-45
24 The Panzer Divisions
266 The Allgemeine-SS
34 The Waffen-SS
229 Luftwaffe Field Divisions
124 German Commanders of WW2
213 German MP Units
139 German Airborne Troops
131 Germany's E. Front Allies
103 Germany's Spanish Volunteers
147 Wehrmacht Foreign Volunteers
254 Wehrmacht Auxiliary Forces
238 Allied Foreign Volunteers
142 Partisan Warfare 1941-45
169 Resistance Warfare 1940-45

MODERN WARFARE

- 132 Malayan Campaign 1948-60
174 The Korean War 1950-53
116 The Special Air Service
156 The Royal Marines 1956-84
133 Battle for the Falklands
(1): Land Forces
134 (2): Naval Forces
135 (3): Air Forces
250 Argentine Forces in the Falklands
127 Israeli Army 1948-73
128 Arab Armies (1): 1948-73
194 Arab Armies (2): 1973-88
165 Armies in Lebanon 1982-84
104 Vietnam War Armies 1962-75
143 Vietnam War Armies (2)
209 War in Cambodia 1970-75
217 War in Laos 1960-75
183 Modern African Wars:
(1): Rhodesia 1965-80
202 (2): Angola & Mozambique
242 (3): South-West Africa
159 Grenada 1983
178 Russia's War in Afghanistan
221 Central American Wars

GENERAL

- 65 The Royal Navy
107 British Infantry Equipments (1)
108 British Infantry Equipments (2)
138 British Cavalry Equipments
72 The Northwest Frontier
214 US Infantry Equipments
205 US Army Combat Equipments
234 German Combat Equipments
157 Flak Jackets
123 Australian Army 1899-1975
164 Canadian Army at War
161 Spanish Foreign Legion
197 Royal Canadian Mounted Police

An unrivalled source of information on the uniforms, insignia and appearance of the world's fighting men of past and present. The *Men-at-Arms* titles cover subjects as diverse as the Imperial Roman army, the Napoleonic wars and German airborne troops in a popular 48-page format including some 40 photographs and diagrams, and eight full-colour plates.

COMPANION SERIES FROM OSPREY

ELITE

Detailed information on the uniforms and insignia of the world's most famous military forces. Each 64-page book contains some 50 photographs and diagrams, and 12 pages of full-colour artwork.

WARRIOR

Definitive analysis of the armour, weapons, tactics and motivation of the fighting men of history. Each 64-page book contains cutaways and exploded artwork of the warrior's weapons and armour.

NEW VANGUARD

Comprehensive histories of the design, development and operational use of the world's armoured vehicles and artillery. Each 48-page book contains eight pages of full-colour artwork including a detailed cutaway of the vehicle's interior.

CAMPAIGN

Concise, authoritative accounts of decisive encounters in military history. Each 96-page book contains more than 90 illustrations including maps, orders of battle and colour plates, plus a series of three-dimensional battle maps that mark the critical stages of the campaign.

THE ANCIENT WORLD

- 218 Ancient Chinese Armies
- 109 Ancient Middle East
- 137 The Scythians 700-300 B.C.
- 69 Greek & Persian Wars 500-323 B.C.
- 148 Army of Alexander the Great
- 121 Carthaginian Wars
- 46 Roman Army:
 - (1) Caesar-Trajan
 - (2) Hadrian-Constantine
- 129 Rome's Enemies:
 - (1): Germanics & Dacians
 - (2): Gallic & British Celts
 - (3): Parthians & Sassanids
 - (4): Spain 218 B.C.-19 B.C.
 - (5): The Desert Frontier

THE MEDIEVAL WORLD

- 247 Romano-Byzantine Armies 4th-9th C
- 154 Arthur & Anglo-Saxon Wars
- 255 Armies of the Muslim Conquest
- 125 Armies of Islam, 7th-11th C
- 150 The Age of Charlemagne
- 89 Byzantine Armies 886-1118
- 85 Saxon, Viking & Norman
- 231 French Medieval Armies 1000-1300
- 75 Armies of the Crusades
- 171 Saladin & the Saracens
- 155 Knights of Christ
- 200 El Cid & Reconquista 1050-1492
- 105 The Mongols

- 222 The Age of Tamerlane
- 251 Medieval Chinese Armies
- 50 Medieval European Armies
- 151 Scots & Welsh Wars
- 94 The Swiss 1300-1500
- 136 Italian Armies 1300-1500
- 166 German Armies 1300-1500
- 195 Hungary & E. Europe 1000-1568
- 259 The Mamluks 1250-1517
- 140 Ottoman Turks 1300-1774
- 210 Venetian Empire 1200-1670
- 111 Armies of Crécy and Poitiers
- 144 Medieval Burgundy 1364-1477
- 113 Armies of Agincourt
- 145 Wars of the Roses
- 99 Medieval Heraldry

16TH AND 17TH CENTURIES

- 256 The Irish Wars 1485-1603
- 191 Henry VIII's Army
- 58 The Landsknechts
- 239 Aztec Armies
- 101 The Conquistadores
- 263 Mughul India 1504-1761
- 235 Gustavus Adolphus (1): Infantry
- 262 Gustavus Adolphus (2): Cavalry
- 14 English Civil War Armies
- 110 New Model Army 1645-60
- 203 Louis XIV's Army
- 97 Marlborough's Army

- 86 Samurai Armies 1550-1615
- 184 Polish Armies 1569-1696 (1)
- 188 Polish Armies 1569-1696 (2)

18TH CENTURY

- 261 18th Century Highlanders
- 260 Peter the Great's Army (1): Infantry
- 264 Peter the Great's Army (2): Cavalry
- 118 Jacobite Rebellions
- 236 Frederick the Great (1)
- 240 Frederick the Great (2)
- 248 Frederick the Great (3)
- 48 Wolfe's Army
- 228 American Woodland Indians
- 39 Brit. Army in N. America
- 244 French in Amer. War Ind.

NAPOLEONIC PERIOD

- 257 Napoleon's Campaigns in Italy
- 79 Napoleon's Egyptian Campaign
- 87 Napoleon's Marshals
- 64 Nap's Cuirassiers & Carabiniers
- 55 Nap's Dragoons & Lancers
- 68 Nap's Line Chasseurs
- 76 Nap's Hussars
- 83 Nap's Guard Cavalry
- 141 Nap's Line Infantry
- 146 Nap's Light Infantry
- 153 Nap's Guard Infantry (1)

Title list continued on inside back cover

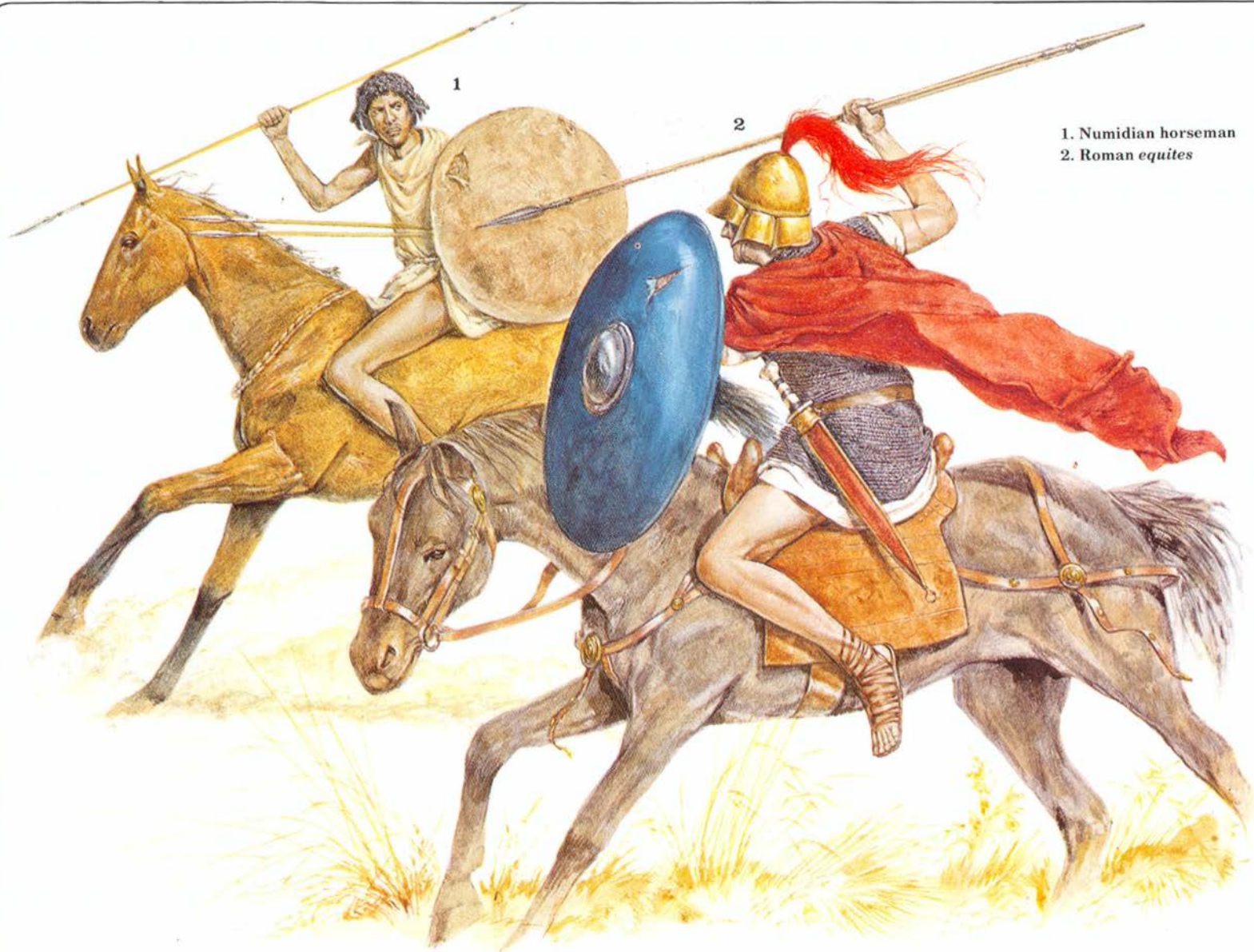
Please note that for space reasons abbreviated titles are given above; when ordering, please quote the title number, e.g. 'MAA 109' for 'Ancient Armies of the Middle East', etc.

**Avec annotations en français sur les
planches en couleurs.
Mit Aufzeichnungen auf Deutsch über den
Farbtafeln.**

ISBN 0-85045-430-1



9 780850 454307

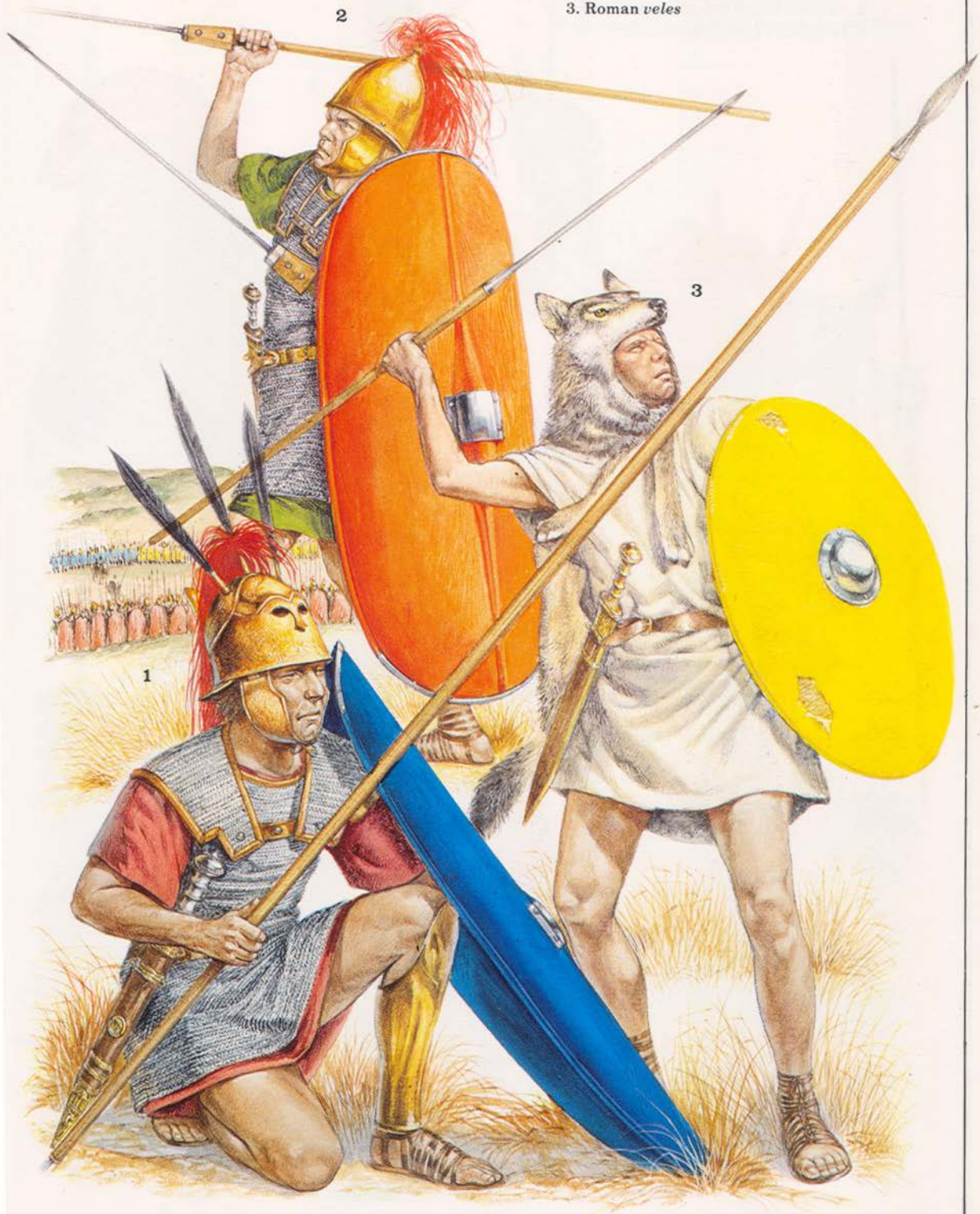


1. Numidian horseman
2. Roman equites

1. Roman tribune
2. Roman *signifer*
3. Roman legate or consul



1. Roman *triarius*
2. Roman *hastatus* or *princeps*
3. Roman *veles*



1. Campanian cavalryman
2. Samnite heavy infantryman
3. Lucanian heavy infantryman



1. Liby-Phoenician heavy infantryman
2. Carthaginian standard-bearer, Sacred Band



1. Iberian horseman
2. Celt-Iberian heavy infantryman
3. Iberian swordsman



1. Celtic chieftain
2. Celtic horn-blower
3. Celtic standard-bearer





1. Celtic horseman
2. Celtic swordsman

