

ANCIENT CHINESE ARMIES 1500-200 BC



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218

ANCIENT CHINESE ARMIES 1500-200 BC

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Erratum: Plate E1 shows a transverse helmet crest; this should probably be mounted fore-and-aft.

Ancient Chinese Armies 1500-200 BC

Introduction

The subject of this book is the period of China's history from the first documented civilisation to the establishment of an enduring unified empire. For most of this period China—'All Under Heaven', as it was known—was no more than a vague cultural concept embracing a number of states linked only by a uniform system of writing, and differing markedly in politics, religion and language. It is often difficult to decide whether a particular state or people should be treated as 'Chinese' at all, and in this respect I have followed somewhat arbitrary traditional guidelines. Thus the Wu and Yuch of the south-east have been covered, but northern tribes like the Hu and Ti are mentioned only in passing, although they also fell within what is now China.

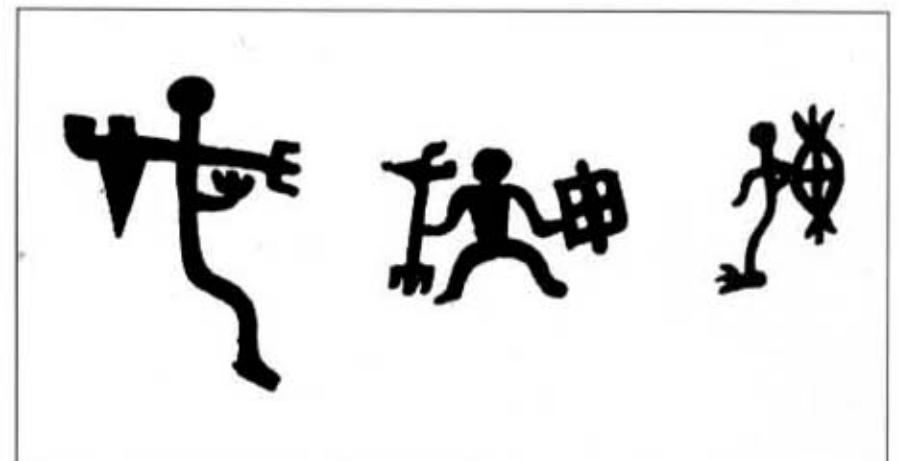
The study of the period is still at a formative stage, but much archaeological work has been done in China recently, and bronze weapons and figurines are well represented in museums, as well as in an increasing flow of illustrated books coming out of the People's Republic. A number of ancient written sources are available in translation, of which the most useful are cited in the Bibliography, although the problem of their reliability is a complex one. The *Shu Ching* ('Book of Documents'), *Shi Ching* ('Book of Songs') and *Chou Li* ('Rituals of Chou') all date from late in the period, but contain much early first-millennium material; while the 4th-century military manuals of Sun Tzu and Wu Ch'i are indispensable. The *Tso Chuan*, consisting of Tso Ch'u-ming's commentaries on the 'Spring and Autumn Annals' of the state of Lu, and *Chan-Kuo Ts'e*, the 'Intrigues of the Warring States', are semi-fictional but almost contemporary accounts, and the former in particular contains much useful and convincing military information. The general

integrity of written sources is illustrated by the remarkable correspondence between the list of Shang kings given by the Han historian Ssu-ma Ch'ien, a millennium after their deaths, and the names found on oracle-bones excavated from Shang sites. These bones and pieces of tortoiseshell, on which inscriptions were made for divinatory purposes, are a vital archaeological source for the Shang.

I have also consulted many modern works, although space prevents me citing more than a few. I must emphasise, however, that my opinions on some questions, such as the importance of infantry in early times, do not always correspond with those generally accepted. It is for the reader who wishes to study the subject in more detail to reach his or her own conclusions, but I hope that I have at least pointed out some directions for future research and debate.

I have adopted the popular Wade-Giles system for transcribing Chinese names into English, but there is no universally accepted system, and readers should beware of being misled by different versions of these names in other works. For example, the state which I have called Tsin will appear elsewhere as Jin or Chin (not to be confused with Ch'in), while Shou, the last Shang

These figures from oracle-bone inscriptions are an important source for the appearance of Shang military equipment, especially perishable items such as shields—see reconstructions in Plate A. (Thames and Hudson Ltd.)



king and enemy of the Chou dynasty, is often confusingly called Chou. There is little point in giving any guide to pronunciation, since ancient Chinese was pronounced quite differently from the modern language and would have borne little relation to the way in which it is now transcribed.

Chronology

- c.1500 BC** Introduction of advanced bronze-casting. Rise of Shang state.
- c.1300 BC** Introduction of chariot. Permanent Shang capital established at Yin.
- c.1027 BC** Chou revolt. Battle of Mu. Chou conquest of central China.
- c.880 BC** Hsung K'eu of Ch'u takes title of 'king'. Chou king forces him to give it up and reduces him to vassalage.
- 771 BC** Invasion by Jung barbarians. Fall of Chou capital, Hao. Eastern Chou dynasty established at Lo-yi; kingdom divided into two parts.
- 750 BC** Chou kingdom reunited by King P'ing.
- 707 BC** King Huan defeated by rebel ministers at Hsu-ko. Chou realm fragments into hundreds of small states.
- 685-643 BC** Duke Huan of Ch'i, first hegemon.
- 632 BC** Tsin defeats Ch'u at Ch'eng-p'u.
- 595 BC** Ch'u defeats Tsin at Pi.
- 584 BC** Wu-ch'en of Ch'u organises Wu army on Chinese lines.
- 576 BC** Ch'in expedition decisively defeated by Tsin at Ma-sui.
- 575 BC** Tsin defeats Ch'u at Yen-ling.
- 506 BC** Wu invades Ch'u. Fall of Ying.
- 479 BC** Death of Confucius.
- 473 BC** Yueh overruns and destroys Wu.
- 453 BC** Coalition of ex-allies defeats Tsin at Ching Yang. Tsin breaks up into three parts—Wei, Han and Chao.
- 350 BC** Lord Shang begins his political and military reforms in Ch'in.
- 333 BC** Ch'u conquers Yueh.
- 318 BC** Coalition led by Ch'u crushed by Ch'in.

316 BC

307 BC

285 BC

279 BC

256 BC

246 BC

223 BC

221 BC

210 BC

207 BC

206 BC

202 BC

Ch'in conquers Shu and Pa.

Wu Ling of Chao forms China's first cavalry units.

Yen overruns Ch'i.

Yen defeated at Chi Mo and expelled from Ch'i.

Ch'in deposes the Chou king. Official end of Chou dynasty.

Accession of King Cheng in Ch'in.

Final defeat of Ch'u by Ch'in.

Ch'in conquers Ch'i. China unified under King Cheng, the First Emperor.

Death of the First Emperor.

Ch'u rebels destroy Ch'in army at Hsin-an. Second Emperor commits suicide.

Ch'in dynasty disintegrates. China divided between Hsiang Yu and Liu Pang.

Liu Pang defeats Hsiang Yu and proclaims Han dynasty. China reunited.

Note: All dates before 841 BC are approximate. I have here adopted the chronology based on the 'Bamboo Annals' of the 3rd century BC, which is favoured by more modern scholars, as well as being easier to reconcile with external influences, than the dates derived from Ssu-ma Ch'ien, who would place e.g. the battle of Mu in 1122 BC.

The Shang Dynasty

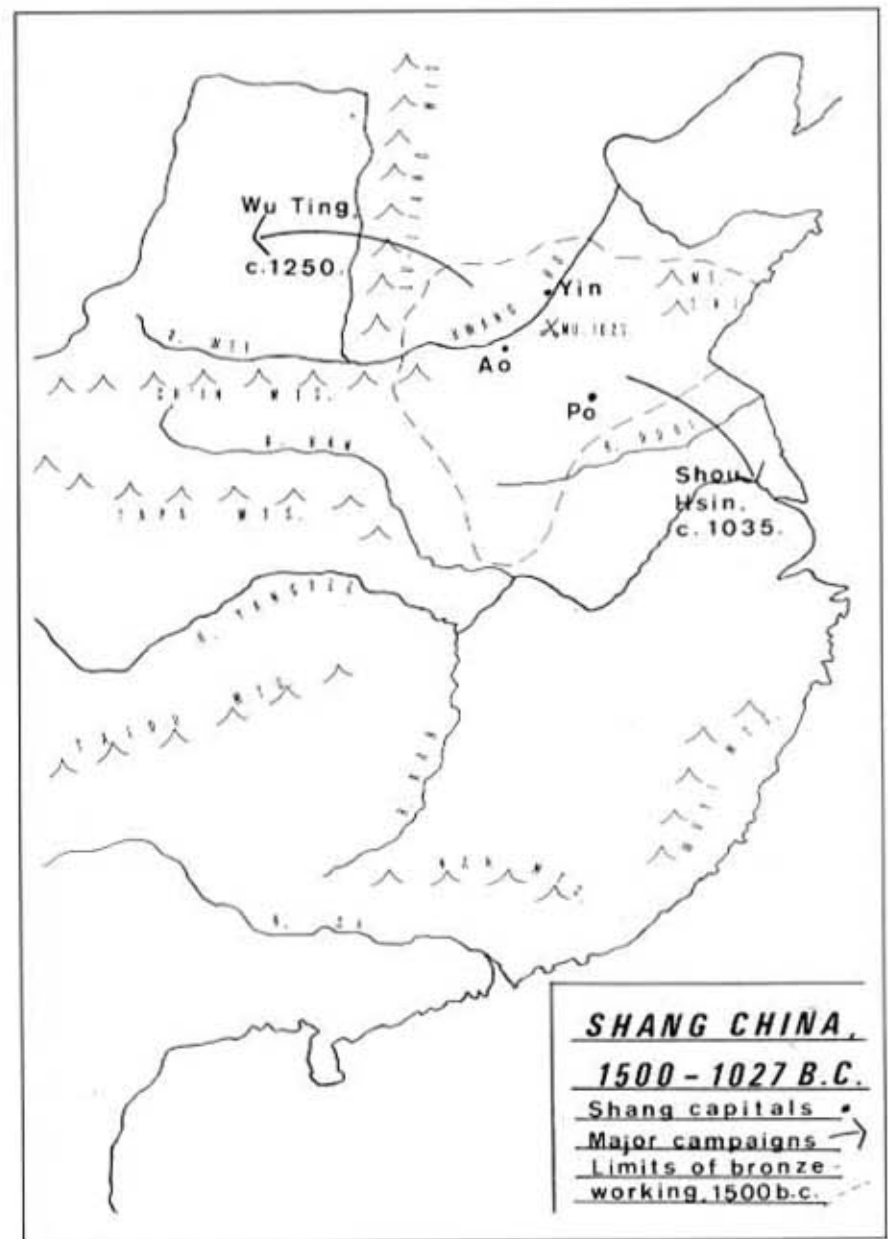
Although later tradition describes a revolt of the Shang people against an even earlier dynasty, the Hsia, culminating in the Battle of Ming T'iao in 1763 BC, it is only with the introduction of writing under the Shang that China emerges from prehistory. By the 15th century BC the valley of the Hwang Ho was dominated by a palace-based military caste which owed its supremacy to a monopoly of bronze-working techniques among a still mainly Stone Age population. There is no direct evidence for the origin of this new technology, but similarities in weapon-types suggest that it diffused into northern China via

Siberia and Manchuria. The Shang themselves, however, were certainly indigenous, as their styles of art and writing show. Their original centre of power may have been in modern Shantung, but they moved their early wooden palaces frequently, perhaps to avoid the notorious Hwang Ho floods, gradually drifting north and east down the valley. As they did so they brought an increasing number of neighbouring tribes under their rule. Shang culture as well as political influence spread over a wide area of north China, but did not yet constitute a centralised state.

The 'Book of Documents' describes a Shang sphere of influence stretching from the sea in the east to the sand deserts of the west, but only the area within a hundred miles or so of the capital was under direct royal control. Outside this were provinces ruled by Shang-influenced local nobles who often fought with each other or even with the king himself. Still further out were 'allied barbarians', mostly semi-nomadic Yi tribes which had not yet adopted Shang culture but were at least temporarily overawed; and, beyond them, the 'wild' nomads. It is likely, however, that the distinction between 'Chinese' and 'barbarians' was less clear than it later became, and that the Shang themselves were a pastoral people, relying as much on their herds of sheep, cattle and horses as on their crops.

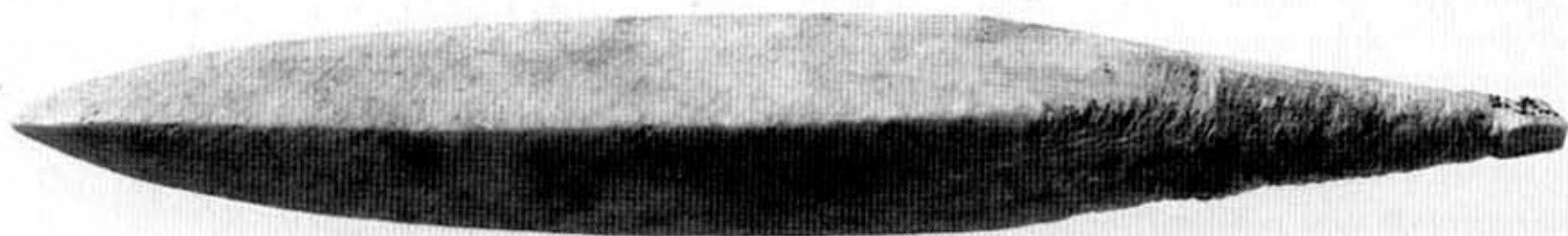
War was a means of legitimising the power of the new aristocracy, and the main aim of foreign policy was the sending out of expeditions to parade this power and gather tribute. Surrounding peoples were deliberately left unconquered to serve as an excuse for war and a reservoir of booty and prisoners; the maintenance of a steady supply of captives was important to the Shang state, as its religion relied heavily on human sacrifice. This represents a primitive stage in the evolution of international relations, in which the resources of other communities at a lower technological level are exploited in a manner analogous to a hunting expedition. In fact hunting trips and military campaigns were organised in the same way, and the distinction between them was often blurred.

The Shang nobility was held together by a complicated clan system, royal power apparently alternating among the members of ten of these



clans. This arrangement sometimes led to civil strife, but the period as a whole was one of gradual increase in state power. In about 1300 BC King Pan-k'eng moved the capital to Yin, where it was to remain until the fall of the dynasty. The palace-cities were by now on a considerable scale; it has been estimated that the defences of the 15th-century city of Ao would have taken 10,000 men 18 years to build.

By the 13th century, Shang influence had spread upriver to what is now Kansu Province, a region occupied by the people known as the Chou. The Chou adopted a compromise between the culture of the Shang and that of the steppe further west. They used bronze, and may have had chariots before the Shang. Certainly their vehicles were better made, and they had more horses. At first they appear as Shang vassals, but by the 11th century their strength had greatly increased. In about 1040 BC their ruler, Wen, was given the title 'Count of the West' by the Shang king Shou Hsin, who trusted Wen to guard his rear while he was involved in a campaign in the



Bone arrowhead from the early Shang dynasty, about 3½ in. long (9.5cm). (Reproduced by courtesy of the Trustees of the British Museum, as are all illustrations in this book credited to the Museum.)

south-east. Shou is described in Chou records as a depraved tyrant, but he may have been right to fear the growing power of Wen, who by now controlled two-thirds of the realm. At any rate, Shou imprisoned him, and Wen's son Wu led the Chou in revolt. The decisive battle was fought in 1027 BC in the wilderness of Mu. Wu occupied the central Hwang Ho valley, building forts at Hao and Lo to hold his conquests, and proclaimed the Chou dynasty. Later Chou propaganda depicts the Shang people as welcoming him as a liberator, but other data cast doubt on this. Shou had been killed, but his son led a revolt which took three years to suppress, and fighting continued in the east for generations. Eventually a Shang successor state, Sung, was allowed to survive on the lower Hwang Ho, although it soon adopted Chou military methods.

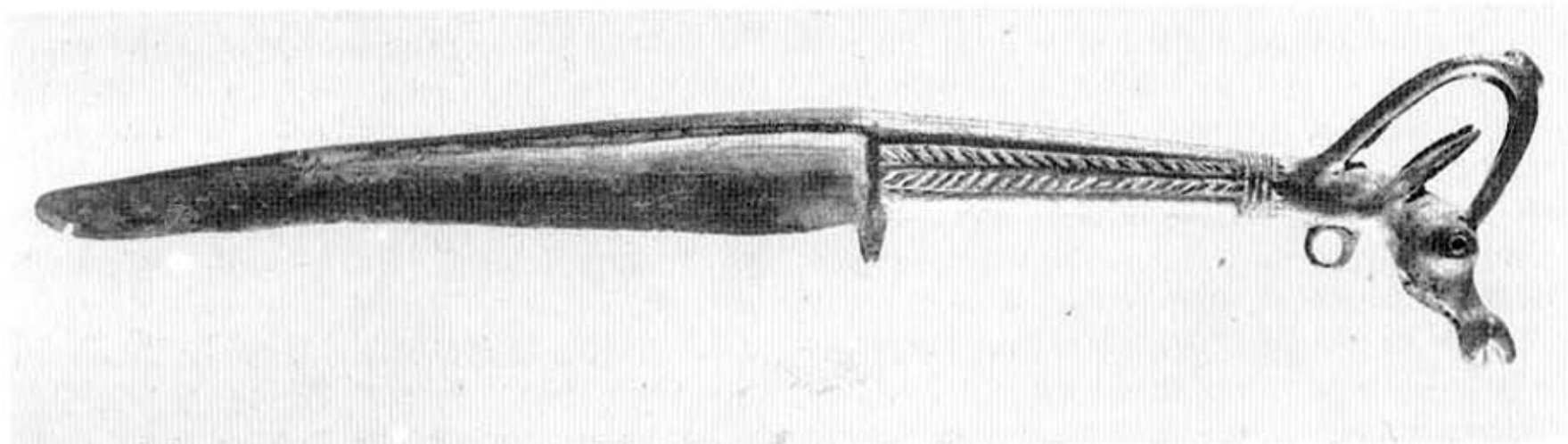
The Shang army

Shang expeditions mentioned on the oracle-bones averaged 3,000 to 5,000 strong, but in emergencies forces of up to 30,000 could be raised. Evidence for the appearance of Shang warriors can be gleaned from the pictographs used in

inscriptions, as well as from a few surviving statuettes and excavated items of armour. Weapons included bows, spears, and the *ko* or dagger-axe—a primitive weapon consisting of a blade mounted at right angles to a three- to six-foot shaft and usually used one-handed together with a shield. Conventional axes were known, but were less popular. Spears were around seven feet long, and had bronze blades; the jade spearheads often found are too brittle for combat, and presumably had a ceremonial function.

The composite recurved bow was known, usually made of strips of bamboo glued or bound together with silk and averaging four feet long. Arrows were of reed or bamboo, tipped with bronze or bone; the metal did not completely replace bone for this purpose until very late in the Shang period. Knives and daggers, often very ornate, are common in aristocratic graves. These also were originally made from bone, often that of human sacrifices, but by the 13th century bronze was more usual. Nobles could wear armour; in the early Shang this mainly consisted of breastplates made from pieces of shell tied together, but again bronze became popular later on. Bronze helmets, usually decorated with monstrous faces cast in

Bronze knife, about 24.5cm long, probably used by a Shang charioteer. The design of the handle suggests Central Asian influence. (British Museum)



relief, were rarer, and the rank and file probably did without any protection except for a leather shield stretched over a bamboo frame.

The chariot, probably an import from Central Asia, first appeared at around the time of the foundation of Yin, but was always restricted to the aristocracy. A 12th-century inscription listing the spoils of a campaign in the west gives an idea of the likely proportions: 1,570 prisoners, 15 pieces of armour, but only two chariots. Shang vehicles were drawn by two horses, although four are occasionally found in burials. The crew consisted of an archer, a driver, and often a third man armed with a spear or dagger-axe. Only the harness decorations, part of the yoke and the axle-caps of the chariots were bronze, the rest being wood, lashed or pegged together. Wheels were up to five feet in diameter with 18 or more spokes; the cab of the vehicle was low and open-fronted, enclosed only by rails. Horses were small and large-headed, reminiscent of the wild Przewalski breed of Mongolia, and were controlled by a bit and bridle made of rope.

A final possible constituent of Shang armies was the war elephant. Elephants of the Indian variety were wild in central China until the first millennium BC, and were certainly captured alive on occasions. A very old tradition ascribes the use of elephants to a minister of the legendary King Yao on a campaign against the southern tribes; and a later legend has the minister, Shun, conquering a wild brother known as Hsiang ('Elephant') by kindness. It is likely that these stories were based on a genuine memory of the use of the beasts in war, in which case it must have originated with the Shang, the first dynasty to fight in the central and southern regions where they were found. The tactic probably did not catch on because of the rapid decline due to hunting of the wild elephant, which is difficult to breed in captivity, and its limited usefulness against foes well equipped with missiles.

Armies were recruited and equipped on an organised basis. Weapon and chariot manufacture was under royal control, and there were officials with responsibility for various aspects of raising an army. Despite the immense social gap between the nobles and the peasantry the latter were not slaves, and were called up to fight when



Bronze weapons, such as this Shang dagger-axe blade from north-east China, survive much better than their later iron counterparts, and so their original appearance can be reconstructed in great detail. Note the intricate pattern on the blade. About 24cm overall length. (British Museum)



These pre-Shang mud dwellings from the upper Hwang Ho valley, reconstructed by Chinese archaeologists, may give an idea of the primitive living conditions of the rank and file as late as the end of the Shang dynasty. (Su Evans & Richard Patching)

necessary. Many would, however, have to make do with stone or bone weapons. Four grades of troops are known from inscriptions. The *ma* were the chariot warriors, supported by separate bodies of *she* or archers, the most numerous infantry type, and *shu*, close-combat troops with spears or dagger-axes. In addition there were guard units, but it is not known how they were equipped. The infantry were not necessarily all peasants; before 1300 BC the nobles fought on foot, and some guard units may have continued to do so later.

Excavated burials provide some details of unit organisation, although we cannot tell how universal they were. At Hsiao T'un the burial of a chief was accompanied by his household troops, sacrificed to protect him in the afterlife. These were divided into five units, each consisting of a chariot, five crewmen or escorts, and 25 infantry. Other burials confirm that chariots were organised into units of five and 25, but five crew per vehicle seems too many, and it is likely that two or three of them escorted the chariot on foot while the other infantry were deployed separately in battle.

Details of how expeditionary forces were supplied are lacking, but they covered impressive

distances on occasion. Shou Hsin's campaign in the east probably reached the lower Yangtze and covered over 1,000 miles, while in the 13th century Wu Ting penetrated the Inner Mongolian steppe to subdue the Ti and Wei barbarians.

The Western Chou

The Chou dynasty was faced from the start with formidable military problems. After the war against the Shang there were threats from barbarians in the south and west as well as from the dynasty's own vassals, many of them local chieftains who had simply transferred the shaky allegiance which they had previously owed to the Shang. Traditionally the Chou are seen as the inventors of the feudal system in China, but in fact they merely legitimised an existing situation. Four great feudal duchies, Yen, Lu, Ch'i and Sung, were set up under native leaders dignified with Chou titles. Elsewhere, land grants were made to the Chou and Shang nobility; a total of 71 fiefs was established, 55 going to members of the Chou royal clan. This was a shortsighted policy which ensured the temporary loyalty of those who had sided with the conquest, but left the king with insufficient land to maintain an effective royal

army. The Chou rulers had to rely on contingents provided by their vassals, the most powerful of whom were the least likely to be loyal.

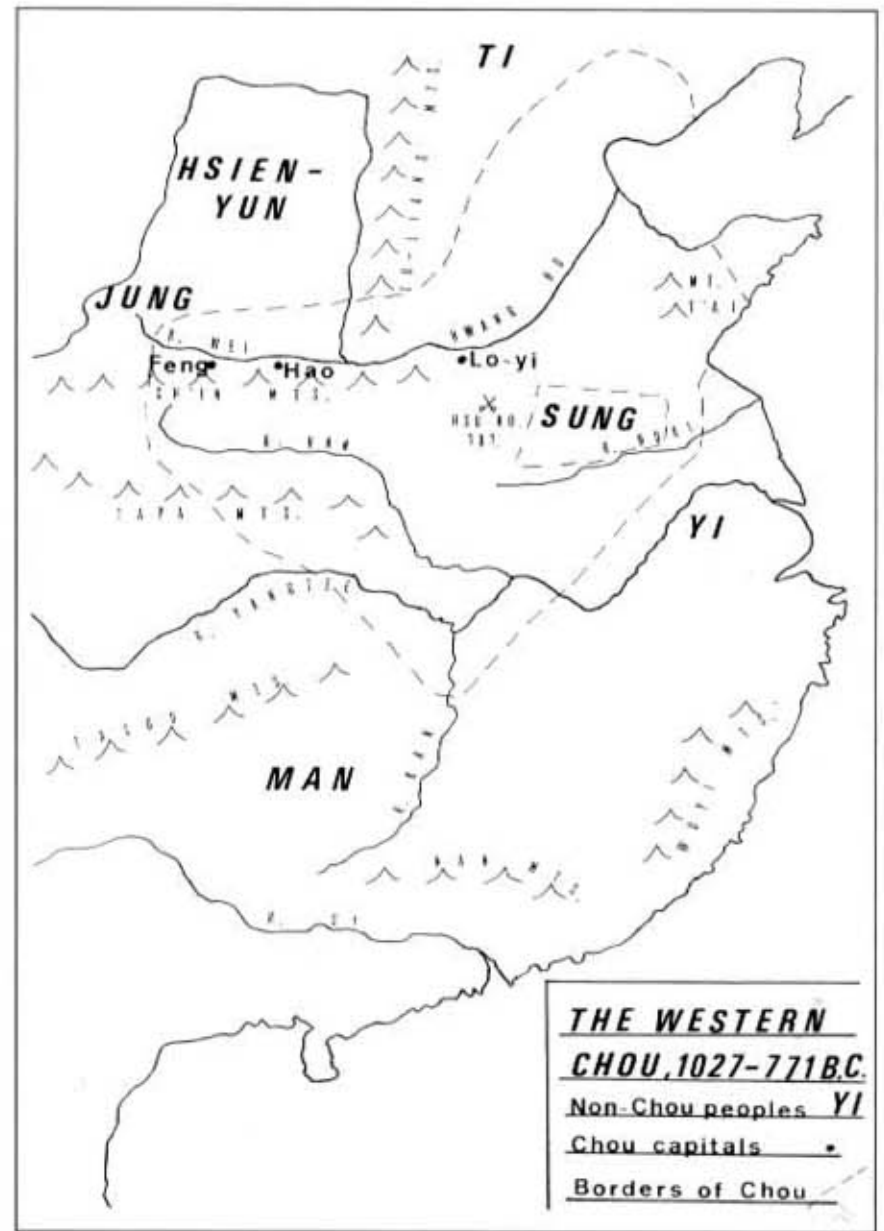
At first all went well, the Chou emphasising ritual and culture as a unifying force, and Chinese influence spread much further than under the Shang. The second and third kings, Ch'eng and K'ang, continued the struggle to contain the Shang and consolidate royal power, while their successors Chao and Mu led long expeditions into the south, where what was to become the state of Ch'u, whose rulers claimed descent from the Hsia dynasty, was precariously held in subjection. Chao's death by drowning on one such campaign was a major setback, and by the 9th century the pretensions of Ch'u were casting doubt on the Chou claim to be the only legitimate rulers of the Chinese world. By that time, the system was beginning to fall apart.

Civil war racked the realm after a coup in 841, and in 771 the Jung barbarians from the west overran the old Chou homeland. Most of the great vassals refused to mobilise against the Jung, and Hao was sacked and the court forced to flee east to a new capital at Lo-yi. Their old lands were soon recaptured, but the kingdom remained divided; and although it was briefly reunited in 750, from then on its authority was merely nominal. Over 170 effectively independent states, led by former vassals, held the real power.

In 707 King Huan attempted to assert his authority over a minister who held the fief of Cheng, but at the Battle of Hsu-ko his allies fled and the Cheng forces surrounded him. Huan was permitted to escape, although wounded with an arrow, but his power was ended, and he had to recognise the independence of his former subjects. Chou survived as a minor state until 256 BC, occasionally receiving lip-service from its neighbours but no longer of any political or military relevance.

The Western Chou army

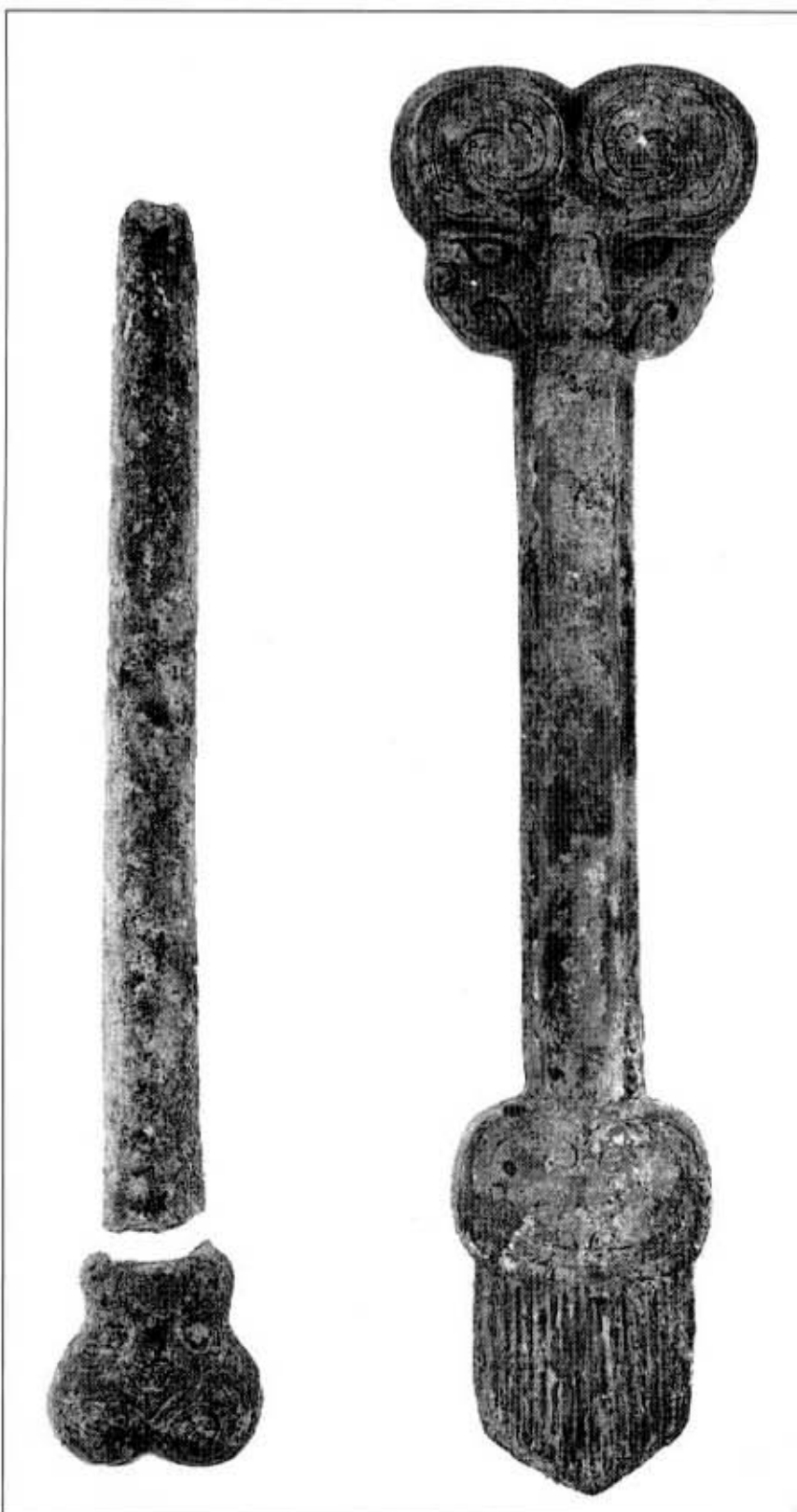
Chou armies showed a great deal of continuity from their Shang predecessors, but new forms of weapons and equipment gradually evolved. The dagger-axe now had a haft up to 18 feet in length, and was used two-handed. It also began to develop more sophisticated features; the blade



was extended down the haft to give an effective cutting edge, and the shaft itself had an asymmetrical cross-section to stop it twisting in the hand. The chariot was also further developed. Wheels became larger, with more spokes, and were dished outwards from the hub to the rim for extra strength. Four horses were usual, but rare two-horse burials are known from as late as the 7th century. Harnesses were decorated with bronze frontlets and strings of cowrie shells, and the whole vehicle was often covered with bronze bells and ornaments to the extent that it was overloaded and unnecessarily cumbersome in battle. This suggests that the chariot was valued more as a psychological shock weapon than for its mobility. Swords had been unknown to the Shang, and were not to come to prominence until the 6th century; but the early Chou occasionally used bronze swords with blades about 18 inches long. These may have been derived from Central Asia, but probably evolved from the indigenous dagger.

Otherwise weapons were similar to those of the

Shang, battle accounts emphasising chariot archery; but the Chou had their own distinctive styles of armour. These are described in the 'Rituals of Chou', which lays down guidelines for the palace armourers. One type, the *kia*, was a sleeveless coat of rhinoceros or buffalo hide formed on a wooden dummy, while another kind was known as *kiai* and consisted of leather scales on a fabric backing. This was used for corselets and armoured trappers for chariot horses, which were also protected by tiger skins. Chou bronze helmets were similar to Shang types but less elaborately decorated, and it is thought that the hood-shaped styles of the later Han dynasty were metal copies of older leather versions.



The army consisted of contingents supplied according to strict rules by vassal states. Vassals of the first rank had to provide three armies, those of the second, two, and third-rank states, one. The size of these forces is not known, but a large army of the Western Chou could field up to 3,000 chariots and 30,000 infantry. The chariot-riding nobility were the mainstay of the army, but the common people also had a vital rôle. The 'Book of Changes', a work of divination dating from the early Chou, uses as a metaphor for the army the image of water hidden under the earth, referring to the military power represented by the peasantry, and emphasises the need to deal fairly with the people in order to retain their loyalty. This conflicts with the traditional view that Chou warfare was essentially an aristocratic game, and implies that the later development of mass armies was a logical continuation of the Chou system.

Further evidence comes from the 'Book of Songs', where the peasants are described as undergoing a month's military training every year; and from the account in the 'Book of Documents' of the Chou army at the Battle of Mu, where Wu ordered his men to advance slowly in ranks and halt at intervals to keep their order. These do not sound like chariot tactics, and the passage may point to a much more highly developed rôle for infantry than is generally assumed. Confucian tradition relates that the Chou organised farmers in their domains into a system known as *ching-t'ien* or 'well-field', according to which each unit of eight families grouped round a well had to provide one recruit for the army. The system must have existed, but the version which we have is an idealisation which was probably never rigidly adhered to.

The Shang system of small-unit organisation was apparently retained. At Hsu-ko chariots were deployed in units of 25, each vehicle protected by 25 infantrymen in five ranks. Armies were generally divided into three divisions, left, right and centre, perhaps corresponding to the 'armies' which vassals were required to provide. In later periods the left took precedence, but early Chou generals were usually found in the centre.

Bronze frontlet, approx. 29cm long, part of a set of armour for a chariot horse, Western Chou dynasty. An alternative design is shown in Plate B. (British Museum)

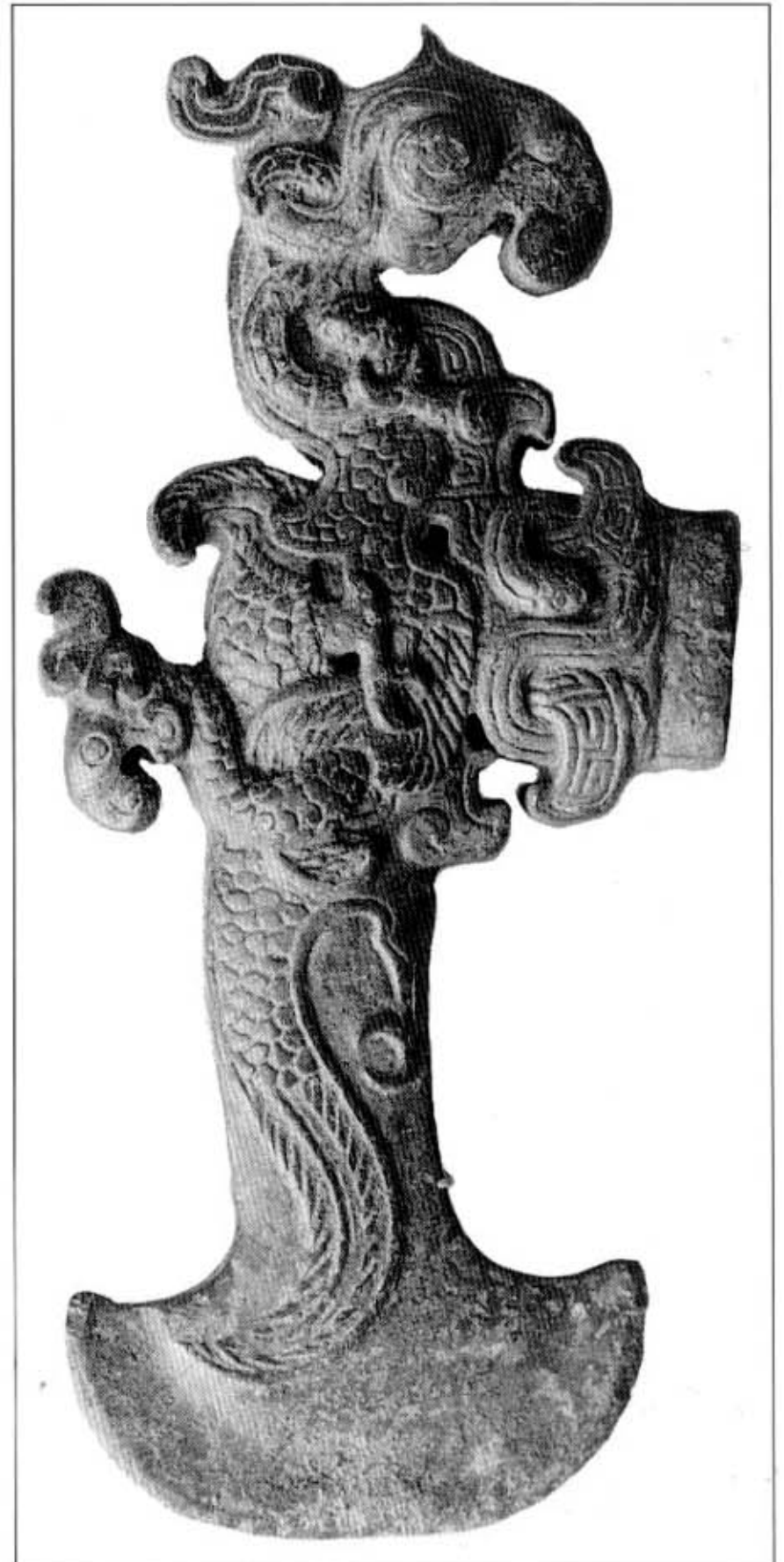
The Eastern Chou

The period between 770 and 256 BC is known as the Eastern Chou after the capital at Lo-yi. It is traditionally divided into two sub-periods: the 'Springs and Autumns', after the annals of the state of Lu, up to 479, and the 'Warring States' thereafter. A distinction is often drawn between the chivalrous, aristocratic warfare of the former period and the mass armies and ruthless professionalism of the latter. In fact the true picture was one of steady evolution, and plenty of examples can be found of ruthless generalship as early as the 8th century, and of individual heroics as late as the 3rd. Certainly there was never much respect for the rights of the smaller states, which began to be swallowed up by stronger neighbours from the 720s onwards, and where permitted to survive were usually impressed into one of the alliances led by the major powers. The hundreds of independent states were reduced by the fifth century to only eight of any consequence: Ch'in, Ch'i, Ch'u, Yueh, Yen, Han, Wei and Chao, the last three having been formed from the breakup of the old great power of the Hwang Ho valley, Tsin. There were many reasons for the success of these states, but it is significant that all were originally on the periphery of the Chinese world, and were able to expand outwards and increase their strength by assimilating barbarian peoples. The ruling house of Tsin, for example, was originally a clan of the Ti tribe, while Ch'i built up its power in the 6th century by incorporating the Yi of the Shantung Peninsula. Ch'in, Ch'u and Yueh in particular were so under barbarian influence that it was a long time before their neighbours recognised them as Chinese at all; but from the time of their first appearance in history they had adopted local forms of the political and military institutions of the central states.

The Chinese/barbarian distinction was still very unclear, and tribes usually regarded as barbarian existed between and within organised states,

living in towns and maintaining chariot forces like the true Chinese, and often supplying them with allies. The Ti, for example, fought with Ch'i against Wei in 640, and with Tsin against Ch'in in 601. After the 6th century, however, most of these tribes were absorbed or banished to the arid borderlands, and the survivors appear in Chinese records mainly as enemies.

The 8th to the 5th centuries were the time of greatest cultural differences between the states, but internally they were becoming more centralised as a civil service based on merit



Light axes were a popular sidearm in early China; this example, from its elaborate decoration probably belonging to a noble charioteer, dates from around 700 BC. (British Museum)



The 7th and 6th centuries were dominated by a series of wars between the alliance headed by Ch'u on the one hand, and the northern powers of Tsin and Ch'i on the other. The cause was the determination of the kings of Ch'u to get a bridgehead over the Hwang Ho, but northern victories at Ch'eng-p'u in 632 and Yen-ling in 575 kept them in check. Meanwhile central states such as Lu, Sung and Cheng made brief bids for power, only to sink back into obscurity. Their weakness stemmed from various causes. Sung, true to its Shang ancestry, never managed to centralise authority, and went to war under the divided command of two commanders-in-chief and a minister of war. It was defeated by Ch'u at the Hung River in 638, and eventually abandoned military ambition and took the lead in a series of unsuccessful diplomatic initiatives designed to bring about peace. Cheng, at first the leader of the northern states, was eclipsed by the growing strength of Tsin during the 7th century, while Lu remained under the control of an ancient aristocracy more interested in ritual than in warfare.

replaced the old nobility. A state's power was judged by the number of chariots it could field, and this provides us with a rough guide to the rise of the great powers: Tsin, for instance, which could muster 700 chariots in 632, had 4,900 by 537. Ch'i had only 100 in 720, but over 4,000 at the beginning of the 5th century. The age was one of endemic warfare, increasing in scale and ferocity as the states widened their ambitions. By the 5th century they were contending openly for mastery of 'All Under Heaven'.

Originally rulers had continued to be graded according to the rank system of the Western Chou, given here with the usual English translations: *Kung*, 'duke'; *Hou*, 'marquis'; *Po*, 'earl'; *Tzu*, 'viscount'; and *Nan*, 'baron'. In 704, however, the ruler of Ch'u took the title of *Wang*, 'king', and most of the big states eventually followed suit. The unofficial title of *Pa*, or 'hegemon', was given to five leading statesmen, the first being Duke Huan of Ch'i in the early 7th century, who at various times acted as 'Lord Protector' on behalf of the Chou king and exercised a form of authority over the other states, but this authority was never much more than nominal.

In 506 a new force erupted onto the scene. The state of Wu in the south-east was barbarian in origin, but had learnt Chinese military methods from a refugee Ch'u general, and had for several decades carried on a border dispute with Ch'u, originally over some mulberry trees. In 506 a Wu army invaded Ch'u, won five battles and sacked the capital, Ying. Ch'u was temporarily neutralised, although its king was later restored with the help of a Ch'in army; and Wu embarked on a rampage ending only in its destruction in 473 by an even more barbarous southern power, Yueh. The Yueh, ancestors of the Vietnamese, remained a thorn in the side of Ch'u until their final defeat in 333. However, these southerners were responsible for important innovations in the art of war, including the use of iron, which was probably transmitted via Wu from further south in around 500 BC.

The 5th century saw temporary stalemate, as the ambitions of each of the leading powers were thwarted in turn. Tsin, which had long suffered from instability, was defeated by its former allies at Ching Yang in 453, a blow which led to its disintegration and to the foundation of the three

new powers. However, economically and culturally it was an age of great progress, and the population of China increased from 12 million in 650 to as many as 40 million. Pressure on land became yet another factor driving the states into war.

Eastern Chou armies

It is not necessary to take too seriously the rules which are supposed to have governed conflict in the 'Springs and Autumns' period. For example, it was said that a state should not invade another while it was distracted by a revolt, or in the year in which its ruler died—but these were in fact favourite times for taking advantage of another's weakness. Defeated states were also not supposed to be annexed, but even the annals of the law-abiding state of Lu are full of instances of this happening. In fact there was no real difference between this and the supposedly more ruthless 'Warring States' era.

The 8th to the 5th centuries were the heyday of the chariot, which appeared in greater numbers than ever before or since, but infantry often succeeded in defeating them. For example, in Tsu in 613 a peasant revolt overthrew the ruler, and a force of 800 chariots sent by his allies to restore him was routed by the peasant army. It seems that chariots were less mobile than might be thought, and could easily be outmanoeuvred by infantry unless the terrain was perfectly level and the going firm. The result was that the enthusiasm of the common people was more than ever

essential for making war, and rulers were known to consult popular assemblies before deciding on policy.

From the late 6th century reliance on the chariot declined, in part because of the influence of states such as Wu which never adopted them on a large scale, and by 540 charioteers are found dismounting to fight in mountainous terrain. For a while chronicles continued to emphasise chariot archery between noblemen, concentrating on individual heroes such as Lang Shin, a disgraced officer who in 624 redeemed his reputation by leading a suicidal charge of the Tsin charioteers against Ch'in at P'ang-ya, gaining the victory almost single-handed. But by 500 the sword was beginning to gain popularity, and from this time swords start to predominate over bows in battle narratives, sword and shield being apparently regarded as a superior combination for infantry fighting to the spear or dagger-axe. In 520 a Ch'i army routed the troops of Hua by throwing away its long weapons and charging on foot with swords, a move which no doubt gained a moral advantage as it implied a greater eagerness to risk close combat. Even at this early date there does not seem to have been much objection to the use of deception, or to taking advantage of an enemy's misplaced sense of honour. 'Tso Chuan' relates how in 520 a certain P'ao of Hua missed the Tsin general Shing with an arrow, and was about to

Bronze dagger and scabbard from the early Eastern Chou period. (British Museum)



shoot again when Shing called to him, saying that it was unchivalrous to take two shots without allowing him to defend himself. P'ao lowered his bow, and was immediately shot dead.

Organisation and tactics were highly developed. The traditional three divisions were still used, but this could be varied if necessary. At Che in 717 three Cheng forces were used to pin the enemy frontally while a fourth worked its way round the flank; while in 540 Tsin fought in five bodies against the Ti. Infantry were deployed five deep, either with the chariots or as a body in the centre; and a remark in 'Wu Ch'i's Art of War', that tall men were given missile weapons and shorter men spears and halberds, implies that archers could be deployed behind the spearmen to shoot overhead. Tactical formations such as 'crane and goose' and 'fish-scale' are mentioned, the latter placing the chariots in line in front with infantry behind. All arms were subjected to a ferocious code of discipline; in 540, for instance, a Tsin nobleman was beheaded for refusing to fight on foot when ordered.

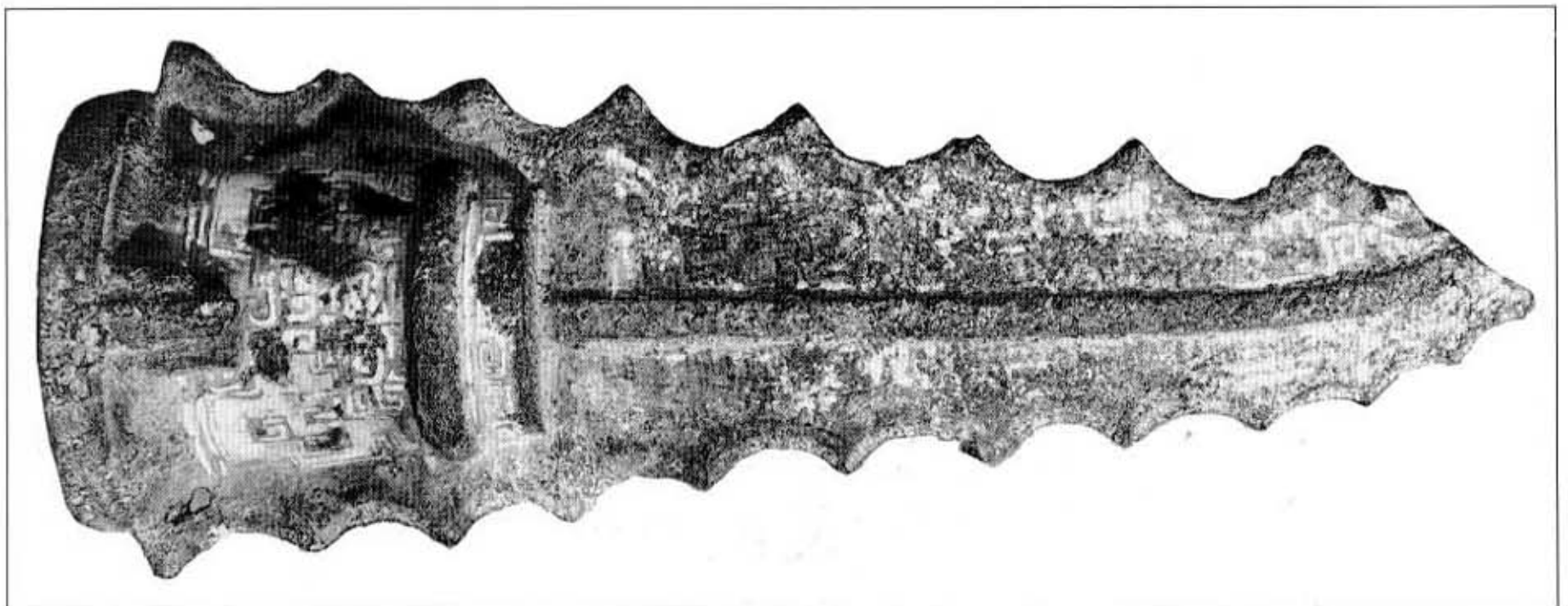
Continuous warfare accelerated developments in weapons and equipment. The chariot still carried three crewmen—a driver, an archer on the left, and a man armed with spear or dagger-axe on the right. Wheels now had up to 26 spokes, and the old nine-foot chariot pole, a source of

Blade for chariot axle, 5th to 4th centuries. Although the Chinese chariot was not designed for breaking up infantry formations in the manner of the scythed Persian variety, such an attachment would deter infantrymen trying to climb aboard, and might damage the wheels of enemy chariots not so equipped. (British Museum)

structural weakness, was shortened to six feet. Cabs were covered with leather to protect the crew, and a canopy or parasol began to make its appearance, although this may have been removed in battle. Four horses were now standard. Some chariots were also equipped with serrated bronze blades about a foot long on the axle-caps. Paradoxically, despite the increase in vehicle numbers, archaeological finds of bronze chariot-fittings are much rarer from the Eastern Chou than from earlier centuries; this may reflect the fact that chariots were now state property and were reused rather than buried with their owners, but it is also likely that they had become more functional and less hampered with excessive decoration.

Armour and bows were similar to earlier types, but the dagger-axe continued to evolve, and by the 4th century the addition of a spear-blade to the end of the shaft had turned it into a true cut-and-thrust weapon or halberd. Spears and dagger-axes fell into two groups, one about nine feet long, the other around 18 feet. Swords were still of the short stabbing type; blades were still bronze, but from the 5th century iron began to appear, the states of Ch'u and Han being known for their weapons of low-grade steel. Iron smelting technology, however, remained very primitive until the 2nd century BC, and the metal could not replace bronze for most military purposes.

Another development of this period was the crossbow, ascribed to Ch'in Shih of Ch'u in the 6th century. The maximum range of this weapon was said to be 600 paces, but its advantage over



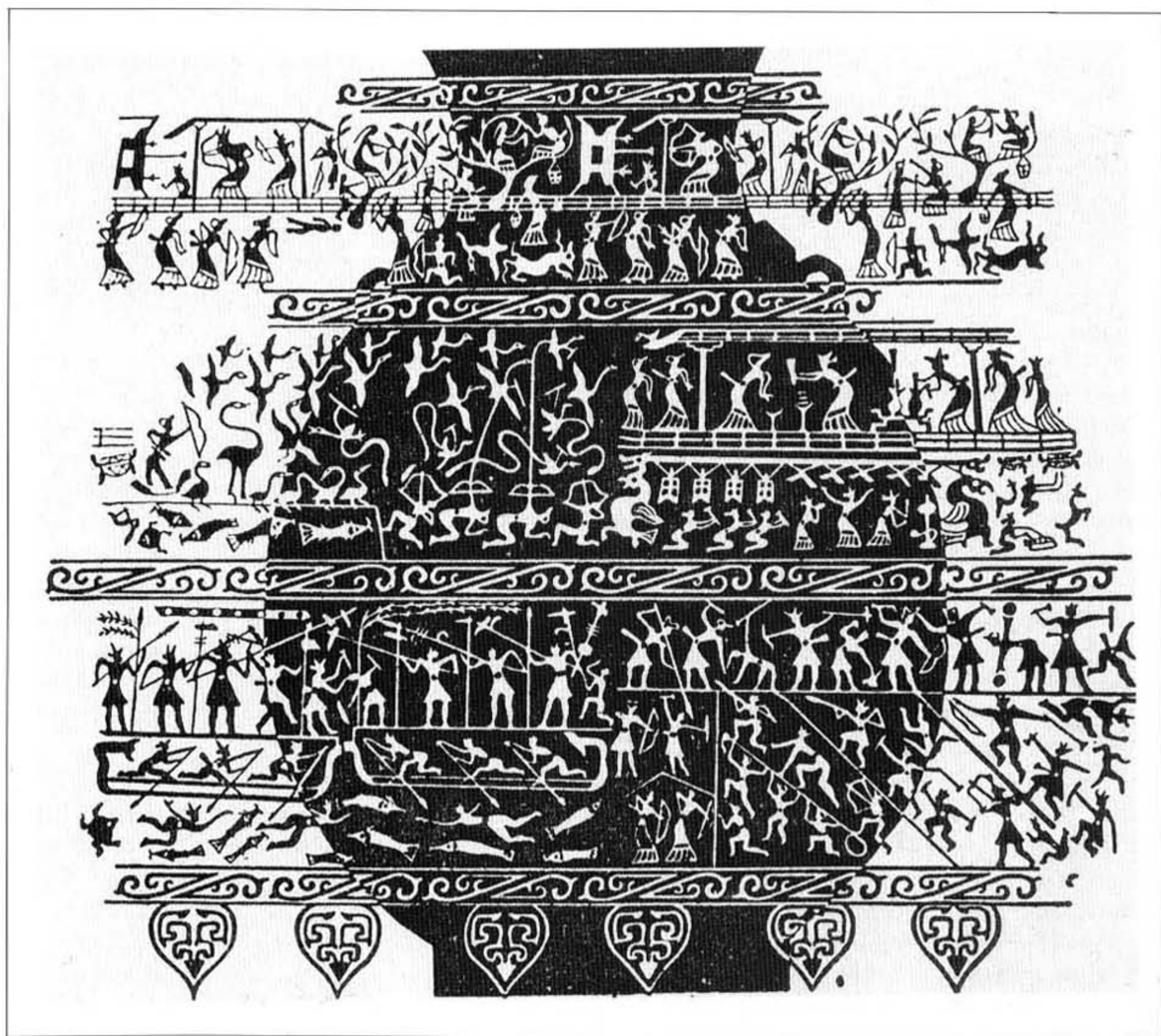
the conventional bow lay in its penetrating power at short range, and because of its slow rate of fire it was at first most popular for defending towns. By 340, however, it was in use in pitched battles and may have contributed to the decline of the chariot, which as a large, slow-moving target, protected only by leather, must have been very vulnerable.

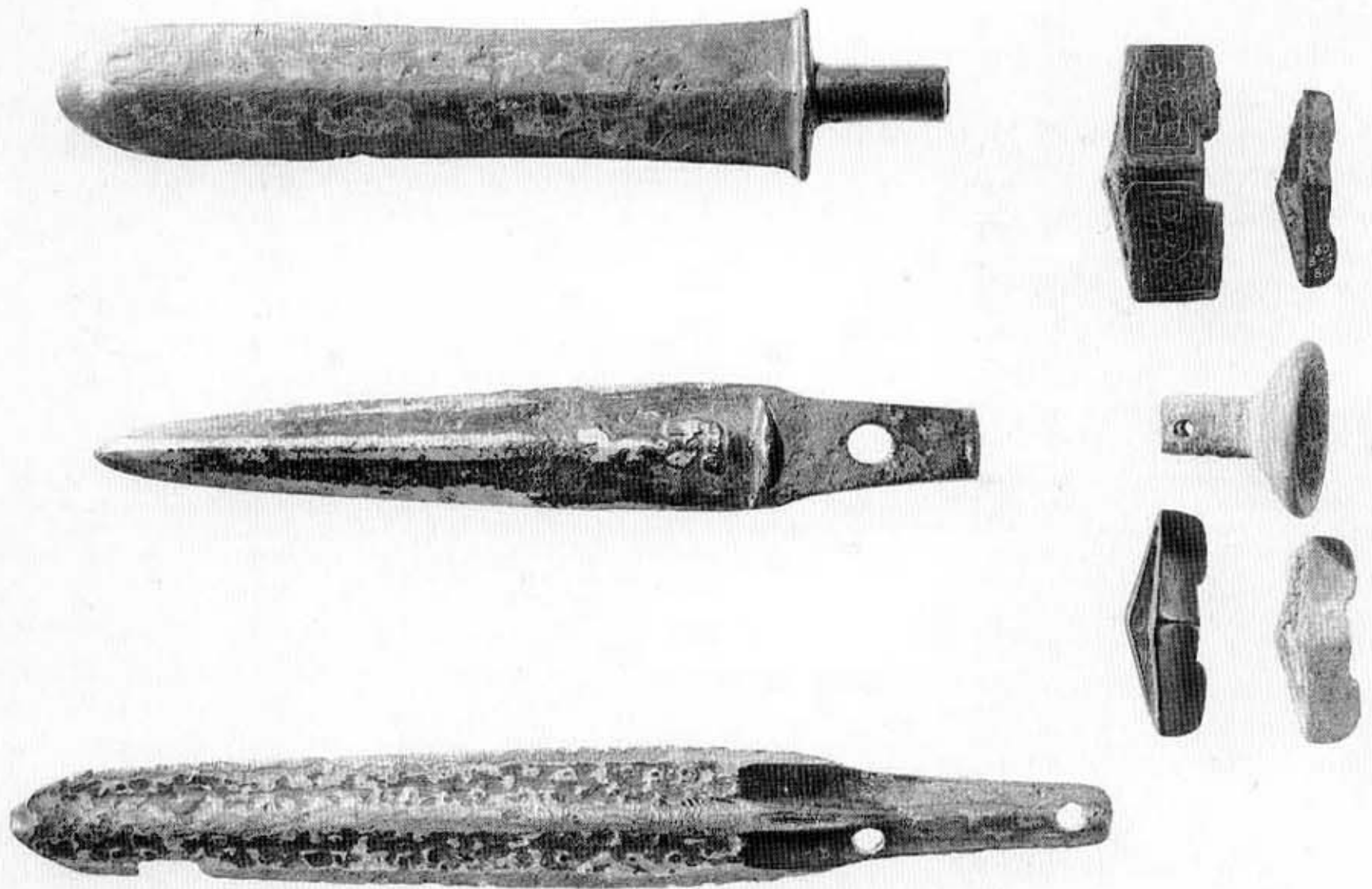
Two peculiarities of southern warfare in this period are of interest: the use of convicts and of elephants. Wu pioneered the employment of condemned criminals as suicide troops at Ke-fu in

518, when 300 were lined up in the van and launched in an attack on the Ch'u army before it was properly deployed. At Tsui-le in 496 the Yueh went one better when, unable to break the Wu line, they sent three ranks of convicts out between the armies. These unfortunates were threatened with reprisals against their families, given swords, and ordered to cut their own throats. The Wu troops, transfixed by this gruesome sight, were taken unawares and overrun by the Yueh. Southern warfare in general was waged with a savagery unknown to the

Relief on 5th-century vessel, showing scenes of archery practice (top left), siege warfare (bottom right), and an amphibious battle (bottom left). Wu and Yueh in particular were great naval powers, and often accompanied their invasions of Ch'u with large river-based fleets. Note the

standards (lower left) resembling leafy branches attached to spears or staffs. These are common in early art, also being shown flown from the rear of chariots, and are presumably the yak-tail standards mentioned in written sources. (Thames and Hudson Ltd.)





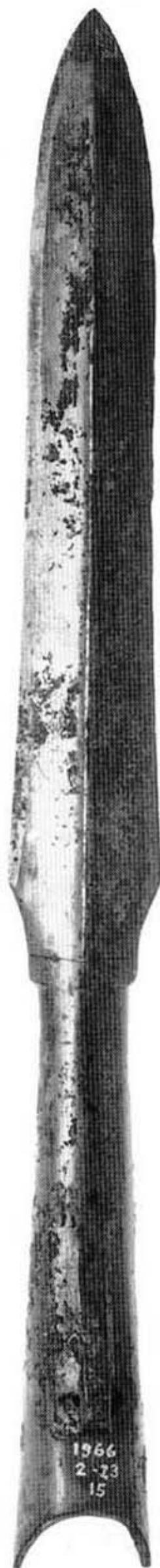
A selection of bronze swords, 4th to 3rd centuries. Such short and relatively primitive weapons were typical of the Eastern Chou period. (British Museum)

northerners; casualties were far higher, and the total collapse of Wu and Yueh can probably be attributed to the excessive strain on their manpower. Before its overthrow by Yueh, Wu was completely exhausted by its campaigns, and the 'Tso Chuan' describes how the bones of its warriors covered large areas of the border with Ch'u 'like weeds'. In 506, in a desperate attempt to save Ying from the Wu army, Ch'u deployed a force of elephants of unknown strength, but the ploy was unsuccessful and the city fell soon afterwards. It is usually said that the elephants had torches tied to their tails, but this interpretation is uncertain. Probably they were led by men with torches, who then used them to stampede the frightened animals into the Wu ranks. There is no mention of men actually riding them, and whatever the outcome the experiment was not repeated.

Methods of raising an army varied from one state to another. Duke Huan of Ch'i introduced in

the 670s a formal system which gave him an advantage over the often haphazard levies of his rivals. Every family provided one militiaman with obligation to serve whenever required, the families being grouped into three provinces of five districts each. This system provided three armies, each of five divisions. Three armies were usual for the larger states, a survival from the organisation of the Western Chou, but smaller ones fielded only one or two. Lu, for example, reduced its establishment from three to two, briefly increased it again to three, but was unable to sustain this burden and reverted to two. This implies that armies were of a universally standard size, but details are lacking.

Military expeditions were of two types: *fa*, a formal march with drums beating, and *ch'in*, a stealthy raid or surprise attack. The latter was a favoured way of augmenting supplies by stealing the harvest from a neighbour's fields, but by the 5th century most states had grain surpluses and this type of campaign became less common. Promotion and merit were originally gained by bringing back the heads or ears of dead enemies, a



practice particularly popular in Ch'i and Ch'in, but in most states this custom was discouraged by the 4th century as it made the maintenance of order on the battlefield impossible. Prisoners were still sometimes sacrificed and their blood smeared on the drums as a way of invoking divine aid. The consultation of oracles before battle was another time-honoured tradition, but by the end of the period a sceptical attitude, derived from Confucian influence, was gaining ground.

The 4th and 3rd Centuries

During the 4th century BC, while the central and northern states squabbled over the remains of Tsin, further developments were taking place on the frontiers. In the south-west new semi-barbarian powers were arising. Shu and Pa, pastoral territories inhabited by tribesmen known for their wild songs and dances, became organised under dynasties founded by exiles from Ch'u; but the most ominous cloud on the horizon was the rise of Ch'in. This state had its origins in a fief in Kansu granted by the Chou to a minor aristocrat in 897 so that he could raise horses for the royal armies. Its early history was a long series of wars against the Jung tribes, but in 623 a decisive victory was won, and by 400 the Jung had been absorbed into the growing state. Gradually, as the chaos further east allowed it to expand, Ch'in crept eastwards, despite a serious defeat by Tsin in 576, and in 350 set up its capital at Hsienyang in an area known as the 'land within the passes'. This, the upper valley of the Wei River, was a natural stronghold which enabled Ch'in to build up its power in security. It was said that a force of 20,000 could hold the passes indefinitely against a million men.

Ch'in was a culturally backward land, playing only a minor part in the events of the 8th to the 5th centuries; the turning point came with the reforms of Lord Shang, a brilliant minister who after the middle of the 4th century set out to convert Ch'in into a totalitarian state. The people were warlike but manpower was limited, so Shang

Bronze spearhead from Ch'u, 5th to 4th centuries. See Plate D2 for a reconstruction of a similar type. (British Museum)



started irrigation schemes to increase the amount of agricultural land, and for the first time allowed land to be bought and sold. Peasants from all over China therefore flocked to Ch'in in search of land of their own. Every man was a soldier, and 20 grades of military and civil nobility were introduced, based solely on the number of heads cut off in battle. The result was that everyone was not only willing but eager to fight. Ch'in was also helped by its relative primitiveness, freedom from tradition and willingness to adopt new ideas. It was also used to employing aliens from other states in the army and government, and so was able to attract the best talent from many sources.

Shu and Pa, conquered in 316, were the first victims of Ch'in expansion. Ch'u was then drawn into a long war in which neither side seemed able to gain a decisive advantage, despite the capture of the Ch'u king Huai in 299 and the sack of Ying in 278. 'Chan-Kuo Ts'e' describes the problems caused for Ch'u by Ch'in bases far up the Yangtze from which rafts, each carrying 50 men with supplies for three months, could float downstream

Detail of bronze sword blade from Yueh, Eastern Chou period. The style of decoration is a southern variant of earlier northern patterns. (British Museum)



to Ying in only five days 'like a swooping hawk', long before troops could be deployed to meet them. One result of this war was the spread of Chinese military systems still further south and west. In the 290s the Ch'u general Chuang Chiao, who had been sent to subdue the barbarians of Yunnan, finding his way home blocked by a Ch'in invasion, remained in Yunnan with his army and set up the state of Tien. This remote region remained isolated and was never conquered by Ch'in, but it adopted many items of Chinese technology, such as bronze armour and the crossbow.

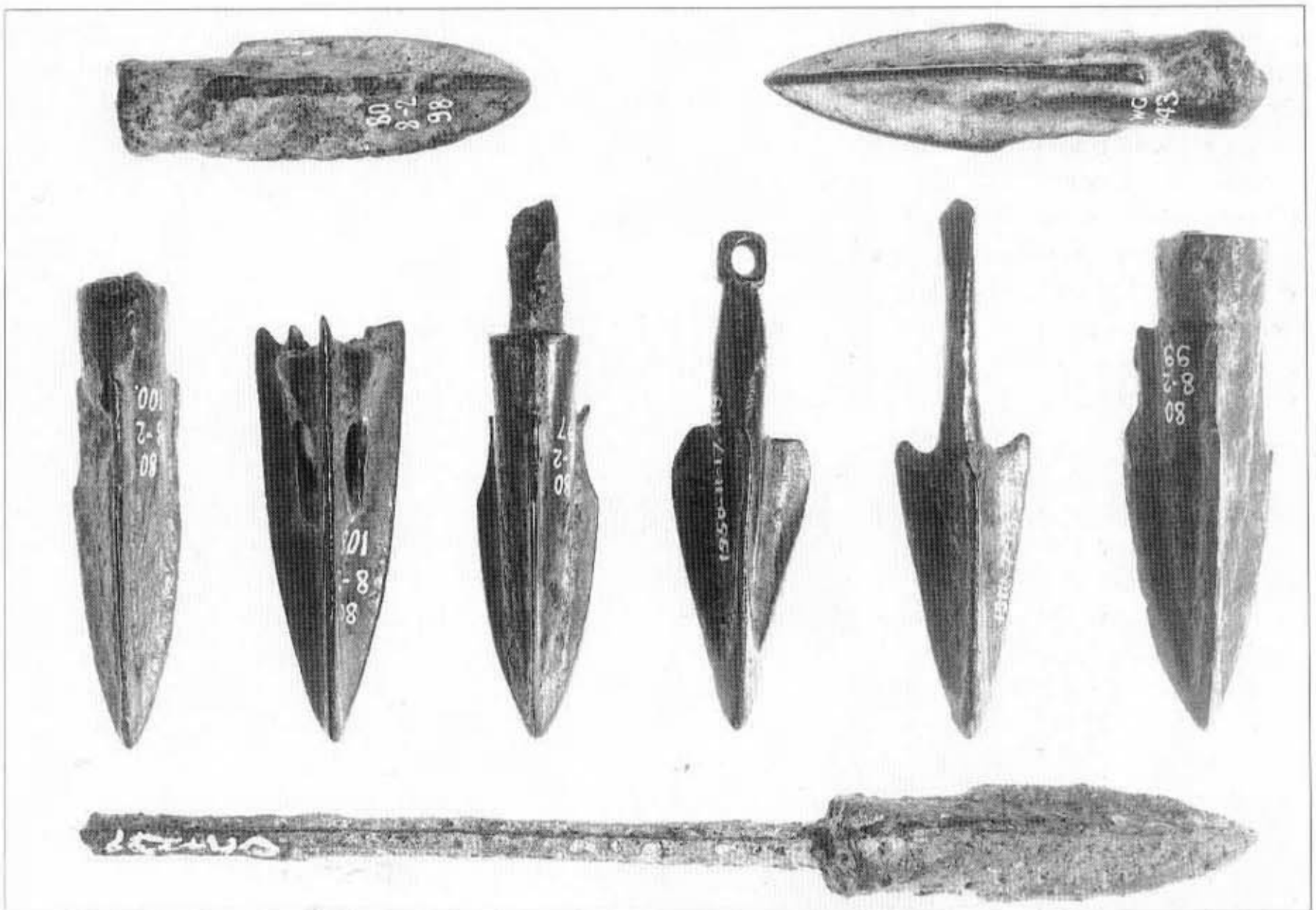
War broke out in the north-east in 285, when Yen took revenge for intervention in its internal affairs by invading Ch'i, defeating its armies and overrunning its territory. Ch'i resistance centred on the city of Chi Mo, from which the hero T'ien Tan led a campaign which eventually liberated the country. From then on, however, the history of the 3rd century is that of a monotonous series of victories by the Ch'in forces, aided by continuing quarrels among their victims. As Ch'en Chen of

Wei put it, 'our states boil one another alive, and Ch'in need not even supply the faggots'.

In 260, at Ch'ang-p'ing, the Chao army was surrounded and allowed to surrender on terms, but the Ch'in soldiers, eager for their quota of heads, killed the prisoners in cold blood. In 238 King Cheng, the future Ch'in Shih Huang Ti, the First Emperor, came of age and took over direction of the campaigns, aided by his minister Li Ssu. In 228 Chao was finally destroyed, and although a reverse was suffered at the hands of Ch'u in 226, three years later Ch'u fell to General Wang Chien. The other states followed in quick succession, the last being Ch'i in 221; and by the end of that year the Chinese people were united for the first time in over five centuries. No depth of treachery seemed too low for Ch'in; Huai of Ch'u, for instance, was kidnapped and imprisoned while visiting Ch'in under a safe conduct to discuss peace terms.

States involved in this kind of total war had to

A selection of bronze heads for arrows and crossbow bolts, late Eastern Chou. (British Museum)

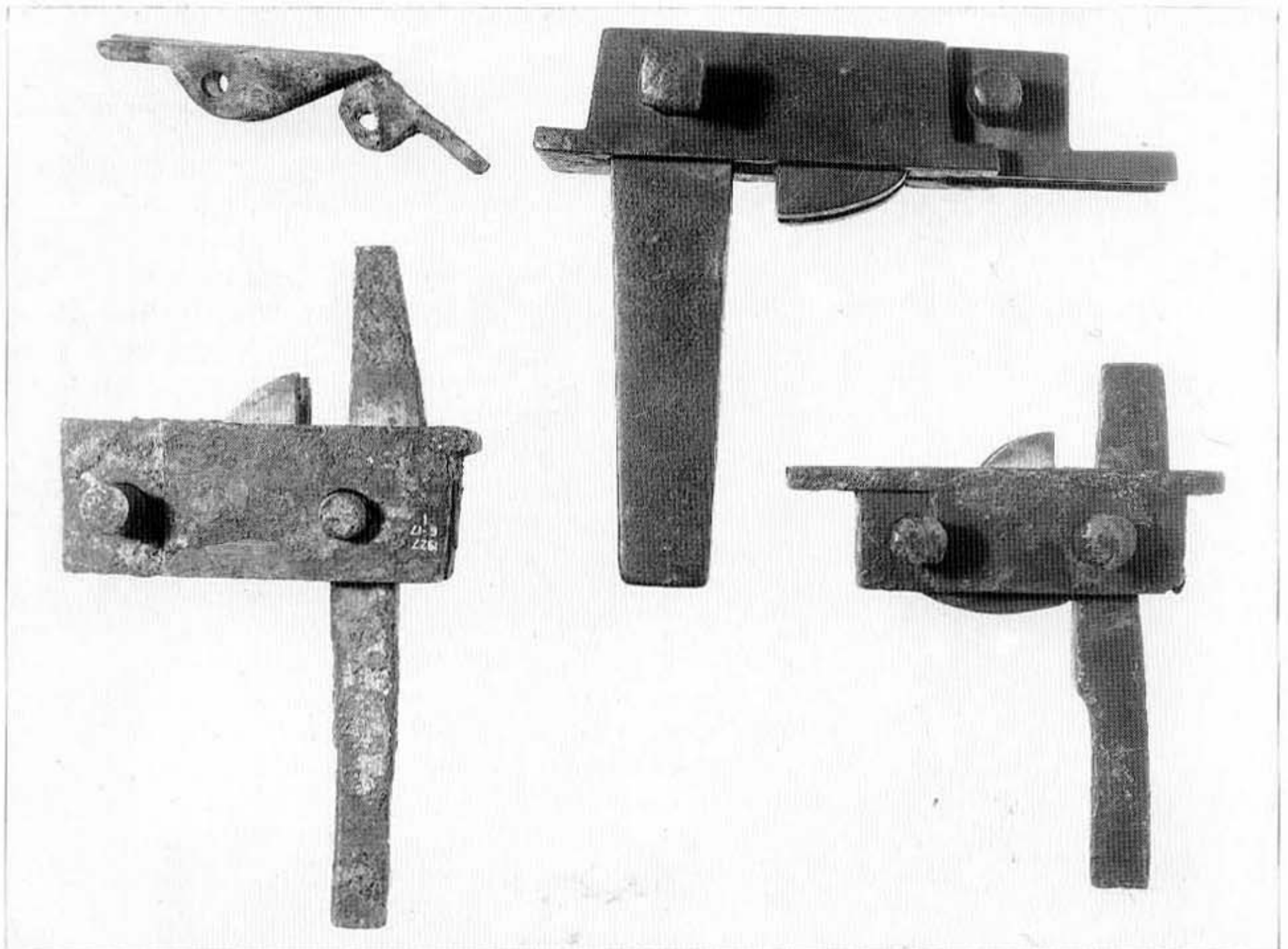


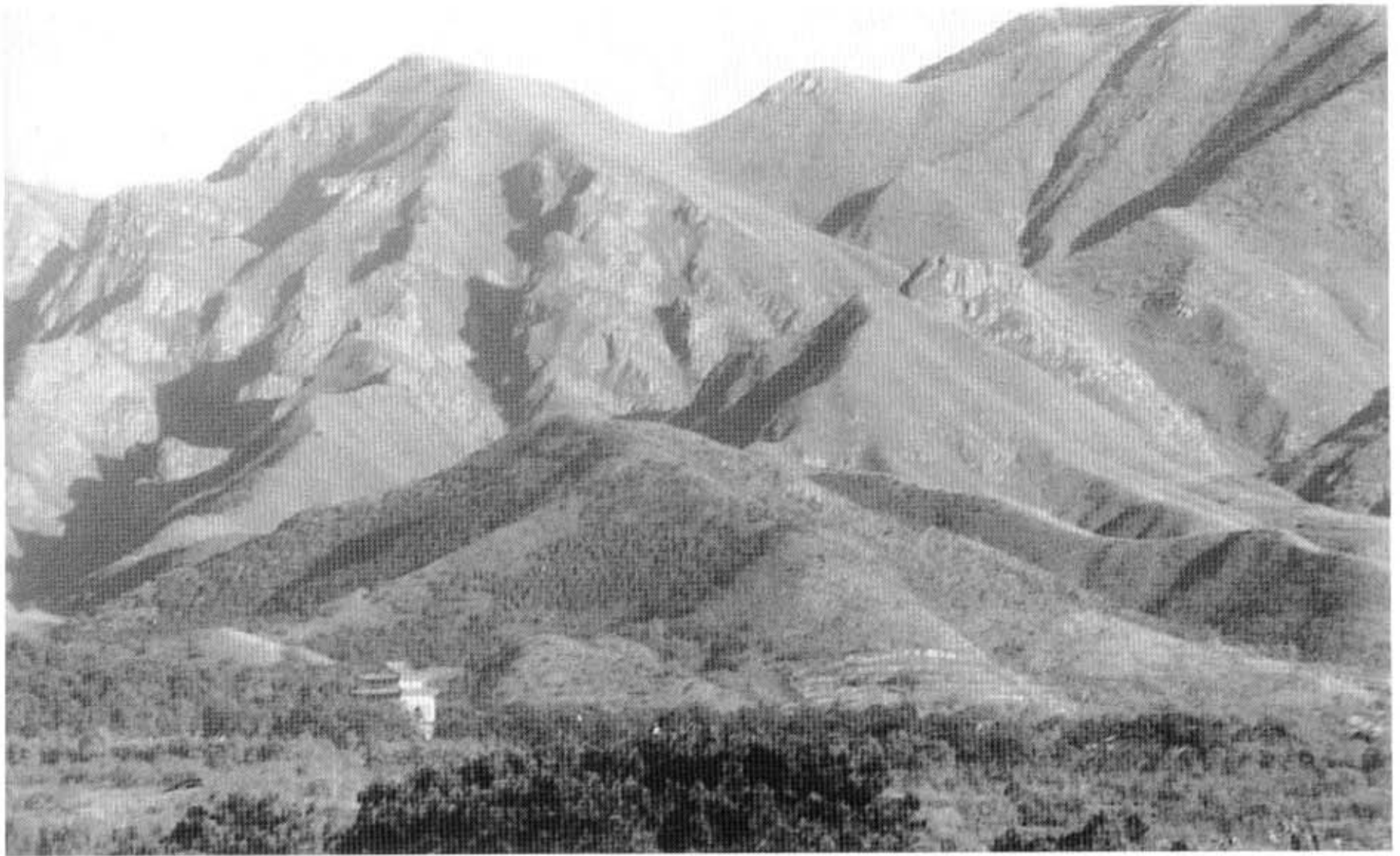
conscript every man available, and many of their armies were huge by pre-modern standards. Ch'in forces up to 600,000 strong are mentioned, and although this must be an exaggeration, 'Sun Tzu's Art of War' considers armies of 100,000 as commonplace, and accompanies these figures with a detailed analysis of costs which suggests that they are more than just a guess. In fact, careful estimates of an enemy's strength carried out in the temples had largely replaced the use of oracles by the 4th century, so at least roughly accurate figures must have been available. 'Chan-Kuo Ts'e' contains a discussion on this question in which armies of only 30,000, such as were usual in earlier times, are dismissed as inadequate for 3rd-century conditions.

Bronze trigger-mechanisms for crossbows, 4th to 3rd centuries. The secret of this precision mechanism was for centuries a vital advantage for the Chinese in their struggles with the barbarians who, although they often captured examples, were never able to duplicate the workmanship involved. (British Museum)

Such multitudes could not be adequately supplied overland in the absence of proper roads, and although water transport was used where possible, the 'Sun Tzu' recommends feeding them by foraging in enemy territory. The effects of plunder on this scale must have been disastrous, and it is not surprising that famine and disease began to make their appearance. The 'Sun Tzu' remarks that 'an army which does not suffer from one hundred diseases is said to be certain of victory'.

At about this time the study of war became an important theme in the writings of Chinese philosophers; and the works of Hsun Tzu, a follower of Confucius, illustrate different attitudes to such questions as recruitment and maintenance of morale. In a debate at the court of the king of Chao in 260, Hsun Tzu and Lin Wu-chun put forward two approaches to the problem of dealing with the Ch'in invasion. The latter advocated reliance on strategy and the hiring of mercenaries,





but Hsun Tzu somewhat naively argued that it was sufficient to gain the support of the common people by enlightened policies, believing that an aggressor's troops would not fight against a virtuous ruler. Both, however, agreed on the need for strict discipline, condemning many contemporary commanders who disregarded this as no better than bandits.

Armies of the 4th and 3rd centuries

The chariot continued to be employed as a shock weapon until the end of the period, but it was nearing the end of its career and no further significant development took place. By 300, cavalry was starting to take over many of its rôles. Horse-riding by individuals is attested as early as the 6th century, but the first Chinese cavalry units were not raised until 307, when Wu Ling of Chao forced his men to adopt the dress and equipment of the Hu barbarians. This was initially regarded as a betrayal of Chinese culture, but its advantages were obvious; and it soon spread among the northern states, where the terrain was open and the threat from mounted steppe nomads greatest. The first horsemen were recruited from conscripted peasants and nomad mercenaries, but

Cavalry country; in contrast to the broken, marshy country of the south, the drier terrain of north China encouraged the use of horses in warfare. This view shows the horse-raising area of the ancient state of Yen. (Rev. P. Ward)

by the end of the 3rd century mounted combat was respectable even for a Chinese gentleman. Chao, Ch'in, Wei and Yen were the leading cavalry exponents of the early 3rd century, Ch'in and Wei in particular being unpopular with their neighbours because of their use of undisciplined Hu tribesmen.

The horse of the period was still the small Mongolian breed, and partly for this reason early cavalry was mainly light, equipped with the bow and noted for mobility rather than close combat skills. By the end of the 3rd century, however, at least a few horsemen wore armour. It is not certain whether mounted crossbowmen were in use this early. It is usually thought that they had to await the development of a belt-hook device for cocking the weapon, which otherwise had to be drawn by standing on the bow and pulling up with both hands; but Han armies had them by 170 BC, and the use of a light crossbow which could be cocked with the arms alone is not impossible.

By this time the sword was overwhelmingly the most popular weapon for close combat. Armour, now common for at least élite infantry units, was still often of leather, but metal protection was beginning to appear. The Ch'in terracotta warriors depict several styles of body armour, formed from plates riveted or laced together, in colours which suggest iron, bronze and probably leather. Similar coats of iron plates dating from the mid-4th century have been excavated. It used to be thought that Ch'in owed its military supremacy to its adoption of iron weapons, but recent research does not bear this out. Iron swords and spearheads were in fact more common in Ch'u, and Ch'in bronze-casters were able to make blades at least as good as the brittle cast iron of the time. Ch'in swords could be coated with a chromium alloy to improve their sharpness, and the technique may have been known elsewhere. The state of Han was noted for the excellence of its arms and equipment, particularly bows, cross-

bows, swords and halberds. 'Chan-Kuo Ts'e' describes its troops as all equipped with iron face-masks and thumbings, which implies that all were trained as archers.

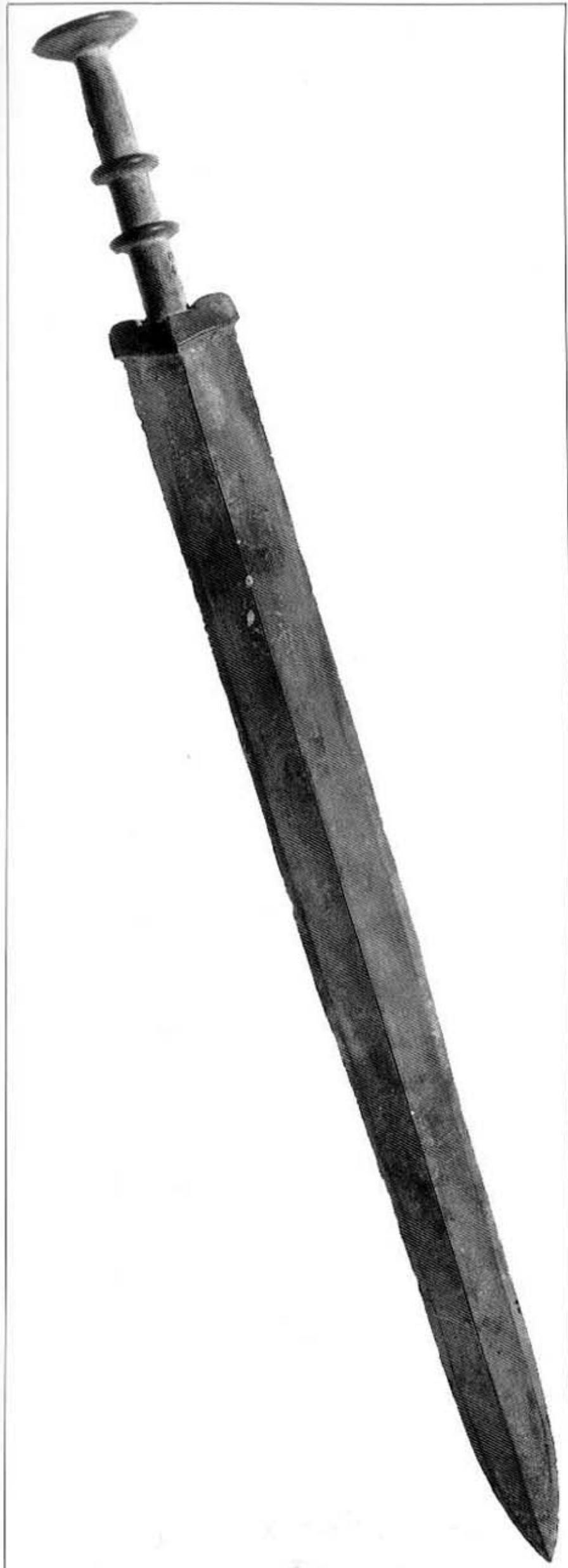
The system of organisation by fives was still in force, an infantry squad sometimes being formed from three spearmen supported by two archers or crossbowmen, but missile troops could also be deployed separately. A larger unit consisting of a chariot, three crewmen and 72 infantrymen accompanied by a baggage wagon and 25 grooms, cooks and servants may have been administrative rather than tactical; by the 3rd century we read of officials specifically responsible for administration and supply.

A division of the army into five bodies was now usual, denoted by a system of flags: *Left Wing*, Green Dragon; *Right Wing*, White Tiger; *Vanguard*, Red Bird; *Rearguard*, Black Tortoise; *C-in-C with Bodyguard*, Great Bear constellation.

Elite infantry guard units were now popular; those of Ch'u were armoured crossbowmen who were trained for seven years and could march 100 miles 'without resting'. Other élite formations were the *ch'i* or extraordinary forces, whose main

Lid of a bronze cowrie-shell container from Yunnan Province in the far south-west, with a battle scene showing warriors of the Tien and Kunming peoples—see Plate F2. (Cultural Relics Publishing House, Beijing)





function was surprise. They were selected from the strongest and bravest men, often by drafting one from each five-man squad. 'Wu Ch'i's Art of War' suggests other sources for shock troops, such as men who have disgraced themselves and wish to make amends by acts of courage. The *ch'i* units would not have been distinctively uniformed, as they were relied upon to deceive the enemy after the ordinary troops had pinned him. Sun Tzu's advice is to 'use the ordinary forces to engage; use the extraordinary to win'.

Wu Ch'i has some interesting information on the characteristics of the different states' armies. Ch'in forces were brave but lacked discipline, as everyone fought for his own profit. They were best dealt with by luring them into a pursuit and ambushing them. This is supported by other sources which describe Ch'in soldiers as charging fanatically, even throwing off their armour in a kind of berserk rage.

Ch'u, on the other hand, was not highly regarded; the land was rich, but the people were lazy and lacked stamina. Hsun Tzu's comments on Ch'u are similar; he remarks that they were defeated by Ch'in not because they lacked good armour and weapons, but because they did not know how to use them. This may have been partly due to the unhealthy malarial climate, but in the revolt of 209 the men of Ch'u were regarded as worth ten of any other troops. Ch'u was the victim of a lot of unfair prejudice, its inhabitants being disparaged as semi-barbarians or 'monkeys with hats on'.

Yen soldiers are described as 'stupid and honest', knowing nothing of strategy and preferring the defensive; while the army of Ch'i was unreliable, as the government was corrupt and inspired no loyalty. Han, Wei and Chao were well organised but war-weary, and their officers were badly paid and so of poor quality. It should be remembered that these comments are not valid for all periods, and of course contain an element of bias, but they are a useful corrective to the idea that all Chinese were alike. Regional differences were reduced by the 3rd century, however, by the

Bronze sword of a later type, 3rd century. Well balanced for cutting and stabbing, this type—here about 46cm long—was to develop into the long sword of the Ch'in period seen in Plate C. (British Museum)

practice of incorporating prisoners of war into the captor's forces. Whole armies were sometimes added to the strength of a state in this way, and where possible would be transferred to a distant frontier to reduce the risk of them defecting again.

The Ch'in Empire

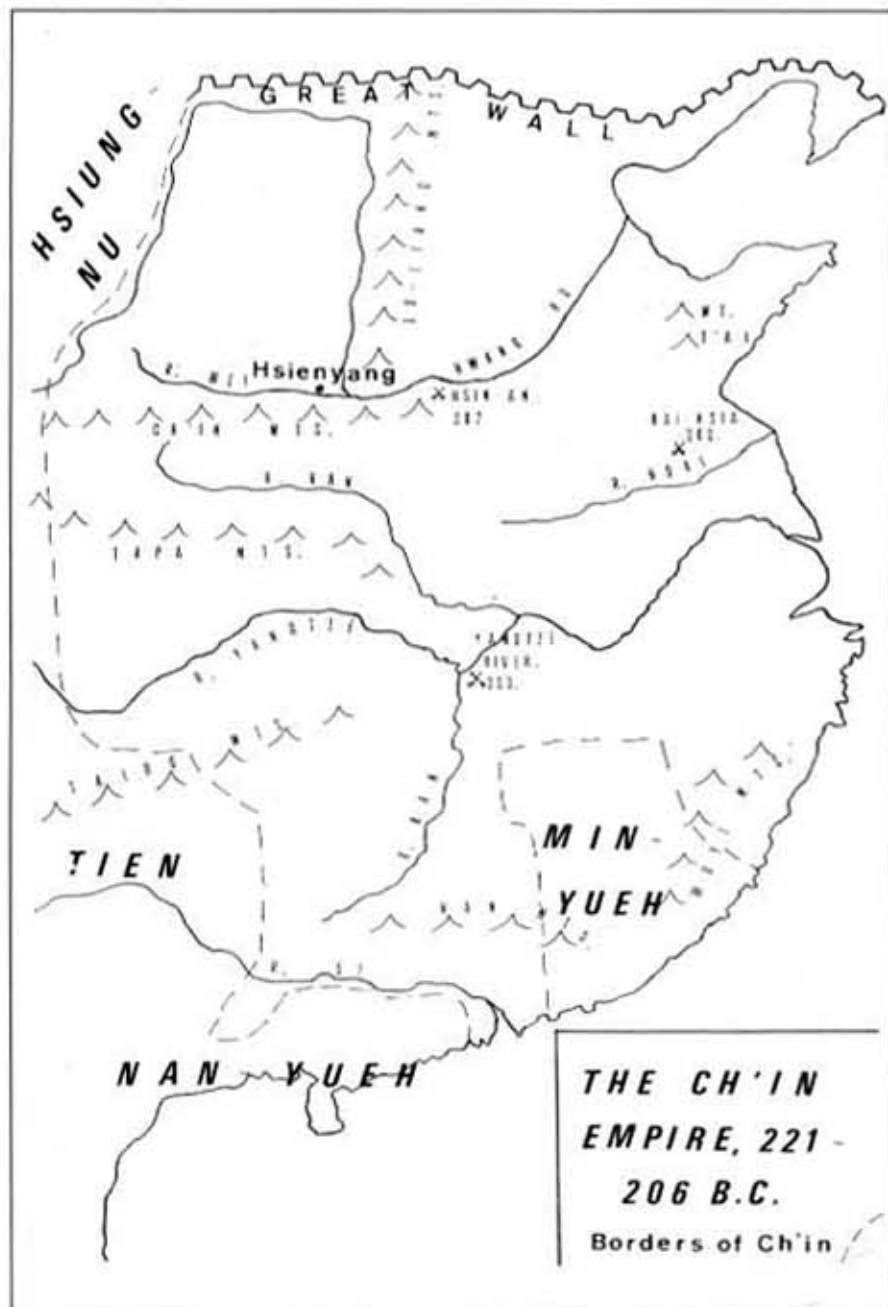
Ch'in expansion did not stop in 221, and between then and 209 many remote regions were brought into the Chinese sphere of influence for the first time. In 213 Emperor Shih Huang Ti invaded the lands south of Ch'u, his armies reaching the sea near present-day Canton. The Liaotung Peninsula in Manchuria was also occupied; and in 215 General Meng T'ien inflicted a major defeat on the newly formed nomad confederation of the Hsiung-nu on the borders of Chao. The Great Wall was built by linking up a series of walls which the northern states had erected since the

5th century, but was on a far grander scale than anything previously attempted. It covered 3,000 miles of the steppe frontier far to the north of the present wall, and was completed under the command of Meng T'ien by 300,000 troops and impressed labourers. The sufferings of these conscripts, and the savagery with which Ch'in law was imposed, led to discontent, and when the First Emperor died in 210 his successor was unable to hold the state together. The aristocracy of the former states had been deported en masse to Hsienyang, but many now escaped to add their authority to the revolts which broke out everywhere.

The Ch'in commanders had committed a strategic error by spreading their troops thinly throughout the Empire in isolated garrisons, and the insurgents were able to defeat them in detail and to equip themselves with captured weapons and armour. In 209 General Chang Han armed a force of labourers who were working on the First Emperor's tomb and used them to beat off Ch'en She's rebels from a town near Hsienyang, but such makeshift levies were not enough. Rebels from Ch'u took a leading rôle in the uprisings, and in 207 massacred a large Ch'in army at Hsin-an. The following year they destroyed the capital and extinguished the dynasty.

The Empire fell into anarchy; but gradually two of the rebel forces collected the others around them and carried on the war against each other for mastery of China. The Ch'u army was led by a southern aristocrat, Hsiang Yu, while his main rival, Liu Pang, was a man of lowly birth commanding a force known as the Han, after his fief in Han-chung in the far west. The Han armies were strengthened by contingents from Shu, Pa and Ch'in, the latter won over by lenient treatment in contrast to Hsiang Yu's brutality.

The war dragged on for several years, complicated by numerous betrayals and defections among the allies, and at one point, after a defeat at P'eng-ch'eng in 205, Liu Pang was a fugitive without an army; but his ability and determination were ultimately successful. Three years later, reinforced by drafts from Ch'in, he invaded Ch'u. At Kai-hsia, Hsiang Yu was encircled by an army four times the size of his own; he managed to escape with 800 cavalry, only





**Shang warriors,
1500 BC-1000 BC:**

- 1: Infantryman**
- 2: Yi barbarian**
- 3: Shang nobleman**
- 4: Axeman**

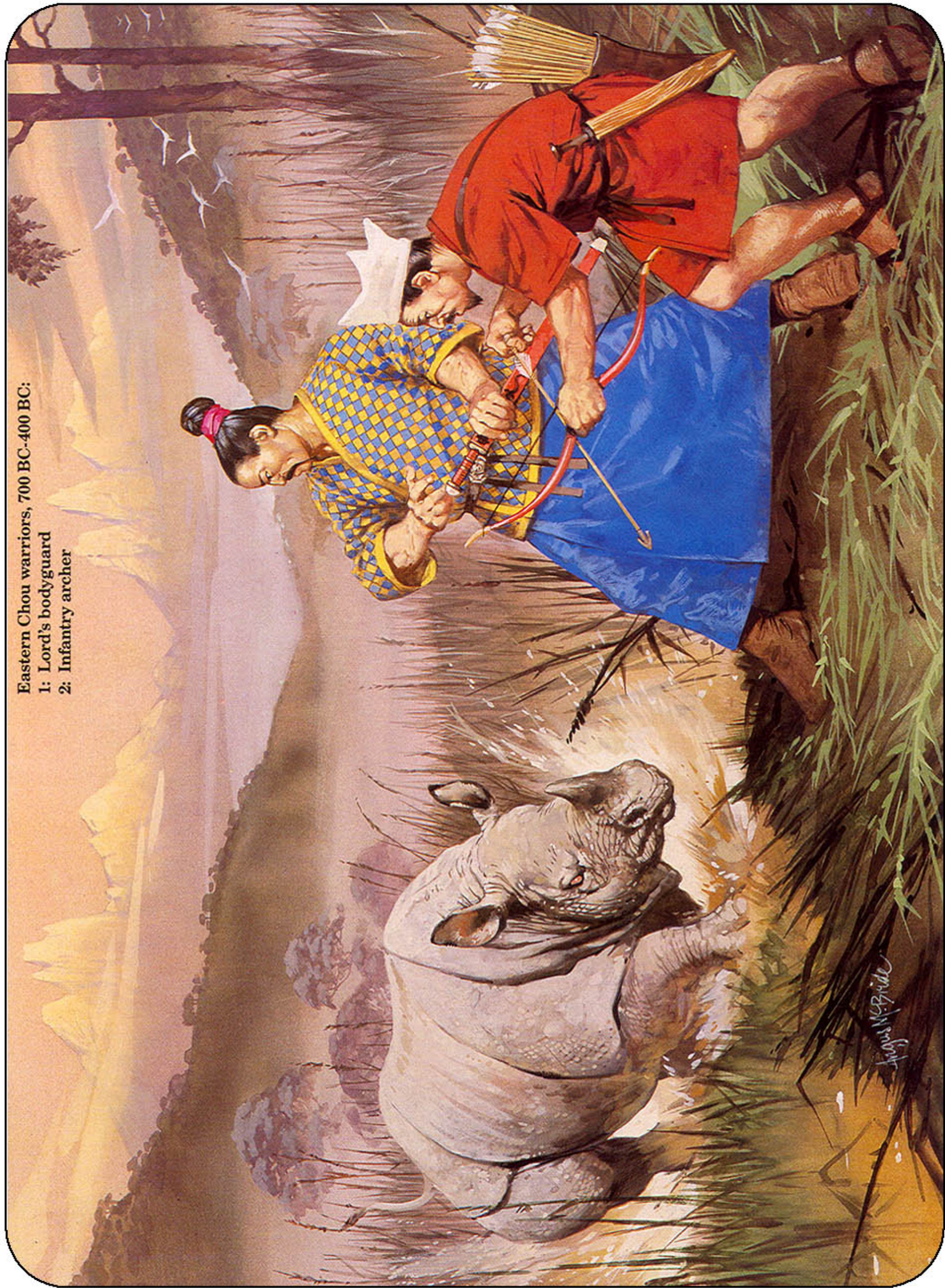
Chariot, Western Chou, c.800 BC

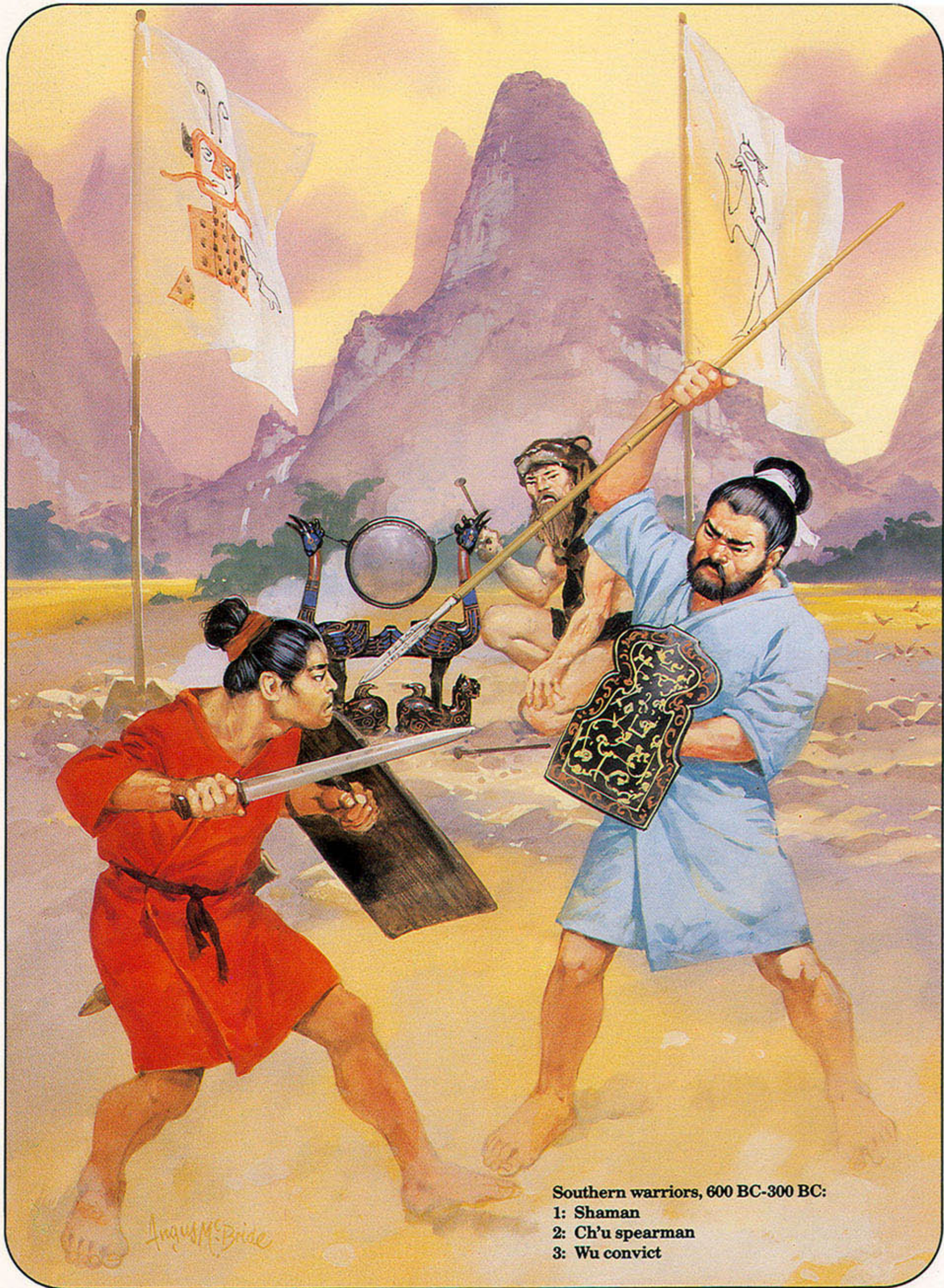


Eastern Chou warriors, 700 BC-400 BC:

1: Lord's bodyguard

2: Infantry archer





Southern warriors, 600 BC-300 BC:
1: Shaman
2: Ch'u spearman
3: Wu convict

The 4th and 3rd Centuries BC:

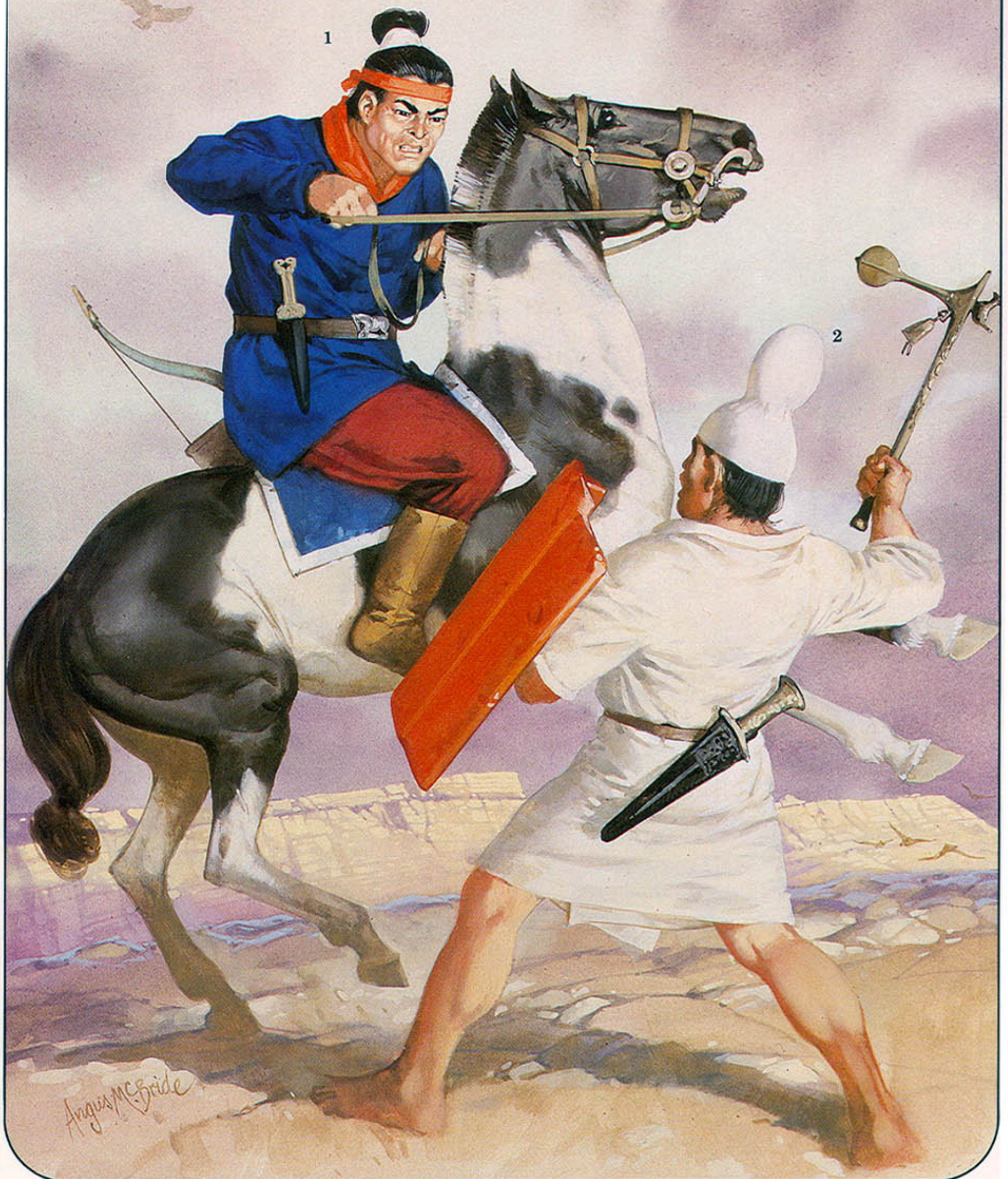
- 1: General
- 2: Crossbowman
- 3: Swordsman



Western warriors, 300 BC-200 BC:

1: Chao horseman

2: Tien warrior





The Ch'in Imperial Guard, 221 BC-206 BC:
1: Crossbowman
2: Halberdier
3: Skirmisher

Ch'in mounted troops:
1: Cavalryman
2: Charioteer



to be hunted down and killed. Liu Pang took the title of Han Kao-ti, proclaiming the Han dynasty which was to rule for 400 years.

The Ch'in army

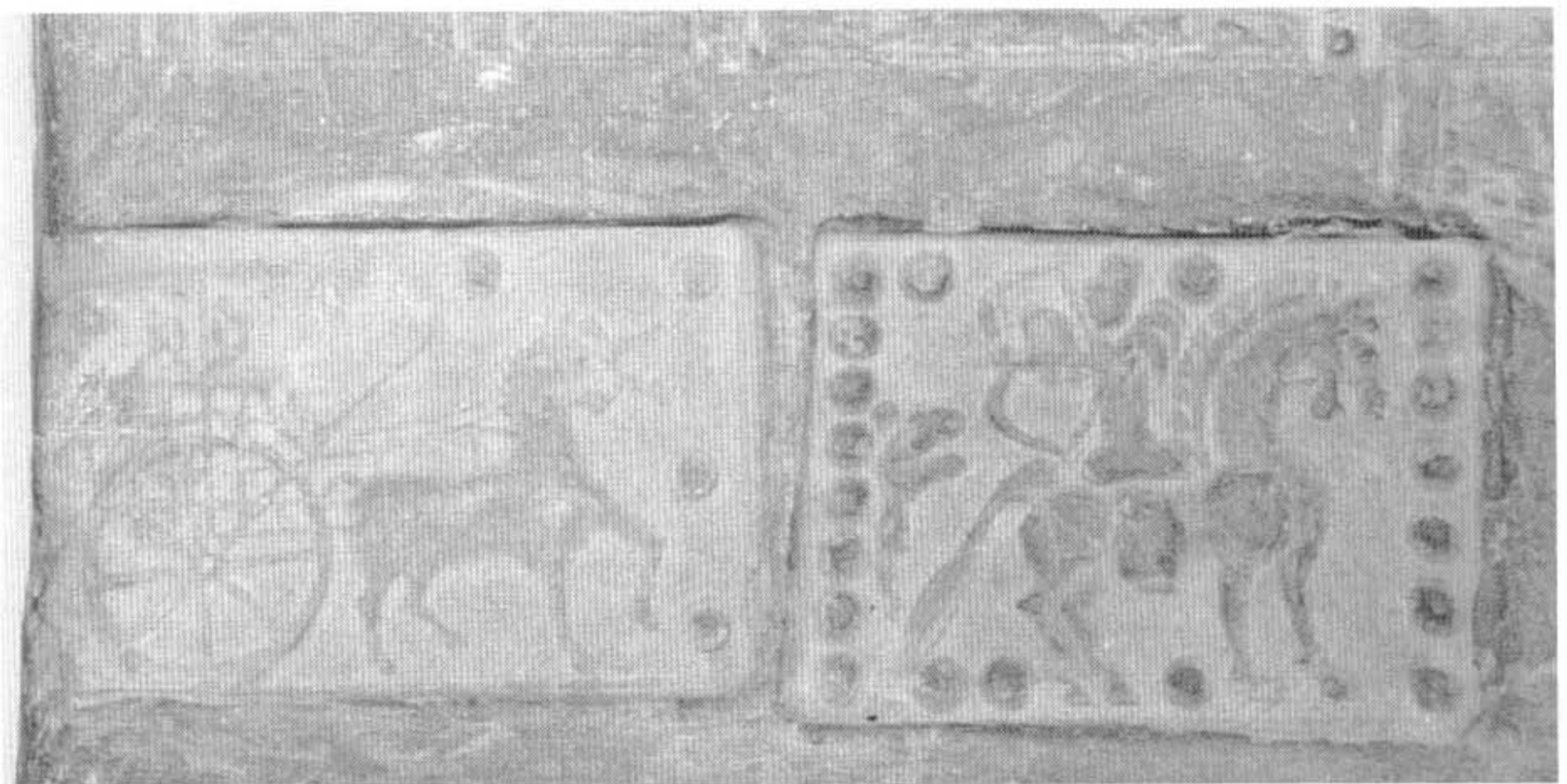
Most of our evidence for the Ch'in army comes from the terracotta figures from the First Emperor's tomb at Hsienyang, which presumably represent the palace guard. If the huge numbers reported for Ch'in armies are even approximately correct, few can have been as lavishly equipped as these élite troops. Troop-types depicted are both armoured and unarmoured infantry, armed with bows, crossbows, spears and halberds; cavalry, whose armament is unknown; and four-horse chariots. Swords have not been cast on the figures, although we know from many other sources that they were in common use, and the statues were probably equipped with real ones which were later stolen. Swords by now had blades up to three and a half feet long, and we are told that King Cheng had difficulty fighting off an assassination attempt in 227 because the length of his sword made it difficult to draw.

The pottery army has certain limitations as a source for the Ch'in; the weapons were taken by rebels soon after the burial, and the lack of shields may be attributable to the same cause. Alternatively, it is possible that shields were not carried when on guard duty, as opposed to in

battle, although some figures appear to have been carrying something in each hand, perhaps a weapon and a shield. It is hard to believe that the troops would have faced the crossbows of their enemies without the benefit of shields, and reliefs of the Han period do show them in use by Ch'in soldiers.

However, the figures are a unique guide to styles of dress and armour, and it is possible to deduce something of Ch'in unit organisation from the formations in which they were buried. The first pit contains an infantry unit of approximately 6,000 men. Most are close-formation armoured troops, wearing a variety of armour styles and probably armed with spears and halberds up to nine feet long. The officers are carried in six chariots accompanied by crewmen armed with similar weapons, and escorted by small groups of armoured or unarmoured infantry. In front of the unit are deployed about 200 skirmishers, probably crossbowmen. Other unit types are a group of 64 three-man, four-horse chariots; a unit of 19 chariots accompanied by eight horsemen and 264 armoured infantry; and a detachment of six chariots and 108 cavalry.

Stone carving from the early Han era showing a chariot and a mounted archer. These two troop-types formed the mobile arm of the Han and Ch'u armies in their struggles following the fall of Ch'in. For a long time after their victory in 202 BC, the Han armies remained similar in appearance to their predecessors. (British Museum)





Tactical & Strategic Doctrine

A number of ancient Chinese works on military science survive. The best known are those attributed to Sun Tzu, whose author supposedly lived about 500 BC but which may be 4th century; and Wu Ch'i, traditionally a work of the 380s but in fact a compilation containing much 3rd-century material. However, 182 such books were known in the early Han period, and 'Tso Chuan' describes Sun Shuh of Ch'u as quoting a manual called 'The Art of War' as early as the Battle of Pi in 595. Written works containing a formal system of strategy and tactics were therefore not, as is sometimes assumed, an invention of the 'Warring States' era.

The *Sun Tzu Ping Fa*, or 'Sun Tzu's Art of War', was by far the most influential of these books, and can be considered to contain the essence of Chinese thinking on the subject. It was not, however, without its critics. The philosopher Han Fei Tzu, whose ideas influenced King Cheng of Ch'in, felt that it placed too little emphasis on the rôle of discipline in controlling troops, and that its humane concern with the limitation of war was hypocritical. The Confucians, on the other hand, were horrified by its advocacy of deceit and covert operations. Yet to a modern reader it is remarkable for its rational approach and lucid exposition of the critical factors in warfare.

According to the 'Sun Tzu', the first requirement for a campaign is a mathematical calculation of the respective strengths of the combatants, with weighting where appropriate for factors such as the ability of commanders and the social cohesion of states. If it was decided to embark on war, it was essential to carry the fighting into enemy territory. This had three advantages: it enabled troops to live off the land without antagonising one's own people, it disrupted the enemy's mobilisation plans, and it reduced desertion by one's own men, whose best

hope of safety in a hostile country was to stay with the army. This implies that commanders were often unsure of the reliability of their troops; and Sun Tzu frequently returns to this subject, suggesting that the army be deliberately led into 'death ground', a desperate position where retreat is impossible, in order to induce it to fight.

Sun Tzu goes on to describe the terrible effects of a long war and to emphasise the need for speed in strategic operations. Pitched battles were to be avoided when possible and fortified cities to be bypassed, it being preferable to subvert an enemy by deceit, including the use of spies and secret agents. This type of operation was made easier by the fact that an inhabitant of one Chinese state could usually pass himself off as belonging to another. Knowledge of the enemy commander's character was vital for this sort of trickery, so that his personal weaknesses and vices could be used against him.

If battle is inevitable, Sun Tzu again stresses the importance of knowing the enemy, of reconnaissance, and of familiarity with the correct use of terrain. The 'Kuan Tzu', a 4th-century work, is even more emphatic on this latter point, and on the necessity for the detailed study of maps. The Shang may have had maps cast on bronze vessels, and by the Eastern Chou they were in widespread use, painted on silk. A magnetic compass, consisting of a piece of lodestone swinging freely on a wooden board, was also available by the 5th century at the latest.

Battle tactics revolved around the use of the 'ordinary' and 'extraordinary' forces. The main themes throughout the period are operations against the flanks and rear, and direct frontal attacks by deliberately enraged troops. All the surviving manuals discuss ways of assessing the state of the enemy from the appearance of his formations and the noise his men are making, and explain the need to judge the correct moment for a charge. Whatever the exact plan used, all sources stress the primacy of the offensive in ancient Chinese warfare, although field fortifications were often used as a base from which an attack could be launched, and many commanders entrenched their camps at night when in hostile territory. Sun Tzu therefore devotes a chapter to the use of fire as a method of

Figure of a crossbowman from the terracotta army of the First Emperor of Ch'in, as restored by Chinese archaeologists. A unique source for the military historian, the discovery of this buried army in 1974 revolutionised our understanding of the Ch'in army. See Plate G for a reconstruction based on this figure. (Cultural Relics Publishing House, Beijing)



A high-ranking officer from the terracotta army; marks of rank include the long double tunic and elaborate armour, and the unusual height of the figure—he is 6ft 4in. tall, towering over his subordinates. (Cultural Relics Publishing House, Beijing)

attacking the enemy in his camp, either by means of incendiary arrows or by burning dry grass.

It is difficult to say how far the precepts of the manuals were consciously adopted, and it is unlikely that they were actually consulted on campaign. Before the invention of paper in the 1st century BC they were inscribed on strips of bamboo tied together with leather, and even the relatively short 'Sun Tzu' would have needed a cart to carry it. Nevertheless, many battle narratives show the application of the principles they advocate; and, as 'Tso Chuan' shows, officers would know at least some passages by heart. It is therefore no exaggeration to speak of a coherent body of doctrine on the art of war from at least the Eastern Chou period.

Command and control

The system for selecting commanders was of course vital to the conduct of warfare. During the Shang and Western Chou dynasties it was usual for the king himself to lead the armies, and noble birth was a prerequisite for command in most states until much later. Command was often hereditary within a family, but there were exceptions from an early date. Wu's second-in-command at Mu in 1027 was the son of a butcher, raised from the ranks because of his exceptional ability, but this was unusual. More typical was the case of Ts'ao Mei, who served Duke Chuang of Lu between 693 and 662. This desperate character led the army to three successive defeats, but was retained as general because of his personal strength and courage. He later achieved notoriety by taking Duke Huan of Ch'i hostage during a peace-making ceremony. Even in the 3rd century a display of personal heroics was considered appropriate for a commander, but was no longer a necessity. Sun Pin, who had had his feet cut off after being falsely convicted of a criminal offence, was able to direct his armies from a litter in the rear.

By the 5th century, generals of peasant origin were becoming as common as those from the nobility. This paralleled the replacement of the aristocracy in civil office, and led to the rise of a professional military class which often had no loyalty to a particular state and would offer its services to the highest bidder. Wu Ch'i, for

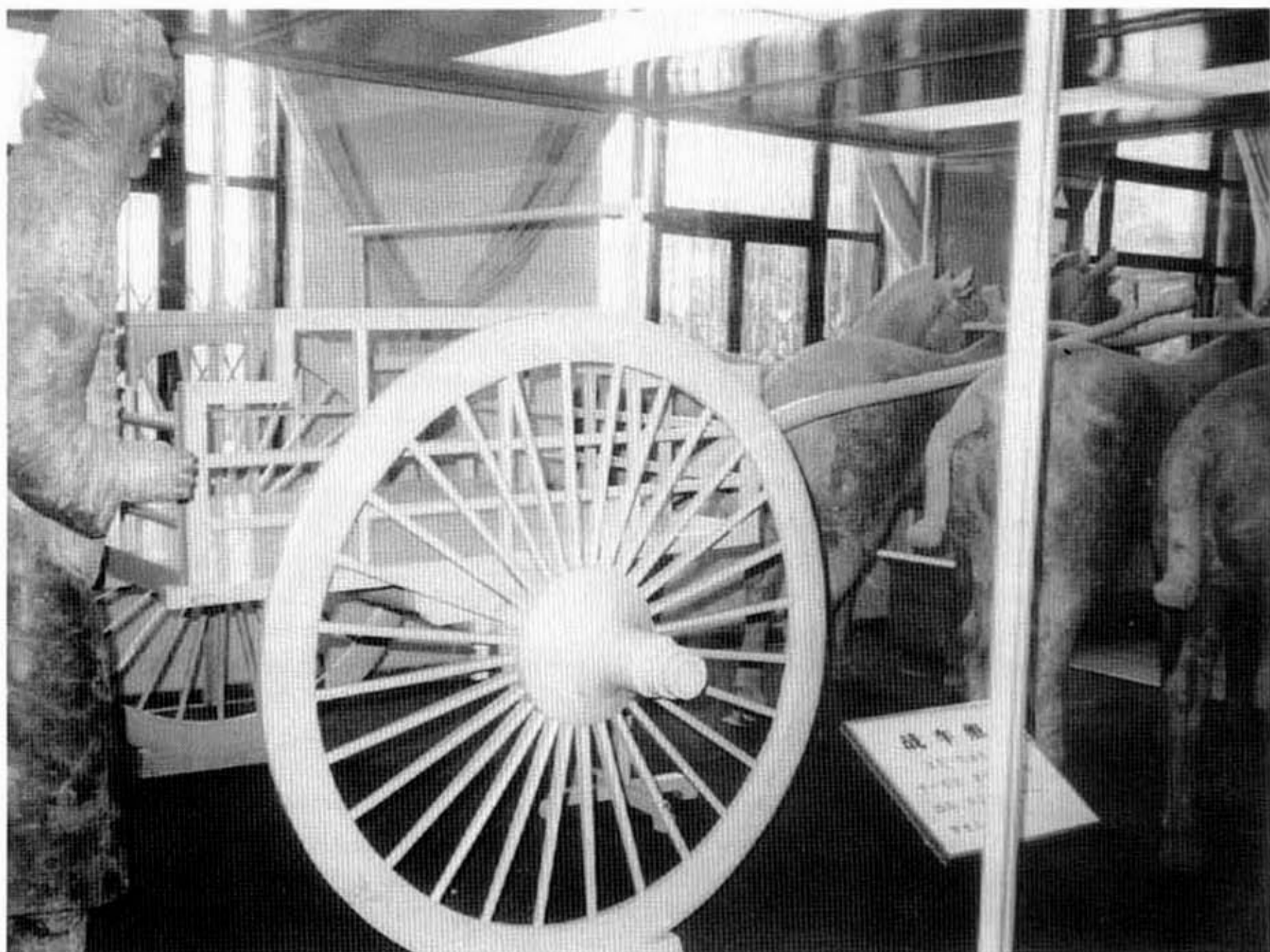
example, was born in Wei, studied war in Lu and then went to Ch'u, where he reformed the army. Sun Pin, also a native of Wei, led the Ch'i army to its greatest victory against his home state. It was considered disastrous for a ruler to interfere in the conduct of a campaign once he had appointed a general to carry it out, and the 'Sun Tzu' warns against this temptation.

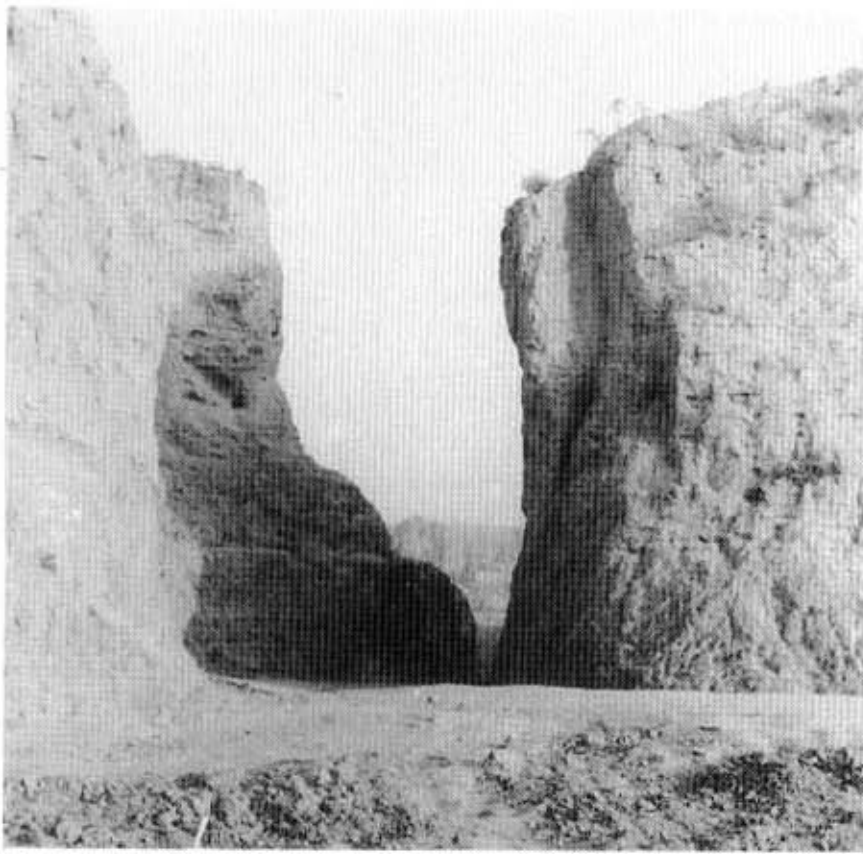
Methods for controlling troops on the battlefield were highly developed. A large variety of flags was used, both for signalling and to raise morale; divisions and commanders were distinguished by flags, and each unit was identified by smaller banners of a different colour. Movements to the right or left were indicated by flags, while drums signalled the advance and bells the retreat. Four beats of a drum signified 'prepare for action', and five the commencement of a march. Bronze bells, struck like a gong from the outside, were often carried in chariots. Wu Ch'i mentions horse-borne and 'ordinary' drums,

presumably carried on foot. Drums and gongs were also used for psychological warfare, inspiring their own side and terrifying the enemy, and the generation of the maximum amount of noise was considered essential to a successful charge. It is difficult to tell at what date this system developed, but flags and drums are mentioned at the beginning of the Western Chou and seem to have had the same functions as later. Coloured banners were also used as national recognition symbols; for example, the Chou army at Mu carried white ones, while the Ch'in Empire adopted black, and the Han in the succession wars used red.

When discussing signalling, Sun Tzu remarks on the difficulty of hearing the human voice in battle, or of seeing much once the dust was raised. A device used to overcome the latter problem was

A reconstruction of one of the chariots buried with the Ch'in Emperor. Chariots were still an important part of the Ch'in war machine at a time when other advanced powers were discarding them, but probably had mainly a command and psychological warfare function. (Duncan Head)





Detail of surviving section of the 'Long Wall' of Wei, built in the 4th century, when Wei bore the brunt of Ch'in aggression. Note the stratified appearance created by the ramming down of successive layers of earth, a building technique used since Shang times. (Cultural Relics Publishing House, Beijing)

the *ch'ao-ch'e* or crow's-nest chariot, which was invented during the Eastern Chou. This consisted of a chariot with a high chassis and reinforced wheels, with a small tower on top. 'Tso Chuan' describes the king of Ch'u climbing on such a vehicle to observe the Tsin deployment in 575. It seems that the tower held only one man, as the king had to shout his observations to an officer below for interpretation.

Chinese troops were strictly controlled and drilled from an early date. The good order of the Chou army at Mu has already been mentioned, and the account in 'Tso Chuan' of the Ch'u army of 595 also bears witness to a developed system of drill. The troops could all manoeuvre at once in response to signals, and were trained to deploy in emergencies without specific orders. The introduction of marching in step has been associated with Wu Ch'i around 380, but may have taken place much earlier. A music manual of the 1st century BC describes a military dance of 'ancient times' in which the dancers advanced 'keeping together with perfect precision, like a military unit', the pace being regulated by the beat of a drum. Such dances were used as early as the Western Chou as training for war.

Fortification and sieges

The walled cities of the Shang represent the earliest Chinese fortifications. The walls were built by pounding earth with wooden rammers until it became as hard as brick; at Ao, they were 60 feet thick at the base and 25 feet in height. This technique was used until Ch'in times, but refinements were added later. By the 6th century lookout towers were being built above the walls, which could be faced with stone or brick. The area enclosed by the walls was traditionally square or rectangular, with a gate in the middle of each side; but the growth of towns in the Eastern Chou period led to the building of suburbs outside the walls, and these on occasion became the scene of furious battles. In some cases a series of concentric walls was erected at different times to enclose these suburbs.

The 'Book of Songs' describes methods used for assaulting towns in the Western Chou. Scaling ladders were available, including types which could be wheeled up to the walls, and protective mantlets were used to shield men attempting to tunnel through them. Starvation and assault by escalade remained the most popular ways of taking cities, although Kaou-yu in Lu was captured in 546 by Tsin troops creeping in through the storm-drains. By the 4th century, however, assaults were regarded as a last resort.

The defence had by then been strengthened by the invention of large artillery crossbows which were stationed on the walls. Some of these were cocked with pulleys and windlasses and had draw-weights of 400 pounds. In about 350 the 'Book of Lord Shang' described how the population of a beleaguered city was divided into three 'armies'; the able-bodied men guarded the ramparts, the women dug ditches and built earthworks, while the very young, old and infirm looked after the livestock. During the 4th century a new element was introduced into the defence by Mo Tzu, a philosopher who preached justice for the weak and was prepared to put his ideals into action. His works covered the techniques of defence and his followers, known as Mohists, intervened on numerous occasions on the side of small states which were under threat. Among their inventions were kites for signalling, improved pulleys and counterweight mechanisms, and a type of

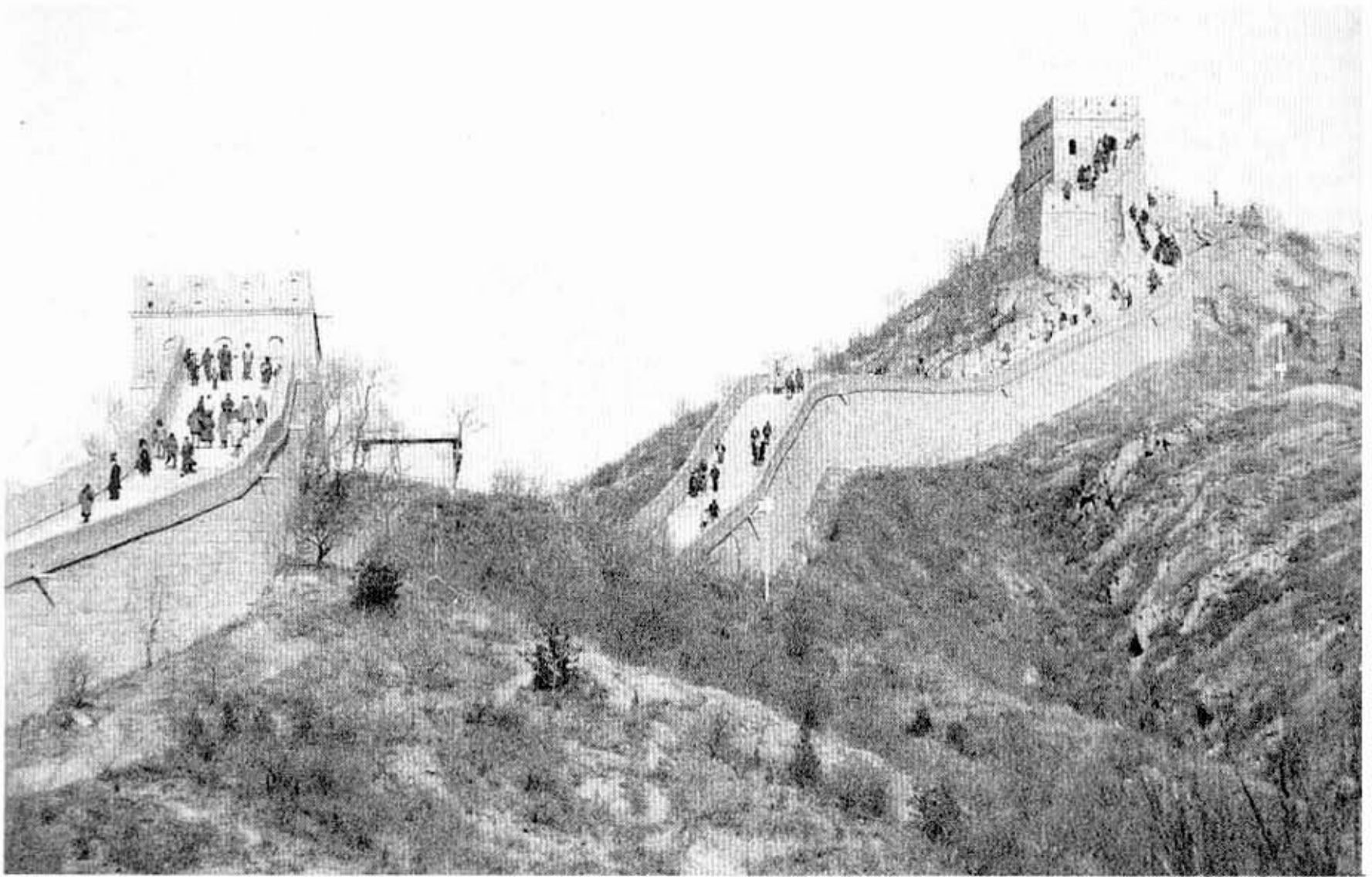


A ruined tower on the Wei wall. (Cultural Relics Publishing House, Beijing)

primitive resonance box made from a pottery jar with a leather membrane over the mouth. These were buried in deep shafts within the walls, and by listening to the vibrations which they amplified it was possible to discover the direction and distance of enemy mining operations. Besiegers' tunnels, when located, were dealt with by burning noxious substances such as dried mustard in a furnace and blowing the smoke down the tunnels with oxhide bellows. Mo Tzu was able to prevent at least one war by demonstrating to the aggressor some of the techniques which he was prepared to use in support of the victim.

Another aspect of Chinese fortification was the building of long walls to protect a state's territory from attack. According to the 'Book of Songs' the Chou built a wall against the northern barbarians in the 8th century, and by the 5th the practice was widespread, as a protection not only against barbarians but against Chinese neighbours. Han,

Wei, Chao, Ch'i, Yen, Ch'in, Chong-shan and Ch'u all had walls in the 4th century, some of which still survive in part despite the Ch'in Empire's demolition of internal barriers. Wei was defended against Ch'in by two parallel walls 180 yards apart, the outer being more than 20 feet thick. Square watchtowers were erected a bowshot beyond the outer wall. The walls and towers are now about 12 and 30 feet high respectively, but would originally have been considerably higher. The walls were made of rammed earth, the towers being strengthened with timber, and incorporating signal beacons to give warning of attack. All these constructions were crude compared to later versions, and few were continuous along the whole length of the borders; but the Ch'in wall started in 215 was a much more formidable obstacle, and at least in part seems to have taken the battlemented form familiar to us today, with room for vehicles to drive along the top. Even this barrier was probably guarded along most stretches only by outposts and patrols, however.



Ten Decisive Battles

The following battles have been chosen to illustrate the Chinese art of war, both for their historical significance and for the light they shed on the tactics in use.

Mu, 1027 BC

Wu of Chou, leading an army of 3,000 nobles and their retainers, augmented by barbarian allies and 800 Shang defectors, met the Shang king Shou Hsin at Mu. The Shang force was considerably larger than that of the Chou. Wu therefore instructed his men to advance slowly and in strict formation; 'do not exceed four or five strokes, six or seven thrusts, then halt and line up'. The next morning the Shang attacked, but their front rank was thrown into confusion and fell back, disordering those behind. Despite the claims of Chou propaganda the battle was hard-fought, but the Chou were victorious and showed no mercy, shedding enough blood 'to float a log'. This battle made Wu master of most of the Hwang Ho valley.

Although rebuilt many times, this north-eastern section of the Great Wall probably retains the main architectural features of the best parts of the Ch'in original. (Su Evans & Richard Patching)

Che, 717 BC

The southern Yen invaded Cheng in support of one of their allies, bypassing the town of Che. Three Cheng divisions were sent to occupy the enemy by skirmishing as they advanced, while a fourth body, under the earl's sons Man-pi and Tse-yuen, manoeuvred itself into their rear. The two princes entered Che undetected, and led the citizens in an attack which took the Yen by surprise and defeated them.

Cheng, 713 BC

The northern Jung, a foot-fighting barbarian tribe who were 'light and nimble, but had no order', invaded Cheng and were confronted by the earl. The Cheng charioteers feared that a swift attack would overrun them, so the earl's son Tu proposed a plan. The main body of the army was divided into three and withdrawn into positions for an ambush, and a detachment was sent forward to make a feint attack. This group

pretended to flee and the Jung pursued in a disorderly mob. General Chu Tan ambushed the first body of barbarians to come within reach, and surrounded them. Tu had correctly judged the character of the enemy, for the rest of the Jung fled, making no attempt to help their comrades.

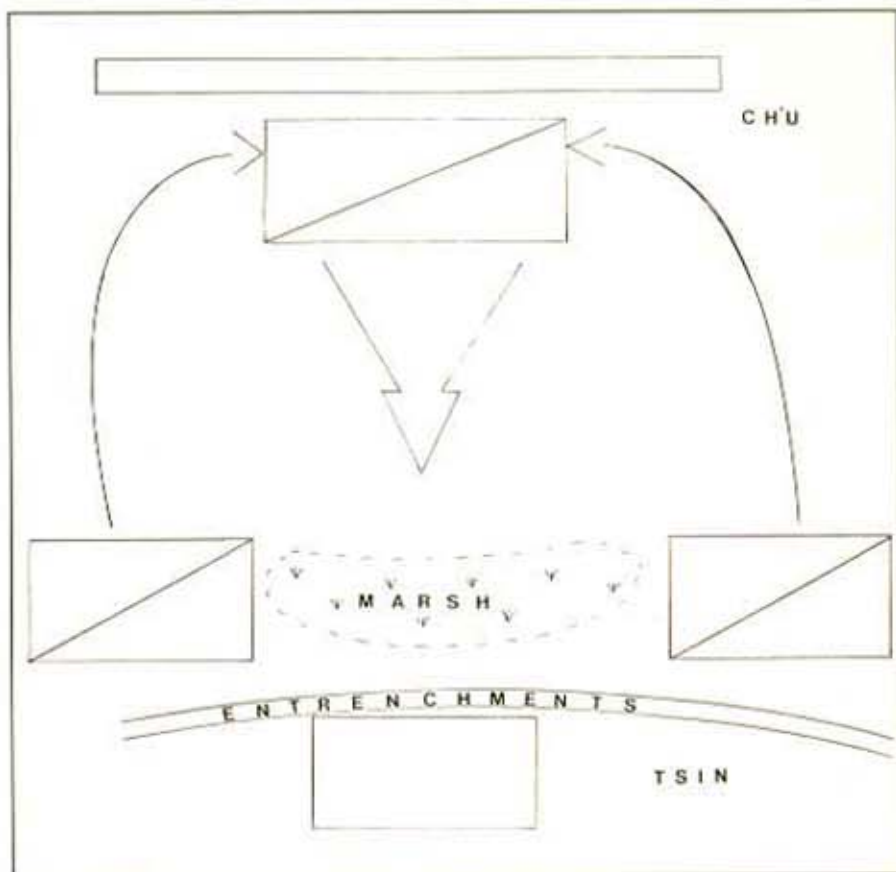
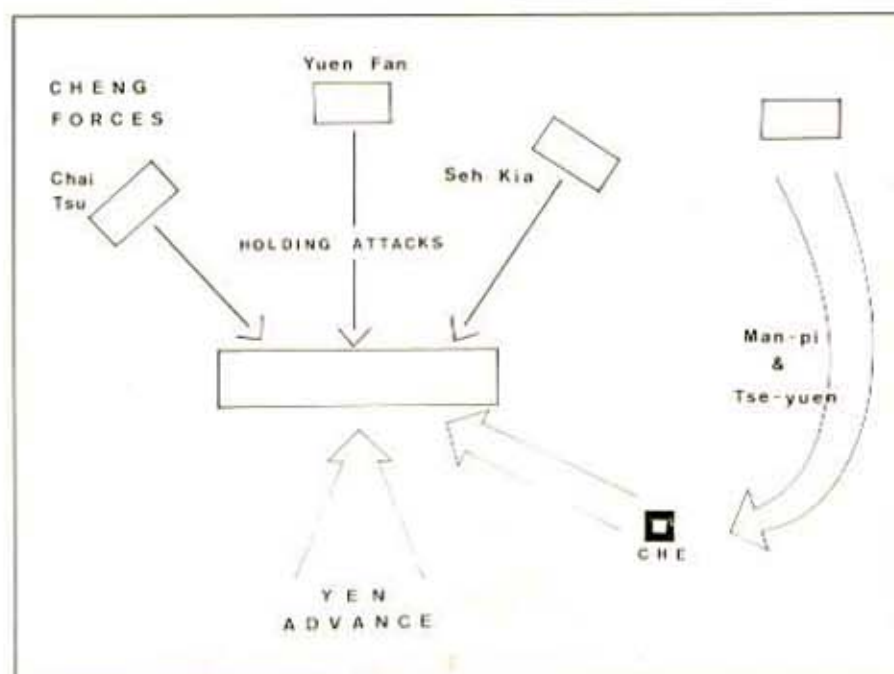
Ch'eng-p'u, 632 BC

Duke Wen of Tsin faced an invading army under Tzu-yu of Ch'u. The two men were personal enemies, and Tzu-yu led the chariots of his left wing with the aim of killing Wen. The Tsin left pinned the Ch'u right with a feint attack while their own right withdrew behind a screen of chariots dragging branches to raise dust. When Tzu-yu was well separated from his centre, the Tsin right and centre closed in on him from two sides with chariots and infantry. The Ch'u commander was killed and his army routed.

Pi, 595 BC

The Ch'u and Tsin armies faced each other for several days while the charioteers skirmished; the battle developed by accident when a force of Tsin chariots came out to rescue two of their skirmishers and the Ch'u charged them. Ch'u chariots advanced on both flanks, driving back their opponents when their reserve of 40 vehicles was committed, and the Tsin army began a general retirement. By chance, the king of Ch'u was with his left wing when it began to pursue, and from this time the left took precedence in Ch'u, a practice later followed by other states.

Operations against the enemy's rear: the Battle of Che, 717 BC.



The battle of envelopment: Yen-ling, 575 BC.

Yen-ling, 575 BC

Ch'u once more confronted Tsin at Yen-ling, but the condition of the Ch'u army was poor. It contained many 'wild tribes of the south' who were badly disciplined, and the two ministers commanding it hated each other. The Tsin officer Meao Fun-hwang pointed out that the best Ch'u troops, those of the royal clan, were in the centre, and suggested an enveloping attack on both flanks while the Tsin centre stood on the defensive, protected by a marsh. This plan was successful and the Ch'u army was defeated.

P'ing-yin, 554 BC

Tsin beat a superior Ch'i army by deception. Deploying in close terrain, the Tsin soldiers set up banners in marshes and defiles where there were no troops, to make their line look longer than it was, and sent out patrols of carts dragging branches, and chariots with one crewman in each, the others being dummies. The Marquis of Ch'i, observing from Mount Wu, was convinced that he was outnumbered and decided to withdraw. The retreat was detected by the Tsin commander because of the activities of crows in the deserted camp, and he ordered a pursuit. Ch'i attempted to hold the pass of P'ing-yin against him, but the rearguard was taken prisoner and the main body harried back to Ch'i.

Ma Ling, 341 BC

Leading an expedition from Ch'i to aid Han, which was being attacked by Wei and Chao, Sun Pin took advantage of the fact that the Wei regarded Ch'i troops as cowardly and unreliable. As he advanced into Wei he ordered his men to light fewer campfires each night, deceiving the enemy general, P'ang Chuan, into thinking that the Ch'i were deserting en masse. P'ang Chuan therefore made a forced march with light troops to cut them off before they could escape, and marched into a trap. In a defile at Ma Ling, Sun Pin had deployed 10,000 infantry with crossbows—the first time that this weapon is mentioned in open battle. The Wei force came within range as darkness was falling, as Sun Pin had predicted, and volleys of bolts drove them back in rout. P'ang Chuan committed suicide—an additional source of satisfaction to Sun Pin, since he had been responsible for the latter's imprisonment and mutilation.

Yangtze River, 223 BC

Following the defeat of an earlier expedition, King Cheng of Ch'in sent the veteran Wang Chien to conquer Ch'u with an army said to number 600,000. Nevertheless, Wang Chien moved cautiously, and on arrival at the frontier near the Yangtze River built a fortified camp and waited, feigning hesitancy. The Ch'u warriors were overconfident after their previous victory, and, believing that the enemy was afraid, their frontier army began to relax, many men drifting away homewards. Seeing this, Wang Chien launched a sudden attack and scattered the Ch'u forces. The king of Ch'u was captured and his state annexed by Ch'in.

The Ching-hsin Pass, 204 BC

Han Hsin, sent to force the Ching-hsin Pass which was held by a large Chao army, first ordered out a division of 10,000 men which deployed in view of the Chao lines with its back to the River Ti. He then marched out in front of the troops with his commander's flag and drums, tempting the enemy to attack. Believing that the Han were trapped, the Chao sallied out from their fortifications. Han Hsin then fled back to his division on the riverbank, which, being in 'death

ground', put up a desperate fight and held the attack long enough for the trap to be sprung. Two thousand Han cavalry had been sent through little-known defiles to arrive on the Chao flank, and at a given signal they rode into the deserted fortifications and set up the red flags of Han on the ramparts. Seeing this, and unaware of the small size of the force in their rear, the Chao panicked and turned back. Han Hsin followed up and routed them.

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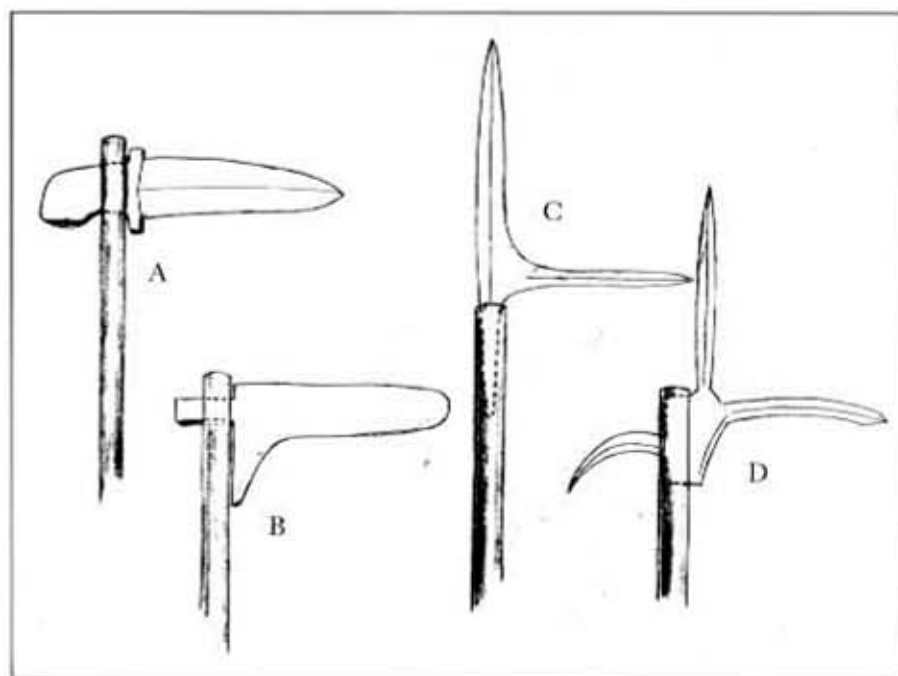
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Stages in the evolution of the dagger-axe into a true halberd: (A) Shang dynasty, 12th century BC; (B) Western Chou, 9th century; (C) Eastern Chou, 4th century; (D) Ch'in, 3rd century.



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The Plates

A: Shang warriors, 1500–1000 BC

A1: Infantryman

This soldier of the *shu*, or royal halberdiers, is reconstructed from the pictographs used in inscriptions to denote warriors. He carries a primitive dagger-axe and a lacquered hide shield, and wears a robe of coarse hempen cloth. The decoration on his shield represents an alternative form of the dagger-axe.

A2: Yi barbarian

The 'Book of Documents' describes the skin-clad barbarians who were often the victims of Shang campaigns. This is a captive from the Huai Valley who is about to be executed as a sacrifice, perhaps to consecrate the foundations of a new city-wall. His weapon would be a spear or bow, and he could also appear as an ally of the Shang or early Chou. Trousers were also associated with non-Chinese at this period, and some sources suggest that they were originally worn by the ancestors of the Shang themselves. The three main distinguishing features of Chinese dress in the classical age were: the wearing of robes instead of trousers; the fastening of clothes from left to right; and the tying up of the hair on top of the head.

A3: Shang nobleman

Reconstructed from a number of armour finds, this man represents an élite chariot warrior of the Yin period. His robe is silk, and the composite

bow is covered with the same material. An alternative type of body armour was a corselet made from a single piece of bronze. The neck-protector is reminiscent of earlier panoplies from the Middle East, but no direct connection has been proved.

A4: Axeman

The heavy bronze axe, from an example in the Metropolitan Museum of Art, New York, was probably not used in battle, being designed for decapitating human sacrifices. Smaller versions, however, were used in combat. The infantry archers, the most numerous element of the army, would have been similarly dressed.

B: Chariot, Western Chou, c.800 BC

Reconstructed here from archaeological discoveries, with armour and horse-trappings from descriptions in the 'Rituals of Chou' and 'Tso Chuan', the four-horse chariot was the main shock weapon of the early Chou. The crew's armour is made from up to seven layers of lacquered rhinoceros hide, the now almost extinct Sumatran species of rhinoceros being common in China until after 500 BC. Similar armour protects the horses. The positioning of the archer on the left and spearman or halberdier on the right was standard; occasionally a fourth crewman could be added. All would be high-ranking noblemen, and the commander of the vehicle could take any position including that of driver. A unit commander's flag could be decorated with bells and feathers. The shield design is conjectural, but utilises a very popular theme in Shang and Chou art, the *l'ao-t'ie* or monster mask.

C: Eastern Chou warriors, 700–400 BC

C1: Lord's bodyguard

This is one of the élite guards or shock troops of a ruler's household, taken from a 5th-century figurine in the tomb of Marquis Yi of Cheng. He is dressed in silk, and carries an ornate sword; the best swords were extremely valuable, the hilts bound with silk and ornamented with jade. The decoration on his robe is derived from patterns on surviving textile fragments; other possibilities would be checks, dragons, phoenixes, or complex designs like that on the shield of D2.



This detail from a stone relief shows an armed guard on duty outside the house of his lord. The carving would have been buried with the nobleman after his death to protect him in the next world; the figure on which Plate C1 is based performed a similar function. Although dating from soon after the fall of the Ch'in dynasty, this figure is dressed in a style also typical of the Chou period. His weapon is probably a variant of the bronze dagger-axe. (British Museum)

C2: Infantry archer

A 5th-century bronze vessel is the source for this figure, one of the less well-equipped rank and file of Chou armies. The quiver is shown carried at the waist, but it is unclear whether it was suspended from a baldric, as shown here, or attached to the belt. The nature of the headgear, which has been reconstructed as a stiff cap, is also uncertain; other types illustrated in reliefs and paintings resemble that of H2, or, in the south at least, F2.

D: Southern warriors, 600–300 BC

D1: Shaman

The state of Ch'u retained many archaic customs which had died out elsewhere, and poetry describes the rôle of the *wu* or shamans, dressed in bearskins, in inspiring the armies. The drum and flag designs come from excavated tombs in the area, and perhaps had religious significance.

D2: Ch'u spearman

Ch'u had few rich men, and equipment was often poorer than in the north, although 6th-century élite troops are described as wearing rich silk surcoats over armour. This man carries a shield from a tomb at Ch'ang Sha, and a long spear with a blade which is here of bronze, but by 300 BC could be steel, 'as sharp as a bee's sting'. The beard distinguished Ch'u soldiers from those of Wu, few of whom had much facial hair.

D3: Wu convict

One of the 'suicide warriors' employed in 518, he wears the red robe associated with convicts and carries a wooden shield, which was regarded as superior in combat to the leather ones of Ch'u.

E: The 4th and 3rd centuries

E1: General

Reconstructed with a bronze helmet and an officer's armour from the Ch'in terracotta army, he carries a tally or symbol of authority in the shape of a tiger. A small axe was also used as such a symbol.

E2: Crossbowman

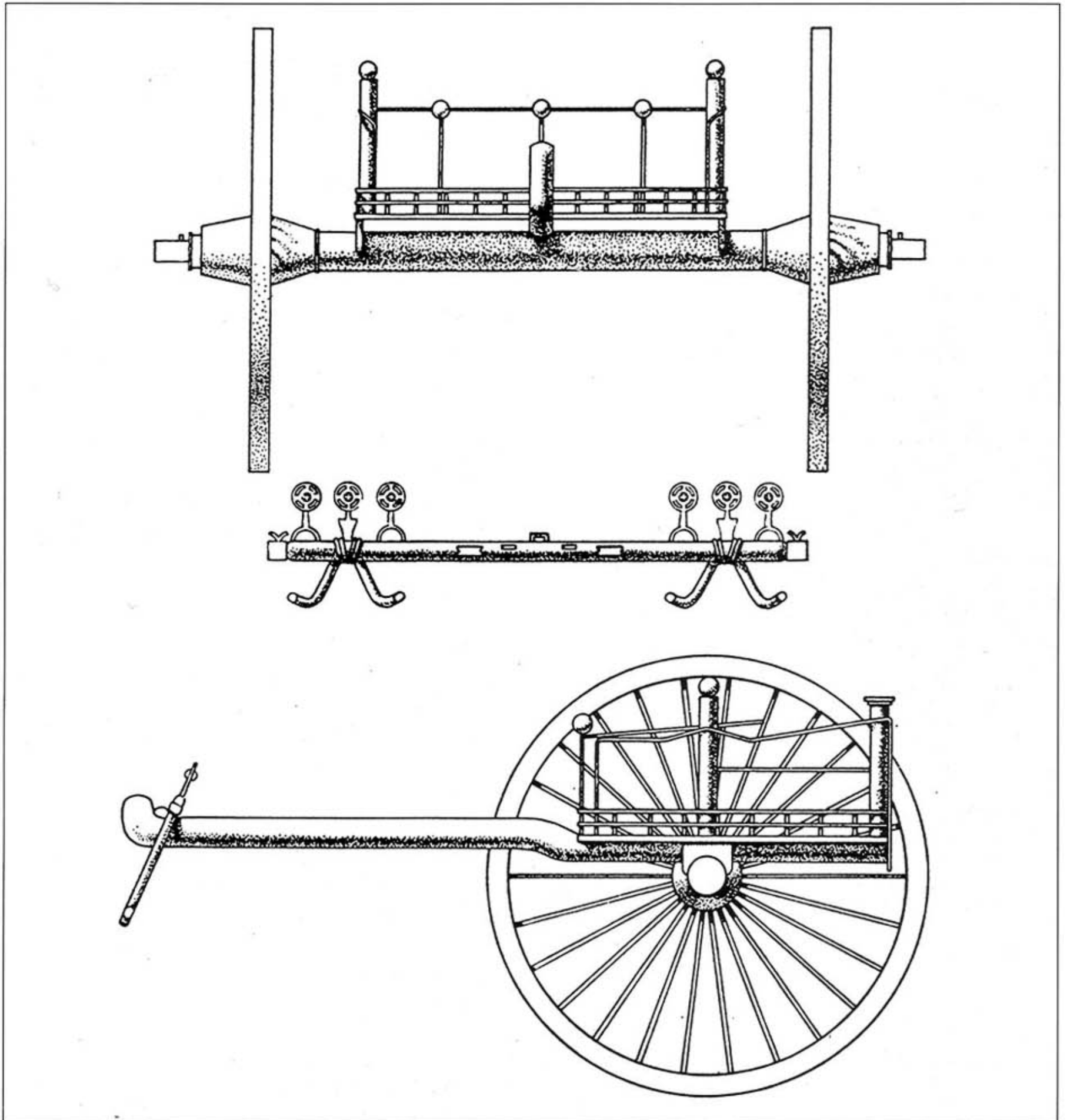
Note the size of the crossbow, based on an example found at Hsienyang, and the method of

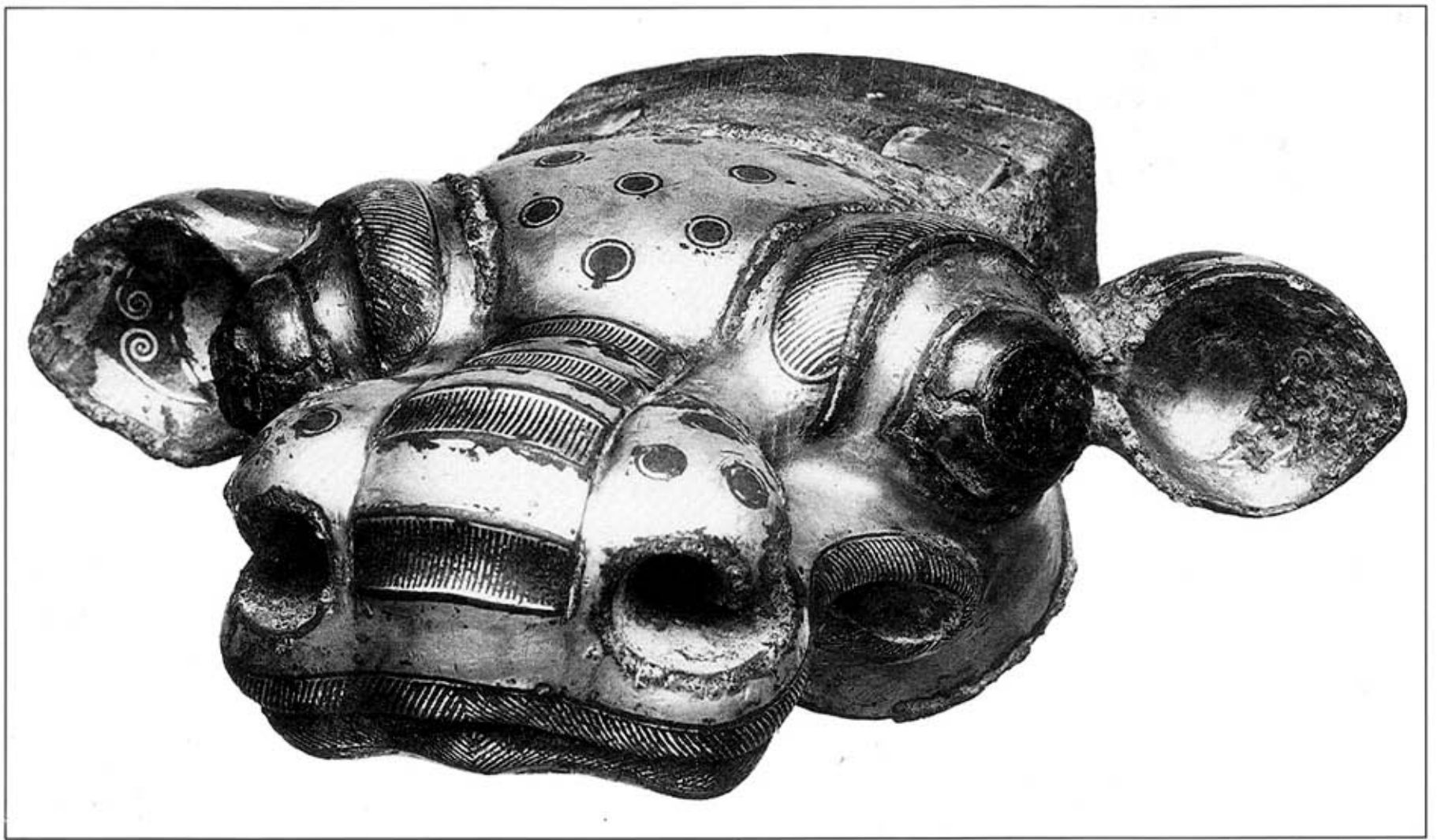
drawing it, described in 'Chan-Kuo Ts'e' and illustrated in reliefs of the Han dynasty. A bronze belt-hook began to replace the earlier buckle in the late 5th century; it was originally a nomad fashion.

Reconstruction of a 4th-century chariot from excavated remains from Liu Li Ko, ancient state of Wei. The shape of these chariots is preserved in the form of discolorations in the soil where the original wood has decayed; their general form is little different from the earlier type shown in Plate B. (Thames & Hudson Ltd.)

Eg: Swordsman

The long iron sword shown here was coming into use by 350 BC. This man wears a leather cuirass and helmet, and carries a shield from a Han relief. The red and black lacquer used on earlier armours was by now supplemented by other colours, and Wu Ch'i describes hide armour painted vermilion and blue and ornamented with rhinoceros horn and ivory. In the 3rd century the palace guards of Chao wore black uniforms.





Gold- and silver-inlaid bronze ornament for a chariot yoke in the shape of an ox-head, 5th to 4th centuries. Plate B shows how these ornaments were fixed to the vehicle. (British Museum)

F: Western warriors, 300–200 BC

F1: Chao horseman

A 3rd-century painted tile shows a rider in this heavily nomad-influenced costume, which was adopted along with the techniques of horseback fighting. The Chinese had been in contact with cavalry on the steppe since before 500 BC, but did not field their own for another two centuries. In the 3rd century Chao, a frontier state on the edge of the steppe, relied heavily on horse-archers to counter nomad raids and Ch'in aggression. Similar troops were found in the early 3rd-century armies of northern states as far east as Yen. Chinese horse-archers were often known as *lou-fan*, after one of the nomad bands.

F2: Tien warrior

Based on a bronze figurine from Yunnan, this axeman from the semi-barbarous land of Tien may also be typical of the less sinicised elements in Shu and Pa. Note the bronze 'disc-axe', an archaic weapon common in the south-west. Tien cavalry were dressed similarly and probably

armed with swords and spears, although steppe nomad influence was strong even in this remote region, and mounted archery cannot be ruled out. Their enemies of the Kunming tribe were distinguished by long pigtailed, while among the men of Pa leaf-shaped swords were characteristic weapons and tiger motifs were popular for tattoos and shield designs.

G: The Ch'in Imperial Guard, 221–206 BC

G1: Crossbowman

He is based, like the others in this plate, on the terracotta army from the tomb of the First Emperor. The missile troops were probably deployed as skirmishers to screen the close-order formations. At least seven different armour styles have been found, and, like the hairstyles, they do not appear to have been standardised within each unit. There is no evidence for the claim that the hairstyles represent the different nationalities of the Empire.

G2: Halberdier

This hand-to-hand fighter could alternatively carry a spear, and would probably also use a shield in battle. Bronze armour is suggested by the brown paint found on some figures; uniform

colours are also based on surviving traces of paint. Elite Ch'in soldiers of the pre-Empire period may have been similarly equipped, while others would resemble those in Plate E. Trousers are said to have been first worn in China by the Chao cavalry in 307 BC.

G3: Skirmisher

Pottery figures found without armour or weapons presumably represent skirmishers attached to the heavier troops, perhaps to protect the command chariots and attack those of the enemy. The spear was used for stabbing rather than throwing, and again a shield, perhaps like that of E3, could be added. The pose of other figures suggests that they were archers.

H: Ch'in mounted troops

H1: Cavalryman

Another pottery figure is the source for this heavy cavalryman; most Ch'in horsemen were probably similar to figure F1. Accounts of hand-to-hand fighting from the succession wars most commonly

refer to swords, but a bow, spear or halberd could also be carried. By 202 BC cavalry could carry a shield for dismounted combat.

H2: Charioteer

This armour is associated with a chariot driver from Pit No. 2; other chariot troops wore additional arm protection. Ch'in flags were black, the colour of the element water, which was astrologically associated with the dynasty. The styles of armour typical of the Ch'in remained in use at least as late as the 1st century BC, and soldiers of Liu Pang's, Hsiang Yu's and early Han dynasty armies must have looked very similar, especially as much of their equipment was looted from defeated Ch'in troops. As early as 209 BC, however, there were attempts to distinguish the various rebel bands from each other. The Ch'u wore blue caps, while Liu Pang's forces adopted red flags (replaced by yellow after the establishment of the dynasty), the numbers of which were increased in order to exaggerate the armies' apparent strength.

Notes sur les planches en contenus

A Soldat des hallebardiers royaux *shu*, reconstitué avec l'aide de pictographes. Remarquez la 'hache-poignard' primitive, le bouclier laqué avec motif alternatif d'hache-poignard peint la-dessus, et la tunique grosse. **A2** Un captif au point d'être sacrifié, reconstitué des descriptions dans le *Livre des Documents*. **A3** Guerrier-aurige d'élite de la période *Yim*, reconstitué d'après les découvertes d'armure. Un type alternatif de cuirasse était fabriqué d'une seule plaque de bronze. **A4** Remarquez la hache de bourreau; des exemples plus petits étaient utilisés au champ de bataille.

B Reconstitué d'après les découvertes archéologiques et descriptions dans les *Rituels de Chou* et la *Tso Chuan*. L'armure et les casques de l'équipe sont fabriqués de jusque'à sept couches de peau de rhinocéros, et laqués en rouge. Le charretier, l'archer et l'homme armé de la lance étaient tous des nobles. Le dessin conjectural du bouclier représente un emblème *l'ao l'ie* populaire. Le drapeau d'un commandant d'une unité aurait pu être décoré des clochettes et des plumes.

C1 La garde d'élite de l'escorte d'un seigneur, reconstituée d'une figurine trouvée sur une tombe. Le veston et la tige sont en soie; ce dessin est basé sur un fragment survivant, mais des carreaux, des dragons et des phénix étaient aussi utilisés. L'épée est richement ornée. **C2** Le costume plus simple des hommes de troupe des armées *Chou*, d'après un vaisseau en bronze du cinquième siècle. La reconstitution du calot, en étoffe dure, est douteuse.

D1 La culture *Ch'u* était archaïque; il existe des descriptions des *wu* ou chamans vêtus en peau d'ours. Les dessins de tambour et de drapeau ont été trouvés sur des tombes déterrées. **D2** La barbe est typique de la région. Peu de guerriers étaient richement vêtus ou équipés; il existe quand même des descriptions de soldats d'élite qui portaient des surcots en soie au-dessus de leur armure. L'illustration du bouclier et de la lance est grâce aux découvertes archéologiques. **D3** Un des 'guerriers suicide', un détenu qui était envoyé au combat par les racleurs en 518 av. J.C. La robe rouge était associée aux détenus. Le bouclier en bois était supérieur au type en cuir *Ch'u*.

E1 Le casque et l'armure sont reconstitués de 'l'armée en terre cuite' *Ch'in*; il porte un symbole d'autorité dans la forme d'un tigre; une hache décorative symbolise son rang. **E2** Des exemples d'arbalète ont été trouvés, et il existe de l'évidence documentaire pour leur méthode d'usage. **E3** L'épée plus longue en fer commençait à être utilisée environ 350 av. J.C. La cuirasse en cuir était souvent multicolore, comme par exemple cette combinaison de rouge et bleu; elle était quelquefois décorée avec de la corne de rhinocéros et de l'ivoire. Le bouclier est basé sur un sculpture en relief *Han*.

F1 D'un carreau peint; les premiers cavaliers étaient fortement influencés par les nomades de la steppe, et les archers montés s'appelaient souvent *lou-fan*, d'après la bande de nomades bien connue. **F2** D'une figurine en bronze par *Yunnan*; un guerrier semi-barbare, qui utilisait la hache-disque archaïque en bronze du sud-ouest. Le calot en étoffe est façonné pour couvrir le toupet.

G1 Basé, comme les autres illustrations dans cette planche, sur 'l'armée en terre cuite' trouvée sur la tombe du Premier Empereur. Des soldats avec projectiles étaient probablement déployés en forme d'une rideau avant les formations de soldats armés avec des lances en ordre serré. On a identifié sept styles différents d'armure; comme les soiffures, ils ne semblent pas avoir été standardisés dans les unités individuelles. **G2** Il pourrait alternativement porter une lance et probablement un bouclier au champ de bataille. Les couleurs de l'uniforme sont basées sur les traces de peinture survivantes sur quelques figures. Les pantalons semblent avoir été introduits vers 307 av. J.C. sous la dynastie *Chao*. **G3** Les figures non-armées représentent probablement des tirailleurs; la lance et probablement un bouclier, comme celui dans E3, auraient été utilisés. Les *Ch'in* étaient connus comme chasseurs de têtes ardents.

H1 Des épées, arcs, lances ou hallebardes étaient tous portés par les cavaliers *Ch'in* divers. Dès 202 av. J.C. les cavaliers portaient des boucliers pour combat à terre. Le cavalier et le cheval sont basés encore sur les figures sur la tombe de l'empereur. **H2** Basé sur un charretier trouvé dans le trou no. 2 à *Hsienyang*; des autres portaient de la protection supplémentaire sur les bras. Les drapeaux noirs *Ch'in* symbolisaient l'eau, qui était astrologiquement associée à cette dynastie. Styles d'armure *Ch'in* restaient en usage au moins jusque'au premier siècle av. J.C.

Farbtafeln

A1 Dieser Soldat der *Shu* oder der königlichen Hellebardiere wurde mit Hilfe von Bilderschriftzeichen originalgetreu nachgebildet. Zu beachten ist die primitive 'Dolch-Axt', das lackierte Lederschild auf dem ein alternatives Motiv einer Dolch-Axt gemalt ist und die aus Hanf gewebte Tunika. **A2** Ein Gefangener, der geopfert werden soll. Nachbildung anhand der Beschreibungen im 'Book of Documents'. **A3** Ein Triumphwagen-Elitekrieger aus der *Yim*-Periode. Die Nachbildung war aufgrund von wiederentdeckten Brustpanzern möglich. Ein ähnlicher Kürass wurde aus einfachen Bronzeblechen angefertigt. **A4** Die große Henkersaxt ist besonders auffallend, kleinere Abwandlungen wurden im Kampf benutzt.

B Aufgrund von archäologischen Entdeckungen sowie den Beschreibungen in den 'Ritualen von Chou' und 'Tso Chuan' war diese Rekonstruktion möglich. Die Panzerung und die Helme der Besatzung hatte man aus Nashornleder gefertigt; aus sieben Schichten setzte sich die Panzerung oftmals zusammen, die abschließend rot lackiert wurde. Fahrer, Schütze und der Lanzenkämpfer waren Edelleute. Das vermutliche Schildmotiv birgt ein beliebtes *T'ao-l'ie* Symbol. Die Fahne eines Einheitskommandanten war möglicherweise mit Glocken und Federn verziert.

C1 Elitewachposten des Gebietergefolges, der anhand einer Grabmahlstatuette nachgebildet wurde. Die Jacke und das Gewand sind aus Seide. Das Muster stammt von einem noch existierenden Teilstück, Karos, Drachen und Phönixe wurden gleichermaßen verwendet. Das Schwert ist reichlich verziert. **C2** Die einfacher gehaltenen Gewänder von *Chous* Mannschaftsstand. Ein Bronzebehälter diente hier als Muster. Die Nachbildung der Mütze aus steifem Material ist unter Umständen nicht wirklichkeitsgetreu.

D1 Die *Ch'u*-Kultur hatte ihre Ursprung im Altertum. In ihrer Gedankenwelt existierten in Felle gekleidete *Wus* oder Zauberpriester. Trommel- und Fahnenmotive stammen von ausgegrabenen Grabmälern. **D2** Der Bart ist für die Region bezeichnend. Wenige Soldaten waren gut gekleidet oder ausgerüstet, obgleich die Elitetruppen seidene Wappentrocke über die Brustpanzer getragen haben sollen. Das Schild und das Speer wurden bei einer archäologischen Ausgrabung entdeckt. **D3** Einer der 'Himmelfahrtskämpfer' der im Jahre 518 v. Chr. in dem Kampf geschickt wurde. Dabei handelte es sich um Gefangene, die dazu gezwungen wurden. Das rote Gewand war das Zeichen eines Gefangenen. Die Hölzernen Schilder gaben mehr Schutz als die ledernen *Ch'u* Schilder.

E1 Der Helm und die Rüstung sind eine Nachbildung von der *Ch'in* 'Terrakotta-Armee'. Er trägt das Symbol der Autorität, das wie ein Tiger geformt ist. Die verzierte Axt ist darüber hinaus ein Zeichen seiner Machtstellung. **E2** Armbrüste sowie deren Anwendung wurden im Laufe von Ausgrabungen entdeckt. **E3** Das lange Eisenschwert wurde ab 350 v. Chr. eingeführt. Das Lederkürass soll mehrfarbig gewesen sein, so wie das blau-rote. Manchmal wurde es zusätzlich noch mit Hörnern des Nashorns oder Elfenbein getragen. Das Schild stammt von einer Reliefskulptur aus der *Han*-Dynastie.

F1 Auf einer bemalten Kachel ist ein Kavallerist zu erkennen. Die Gewänder und Angriffstaktiken wurden sehr durch die Steppenomadenn beeinflusst. Die berittenen Bogenschützen wurden oftmals *Lou-fan* genannt, und zwar nach einer bekannten Nomadengruppe. **F2** Dieser nahezu barbarische Krieger basiert auf einer Statuette aus *Yunnan*. Er benutzt einen veralteten Stabdolch aus Bronze, der im Südwesten gebräuchlich war. Die Stoffmütze ist so zugeschnitten, dass sie den oberen Haarknoten verdeckt.

G1 Dieser Soldat beruht, wie die anderen Abbildungen dieser Bildtafel, auf der 'Terrakotta-Armee' im Grabmal des ersten Kaisers. Die Geschößtruppen wurden wahrscheinlich vor den engen Formationen der Lanzenkämpfer eingesetzt. Sieben verschiedene Rüstungsarten sind bekannt. Für die Haarracht gab es wohl innerhalb der Einheit keine festen Richtlinien. **G2** Es war auch möglich, daß er eine Lanze und wahrscheinlich auch ein Schild im Kampf trug. Die Uniformfarben wurden von Farbüberresten einiger noch existierender Statuetten entnommen. In der *Chao*-Dynastie rund 307 v. Chr. wurden Hosen eingeführt. **G3** Bei den unbewaffneten Figuren handelt es sich wohl um Vorposten. Zur Ausrüstung gehörten wahrscheinlich ein Schild wie in E3 und ein Stabdolch. Die *Ch'in* waren als eifrige Kopfläger bekannt.

H1 Schwerter, Bogen, Speere oder Hellebarden wurden von zahlreichen *Ch'in* Kavalleristen benutzt. Im Jahre 202 v. Chr. konnte die Kavallerie Schilder für den Erdkampf verwenden. Reiter und Pferd entsprechen wiederum Nachbildungen vom Grabmal des ersten Kaisers. **H2** Ein Triumphwagenlenker im zweiten Kampfplatz in *Hsienyang*. Die anderen trugen zusätzlichen Armschutz. Die schwarzen *Ch'in* Fahnen symbolisierten Wasser mit dem die Dynastie astrologisch assoziiert wurde. Der *Ch'in* Rüstungsstil wurde mindestens bis zum 1. Jahrhundert v. Chr. beibehalten.

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