

THE CONQUISTADORES



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101

THE CONQUISTADORES

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Film strip of the Codex Laud, Codex Mendoza, the
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Introduction

The 200 years from 1450 to 1650 are often referred to as the Age of Discovery, for during this period European explorers voyaged to most of the habitable regions of the globe. These explorers, challenging not only the forces of nature but also the teachings of the all-powerful Church, discovered vast territories whose existence had not been suspected, and mapped the rough outlines of the world as we know it. Yet these men were not 'pure' explorers; most were seeking only to link Europe with other regions known or believed to exist, and which were considered to be of economic importance. They sought personal financial gain, and their discoveries were largely accidental bonuses.

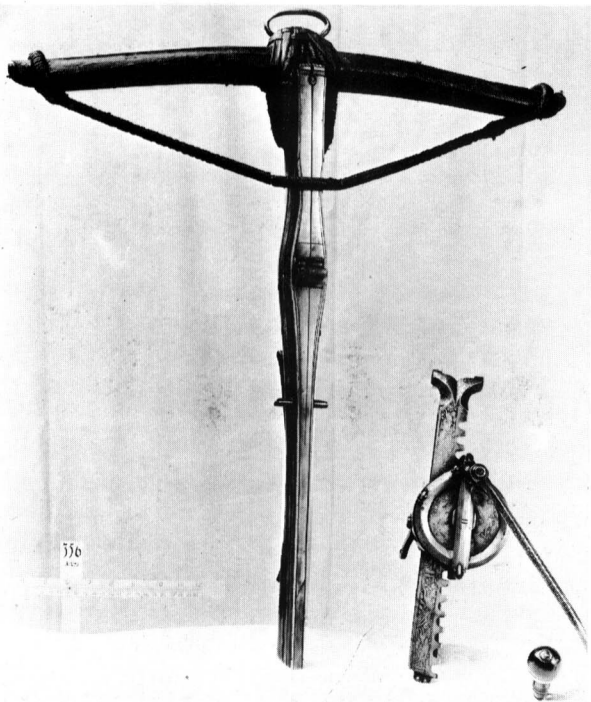
In the 15th and 16th centuries an immense amount of geographical knowledge was gained by this rather haphazard method. Most startling of all the discoveries was that of the New World, a vast and apparently unending continent hitherto unknown and unsuspected. On 12 October 1492 Columbus, seeking a route to the legendary rich markets of China and Japan by sailing continually westwards, discovered this New World when he sighted a Caribbean island which he named San Salvador (generally identified with Watling Island in the Bahamas). In the following decade Columbus discovered most of the larger islands of the West Indies and claimed them for Spain. By 1520 many of these islands had been explored and a considerable number of Spanish colonies had been founded on them, especially in Cuba and Hispaniola (Haiti).

Most of the settlers in these colonies were ex-soldiers who had fought in the armies which drove the Moors out of southern Spain, or served in the Italian campaigns against the French. They were a hardy, adventurous and unruly

crew, no longer able to find suitable employment in Europe. They carved a foothold for Spain in the Indies, only to become restless in the rôle of settler once their pioneering work was done. Anxious to avoid the dull work of the administrators and planters who inevitably followed the explorers in these new lands of the Spanish

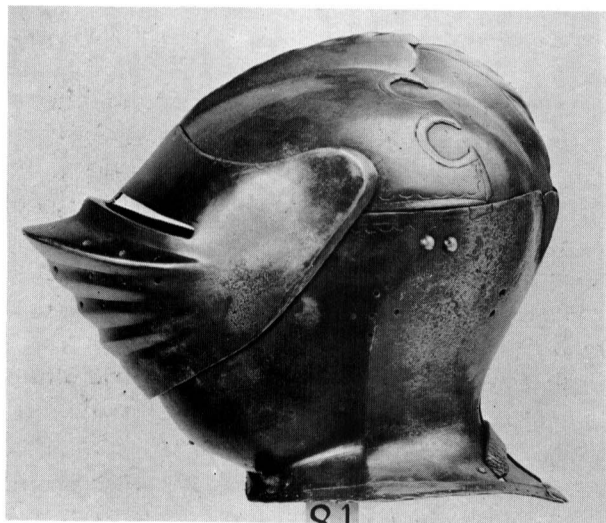
An unarmoured Spanish crossbowman. He is reloading his weapon with the aid of a wooden lever, a simple but effective device probably descended from the older 'goat's foot'. This lever was small, light and more convenient than the goat's foot lever, as it pushed the bowstring to the catch of the lock instead of pulling it there, and worked without friction. It could bend easily and quickly a steel bow of moderate size, one, for instance, which did not require a windlass or cranequin; and it and the lighter crossbow would therefore have been more suited for service in the Americas than the more elaborate reloading systems required for the stronger bows.





German crossbow of *circa* 1520, with composite stave of layers of cane and whalebone, covered with parchment. Overall length 72.5cm (28in.), span of bow 63.7cm (25in.), weight 2.170 kilos (4 $\frac{1}{2}$ lb). The bar piercing the stock above the trigger is for the claw of a cranequin (illustrated alongside: one arm of the claw is just visible on the left underside). (Wallace Collection)

Spanish armet of about 1500, the whole of which is blued. This is a distinctively Spanish type of armet. Helmets such as these were worn by the heavy cavalymen of the period. (Wallace Collection)

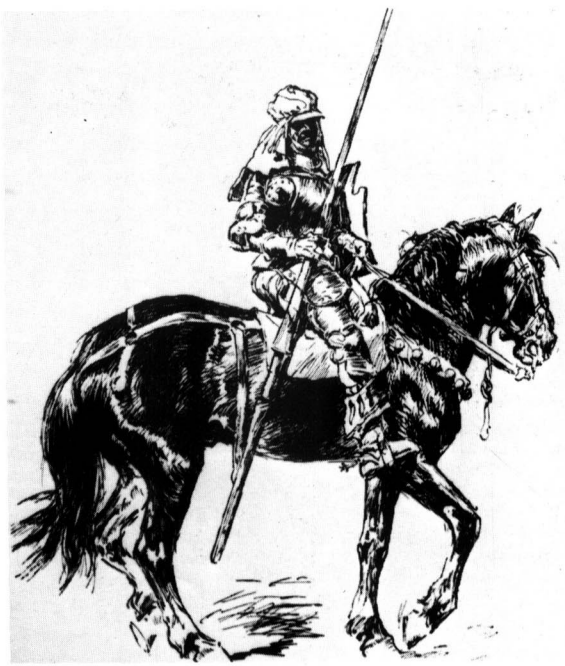


Crown, these men soon began to seek new frontiers, once again turning their faces westwards towards the unknown. The age of Los Conquistadores, 'the conquerors', had arrived.

Of course, it was more than just adventurous spirits which made men venture into the unknown vastness of the Americas. Just as the early navigators had sought the routes to new markets for financial gain via sea-borne trade, so now the conquistadores sought wealth by the only method they knew—conquest of land. Bernal Diaz, perhaps the most honest writer on the conquests in the Americas, wrote that he and his companions went to the Indies 'to serve God and His Majesty, to give light to those who were in darkness, and to grow rich, as all men desire to do'.

The age of the conquistadores was belligerent and brief, lasting from 1520 until about 1550. The conquistadores undertook their puny expeditions into the great land masses of the Americas at their own expense, enduring great hardships, and risking their lives and fortunes without any help from the Spanish Crown. Left to themselves they would probably have settled in feudal communities, paying only verbal homage to the Crown, and carved out great fortunes for themselves by exploiting the Indians they had conquered. But the Spanish Crown did not allow this to happen. Those few conquistadores who survived the battles with Indians, disease, poisonous snakes, starvation and thirst—and the knives of their rivals—were soon displaced by royal appointees, lawyers and clerics sent to protect the Crown's interests in the new lands. Planters and mining experts followed inexorably, forcing those conquistadores who survived to keep moving ever westward: it was to be the Crown and the merchants of Seville—not the conquistadores—who reaped the rewards of the conquests.

Spain's wars with France began in 1495 and did not end until 1559. France was twice as populous as Spain, and richer in natural resources: in order to field armies which could withstand the might of France, Spain needed to hire thousands of mercenaries. Wars, and particularly mercenaries, cost a great deal of money, and the Spanish treasury had somehow to be refilled constantly if the monarch was to have the



Spanish heavy cavalrymen in three-quarter armour, wearing open-faced helmets and with their lower legs protected only by boots. The drawings are by Anton Hoffman, who in 1918 published a series of such drawings, illustrating the conquistadores and their Indian opponents. Hoffman is generally accurate on Spanish detail, but is often at fault when it comes to the Indians. However, he has managed to capture the atmosphere of the time, place and people strikingly, and a number of his drawings have been used here for the sake of 'atmosphere'.

wherewithal to pursue his grand policy.

In the 16th century money meant gold, and gold was a rare metal in Europe. At the end of the 15th century Europe's entire store of gold did not exceed 90 metric tonnes (88 tons): cast in a single ingot it would have formed a cube only two metres (6ft) in each dimension. There was considerably more silver available, 3,200 metric tonnes (3,150 tons) in the whole of Europe—but even this was insufficient to finance protracted wars, which now required great investment in cannon foundries, gunsmiths' factories and powder mills, as well as horses, arms and armour, and the greatest drain of all—the soldiers' pay. If Spain was to grow in power, she needed gold. Some was scavenged from the Portuguese exploration of the coast of Africa, some from Oriental overland trade routes, and gold plate was melted down to produce more coin. But these were trifling additions: the grandiose plans of the great European monarchs could not be fulfilled

on the gold which had circulated amongst the petty medieval kings. Within the wars of Spain and France was waged another war—the war for gold. And where was gold to be found, if not in the Indies? This was the reason for the Spanish monarch's great interest in the New World, and his rigid control over it by loyal officers from his court.

It is estimated that Cortes took from Montezuma \$6,300,000 in gold (valuation made in the mid-1950s). Pizarro is believed to have taken from Atahualpa 1,326,000 gold pesos (\$6,169,200) and 52,000 silver marks (\$681,240). No European monarch or banker had ever had such a fortune in his coffers: here was the source of Spain's rise to greatness in the 16th century.

By 1560 it is estimated that 101 metric tonnes (99 tons) of gold had been shipped to Spain from the New World, more than doubling Europe's entire store of that metal. The discovery of the Potosi mines in 1545, and those at Zacatecas in

1547, was to result in an almost equal increase in the stock of silver in Europe over the next 40 years, during which time 6,872 metric tonnes (6,765 tons) of silver crossed the Atlantic. To these riches must also be added the vast wealth realized by the Aztec jewels, Bogota emeralds and Venezuelan pearls; by the beaver skins of New Mexico, the precious woods of Guiana and the indigo, vanilla and cacao of the islands. The conquistadores, Spain's ex-soldiers in the New

World, had won the battle for gold, and made possible Spain's brief but brilliant burst of glory.

Los Conquistadores

The highly efficient armies created by Ferdinand V and Isabella for the *reconquista* of 1481 to 1492, which finally expelled the Moors from Iberia, were reorganized in the last decade of the 15th century into a standing army under full royal control. This was the army which was to fight the Italian Wars against France, under the inspired leadership of *El Gran Capitán*—Gonzalo de Córdoba, the first important European soldier

War saddle of 1549. The seat is padded and covered with quilted leather strongly lined with brown leather and bordered with a silk fringe. The large padded bolsters on either side are to support the rider's thighs. The central steel plate is reinforced at the back by a fourth plate. The underside of the saddle is heavily padded with straw covered with coarse canvas. (Wallace Collection)



fully to understand and utilize small-arms fire-power.

At the beginning of the wars with France in 1495, the standing army of Spain was the only one in Europe which could truly be described as a regular army, with over a decade of continuous warfare behind it. In the next decade, under Córdoba, this army reconquered the kingdom of Naples, which was finally surrendered by the French in 1505. During this period Córdoba trained a portion of his infantry in Swiss pike tactics, and by 1505 he had forged an army of highly disciplined and experienced pikemen and arquebusiers which, combining the advantages of both arms in mutually supporting rôles, and trained and organized in a modern sense for the first time, was to dominate the battlefields of Europe for the next 70 years.

The Italian Wars were renewed in 1508 by Louis XII, and lasted until 1514. Francis I renewed them in 1515, but peace was signed the following year. The wars were not resumed until 1521. For the first time in 20 years the soldiers of Spain were unemployed. Volunteers flocked to the newly discovered Caribbean islands to pursue the only trade they knew—and to get rich quickly.

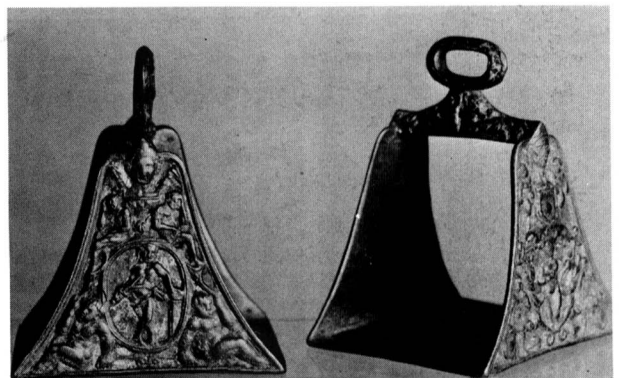
The soldiers who went to the West Indies, and from there to conquer the Americas, were the most adventurous men of an adventurous age: tough, brave and ruthless. More importantly, two decades of war, of constant success against all enemies—and another decade of success against Islam before that—had given these Spanish soldiers an unshakeable self-confidence. They were not only unbeatable, they *knew* they were unbeatable; and whenever they were faced by thousands of Indians in the Americas their first reaction, regardless of the overwhelming odds, was always to advance, with their cavalry charging arrogantly into the thick of the enemy.

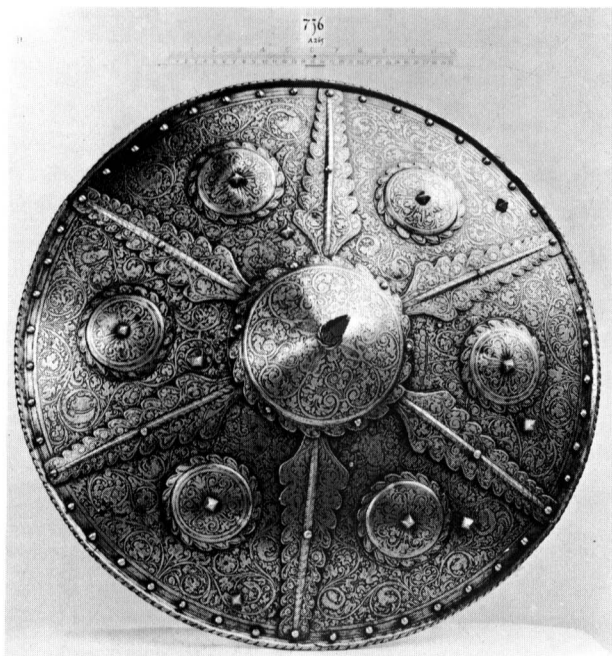
When one looks at the numbers of Spanish soldiers involved in the American conquests, one can begin to appreciate the measure of this self-confidence. When Cortes advanced into the heart of the Aztec empire, confronting and defeating armies of 40,000 or more, he had 400 men, 15 horses, 10 heavy cannon and four lighter pieces. When he undertook the siege of Tenochtitlan in



German steel spur of circa 1500, of the style used by the conquistadores. (Dept. of the Environment)

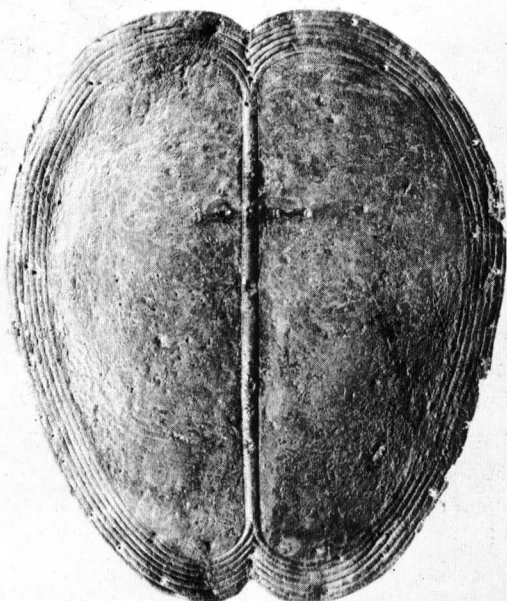
A pair of Spanish stirrups in the Moorish style, dated about 1550. (Wallace Collection)





Iron shield or buckler in the Spanish style, made about 1560. The shield is made in two halves riveted together and is convex in section. The conical boss has a central spike of diamond section. At the back are rings for the arm and hand-loops. Diameter 59.3cm (23in.), weight 4.180 kilos (9lb). Shields of this form, with applied radiating spokes and round bosses, but faced with leather or velvet, may be seen in the Real Armeria at Madrid. (Wallace Collection)

Spanish *adarga*-style shield of the 16th century, made of hide. (Dept. of the Environment)



1521 he had some 850 Spanish infantry, 86 cavalry, and 15 cannon. Georg Hohermuth had only 509 men when he set out to conquer the whole of Venezuela in 1535, and when Pizarro first invaded Peru he had just 106 infantry and 62 cavalry.

Nor should it be imagined that these small armies resembled in any way the invincible Spanish armies of Europe. Despite their success with the arquebus in the Italian Wars, relatively few firearms were employed by the Spaniards in the New World. The long and rather unwieldy arquebus of the first half of the 16th century was a practical weapon in orderly European battles in open terrain; but it was not a weapon which could be used advantageously in the climate and terrain of the Americas. A rest was required to support the end of the barrel, a fine powder was needed for priming, and a lighted match had to be carried for ignition. The match itself was lit by flint and tinder and, since it could not be kept burning at all times, the arquebusiers in America were sometimes attacked before they could get their matches lit. Particularly in Peru and the Yucatan, the guerrilla type of warfare waged by the Indians rendered arquebusiers largely ineffective.

Nor was the crossbow, with its powerful steel stave, used to any great effect, the Indians regarding it as a clumsy machine inclined to malfunctions. It was effective enough in Europe, where its velocity was designed to penetrate plate armour, but such velocity was not needed in the Americas; and the crossbowmen were stuck with a slow reloading system, using pulleys or ratchets, when they could better have employed a crossbow which packed less punch but was easier to reload. Granted, the crossbow bolts killed any Indian they hit; but there were thousands of Indians, and relatively few were hit.

Contemporary accounts of the various expeditions usually state that many arquebuses and crossbows were no longer serviceable after several weeks in the field (due to rust or broken bow strings, caused by the climate), and after several months in the field most such weapons were usually rendered unserviceable. The proportions of troop types tend to confirm this. At the siege of Tenochtitlan Cortes's 850 infantry included be-

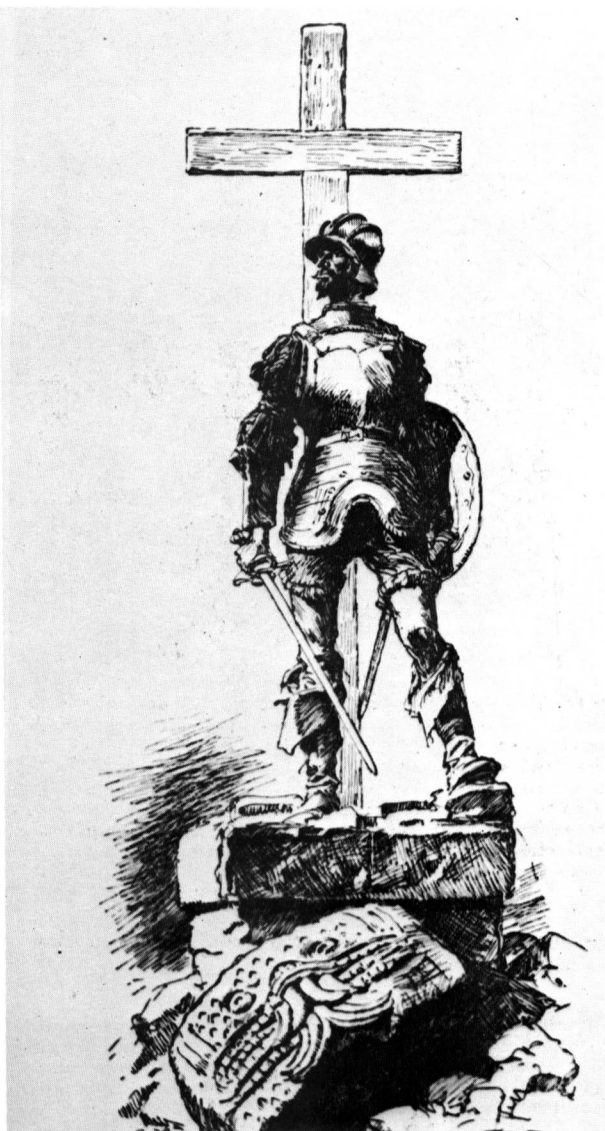
tween 120 and 160 crossbowmen and arquebusiers, yet conditions were as near ideal as they would ever be for such weapons; and when Alvarado attacked Quito he had no arquebusiers at all, though one-fifth of his 500 men were crossbowmen.

There was also the problem of ammunition replenishment. Before the siege of Tenochtitlan, Cortes had Spanish crossbow bolts and bolt-heads distributed to his Indian allies of Texcoco, with instructions to copy them and produce 8,000 of each. Within eight days the Indians delivered 50,000 bolt-shafts and a similar number of copper bolt-heads, the latter apparently superior in quality to the Spanish ones! These were distributed amongst Cortes's crossbowmen (possibly 80 in number) with instructions to polish, oil and feather the bolts. Another vital item was powder. Before the siege of Tenochtitlan Cortes had 510 kilos (1,124lb) for his arquebusiers and his three heavy iron cannon and five small bronze field pieces. Finally, bow-cord was shipped to the conquistadores in great quantity, suggesting a rapid deterioration of the cord in service, and confirming the lack of reliability of the crossbow in this theatre.

If it was not the trained arquebusiers with their 'sticks which produced thunder', or even the crossbowmen using a weapon which the Indians could comprehend, who defeated the American Indians, then success must have been achieved in hand-to-hand combat. It seems incredible that such small numbers of Spanish soldiers—who were not always supported by Indian allies—could overwhelm thousands of Indians in hand-to-hand fighting, but they did. So how did they do it?

Firstly, and most importantly, the Spaniards had the horse. The American Indians had never seen horses before and few became familiar with the animal during the conquistadore period. The Aztec account of the conquest (*The Broken Spears*) brings home just how supernatural these animals must have appeared to the Indians, who at first believed that if the rider was killed the horse was rendered useless:

'The stags [i.e. horses] came forward, carrying the soldiers on their backs. The soldiers were wearing cotton armour. They bore their leather



Spanish sword-and-buckler man in cuirass with tassets, burgonet and gorget. His armour is decorated with the popular braided or 'rope' design of the 1520s.

shields and their iron spears in their hands, but their swords hung down from the necks of the stags.

'These animals wore little bells, they are adorned with many little bells. When the stags gallop, the bells make a loud clamour, ringing and reverberating.

'These stags snort and bellow. They sweat a very great deal, the sweat pours from their bodies in streams. The foam from their muzzles drips onto the ground. It spills out in fat drops, like



Spanish sword-and-buckler men in battle with Aztec warriors. All are using iron bucklers, wear burgonets, and have unarmoured legs.

Spanish sallet, late 15th century, stamped with the mark of Castejón de las armas (Zaragoza). The sallet and burgonet were generally worn by infantrymen, though some cavalrymen also preferred them to the closed helmet. (Dept. of the Environment)



lather of amole [a plant used by the Aztecs to make soap].

'They make a loud noise when they run; they make a great din, as if stones were raining on the earth. Then the ground is pitted and scarred where they set down their hooves. It opens wherever their hooves touch it.'

Although the dominance of the heavily armoured horseman had been challenged by the introduction of the pike and arquebus formations, such cavalry was to retain a considerable measure of importance on European battlefields right into the second half of the 16th century, and in the Americas it reigned supreme. In battle the mounted man had an overwhelming advantage over a foot-soldier, striking downwards from a greater height with all the added force that entailed, and using his horse as a weapon to knock down other opponents. That same height made the rider less accessible to the foot-soldier, and the horseman could fight longer and manoeuvre more quickly than a foot-soldier, who had only his own legs to rely on. Even more important was the mobility which horses gave to the Spaniards, in comparison with the Indians, who were wholly on foot. Time and time again small bodies of Spanish cavalrymen dashed into the fray, or rode across country to take Indian forces by surprise. There was no way the Indians could prevent such lightning attacks, for even if a screen of picquets was thrown out in advance of an army, the Spanish horsemen could ride past them faster than the sentries could run back to give the alarm. *The Broken Spears* also gives a description of the riders:

'There were about fifteen of these people, some with blue jackets, others with red, others with black or green, and still others with jackets of a soiled colour, very ugly, like our *ichtilmatli* [cloak made from the fibres of the maguey cactus]. There were also a few without jackets. On their heads they wore red kerchiefs, or bonnets of fine scarlet colour, and some wore large, round hats like small *comales* [wide flat pottery dish on which tortillas were—and still are—baked] which must

Brigandine of small plates riveted to linen covers, cabacete and bevor, and gauntlets, all Spanish circa 1470–1500. This represents the type of armour used by many Spanish foot-soldiers in the initial battles. (Dept. of the Environment)





Side-view of the cabacete illustrated in the preceding photograph. It is of late 15th century Spanish manufacture, or possibly Italian for the Spanish market. (Dept. of the Environment)

Spanish morion of the early 16th century. This was the type of helmet preferred by arquebusiers and crossbowmen, and was also popular with other foot-soldiers. (Dept. of the Environment)



have been sunshades. They have very light skin, much lighter than ours. They all have long beards, and their hair comes only to their ears.'

The European fashion at this time was for doublets of cloth and leather with puffed and slashed sleeves, with padded rolls at the shoulders, and very short and wide knee breeches, also puffed out by stuffing. With these were worn tight-fitting hose and calf-high Moorish boots of red leather, or the heavier rough leather thigh-boots, turned down to below the knee except in battle. The clothing was colourful, red being an especially popular colour, and feathers were often worn in the hats.

The stuffing in the doublet and breeches afforded some protection against a sword slash, but when the conquistadores first fought in the Americas they wore armour of the type used in Europe. The captains and some of the richer horsemen would have worn what is known as three-quarter armour: closed helmet, cuirass, arm defences and gauntlets, and leg defences which ended at the knees. This armour was probably quite decorative in appearance, for the age of the conquistadores coincided with the peak of the art of the armourer. The Italian Wars had caused an interchange of styles between the great German and Italian armour manufacturing centres, and by about 1500 the formerly distinctive styles of these two countries had fused to give a common style throughout Europe, usually referred to as Maximilian armour, though this term refers particularly to armour decorated with vertical fluting. However, armours with smooth surfaces were used as widely as fluted armour during this period, and indeed smooth armour was the most popular style outside Germany. (Fluted armour went out of fashion in Italy about 1520, and in Germany by the 1530s.) After about 1510 the turned edges of plate armour made in Germany were often decorated with brass borders of a braided or 'rope' design, and this was general practice by about 1520. From this date these edges were turned inwards instead of outwards as formerly, and this provides a rule-of-thumb guide when dating armour. Another development *circa* 1510 was the embossing and etching of whole armours in imitation of the puffed and slashed costume of the period. This fashion was at its peak

in the 1520s and ended *circa* 1530.

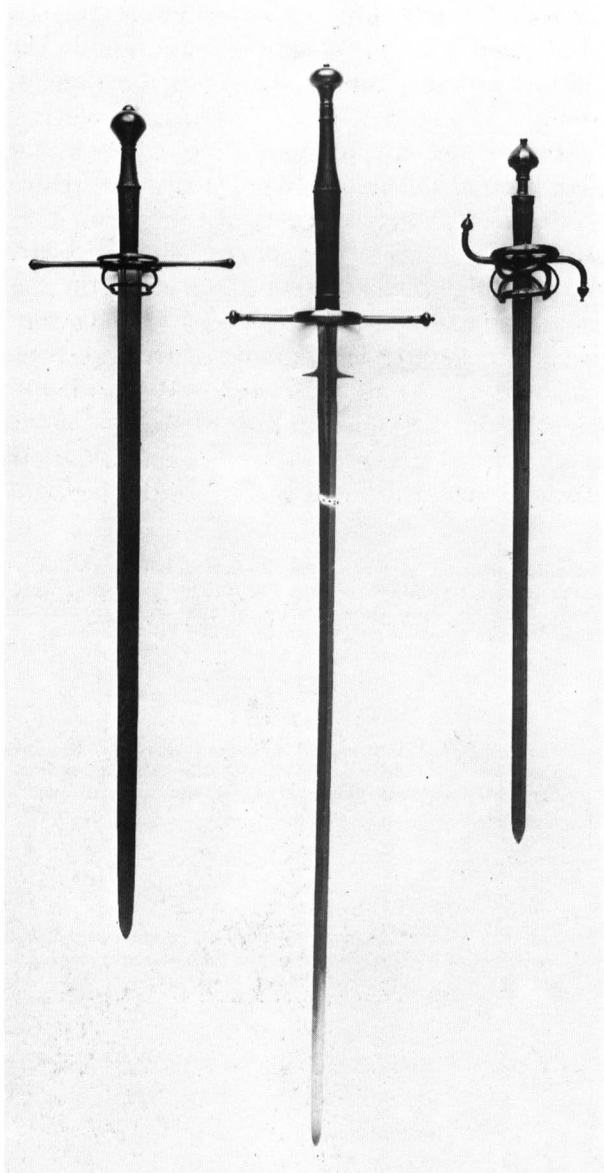
The Spanish had been greatly influenced by the Moors, and had developed a lighter armoured horseman in the Moorish style to cancel out the advantages of pikeman and arquebusier. These light cavalymen, called *jinetes*, rode lighter, faster horses than the medieval knight and used a style of riding called *a la jineta*, which made for greater manoeuvrability. Instead of riding with legs stretched out, like the medieval knight, who had to take the shock of charging home with the lance, these riders used short stirrups and rode with their legs bent backwards so as to give the appearance of almost kneeling on the horse's back. A high Moorish saddle was used, and the single-rein but powerful Moorish bit, which turned a horse by pressure on the neck, not by pulling at the corners of the mouth. This bit had a high port and often a long branch, so that by

raising the hand the port was pressed into the palate, and a horse obeyed far more rapidly yet suffered less than under the modern system of riding.

Most of the cavalry in the Americas would have been of this lighter type, wearing a lighter type of armour specially designed for them. This usually consisted of an open helmet, collar, cuirass, thigh defences called tassets, arm defences and gauntlets. Some cheaper armours consisted of helmet, gorget, cuirass and vambraces, which protected only the outsides of the arms and had laminated extensions over the backs of the hands instead of gauntlets. Occasionally no plate was used on the arms, only mail, and some light

'Spanish' morion of *circa* 1580; in fact this example is of north Italian manufacture, but the morion was so distinctively Spanish that almost all morions were so termed regardless of place of origin. (Dept. of the Environment)





16th-century swords, left to right: hand-and-half sword, probably German, length of blade 109.3cm (43in.), weight 2.140 kilos (4½lb); two-handed sword, Spanish or German, length 135.2cm (53in.), weight 2.675 kilos (5lb); hand-and-half sword, Spanish blade, German hilt, length 95.4cm (37½in.), weight 1.740 kilos (3½lb). (Wallace Collection)

cavalrymen had only an open helmet, mail shirt and gauntlets.

A full suit of armour weighed between 27 and 32 kilos (60–70lb), but was not cumbersome because the weight was distributed evenly over the whole body. A mail shirt might weigh between 7 and 14 kilos (15–30lb), depending on the size of the links, but most of that weight was

carried on the shoulders. The tropical rains of central America soon rusted such armours (even though they were often painted black to prevent this), while the sun boiled the men inside them; and it was not long before the conquistadores began to adopt the local armour, a jacket of cotton or maguey fibres, stuffed with cotton to a thickness of three fingers. This armour is sometimes referred to as quilted, and there must have been some stitching to keep the stuffing evenly distributed. The jackets were soaked in brine to toughen them, and were quite capable of stopping an Indian arrow or sword slash: one Spanish captain is said to have emerged from a battle looking like a porcupine, with 200 arrows in his quilted armour, and it was certainly normal for such armour to stop perhaps 10 arrows without injury to the wearer.

Helmets and gorgets were worn with this quilted armour, with local hemp sandals replacing the heavy leather boots. Diaz says: 'We never took off our armour, gorgets or leggings by night or day.' It must be assumed that 'leggings' refers only to hose, as it is doubtful if any form of protection was worn on the legs. A small shield completed the cavalryman's defences, generally an oval buckler of iron or wood covered in leather, though the heart-shaped *adarga* was also used. Offensive weapons were a lance, sword and dagger. The lance (*lanza jineta*) was between three and four metres (9–12ft) long, thin and light, with a metal head of diamond cross-section. It could penetrate the Indian armour with ease.

In weapons and equipment as well as in spirit, the conquistadores were indeed men of iron: well might the American Stone Age author of *The Broken Spears* write of the Spaniards: 'Their trappings and arms are all made of iron; they dress in iron and wear iron casques on their heads. Their swords are iron; their bows are iron; their shields are iron; their spears are iron.'

The second decisive factor in hand-to-hand combat with the Indians was the Spanish infantryman and his sword. At this date the pike and arquebus had not yet totally replaced the sword-and-buckler men who had built the fine reputation of the Spanish army, and who were famed throughout Europe for their skill as swordsmen. Encased in three-quarter armour

and open helmet with gorget, armed with a long, double-edged sword and small buckler, these swordsmen had broken the famous Swiss pike formations which had ruled the battlefield for a century, to emerge as the leading infantrymen of the day.

The development of firearms had not yet made the swordsman obsolete, only caused the lightening of his armour to give greater speed in the attack, and in America the sword-and-buckler man more often than not wore only a helmet and studded brigandine, or a jack made of small plates of iron or horn secured between two layers of canvas by stitching, or a plain but tough leather jerkin. Sallets and burgonets were worn by these men, but the most popular type of helmet for the infantry was the morion, which was especially favoured by the arquebusiers and crossbowmen because it enabled them to take aim better.

The straight Spanish sword was about a metre in length, double-edged, with a sharp point and S-shaped crossguard, one arm of which curved towards the pear-shaped pommel to protect the hand, while the other curved towards the point and could be used to trap an enemy's weapon. Sometimes there was a metal ring at each side of the blade to provide extra protection for the hand.

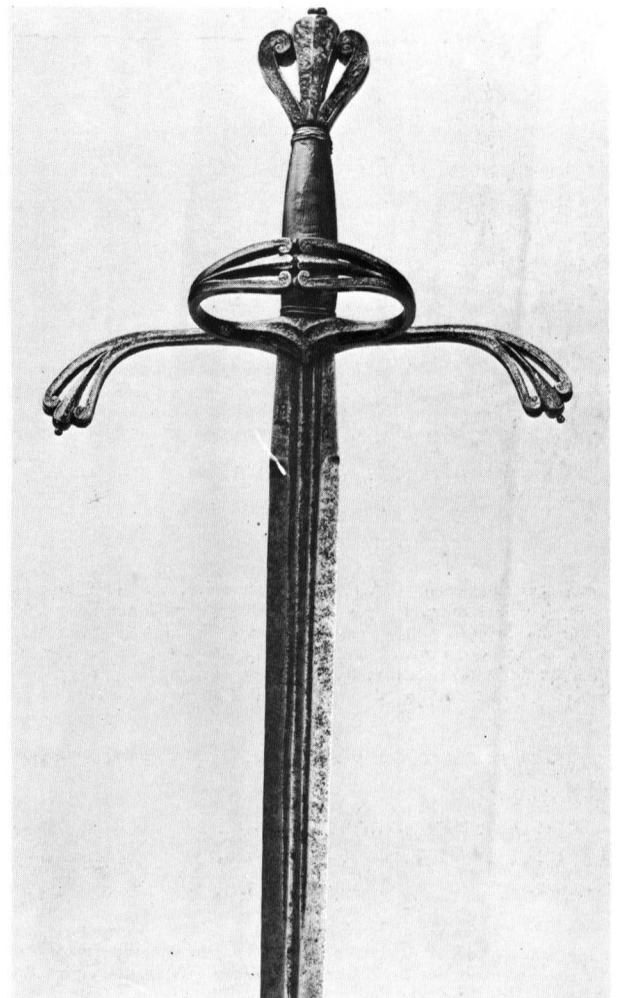
This was the period when the rapier made its appearance, and the art of fencing became popular throughout Europe. The Spanish had gained much from the Moors when it came to sword-blade manufacture, and by this date Toledo was one of the most famous centres of sword manufacture. Strict standards were enforced, and all blades were rigorously tested by bending them into an S and semi-circle, and by striking full force against a steel helmet, before being passed. Toledo blades were long, strong, flexible, light and razor-sharp—deadly weapons in the hands of skilled men, and the Spanish were the finest swordsmen in Europe.

Against such weapons the Indians had a heavy, clumsy sword which could only be used in a slashing action: while they were still raising their arms to strike, the conquistadores could transfix them with one lightning lunge, piercing the cotton armour with ease. It is no coincidence that, once established in the Americas, the

Spanish forbade any Indian to possess a steel sword under any circumstances whatever.

Thirdly, there were the cannon the Spanish dragged so painstakingly overland with them—or rather, enlisted native porters to do so for them. There is little reference to the rôle played by cannon in the conquests, yet one can judge from the eyewitnesses' descriptions of battles that the cannon were devastating, employing in the set-piece battles what must have been langridge (a kind of canister-shot containing irregular iron projectiles) at close range and with murderous effect. Nor was their effect restricted to the purely physical: as with the horses, the cannon had an effect on the minds and morale of the Indians:

Spanish sword of the mid-16th century, length 104.3cm (41in.), weight 1.340 kilos (2 $\frac{3}{4}$ lb). (Wallace Collection)



‘Then the Spanish fired one of their cannons, and this caused great confusion in the city. The people scattered in every direction; they fled without rhyme or reason; they ran off as if they were being pursued. It was as if they had eaten the mushrooms that confuse the mind, or had seen some dreadful apparition. They were all overcome by terror, as if their hearts had fainted. And when night fell, the panic spread through the city and their fears would not let them sleep.’
(From *The Broken Spears*.)

The Aztecs

‘Aztec’ has come to be used as a collective title for all Mexican Indians, but the true Aztecs were originally a relatively small tribe which moved from the north-west into the valley of Mexico in the 11th or 12th century. By *circa* 1325 they had founded their city of Tenochtitlan in Lake Texcoco, and about a hundred years later they emerged as one of the leading powers, forming a triple alliance with the cities of Texcoco and Tlacopan (Tacuba). Under Aztec leadership the Triple Alliance conquered the neighbouring tribes, but civil war broke out between the allies in the 1460s, ending in 1473 with victory for the Aztecs. Tenochtitlan thus became the capital of an empire, which by the time of the conquistadores contained no less than 38 semi-independent tribes, all ruled by the Aztec emperor or ‘Chosen Speaker’ in Tenochtitlan.

By this date the population of Tenochtitlan had grown to an estimated 90,000 (contemporary sources usually give 250,000 but this is an exaggeration); at the same date London had a population of *circa* 40,000, Paris 65,000. The Aztecs could no longer support themselves from local produce, and were dependent on tribute from the conquered tribes, not just in the form of food, but also for all the luxuries which they coveted but could not produce for themselves—gold, jewels, chocolate, rubber, cotton, animal skins and birds (for their feathers). However, war was not only a political and economic necessity



German sword of about 1580: the Toledo inscription is not in the Spanish manner. Length 93.4cm (36½in.), weight .830 kilos (1½lb). (Wallace Collection)

to maintain the *status quo* and to exact tribute, it was also essential for religious reasons. The Aztecs regarded themselves as the chosen people of the gods, chief of whom was their own Huitzilpochtli (the Hummingbird Wizard), who was the sun, the ever-youthful warrior who fought Man's battles with the other gods for Man's survival. To keep up his strength, Huitzilpochtli needed food, and the most precious food was human blood. Huitzilpochtli was therefore fed by human sacrifice, and war was the means by which the Aztecs secured an unending supply of victims.

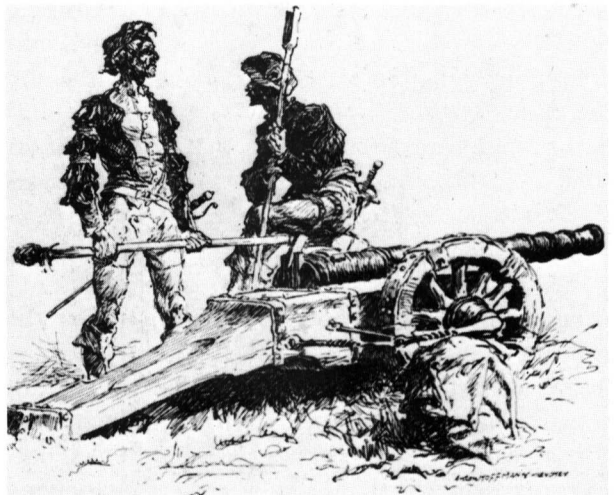
Thus the Aztecs were continually at war, and their army was of paramount importance. All youths, regardless of rank, were submitted to a rigorous military training from the age of fifteen. As a mark of their status their hair was shorn, with the exception of a long tuft left to grow at the back of the head. These youths went into battle with experienced veterans, each youth following a veteran and awaiting the opportunity to prove himself, rather like a medieval European squire. If a youth succeeded in taking a captive for sacrifice—usually with the help of five or six other initiates—he became an *iyac* and most of his tuft of hair was removed, leaving only a small part which reached down to one ear. Thereafter the youth had to take all further captives entirely unaided. Successful youths were allowed to stain their faces with red ochre, and the Chosen Speaker granted them orange capes with a striped border and a scorpion design, together with two breechclouts, one of carmine, the other of many colours. More honours were granted to those who managed to achieve a total of three captives, but only when a youth had taken a fourth captive was he promoted to the title of seasoned warrior. He then became a member of the officer class, and could mix on equal terms with the greatest captains. Needless to say, only a minority of youths achieved this status: the majority failed and returned to their homes, where they pursued the trade of their father, more often than not becoming peasant farmers.

The peasant (*macehualli*) formed the base of Aztec society and was grouped in clans of related families. Although primarily a farmer he was also a warrior, part of the vast reservist force which

formed the bulk, the rank and file, of all Aztec armies. For the Aztecs had no standing army as such, only the cadre of seasoned warriors, and when war was declared the peasantry had to be mustered, armed and given a brief refresher course. Other members of the clan tended a peasant's fields while he was away with the army. As warfare was almost continuous, but normally on a small scale, the peasant-warrior was usually called upon to serve in a sort of rota system, and because of his initial training was quite proficient as a warrior.

The smallest unit in an army was a squad of 20 men, although detachments of four to six men were used for scouting and raiding parties. These squads were combined into larger units of 200, 400 and 800 warriors, and were commanded at each level by officers drawn from the officer class but of the same clan. Some missile-men were formed into separate bodies under an officer called *Otomitl*. All the men of one clan were thus formed into one large group (*capulli*), with their clan chief in overall command. There were 20 clans in Tenochtitlan and the 20 *capulli* were organized into four divisions, corresponding to the same grouping as existed in the four quarters

A light culverin with cast bronze barrel, typical of the field guns of the period. The Spanish were amongst the first to use limbers to improve mobility, but even so eight or nine horses were needed to move the artillery pieces. In the Americas the pieces were moved by native labour, and no mention is made of limbers. It is possible they were dragged barrel first, with the trail literally trailing.





A member of the 'military order' of the Knights of the Jaguar. He wears a jaguar skin, which conceals his quilted cotton armour. He is armed with a rather fanciful axe for which there is no evidence, but is otherwise correctly portrayed.

(*barrios*) of the city. In the largest armies the troops from a given *barrio* were sometimes divided again into 'brigades' of two or three clans.

The four divisional commanders were blood relatives of the emperor: two were called *tlacatacatl* (chief of men), another *tlacochcalcatl* (chief of the house of javelins). The Chosen Speaker was commander of the whole army, and commander-in-chief of all the forces fielded by the Aztec confederation of city states. The emperor might lead the armies in person, but in time of continuous warfare the command was sometimes delegated to a war chief (*tlacatecatl*) who held office for a single campaign.

Mexican chroniclers refer to armies of anything from 20,000 to 200,000 warriors under the supreme command of Tenochtitlan. The first figure seems a reasonable estimate for the contingent from Tenochtitlan itself: Texcoco and Tlacopan may have produced a further 20,000 warriors between them. They were thus depen-

dent upon each other, and on contingents from conquered tribes, when fighting the largest tribes, such as the Tlaxcalans, who could field about 40,000 warriors.

In addition to providing officers for the subdivisions under the clan chiefs, the officer class also provided a bodyguard for the emperor and at least three other permanent bodies of troops, known as the Knights of the Eagle, the Jaguar and the Arrow. The Knights of the Arrow do not appear to have been of the same importance as the other two 'military orders', but all three seem to have fought as a separate body within the army, acting as a *corps d'élite* which probably took the centre of the line of battle.

Everyday clothing for the peasantry was a narrow loincloth (*maxtlatl*) which was passed between the legs and taken round the waist, with the two ends left hanging at front and rear. The ends were usually embroidered and had fringes. A triangular 'apron' was also worn sometimes, covering the upper thighs. A rectangular woven cloak (*tilmantli*) of cotton or maguey fibres was tied over one shoulder, and sandals of maguey fibres or animal skin were worn on the feet.

In time of war the cloak was discarded and each warrior was issued with a quilted *ichcahui-pilli*, a sort of tight-fitting combination suit with short sleeves and with legs ending at the knees, made of cotton or maguey fibre stuffed with cotton to a thickness of three fingers, and soaked in brine to toughen it. There was a vertical opening down the back, fastened by lacing. This garment was quite capable of stopping an Indian arrow and sometimes even a javelin.

The only other defensive equipment was a shield (*chimalli*). One type was made of leather or wooden slats and covered a warrior from head to foot. It could be rolled up when not needed and was designed purely to protect troops from a missile barrage. The other round or buckler type of shield, carried by every warrior, was between 50 and 75cm (20-30in.) in diameter and was made either of wood, or wickerwork of reeds, or canes laid side by side and secured with cotton thread. The round shields were usually covered with hide, and some were elaborately decorated, either with paint, inlay, feather mosaic or metal ornaments. The round shields of the ordinary

warriors were usually plain, though it is possible that all warriors' shields had painted on them the hieroglyph of their clan. The shields of the various captains and members of the knightly orders bore their personal emblems or hieroglyphs, as did that of the commander of each clan. These shields were frequently of wood inlaid with gold or turquoise, or had the devices portrayed in a feather mosaic stuck onto bark-paper backing.

The equipment of the captains and commanders was also much more elaborate, with feather decoration on the *ichcahuipilli*, and banners of wickerwork decorated with feathers or paper, gold and jewels, carried on each captain's back by means of a shoulder harness which left both arms free. These captains also wore head-dresses of leather or wood, decorated with feather crests or devices made from cloth and paper. The long green and bronze plumes of the quetzal bird were reserved for the highest ranking commanders—clan chieftains and above.

The Jaguar Knights wore jaguar skins over their *ichcahuipilli*, with the animal's head forming a headdress, the warrior's face showing through the open jaws. The *ichcahuipilli* of the Eagle Knight was completely covered by feathers in imitation of that bird and a headdress in the shape of an eagle's head was worn, with the beak wide open to show the warrior's face.

In addition to the clan and unit insignia each army also had a distinctive emblem which served as a rallying point and which was carried on the back of a leading warrior. That of the Tepetipac was a wolf with arrows; that of the Ocotelolco a green bird perched on a rock; and that of the Tlaxcalans a white crane with outstretched wings. Added to this riot of colour was the red, white and black paint used to colour the faces of the warriors.

The purpose of all this finery was to distinguish the various captains in battle, not only for the benefit of their own troops, but also because the main aim of Indian warfare was to obtain prisoners for sacrifice, and those prisoners had to be warriors of rank, the higher the better.

Orders were given in battle by small drums carried on the backs of the captains, and by trumpets, shrill bone or clay whistles, and deep-toned conch shells. These were also used to send

up a cacophony of sound at the opening of a battle, and the Spanish chroniclers record the ear-splitting din with which Indians began their battles in an attempt to intimidate their foes.

The missile weapons of the Aztec confederation were the bow, sling and javelin. The bows (*tlauitolli*) were between 1.25 and 1.5 metres (4ft 1in.—4ft 10in.) in length, made from a single piece of wood, and shot arrows with points either of obsidian or simply of fire-hardened wood. The bow was not a particularly effective weapon and the Aztecs preferred to use the javelin (*tlacochtli*) or dart (*mitl*), both with obsidian points and hurled by a spear-thrower (*atl-atl*). This consisted of a short wooden staff with a groove down the middle to hold the missile, and a projecting peg at the end to prevent the missile slipping out when the thrower drew back his arm for the throw. The javelin was also used in hand-to-hand fighting, but the dart was solely for missile use. Some javelins had a double or pronged head. A light throwing spear, normally used for hunting

A knight of the military order of the Arrow, as illustrated in contemporary manuscripts. He wears the distinctive dress of his order, in red and white, and carries a shield, two javelins and a fighting spear resembling a giant arrow. Some of the other members of the order would probably have carried the *macana* or *maquahuatl*.



birds, was also employed at the siege of Tenochtitlan. Perhaps the most effective missile weapon against the Spanish was the sling. These were of plaited or twisted cotton thread, and were capable of hurling stones the size of chicken eggs with deadly effect. The Matlaltzinca tribe of the valley of Toluca were noted slingers: they carried their slings tied round their foreheads when not in use.

For hand-to-hand fighting the Aztecs had, in addition to the javelin, a long wooden lance (*tepuztopilli*) between 1.75 and 2.75 metres (5ft 7in.–9ft) long, with flakes of obsidian set into the head to provide both point and cutting edges. This was a popular weapon with the Chinantec tribe from the mountains of Oaxaca. Another two-handed weapon was the 1.25-metre (3ft 10in.) *cuauhololli*, which had a knob at one end and a 50 to 60cm (20–24in.) blade at the other. It resembled an axe or medieval bill more than a spear, having no point. It was not common amongst the Aztecs but was used by tribes they had conquered.

The two main weapons for close combat were the *maquahuil* and the *macana*. The *maquahuil* was a two-handed, paddle-shaped sword-club of wood, about a metre (3ft) long, 10cm (4in.) wide and 5cm (2in.) thick, with obsidian blades set in grooves all along its edges. The *macana* was a heavy club of wood with a thick round end. The *maquahuil* was a deadly weapon at close-quarters, and both it and the *macana* could smash down even those Spaniards equipped with plate armour by the sheer force of their blows. The *maquahuil* could also sheer through cotton armour, for the obsidian flakes were frequently renewed and were razor-sharp. In fact, the very sharpness of obsidian—sharper than steel, though not holding its edge for long—was the main reason why the Aztecs had not bothered to put to practical use the iron they stored in their treasure houses.

Tactics were relatively simple, and typical of most primitive peoples. After the whistling, beating of drums, clashing of weapons and shouting of



Aztec warrior, as drawn by Hoffman. He is armed with a *maquahuil*, or sword-club, edged with obsidian blades, and wears quilted armour and a typical Aztec headdress. Cotton armour used by the Spaniards probably took this form, but the native armours are shown in contemporary manuscripts as reaching to the wrists and mid-calf.

insults, the archers, slingers and javelin men discharged their missiles at the enemy and the two armies rushed at each other for the hand-to-hand fighting. Tired troops were withdrawn and replaced by fresh warriors from a reserve, and attempts were made to outflank an enemy or to attack him from two sides at once, but that was the limit of tactical manoeuvring. Sometimes an army might feign a retreat, only to lead the pursuers into an ambush. Another popular ruse was to conceal troops in prepared positions and lure the enemy into the trap.

Victory was achieved when one side captured the opposing commander, or seized and set fire to the other side's temple. Consequently battles tended to be short and sharp, with relatively few casualties; a warrior gained no glory by killing an opponent, being rewarded only in proportion to the number of captives he had taken, and there

Warriors' headdresses, shields and over-suits, together with various other items, as depicted in a contemporary manuscript listing the tribute to be paid to the Aztecs by a conquered tribe. The suits were often completely covered in featherwork. (Bodleian Library filmstrips)

was no pursuit to slaughter a routed enemy. Rewards were also given to the families of those who died or were taken captive: those who had done wrong in the battle were stoned to death on the battlefield.

The nature of the land itself determined strategy. Aztec roads were only of beaten earth, but they were superior to most roads in Europe at this date and were quite adequate for a civilization which had no draught animals and therefore no vehicles. However, this lack of transport, and the lack of a system of supply depots along the roads, meant that all supplies and equipment had to be carried on the backs of men. Although an Aztec porter could march 24 kilometres (15 miles) a day carrying 34 kilos (75lb), it was simply not possible to conduct a prolonged campaign. For the same reasons sieges were almost impossible, and in general there were no fortifi-

An Aztec captain as depicted by Hoffman. He carries a most improbable club, and is apparently without any form of body armour, but the drawing does show the correct form of shield, headdress, captain's insignia carried on the back, and padded 'greaves' which were only worn by the high-ranking officers.



cations: the water defences of Tenochtitlan, for example, were sufficient to deter all attackers except the Spanish. When campaigns had to be undertaken in distant parts of the empire it was customary for the local conquered tribes to supply the bulk of the army, stiffened only by contingents of knights and seasoned warriors from the Triple Alliance.

Wars or battles were always begun by the ritual of sending shields, arrows and cloaks of a special kind to the enemy leaders as a formal declaration that they would soon be attacked. This explains why the Aztecs were taken by surprise when the conquistadores, at that time their guests, suddenly turned on them without any apparent motive and without formal warning: the Aztecs conducted war on a ritualistic level, with almost chivalrous ideals, but in the Spanish they were fighting men whose aims were total conquest and subjugation of the Aztecs, and permanent occupation of their lands—concepts never entertained by the Aztecs themselves, whose only interests were sacrificial captives and tribute.

In addition the Aztecs could not match the quality of the Spanish weapons and armour. Their javelins and arrows proved to be virtually useless against the conquistadores, able at best to inflict only slight wounds which did not even prevent the Spaniards from maintaining their position in the battle line. There are frequent mentions of conquistadores being injured, but few of them seem to have been killed in battle with the Aztecs. The Spaniards themselves feared the stones of the slingers far more than all the arrows and javelins, which at some battles are described as so numerous that they darkened the sky. The only weapons which did seem capable of killing the Spaniards or their horses were the *macana* and *maquahuatl*, but the Aztecs were all too often prevented from getting close enough to employ these successfully, and even then were outmatched by the lightning thrusts of the Spaniards' steel swords. Another problem in hand-to-hand fighting was the Aztec's ingrained practice of taking prisoners. Many Spaniards must have died but for the desire of the warriors to seize them alive for sacrifice; even Cortes could have been killed on at least two occasions,

if only the Aztecs had not been so preoccupied with the aim of taking him alive.

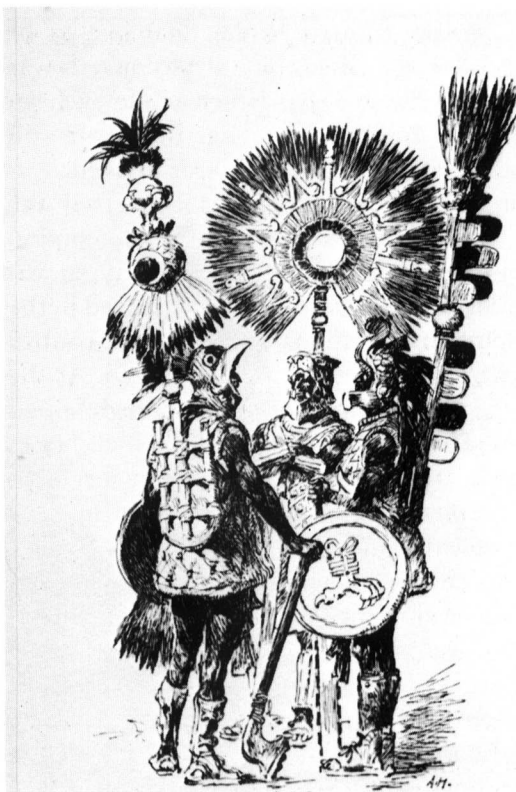
Spanish sources also imply that the Aztecs were poorly led, but this impression was more likely due simply to the superiority of Spanish tactics. The Spaniards fought total war of the kind practised in 16th-century Europe, and the Aztecs just could not adapt to this concept of war. The Aztecs were also fighting the finest soldiers of the age; and face to face, quality of weapons aside, the Aztec warriors were simply no match for the Spaniards.

And yet the Aztec commanders and warriors were not inflexible; they did make some effort to adapt their tactics to defeat this new type of enemy. During the siege of Tenochtitlan they learnt never to move in straight lines, but always to zigzag to avoid the bullets of the arquebusiers. Whenever they saw the crossbowmen taking aim, they would drop to the ground and allow the bolts to whistle harmlessly overhead. They overcame their fear of the cannon, and if they captured one they made sure it would not be used again by toppling it into the lake; and they also used captured swords, with considerably more success than when armed with their own weapons. Even their dread of the horse was overcome. Warriors knocked holes in the walls of houses: when the cavalry charged, they dived through these holes to shelter, where the Spanish cavalry could not reach them. When the cavalry began to withdraw, they issued out to drag the riders from the saddle and cut off their heads.

Given time the Aztecs might have overcome their preoccupation with captives and used their numbers and undoubted bravery to defeat the invaders, but they were not given that time. The Aztec empire fell to the conquistadores after only two major battles in the field, and a three-month siege of the capital by the Spaniards and some 24,000 Tlaxcalan allies.

The Incas

As with the Aztecs, the term 'Incas' did not originally have the meaning which we now apply to it. By about A.D. 1000 a tribe called the Quechua had occupied the valley of Cuzco in



A group of Aztec captains, showing examples of their insignia and how they were framed and carried.

modern Peru and gradually expanded their hold on the surrounding territory, absorbing or killing their neighbours. Around A.D. 1200 the chieftains of the Quechua declared that they were descended from the Sun God, and would henceforth be hereditary and divine rulers. They called themselves Incas, but their tribe was still called the Quechua, and Quechua-speaking Indians survive in Peru to this day.

The Incas reached the zenith of their power during the 15th century, and never lost a battle after 1437—until the Spaniards arrived almost a century later. By 1500 the Quechua people had absorbed about 500 other tribes and the Incas ruled an empire five times the size of modern France, covering not only Peru but also Ecuador, southern Colombia, part of western Bolivia, and northern Chile. The Quechua were still the main ethnic group in this vast empire, but there were three other major ethnic groups: the Symaras to the south, the primitive Urus from the Amazon Basin, and the Chimus along the coast north of

Lima. This last group was the final one to be conquered by the Incas, in a prolonged war lasting from 1461 to 1464, which made such an impression on the Quechuas that they were still talking about it when the Spaniards arrived.

Unlike the Aztecs, the Incas converted the conquered tribes into subjects within the empire, not semi-independent states merely paying tribute. All levels of life were highly organized in the Inca empire, and administered with iron control by the Incas from their capital at Cuzco. At the base of the society was the peasant, regimented into units of 10 under a boss, with 10 such bosses in charge of 100 men controlled by a foreman, and 10 foremen in charge of 1,000 men in their turn controlled by a supervisor, who was head of a village. Villages were grouped into approximately the original tribal divisions, but the decimal system was continued up to 10,000 peasants in 10 villages, constituting a province under a governor or *Tuc-ri-cuo* ('He who sees all'). There were therefore 1,331 officials for every 10,000 peasants. Each of these clans or tribes, called *ayllu*, owned the land it farmed, but everything the people did or owned was controlled by the Incas. The Incas were themselves organized into an *ayllu*, which included all those of royal blood. As the Incas frequently sired scores of children, this was a numerous *ayllu* and provided the élite nobility of the empire: the *Tuc-ri-cuos* were all Incas. A second order of nobility was the *Curacas*, men who were Incas by privilege, not by birth, and whose ability had earned them promotion. The *Curacas* were often the *caciques* or leaders of the conquered tribes, or their descendants.

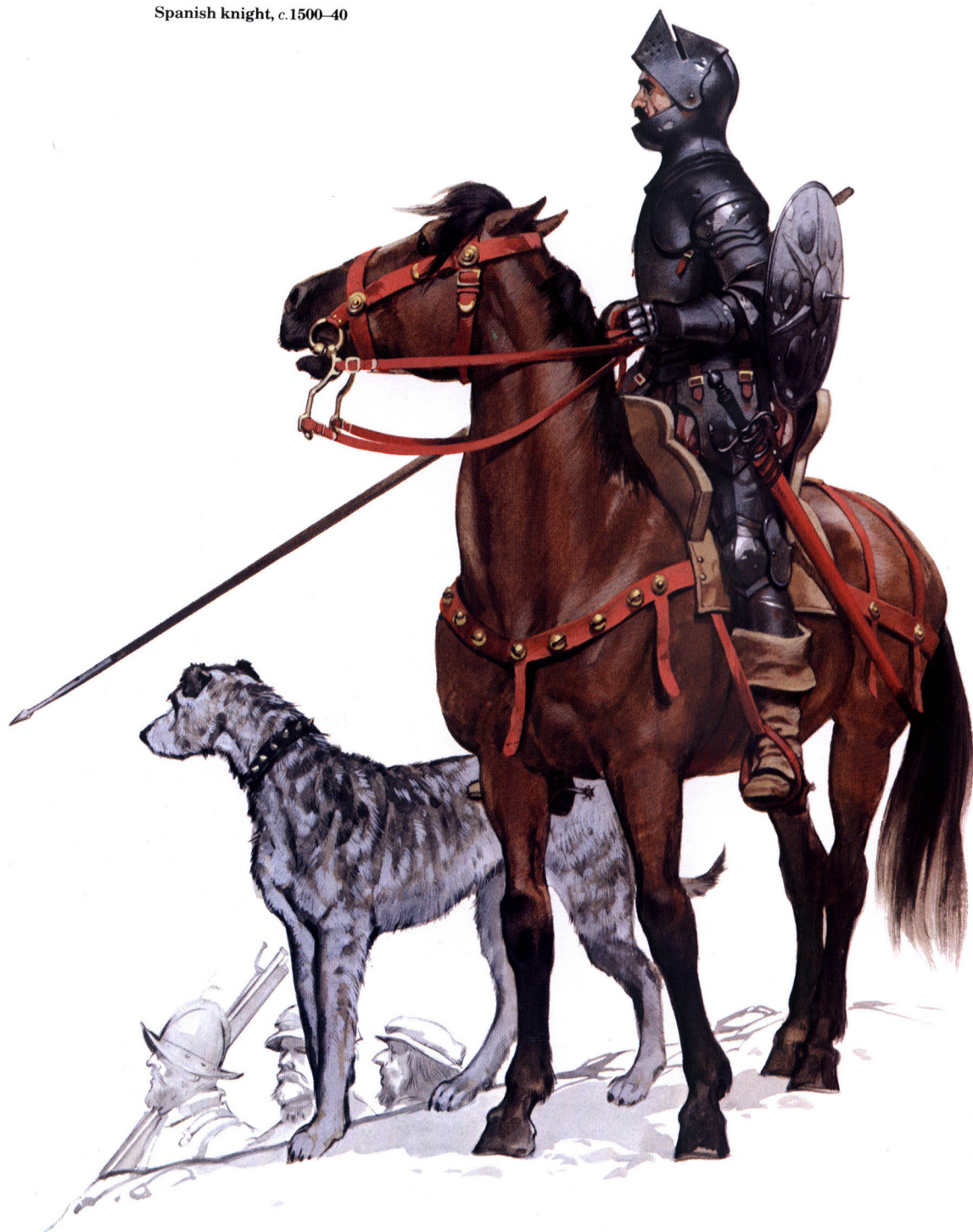
To achieve this dominance over such a vast empire the Incas needed a large and well-organized army. Most able-bodied males were trained in the use of arms from boyhood, with regular drills two or three times a month, and could expect to be called up to perform their military service whenever needed between the ages of 25 and 50, but there was no standing army. Instead, when war was imminent, each province was ordered to send a contingent of warriors under a local commander, and these tribal contingents either marched to Cuzco or waited in readiness to join the main army when it passed near their territory.

Within these contingents organization was, again, according to the decimal system, with 10 warriors forming a squad under a *Chungacamayoc* (guardian of 10), whose duties were to see that his men were fully trained for war and provided with army dress, arms and supplies; on the march each man carried his own grain, cooking pot and sleeping mat. Every five groups of 10 were commanded by a *Pichca Chungacamayoc* (guardian of 50). These two officer ranks were usually held by local officials during their own term of military service.

The decimal system was continued up to a 'corps' of 10,000 warriors, though not all of these were purely tribal groupings. The officers and groupings were: *Pachaca Camayoc*, guardian of 100; *Guaranga Camayoc*, guardian of 1,000; *Apu*, captain of 2,500; *Apuratin*, vice-captain of 2,500; *Hatun Apu*, commander of 5,000; and *Hatun Apuratin*, vice-commander of 5,000. These officers were professional soldiers drawn from an élite officer corps. Thus within an assembled army the tribal captains and generals maintained their ranks and commanded their own people—the Collasuyus, Antisuyus, Cuntisuyus and Chin-chaysuyus, amongst others—but under the command of professional soldiers from the Inca and *Curacas ayllus*. An experienced general was then appointed overall commander-in-chief (*Apusquipay*) by the emperor. He was usually a brother or uncle of the Inca and was attended by aides (*Apusquiprantin*).

The élite corps provided a bodyguard for the Inca, as well as officers for the whole army, and also fought as a unit in battle. The strength of the corps is not known, but it is not believed to have exceeded 10,000. Only the sons of the two nobilities could enter the corps, at the age of fourteen. There followed four years of training, culminating in six days of tests of endurance, skill and courage. Those who passed received a breechclout, sling, shield and silver-headed axe, and had their ears pierced to receive gold ear plugs which would ultimately be up to 50mm (2in.) in diameter. These plugs so stretched the ear lobes of the nobility that the Spaniards called the nobles *Orejones*—'Big Ears'. They were also entitled to wear the *llantos* or royal fringe, a braided circlet worn round the head.

Spanish knight, c.1500–40



1. Spanish swordsman, c.1520–50
2. Spanish arquebusier, c.1520–40
3. Spanish pikeman, c.1540



1. Tlaxcalan captain
2. Tlaxcalan porter
3. Texcocoan captain



1. Aztec Eagle warrior
2. Aztec Jaguar warrior
3. Aztec priest





1. Aztec archer
2. Aztec peasant levy
3. Aztec allied captain

1. Inca general
2. Inca empire: Chinchaysuyu general
3. Inca warrior





1. Inca empire: Chinchaysuyu warrior
2. Inca empire: Quechua slinger
3. Inca empire: Chimor warrior

1. Maya general
2. Maya warrior
3. Maya peasant levy



There were at least four 'battalions' in the corps: in order of importance the Auquiconas (the nearest kin to the Inca and including some of his sons), the Mancopchurincuzcos, the Cacacuzcos, and the Ayllucuzcos.

The size of an Inca army depended entirely on the campaign to be undertaken, and strengths from 70,000 to 250,000 warriors are recorded. When a war was long-drawn-out, or pursued in an unfavourable climate, a rota system was established so that a proportion of the soldiers could periodically return to their homes to recover and tend their land. Their fields were tended by other members of the *ayllu* during their absence on active service.

Discipline was strict within both the *corps d'élite* and the army as a whole, regardless of rank. One general named Capac Yupanqui captured a province on the borders of the empire without orders to do so, and despite his success was executed for exceeding his orders. When the Inca's troops first met the Spaniards they were overawed by the horses, the first they had seen. When Hernando de Soto demonstrated his horsemanship on a spirited mount for the imperturbable Inca Atahualpa, one squadron of Inca troops drew back as the horse approached them: that night they were all executed for showing their fear.

The ordinary people wore a standard form of clothing issued from common stores; no variations were allowed. For men this clothing consisted of a loincloth or breechclout (*chumpi*) of colourful woven wool, about 15cm (6in.) wide, which was passed between the legs and secured at front and back by a belt, with the ends hanging down. A sleeveless woollen tunic (*onka*) was also worn, which reached to just above the knees. This consisted of a piece of material doubled and sewn down the sides, leaving openings for the arms, and with a hole cut out for the head. The tunics often had a patterned border. Over this was worn a woollen cloak (*yacolla*) knotted either at the centre of the chest or at one shoulder. All woollen clothing was made from the wool of the alpaca, which was generally white but could also be in various shades of grey and natural brown. Blankets and cloaks were made from the coarser

and greasy llama wool, of a distinctive brown-white mix.

Sandals of llama leather were worn on the feet, secured by lacing round the ankles, but as these were of untanned leather they became soggy in wet weather, and peasants often went barefoot. Wool and maguey fibre were used for 'dress' sandals, worn at ceremonies and parades. The officials and nobility wore the same patterns of clothing but of higher quality (vicuña wool) and with more ornamentation.

When dressed for war the men donned tunics which bore the distinctive insignia of their *ayllu*, and added bright fringes of woven wool around their legs below the knee and round the ankles and biceps: these were believed to give strength to the limbs. The élite corps may have worn a rich blue tunic, though this may only have been the uniform of the Rucana tribesmen, who carried the Inca's litter.

Some warriors were issued with protective clothing, in the form of a quilted body armour resembling the Aztec *ichcahuipilli*. Leather breast plates were also used. Most warriors also had some form of head defence which carried the distinctive insignia of their *ayllu*. Some of these defences were just caps of thick wool, the grey maguey fibre, or padded cotton, but others were of plaited wood or cane. Many of these helmets had a feather crest running across the top from ear to ear.

There were two distinct types of shield: a round one of slats of iron-hard chonta wood obtained from the jungle tribes, which was carried slung round the neck to protect the back, and a smaller rectangular one of wood or wickerwork covered with cloth or feather decoration, or of toughened deer or tapir hide. This was held on the left arm to shield the front of the body. The rectangular shield often had an 'apron' of cloth which hung from its bottom edge and was decorated with geometric patterns and insignia: the apron protected the legs from missiles.

Captains and generals sometimes wore armour decorated with feathers, and could be recognized in battle by their tall helmets formed in the shape of a puma's head, or bearing plumed crests. They also wore metal discs (*canipu*) on chest and back. These were military awards, the rank of the

award being indicated by the type of metal, either bronze, silver or gold, with the latter reserved for the Inca nobility. Generals also carried a long staff of office decorated either with feathers or with gold or silver bands and a cluster of plumes at the top. The various tribes had standards of birds, snakes and gods, which were carried on long staves. The standard of the Inca himself was small and square and bore a rainbow to indicate his descent from the Sun God, together with his personal device of a puma, condor, etc. It also had a cluster of coloured plumes at the head of the staff. Individual units also had small banners about 20cm (8in.) square, painted with insignia and carried on a spear.

The Inca army could rely on a great variety of both long- and close-range weapons, since the contingents from different provinces were expert at fighting with their traditional weapons, developed in a variety of conditions. For example, the Antisuyus forest Indians from the east were experts in the use of the bow, for only in their jungles could the springy wood for the bows be found. Because of this, wars fought in the mountain regions of the empire rarely had any archer contingents. The bows were short and shot arrows of hardwood, sometimes with fire-hardened points and sometimes tipped with bone. The Ecuadorian and coastal tribes used spear- and dart-throwers, similar to the Aztec *atl-atl*. The darts had bone or fire-hardened points. At closer range the Colla people employed their *ayllos* or *bolas*, two or three stone balls tied to cords or thongs which were united into one cord, and which wrapped themselves round the legs of men and animals. The balls themselves could cause serious wounds, and the weapon was particularly successful against the Spanish cavalry. The other missile weapon was the sling (*huaraca*), which was used universally, because all children spent many hours killing birds in the maize fields with slings. The slings used for war were of plaited woollen cords or maguey fibre, tied round the waist like a belt when not in use. These slings could hurl a stone the size of a



A Tlaxcalan captain, bearing upon his back the great white crane symbol or standard of his tribe. The Tlaxcalan army of 40,000 warriors was defeated by Cortes soon after he landed. Thereafter the Tlaxcalans fought for him against their traditional enemies, the Aztecs. There were 24,000 Tlaxcalans at the siege of Tenochtitlan.

chicken egg with deadly accuracy and effect: at 30 metres (98ft) a sling-shot was observed by one conquistadore to break in two the sword held in a man's hand, and at half that range it could dent an iron helmet and stun the man wearing it. At the siege of Cuzco red-hot sling-shot were used by the Indians in an attempt to drive the Spanish out by firing the town. These sling-shot were wrapped in cotton, though flaming bitumen was used to coat them on other occasions.

Spears about two metres (6ft 6in.) long, with copper or more commonly bone points, were used for hand-to-hand fighting, but the main close-combat weapons were swords, clubs and axes, which were as devastating against the Spaniards as against Indian enemies. The spear and club were the main weapons of the Quechuas, but swords, clubs and axes were supplied by the Incas to the other tribes to supplement their native missile weapons. The clubs or maces had wooden handles about 80cm (31in.) long and a



Spanish crossbowman and Tlaxcalan bowman, as portrayed by Hoffman. The use of a shield by native bowmen is conjectural, but there is no reason why a small shield could not have been used thus by men armed with a short bow.

circular head of stone or bronze with six projecting points. The swords were of the hard, black chonta-palm wood, about 1.2 metres (3ft 8in.) long and 10cm (4in.) wide, tapering towards a handgrip which was rounded and ended in a knob. Bronze cutting edges were fixed all round the wood, and a few swords were made entirely of bronze, though these were rare. The axes had stone or bronze blades set into wooden handles of varying lengths. There was a short hand axe called *champs*, but some had hafts so long that they more nearly resembled a halberd.

The Incas opened their battles with an intimidating cacophony of sound from an assortment of drums, conches, flutes and pipes, together with shouted insults. Slingers then began the missile barrage, followed by the archers, dart-throwers and *aylls* as the range gradually shortened. Then came the deadly hand-to-hand fighting which, lacking the religious restrictions of Aztec warfare, was frequently extremely bloody.

Tactics were rather more complex than those

of the Aztecs. Instead of attacking all along the line of battle, the Incas sought out the centre of command and resistance of their enemy, and endeavoured to take out this nerve-centre with a band of picked warriors. Once their commander was taken, the enemy soon became demoralized and fled the field. Reserves were carefully handled and kept well clear of the confused mêlée so that they might be fed into the battle line when and where needed, or were used to outflank the enemy position, or to protect the rear and lines of communication of the Inca army. A favourite trick was to divide the army into three divisions and engage an enemy with only one in order to assess his strength before committing the other two in surprise flank attacks. Another trick was to set fire to the grass scrub to drive an enemy from a strong defensive position.

Campaigns were normally begun with extensive intelligence work, once attempts to induce peaceful submission had failed. The Inca spy system seems to have been particularly well organized, and informed the military chiefs of the position and strength of the enemy armies, the chief points of resistance, the position of supply centres for weapons and food, and the importance and strength of any alliances. The spies also tried to bribe important people in the enemy's camp, to spread false rumours, and to isolate the enemy from his allies.

Strategy was usually aimed at cutting lines of communication to prevent the enemy being reinforced or receiving supplies, and inducing the enemy to fight as far away from his support points as possible, over terrain which was unfavourable to him.

The key to both administrative and military control over the Inca empire was the great road system. These roads reached to all parts of the empire; the longest one, the royal road, ran through the Andes, down through Ecuador, Peru, Bolivia, Argentina and Chile, for a total of 6,800 kilometres (3,250 miles)—longer than the longest Roman road, from Hadrian's Wall in England to Jerusalem. There were special military roads in this network, rather wider than the standard width of seven metres (23ft) for the royal road, five to six metres (20ft) on the coast road. Side walls kept the soldiers literally on the

straight and narrow during long marches, and those who broke from the columns to steal food or molest civilians were put to death. Stops were at about every 20 kilometres (12 miles), at supply depots (*tambos*) managed by local officials. These depots consisted of rows of rectangular sheds, full of hampers of dried meat and fish, maize, arms and equipment. The different army 'corps' marched at one-day intervals so that there was no overcrowding at these depots.

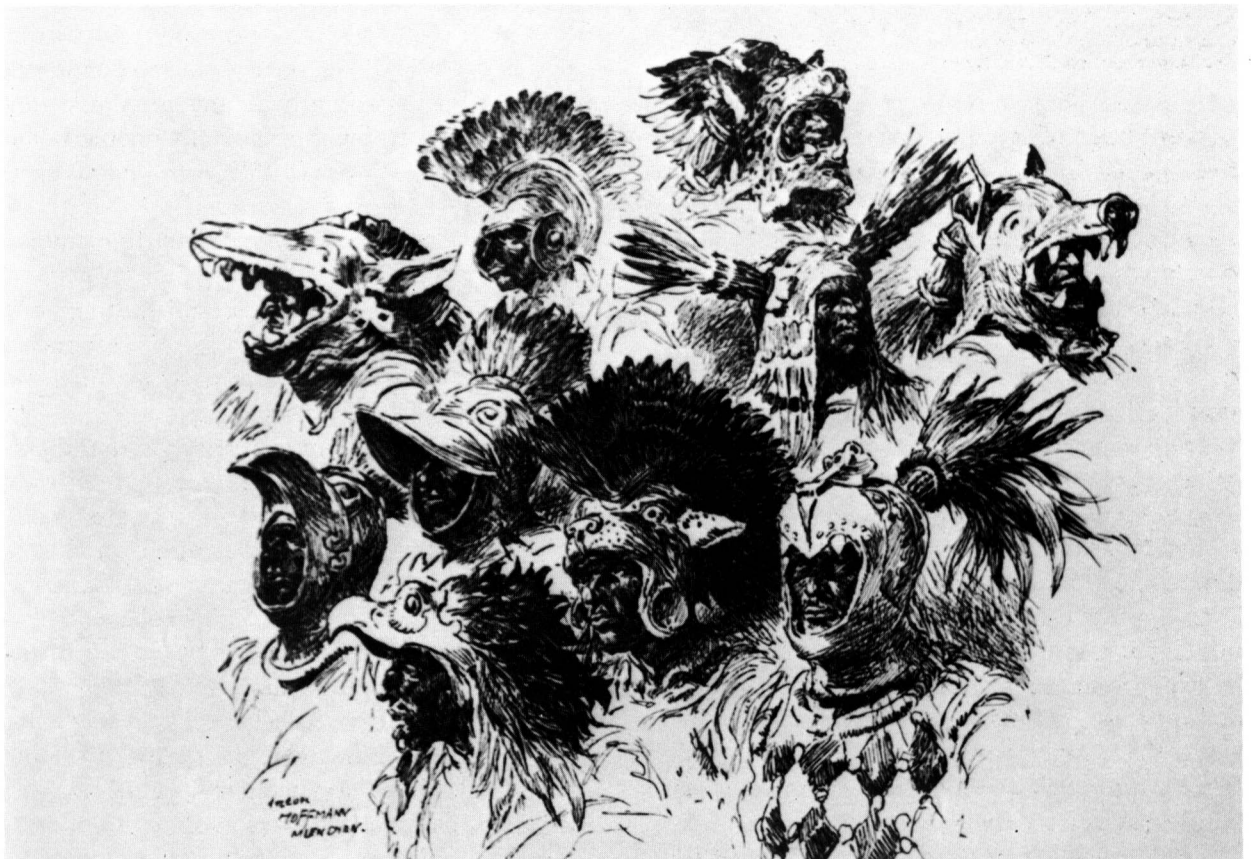
Other smaller posts were set up along the roads for communication purposes at intervals of approximately two kilometres (1 mile). Each post consisted of two small stone huts, housing two runners or *chasqui*. Beacons could be used for urgent and simple signals, but the *chasqui* could, by a relay system between posts, achieve 392 kilometres (246 miles) in 24 hours over terrain at altitudes of more than 3,300 metres (10,000ft). Even the mounted couriers of Rome were fortunate to cover 320 kilometres (200 miles) a day, and for 16th-century Europeans such speed of communication was unbelievable. The *chasqui*

naturally had precedence over all other road users and wore a special livery of chequered design to identify them quickly.

The Incas did not have the wheel, but as their terrain was unsuitable for wheeled vehicles and they had no draught animals capable of pulling such vehicles, this was probably no loss. All supplies and equipment were therefore carried either by porters, many of whom were women, or by llamas, the latter being used in trains of 500 or even 1,000. The llama was an exceedingly useful beast, for although it could only carry a light load of about 57 kilos (125lb) for 10 to 16 kilometres (6 to 10 miles) a day, it could withstand extremes of climate, needed no shoeing, and could exist on moss and stunted herbage where other pack animals could not graze; its dung could be used as fuel, its meat as food, and the thick wool on its back did away with the need for any pack saddle.

The Incas also established a system of fortifications throughout the empire, self-contained

An assortment of headdresses, as portrayed on Aztec warriors in various contemporary manuscripts.



fortresses being built on the high ground outside the cities, on the major military roads, and on the frontiers. Each fortress was a miniature city in itself, with great storehouses and cultivated terraces, capable of supporting itself under siege for a considerable time. The citizens took refuge in these fortresses when their cities were attacked and defended themselves until help could arrive. Those fortresses on the frontiers and roads were smaller and had permanent garrisons.

The Chimus were superior to the Incas in building fortifications, and when the Incas conquered them they absorbed the Chimus's fortification system into their own. The best-known Chimor work is the great chain of strongholds which blocked the coastal plain from the Cor-

Aztec warriors in full flight before a Spanish cavalry charge. Lacking the pike, or a similar long spear with an iron head, the Aztecs and other Indians of Central America were unable to stand up to a charge by heavy cavalry on open ground, and the Spanish knights rode through their ranks many times with impunity, suffering only minor wounds in return.

dillera to the Pacific. The most important fortresses in this chain were Paramonga and Caneta, north and south of Lima. Both consisted of three terraces, rising at Paramonga to some 22 metres (72ft) above the plain. The outer wall at Paramonga was between three and six metres (10 and 20ft) high, with a parapet and pathway round the top. Ramps, which passed through narrow passages, linked the terraces.

The Incas usually conquered such fortifications by blockade, cutting off supplies and water. Another method was to make a pretended withdrawal, leaving a division concealed to cut off the garrison if it could be enticed out by the manoeuvre.

This great Inca empire fell almost as easily as the Aztec one, to just 130 infantry, 40 cavalry and one small falconet; but after the initial defeat and the fall of Cuzco, the Incas rallied and waged successful war against the conquistadores for many years. Their initial defeat was due to two main factors. Firstly, the Inca had died in 1527



Flucht der Tabaskaner vor den spanischen Reitern.



and his death was followed by five devastating years of civil war between his sons Atahualpa and Huascar. The conquistadores landed just as Atahualpa emerged as the victor. Secondly, Atahualpa's intelligence reports were faulty and he did not treat the invaders with the respect they deserved: he was told by his spies that the horses were useless at night, that if the rider fell off that was the end of both rider and horse, that the arquebuses were thunderbolts which could only be fired twice, and that the steel swords were as ineffectual as women's weaving battens. He felt he had nothing to fear, met the Spaniards in person, and was taken prisoner by treachery.

Subsequently the Inca troops fought bravely when led by good generals, but they always launched their attacks on the advent of the full moon, and would rarely fight at night in any great numbers. The Spaniards soon recognized this pattern, and used it against the Indians time and time again. But the Incas did not go under without a fierce struggle. In 1536 the puppet Inca Manco led a revolt which lasted until his death in 1544. Under his leadership the Indians tried desperately to adapt their tactics to deal with the new weapons, and had some considerable successes, once annihilating an entire Spanish force of 70 cavalry by trapping them in a mountain defile and overwhelming them with boulders rolled down from the heights. They put

Illustrations from de Ayala's *Nueva Coronica y buen gobierno*, drawn in Peru circa 1600. Left to right: Huayna-Capac, father of Huascar and Atahualpa; Chalcuchima, a great general of Atahualpa; Huascar being led towards Cajamarca by Atahualpa's generals Chalcuchima and Quisquis.

Spanish prisoners to work making gunpowder, and learnt to fire captured arquebuses. Captains equipped themselves with captured helmets, bucklers and swords, and proved as good as any Spaniard. Some even learned to ride the few captured horses, including Manco himself, who fought on horseback armed with a Spanish lance; but too few horses were captured to alter the inevitable course of the war.

After Manco's death the Incas lacked a leader, and little further attempt was made to assimilate Spanish fighting methods—although Manco's son, plotting a rebellion in 1565, had 800 pikes made, with another 2,000 poles gathered from the jungle ready for heads. The pike was the only answer to the mounted conquistadores, and the Indians of Venezuela had succeeded in holding off the invaders by adopting this weapon. The Incas were not so lucky: the revolt was nipped in the bud, and all the pikes destroyed. Thereafter there was no serious threat to the conquistadores; and the death of Tupac Amaru, last of the Incas, in 1572, signalled the end of a great empire.



Conquistadores advancing against a hail of Indian sling-shot, darts and javelins. Of all the Indians' weapons the conquistadores feared the sling-shot the most, for even their armour could not prevent them from being stunned, while a hit on an unprotected head meant death or blinding.

The Maya

In many respects the Maya had a civilization similar to that of the Aztecs because, although a different people, they had been ruled for six centuries by an aristocracy of Mexican origin. This aristocracy was overthrown by a Mayan rebellion in 1441, and thereafter the Yucatan, home of the Maya tribes, disintegrated into 16 independent, petty states which were constantly squabbling with each other over boundaries and matters of honour. Also, like the Aztecs, they practised blood sacrifice, and war was therefore essential in order to supply a continual stream of suitable victims.

Under the foreign nobility each province had been ruled by a *Halach Uinic*, who lived in the capital of the region and tended to give all administrative posts to relatives. The minor towns in each province were run by *batabob* (singular *batab*), who were also the towns' war leaders, though they shared this second post with a *nacom*,

who held the office for three years. The *nacom* was appointed, but the positions of *Halach Uinic* and *batab* were hereditary. The situation after the 1441 rebellion is not known, but obviously each of the minor states must still have had a ruler, and it is likely that similar offices existed, though now in the hands of the native nobility.

The common people were grouped in clans of related families, with all property and land inherited via the father's line. The precise form of these clans is not known, but it is believed they were similar to those of the Aztecs. Below the clans were the slaves, mostly prisoners of war who were too lowly to be sacrificed.

Every able-bodied man was eligible for service in the army, which was highly disciplined and trained by regular drills and exercises. However, there was no standing army, only a kind of local militia, commanded by an *al holpop*. When an army was to be mustered, orders were sent to these officers to report with their troops to the *nacom*. There seem also, at least in later times, to have been bands of full-time mercenaries known as *holkans*, who fought under permanent leaders. There were also branches of the Aztec warrior societies of the Jaguar and Eagle, though it is not known if these survived the overthrow of the

Mexican aristocracy.

Clothing for the ordinary man was a woven cotton breechclout and a poncho-type tunic (*pati*). A heavier square of cloth (*manta*) served as an overwrap in cold weather and as a blanket at night. Sandals (*keuel*) of tapir or deer hide were worn, tied to the feet by two thongs. The nobility wore similar clothing and sandals but much more colourful and elaborately patterned. Jaguar skins were often worn over the shoulders or suspended from the waist, or cloaks of waist or ankle length were worn. The nobles also wore elaborate headdresses—those of the most important officials were sometimes as large as the man himself. These consisted of a light wicker frame covered with feathers, particularly those of the quetzal bird. Other types of headdress were colourful cloth turbans, or a long swirling design representing the maize plant. In battle these nobles wore on their heads the masks of jaguars and other animals, reptiles and fish, some apparently mythological. Feathers were also used to

decorate their cloaks, banners, breechclout ends and ceremonial shields.

The nobility also wore a great deal of jewellery in the form of gold ear plugs, a jewel (often a topaz) in the left nostril, jade rings on fingers and toes, jade bracelets and necklaces, and even had their front teeth filed to points and sometimes inlaid with jade. Feathers were also worn round the wrists and ankles, and for battle they painted themselves black and red. Tattooing was also practised from the waist up, including the face, as was decorative scarification.

The aristocracy wore quilted armour in battle

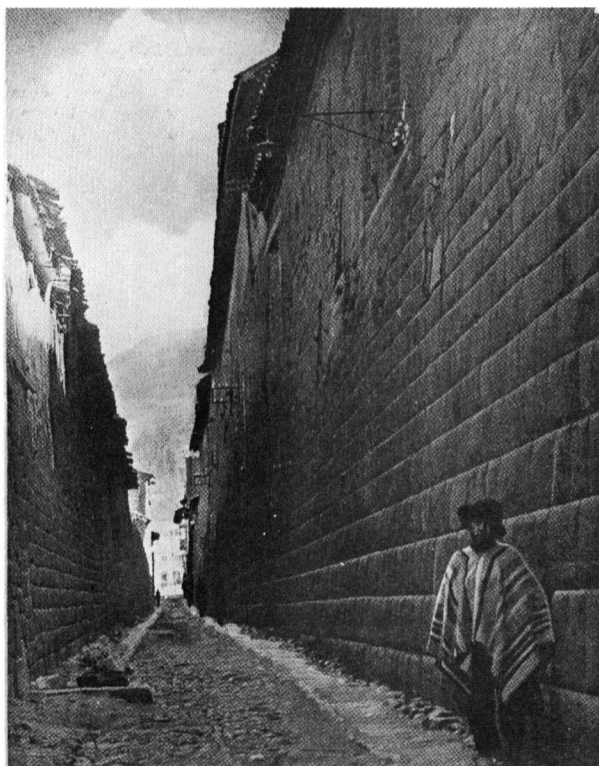
Spanish knights riding down Indian warriors. In Peru and the Yucatan the Incas and Maya were able on a number of occasions to use their broken terrain to negate the superiority of these horsemen, but in the more open lands of the Aztecs the Spanish knight reigned supreme. Difficult as it may be to believe today, at that date the heavily armoured knight on horseback was virtually impregnable, and small groups of knights were able to charge into hundreds of Indians time and time again, provided they stayed in close formation. On a number of occasions knights did get separated from the main body, when they were usually unhorsed and killed.



and it is possible that some of the lesser warriors also wore cotton armour, but of a different form, described by Adamson as twisted rolls of cotton wound round the body—a cheaper but perhaps just as effective protection. The *holkam* wore cuirasses of either quilted cotton or tapir hide. Shields were either round, and larger than those of the Aztecs, or rectangular, of wood or hide decorated with feathers or animal skins. Missile weapons were the bow and dart propelled by an *atl-atl*, both introduced by the Mexicans, and the ubiquitous sling. Arrow and dart heads were of bone or obsidian. The original Mayan weapons were all designed for close combat—a lance or spear 1.5 metres (4ft 10in.) long, a wooden club edged with obsidian, a broad-bladed flint knife, and a kind of trident made by carving three sharp blades from a large sea shell.

Battles were preceded by the usual din, made by war trumpets of wood or bark 1.5 metres long, conch shells, drums, flutes, Pan pipes and rattle gourds. This was followed by the missile barrage,

A section of the original Inca wall in the Calle Jon de Loreto in Cuzco, the capital of the Incas. The Incas were famous for their masonry.



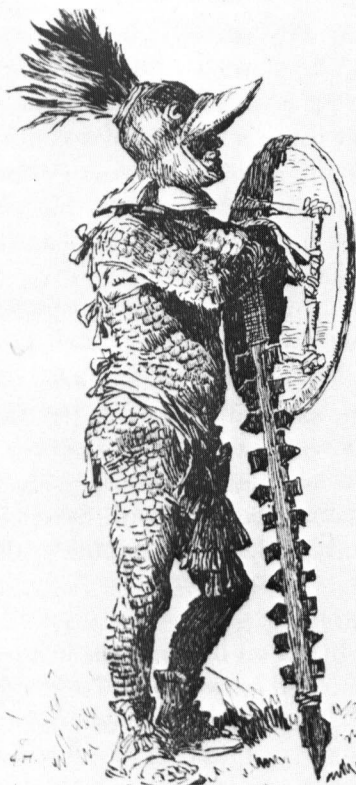
then a charge into close combat. Such battles were of short duration, the main aims being to secure slaves and important leaders—the latter for sacrifice. When the chief of the opposing army was killed or captured the battle was over, so the only tactic was to reach him as soon as possible.

Campaigns were usually begun by a guerrilla raid into enemy territory to take captives. A major battle normally followed this provocation, but once an enemy army had penetrated into home territory there were no more major battles, the defenders resorting to irregular warfare, with the emphasis on traps and ambushes. Campaigns could not be conducted far from home as all supplies and equipment had to be carried on the backs of slaves and women. Also, the bulk of the warriors were farmers first, soldiers second, and their crops always came before the needs of war. As late as 1848 the descendants of the Maya had the capital of Mérida surrounded and at their mercy, but gave up everything to return home in time to plant their maize.

A road system existed in the Yucatan peninsula to link the major cities. Some of these roads were up to 96 kilometres (60 miles) long, broad and level, with a hard, smooth surface of trodden limestone.

Alone of all the great Central American civilizations, the Maya were a maritime people, and they used the sea to transport military forces upwards of 320 kilometres (200 miles). There is evidence that their traders could travel from Tampico to Panama, a distance of 3,850 kilometres (2,400 miles) if following the coast. Their 'ships' were canoes hollowed out of huge trees, often up to 24 metres long and 2.4 metres wide (79ft by 7ft 2in.). They had a high bow and stern, and could hold up to 40 men.

In 1527 Francisco de Montejo was sent by Cortes to conquer the Yucatan. His army of 380 men and 57 horses was worn down by a war of ambushes and attrition, for unlike the Aztecs and Incas, the Maya could not be crushed by a single battle, nor paralysed by the seizing of a central point or supreme leader—for there was none. They were masters of guerrilla warfare, and in the jungles of the Yucatan the horse was of little advantage to the Spaniards. By 1535 not a single white man remained in the Yucatan.



Krieger im Schuppenpanzer.



(Left) Another of Hoffmann's dramatically brooding reconstructions of an Aztec warrior in elaborate headgear and complete suit with 'scale' effect; the weapon seems unconvincing, if one considers basic problems of balance and grip. (Right) A chapter heading from de Ayala shows Inca warriors in battle.

The Plates

A: Spanish knight, circa 1500–40

Spanish knight in three-quarter armour, blackened to protect it from the weather. Most of the captains and gentlemen amongst the conquistadores wore such armour, although some later abandoned all except the helmet in favour of the lighter Indian armour. The Spaniards took their deerhounds with them to the Americas, presumably to hunt meat, although they were also used to savage the Indians. The Indians were overawed by these enormous and fierce dogs, which weighed around 41 kilos (90lb) and stood 75 to 80cm (approx. 30in.) high, for the only breed they possessed was a little one raised purely

Montejo's son launched a new invasion in 1542, and thanks mainly to internecine feuds amongst the Maya states this one was successful. A rebellion in 1546 was crushed with horrific slaughter, and half a million Maya were sold into slavery. One tribe, the Itza, escaped by retreating to their ancestral home in the wastes of the Peten. Here, on an island in the centre of what is now Lake Flores, they built a new capital, Tayasal, and here they preserved a small independent state until 1697, when this last Maya stronghold at last fell in a holocaust of fire and blood.

The Maya rose in revolt again in 1712, 1847, 1860 and 1912, and in the mid-19th century rebellions they very nearly retook the entire peninsula from their oppressors. In fact it is only in recent decades that the more remote villages have begun to accept once again rule from Mexico, for the Maya people were never really conquered, although over the centuries their spirit—and their 4,000-year-old civilization—was broken.

for its food value.

B1: Spanish swordsman, circa 1520–50

The burgonet illustrated here was the most common type of helmet for the sword-and-buckler men and light cavalrymen—not the morion, as is so often supposed. Some swordsmen wore studded brigandines or jacks instead of plate armour: all three types of armour were frequently shed in favour of the Indian armour after the initial battles. The brass ‘rope’ decoration on the armour was popular from about 1520. Gentlemen on foot usually wore similar armour, though sometimes a deep skirt was tied round the waist, falling in folds to the knees. These skirts were usually brightly coloured, with dark borders. The illustration is based on figures in a 16th-century mural in the Mozarabic chapel of Toledo Cathedral.

B2: Spanish arquebusier, circa 1520–40

The morion was the typically Spanish helmet,

Remains of the Great Tower at Machu Picchu, one of the most famous retreats of the Incas after the initial conquest, and situated some 2,300 metres up in the Andes.

especially popular with crossbowmen and arquebusiers. It was derived from the cabacete, illustrated in B3. The comb became more prominent from about 1530. Morions and burgonets were frequently fitted with fabric covers, not just in the Americas but also in Europe. Arquebusiers were usually unarmoured, and this man has abandoned the more clumsy European footwear for native sandals.

B3: Spanish pikeman, circa 1540

This man wears the cooler Indian armour of quilted cotton, and native sandals. He has given up wearing hose, which quickly became torn in Central America’s rough landscape. He wears a cabacete, a helmet popular with Spanish infantrymen. Note the holder for a plume at the rear.

C1: Tlaxcalan captain

This figure is based on illustrations in the Codex Mendoza (compiled between 1536 and 1550) and the Lienzo de Tlaxcala (compiled by Tlaxcalan artists between 1550 and 1564). It shows a Tlaxcalan captain carrying one of the banners of his tribe. The Tlaxcalans fought the Spanish at first, but then became their allies, supplying



24,000 warriors for the siege of Tenochtitlan. As their weapons and insignia were almost identical to those of the other tribes, Cortes advised them to wear a distinctive emblem in battle, and at the battle of Cholula they wore plaited garlands of feather grass as a 'field sign'. Most illustrations show them wearing similar garlands in other battles.

C2: Tlaxcalan porter

The Tlaxcalans also supplied thousands of porters to carry the supplies and equipment of the conquistadores into the interior of Mexico. These porters could march 24 kilometres (15 miles) a day carrying 34 kilos (75lb). The conquistadores claimed to march seven leagues (30km/18½ miles) a day in the lands of the Aztecs. This illustration is based on a number of porters shown in the Codex Mendoza.

C3: Texcocoan captain

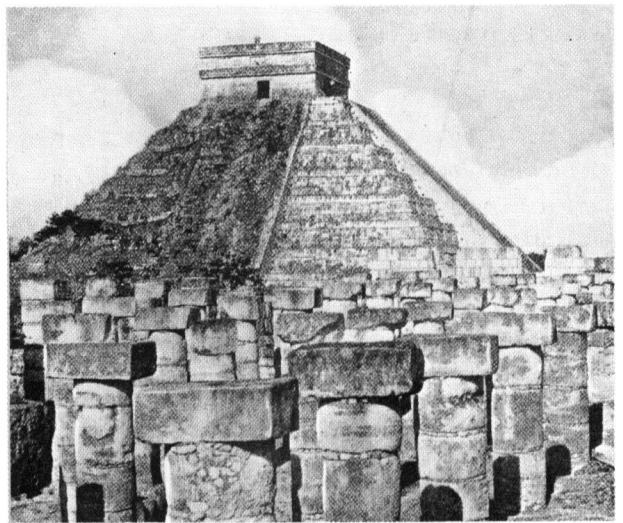
This is based on a contemporary Indian manuscript which describes the figure as King Nezahualcoyolt of Texcoco, one of the three major cities of Mexico and an ally of the Aztecs. He is wearing a gold lip plug called *tentetl*, which is a form of military insignia, and carries a small drum on his back to pass orders during battles. Note the small drumstick attached by a thong. The leather leg protections seem to have been worn only by the warrior caste in the Aztec empire.

D1: Aztec Eagle Knight

A member of the warrior society known as the Eagle Knights, who dressed as eagles for war. The figure is based on illustrations in the Codex Duràn, drawn between 1560 and 1580 by a Mexican artist.

D2: Aztec Jaguar Knight

A captain belonging to the warrior society known as the Jaguar Knights. All the warriors in this society dressed almost identically, the only variation being to the border of the shield, which is usually shown as all yellow. This warrior is distinguished as a captain by the banner strapped to his back. The *maquahuítl* he carries is based on a surviving example in the American Museum of



The temple of the Plumed Serpent at the great Mayan city of Chichen-Itza in the Mexican province of Yucatan. The city was founded not later than A.D. 530 and was at its zenith in the 12th and 13th centuries. It was abandoned in 1448, seven years after the Maya rebelled against their foreign aristocracy.

Natural History: other details are drawn from the Codex Duràn and Codex Mendoza.

D3: Aztec priest

The Aztec priests ruled the empire alongside the Chosen Speaker; there were no less than 5,000 of them in Tenochtitlan alone. This portrayal is based on illustrations of Mixtec priests in the Codex Nuttall. The codex is pre-Aztec, but it would appear there was little change in clothing and religious practices. The priests painted their bodies black, symbolic of religion and war, matted their hair with blood from human sacrifices, and apparently mutilated their ears. They also filed their teeth to points and made their eyes bloodshot to indicate a state of religious exaltation.

E1: Aztec archer

Based on illustrations in the Codex Mendoza, this figure shows the appearance of the rank and file of the Aztec army, the peasant levies. He is wearing quilted cotton armour and a breech-clout, and is armed only with bow and arrows. It is not clear how the arrows were carried, presumably in some form of quiver on the man's back. Other peasant levies illustrated in the same manuscript are dressed as simply, but bear wooden swords, and their shields are decorated

with seven roundels, arranged 2:3:2.

E2: Aztec warrior

Another peasant levy, seen here hurling a large stone. He has no armour at all, except for a padded cap of maguey fibre and a shield. Such caps are not normally shown on Aztec soldiers, and he may therefore belong to a conquered tribe; the town glyph on his shield has not been identified by the author.

E3: Aztec ally

This is another example of an ally, identified by the *cuauhololli* he is brandishing (a sort of wooden pole-axe with obsidian edges). The Aztecs did not use this weapon. He wears quilted body armour and bears the banner of a captain: Aztec captains normally wore clothing which covered the entire body down to wrists and ankles.

F1: Inca general

This figure is based on illustrations in Felipe Guaman Poma de Ayala's *Nueva Coronica y Buen Gobierno*, drawn in Peru and completed in 1613. He carries a spear, mace and shield, and wears on his helmet the insignia of his *ayllu*. The dress and armament of the warrior caste in Peru, from Inca down to the lowest Curacas, was almost identical.

A Maya warrior, from a bas-relief at Chichen-Itza.



F2: Inca empire: Chinchaysuyu general

The Chinchaysuyu were a subject tribe whose lands began about 100 miles south of Lima. This general wears war-paint which indicates he has killed at least three warriors, and carries a cloak instead of a shield on his left arm: cloaks were sometimes used thus in place of shields.

F3: Inca warrior

This figure is also based on Poma de Ayala's work, and shows a warrior of the nobility wielding a halberd type of weapon unique to the Incas. He wears a bronze military award on his chest: a similar plate was worn on the back. His helmet bears his *ayllu* symbol.

G1: Inca empire: Chinchaysuyu warrior

An ordinary soldier of the Chinchaysuyu tribe, fighting in the Inca army. Note he has no shield and only the one type of weapon. The war-paint on his arm means he has killed one warrior. He bears the *ayllu* device of his clan on his headband. The figure is based on illustrations in Poma de Ayala's work, which shows several similar soldiers, lacking helmets or shields and armed only with spears.

G2: Inca empire: Quechua slinger

The sling was used by all warriors, from the Inca and his generals down to the lowest peasant levy. The figure shown here is a soldier of the Quechua people, who had disproportionately well-developed chests and legs because of the altitude at which they lived in the Andes. The man is wearing a cloak of llama wool, which was coarse and greasy, but wind- and waterproof. Cloaks were not normally worn in action.

G3: Inca empire: Chimor warrior

This warrior is based on a terracotta figure made by the Mochica people, who lived on the northern coast of Peru north of Lima. They were conquered and replaced by the Chimus, who were in turn conquered by the Incas in the 15th century. Much of the Mochica culture survived

Portrait of a Maya warrior, in elaborately feathered costume and carrying a trophy head and ceremonial staff, painted on a cylindrical vessel from Campeche. (Photograph courtesy of Museum of the American Indian, Heye Foundation, New York)



in the Chimor kingdom, and this warrior is therefore probably a fair example of a Chimor warrior at the time of the conquistadores.

H1: Maya general

The figure is based on the astonishing murals discovered at Bonampak in 1946. These beautiful paintings are believed to date from the 9th century A.D., but so far as we know are representative of the Maya in the 16th century.

H2: Maya warrior

This illustration is drawn from a figure portrayed on a gold disc found at the Sacred Cenote, Chichen Itzá. He is armed with a lance and his

shield bears a face meant to frighten his enemies. The Maya went to extreme lengths to make themselves look 'handsome', including tattooing and scarification, filing and inlaying their teeth, remodelling their noses with surgery to create a continuation of their sloping foreheads—theyself obtained by tying boards to the heads of babies.

H3: Maya peasant levy

This probably represents a peasant levy, wearing a breechclout, and feathers in his hair, and equipped only with shield and sling. The figure is based on terracotta figurines from the small island of Jaina, just off the coast of Campeche.

Notes sur les planches en couleur

A Armure noircie pour empêcher la rouille; après un certain temps, beaucoup des capitaines et gentilshommes de la garde y substituaient des armures indiennes en toile ouatée. Les Indiens étaient aussi étonnés par les chiens féroces des Espagnols qu'ils l'avaient été par leurs chevaux.

B1 D'après une peinture murale dans la cathédrale de Tolède. Ce casque *burgonet* était le type le plus courant; le *morion*, qui était souvent représenté en peinture, n'était pas beaucoup porté avant 1530. **B2** Les casques étaient parfois équipés de housses en tissu. Ce *morion* avait été développé du *cabacete* porté par le piquier. **B3** Des armures indiennes matelassées et des sandales indigènes étaient souvent adoptées.

C1 D'après le *Codex Mendoza* et le *Lienzo de Tlaxcala*. Le bandeau en herbe tressée identifiait les alliés des Espagnols à la bataille de Cholula. **C2** Les portiers indiens qui servaient les *conquistadores* pouvaient porter 34 kilos sur 24 km chaque jour. **C3** D'après un manuscrit indien montrant le roi de Texcoco, un allié des Aztèques; notez le bouchon d'or dans sa lèvre inférieure et le tambour sur son dos.

D1 D'après le *Codex Durán*; un membre de la société guerrière aztèque des chevaliers 'aigles'. **D2** La bannière attachée au dos identifie un capitaine. **D3** Les prêtres portaient une peinture corporelle noire; les cheveux étaient emmêlés de sang; notez la mutilation rituelle des oreilles et des dents.

E1 D'après le *Codex Mendoza*, un soldat ordinaire typique de l'armée aztèque. Notez l'armure de coton matelassé. **E2** Aucun vêtement de protection n'est porté, hormis un bonnet rembourré en fibre de cactus. **E3** Un allié des Aztèques; les Aztèques, eux, n'utilisaient pas le type d'assommoir de guerre illustré ici. La 'bannière' au dos identifie un officier.

F1 Ce général montre des types de vêtements et d'armes utilisés avec peu de variantes par tous les rangs de l'armée inca. **F2** Une tribu inca assujettie; ce général porte une peinture de guerre indiquant le nom de ses victimes et il utilise sa cape comme bouclier. **F3** D'après le manuscrit de 1613 de Poma de Ayala; un guerrier de la noblesse. Le médaillon est une décoration de service; un autre était suspendu au dos.

G1 Soldat ordinaire d'une tribu satellite; la peinture de guerre sur le bras indique qu'il a tué un ennemi. **G2** La cape de laine de lama était normalement ôtée avant la bataille. Tous les rangs de l'armée inca utilisaient le lance-pierres, quoiqu'il s'agisse ici d'un soldat ordinaire. **G3** D'après une figurine en poterie d'une date antérieure, mais probablement une assez bonne imitation d'un guerrier chimor, une autre tribu assujettie de l'empire inca.

H1 D'après les peintures murales de Bonampak, découvertes en 1946. **H2** D'après le dessin gravé sur un disque en or trouvé à Chichen Itzá. Le bouclier porte l'image d'un visage, pour effrayer les ennemis. Les Mayas se mutilaient beaucoup, se faisant des cicatrices, des tatouages, se limant les dents en pointe, etc. **H3** Cette image est probablement d'un soldat ordinaire, basée sur des figurines en poterie trouvées sur l'île de Jaina.

Farbtafeln

A Die Rüstung ist zum Schutz gegen Rost geschwärzt; nach einiger Zeit gingen viele der geharnischten Hauptleute und Adligen auf die mit Stoff ausgepolsterte Kleidung der Indianer über. Die wilden Hunde der Spanier wirkten genauso furchterregend auf die Indianer wie deren Pferde.

B1 Von einem Wandgemälde in der Kathedrale von Toledo. Dieser *burgonet*-Helm wurde am häufigsten getragen; der oft dargestellte *morion* war vor 1530 nicht weitverbreitet. **B2** Die Helme waren manchmal mit Stoff überzogen. Dieser *morion* entwickelte sich aus dem *cabacete*, der von den Pikeniers getragen wurde. **B3** Häufig wurde die ausgepolsterte Kleidung und die Sandalen der Indianer übernommen.

C1 Aus dem *Codex Mendoza* und dem *Lienzo de Tlaxcala*. Das aus Gras geflochtene Kopfband kennzeichnete die Verbündeten der Spanier in der Schlacht von Cholula. **C2** Die den Konquistadoren dienenden indianischen Träger konnten 34 kg über 24 km am Tag befördern. **C3** Aus einer indianischen Schrift; Darstellung des Königs von Texcoco, eines Verbündeten der Azteken. Von Interesse sind der durch die Lippe gesteckte Goldzapfen und die Trommel auf dem Rücken.

D1 Aus dem *Codex Durán*; ein Mitglied der aztekischen Kriegergemeinschaft der 'Adler'. **D2** Das auf dem Rücken befestigte Banner kennzeichnet einen Hauptmann. **D3** Der Körper von Priestern war schwarz bemalt; das Haar war blutverklebt; man beachte auch die ritualen Verstümmelungen von Ohren und Zähnen.

E1 Aus dem *Codex Mendoza*; ein typischer Krieger des Aztekenheers. Man beachte die gesteppte Kriegstracht. **E2** Außer einer ausgestopften Kappe aus Kaktusfaser wird keine schützende Kleidung getragen. **E3** Ein verbündeter Azteke; die gezeigte Keule war keine Kriegswaffe der Azteken. Das 'Banner' auf dem Rücken kennzeichnet einen Anführer.

F1 Diese Art Kleidung und Bewaffnung dieses Feldherrn fand mit nur geringfügigen Unterschieden in allen Rängen des Inka-Heers Verwendung. **F2** Ein Nebstamm der Inkas; dieser Feldherr trägt Kriegsbemalung, die die Anzahl seiner besieigten Gegner kennzeichnet; der Umhang über dem Arm dient als Schild. **F3** Aus Poma de Ayalas Schrift aus dem Jahre 1613; ein Krieger des herrschenden Stamms. Die Bronzemedaille ist eine Auszeichnung für seine Verdienste, und eine zweite Medaille hängt auf dem Rücken.

G1 Ein Krieger eines Nebstamms; die Kriegsbemalung auf dem Arm zeigt an, daß er einen Gegner getötet hat. **G2** Der Umhang aus Lamawolle wurde gewöhnlich vor dem Kampf abgelegt. Alle Ränge des Inkaheers verwendeten die Schleuder, doch ist dieses ein gewöhnlicher Krieger. **G3** Von einer Tonfigur älteren Datums; jedoch vermutlich eine zutreffende Darstellung eines Kriegers der Chimor, eines anderen untergeordneten Stamms im Inka-Reich.

H1 Von den 1946 entdeckten Bonampak-Wandmalereien. **H2** Von der Darstellung auf einer bei Chichen Itzá gefundenen Goldplakette. Der Schild ist mit einem 'Gesicht' bemalt, um die Feinde zu schrecken. Viel Selbstverstümmelung mit Narben, Tätowierungen, Befehlen der Zähne usw., eine Praxis der Mayas. **H3** Vermutlich ein einfacher Krieger—nach auf der Insel Jaina gefundenen Tonfiguren.

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

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