

SAMURAI

1550-1600



WEAPONS - ARMOUR - TACTICS

ANTHONY J BRYANT ANGUS McBRIDE

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Dedication

Matsushita-san to Usami-san e . . .

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SENGOKU JIDAI

The *samurai* (also called *bushi*) were Japan's military aristocracy, and their heyday was the Age of Battles, or Warring States Period (in Japanese called the Sengoku Jidai). This period is usually given as 1550-1600, primarily for the convenience of a nice round number. It covers the collapse of the Ashikaga shōgunate and the establishment of the Tokugawa shōgunate.

Until the last half of the Age of Battles, it was still

possible for one born outside the *samurai* class to become a samurai. This was accomplished by joining the ranks as an infantryman, and after surviving a few battles, coming to the attention of a clan lord or his officers and being given a permanent assignment.

For the vast majority, however, it was a class to be born or legally adopted into. Despite the high social status of the *samurai*, there were internal class distinctions. The upper strata of their society, the *daimyō* and their families, enjoyed all the benefits of that rank. At the bottom rung of that long ladder were the would-be *samurai*: the *ashigaru* and their families.



Takeda Yoshinobu commits seppuku in this woodcut from the biography of Takeda Shingen. A second (behind Yoshinobu) prepares to cut off the young man's head.

The *ashigaru* (the name literally means 'light feet') were the foot soldiers, the cannon fodder, the vast nameless ranks that populated the armies. Though not born *samurai*, they had the potential to improve their station and to be accepted as equals by their betters. Many generals and other famous names of the Age of Battles were once *ashigaru*. So blurred are the distinctions that authorities are at odds as to whether *ashigaru* can be considered *samurai*.

By the time the last Ashikaga *shōgun* was forced into retirement in 1573, the country had already been in turmoil for decades as old alliances crumbled, families fought amongst themselves and clan members battled for supremacy.

For some of the lesser families, like the Oda of Owari, the nearly constant warfare was an opportunity to gain land and power. For the older, aristocratic families, like the Takeda, it was a chance to extend their control; but it was also a chance to settle ancient disputes, an occasion to be on guard against up and coming families who wanted the rich, ancient fiefs for their own.

It was against such a backdrop of betrayal and defection (and occasional acts of astounding loyalty) that the constant and bloody battles of the Sengoku

Jidai were fought. Some of them are famous out of proportion to their importance (such as the nearly annual Uesugi-Takeda contests at Kawanakajima), while others, critical to Japan's history (such as Okehazama or Mikata-ga-Hara), are virtually unheard of in the West.

It was the age in which the *samurai* class came into its own, for when the wars ended, the Imperial capital of Kyōto had become nothing but a stage, the Emperor a puppet, for the use of the Tokugawa *shōgun* and his Edo-based military government.

THE WAY OF THE SAMURAI

Samurai status was a matter of caste rather than occupation. All *bushi* – whether male or female – were part of the military class, regardless of whether they had ever picked up a sword.

Samurai were not confined to a purely military role, however. Some *samurai* became scholars of great renown. They were civil and military administrators, clergymen, artists and esthetes. Others were just



Left: A 72-plate kabuto. Such helmets were popular with those who could afford them. The shikoro (napeguard) is classic in form. (Private collection, Haragamachi)

Right: The parts of a modern gusoku (suit of armour) are identified here. The crest of the Tokugawa is displayed on this ornate model. (Courtesy Yoroi no Kōzandō)

Tehen

Datemono

Fukigaeshi

Maebashi

Shikoro

Menpō

Yodare-kake

Kabuto

Shinobi no o

Sode

Munaita

Agemaki

Waki-ita

Dō

Shino

Kote

Tekkō

Kusazuri

Haidate

Tategagi

Shino

Suncate





This samurai wears a leather jinbaori (surcoat) over his armour. The cuirass is a hatomune (pigeon-breast) dô, a style

modelled on European peascod breastplates. (Courtesy Kyôto Costume Museum)

family members. Yet all were expected to be familiar with their martial role.

Women were all trained in how to use the small dirks they carried in their waist-sashes. Usually kept wrapped in a brocade case, this was as much a sign of their position as the sword was for the men. Upper-class women were even trained to use certain special weapons: the *naginata* (a sort of halberd), became a woman's weapon, and was used for the last-ditch defence of the home. Feudal lords had bands of *naginata*-armed women roaming the inner compounds of their castles at night.

Many members of the Buddhist clergy – at least most of rank – had been born *samurai*. Although this was one area where one's rank in life was not supposed to matter (after all, one was supposed to have abandoned the ways of the world upon taking the tonsure), this was seldom the case. Some wealthy and very powerful lords took Buddhist vows, yet continued to govern their domains and lead vast armies. Takeda Shingen (born Harunobu) and Uesugi Kenshin (born Terutora) are two famous examples.

For most *ashigaru*, the realities of life in the ranks ensured that dreams of glory remained just that. Ironically, it was Hideyoshi himself – the man who had risen from peasant-born sandal bearer to the ruler of all Japan – who made that dream even harder to achieve, when he issued edicts restricting *samurai* status to those who had been so born.

Another irony was that the armies made up of clan members and hereditary retainers serving their lords were, on the whole, more loyal than their masters. Their lords regularly betrayed would-be allies and *daimyô*, proving that loyalty was expected of the rank and file, but the commanders were a law unto themselves. The classic example is that of one of Oda Nobunaga's own generals, Akechi Mitsuhide, who assassinated the would-be conqueror.

The Confucian ethic of rigid social structures didn't gain official recognition until the Tokugawa government, anxious to secure firm control over society, formally encouraged it. Nevertheless, there was a strong Confucian undercurrent, a sense of everyone accepting their lot. Conveniently, this was also a fatalistic Buddhist world view.

There was a great fear of losing one's master, and the social structure supported the inter-reliance of

vassal and lord. To become lordless – a *rônin* (literally ‘wave person’) – meant the warrior was left without the support or protection of his clan. If the lord died and there was no heir, his retainers would all become *rônin*. A retainer could also be banished from the clan for a crime, such as brawling or violating regulations.

Rônin were wandering swords for hire, and often turned to banditry. Some maintained their sense of honour, and either took the tonsure, or found new employment with another lord and gave allegiance to a new clan. During the Age of Battles, there was no shortage of opportunities for lordless *ex-samurai* to redeem themselves.

All *samurai* had duties and were paid stipends, and from this they had to buy whatever of their equipment wasn’t issued and furnish their household (if they had one). The basis for the economy was rice, and a unit of rice that could feed a man for a year, called a *koku*, was the universal measure of wealth. Fiefs and estates were described in the terms of how many *koku* of rice they produced. One *koku* is 120 litres. The lowest samurai received a little less than a *koku* (assuming his meals were all on his lord’s estate’s books).

Middling lords, and castle commanders, might receive a stipend of several hundred *koku*, and with that he had to pay the *samurai* in his service, supply his garrison, feed his horses, pay his servants, etc. For convenience sake, hard cash was used to make payments, but ultimately it was a rice-based economy. Even the Takeda of Kai, who sat on the

most valuable gold mines in the nation, needed rice to feed their soldiers.

Such was the importance of rice that many farmers didn’t get to eat the crop they grew for the *samurai*; they ate millet. The rice went to the lord’s castles for counting, then storage or dispersal.

The finances were left to the wives as the *samurai* men deemed handling money below them. The only men who dealt with cash were those whose specific duties required it (overseer of the castle kitchens, for example). Even then, it would be notes exchanging hands, for later payment.

Various duties within the clan were assigned as official positions. In some ways, it was similar to a modern army; while everyone is a soldier, some are also cooks, some are clerks, some deal with transportation, and some are responsible for other, more esoteric, duties.

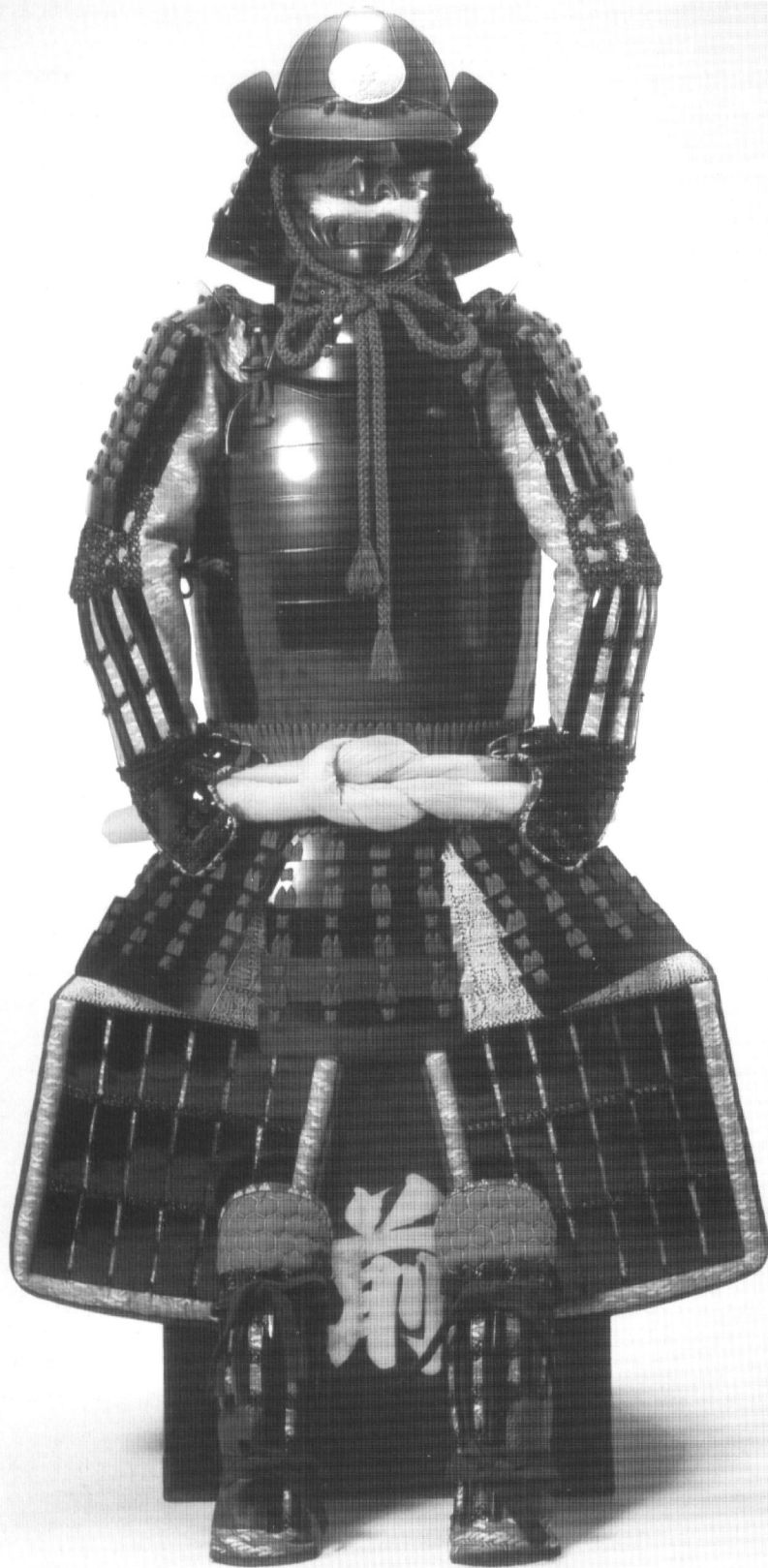
Samurai in a garrison would be freely transferred from one position to the next if their work was good enough. Promotions were not always in the same area. In this way, if a warrior achieved a sufficiently high rank, he would be fairly conversant with all the details necessary to run and maintain an army, a garrison, or even an entire domain.

Daily life

Some *samurai* lived in what amounted to barracks, and others had their own homes. Where they lived depended on a variety of factors, such as their rank, duties, and marital status. Most of the younger,



A 12-plate akoda-nari helmet bowl. This was a common shape for helmets in the late 16th century. Note the steep skirt-plate for the attachment of the nape guard. (Author’s collection)



Left: The okegawa-dô, or tub-sided cuirass, was the most versatile armour of the late 17th century. The one shown here is of the more common, horizontally rivetted clamshell style (yokohagi ni-mai dô). (Courtesy Yoroï no Kôzan-dô)

Right: This reproduction at Kyôto's Eiga-mura studio backlot is typical of a town in feudal Japan. The street in this picture is likely to have been inhabited by lower-class samurai.



lower-class *samurai* in a castle garrison, for example, lived communally in a large barrack-like structure in the castle compound. Married *samurai* might have their own small home adjacent to several others in something akin to married quarters, while those with some seniority might have separate houses of their own.

When relaxing 'at home', a *samurai* might sit back and light up his pipe. Tobacco had entered Japan with the Europeans, and it became popular with those of rank almost immediately, and soon filtered down into the barracks. The Japanese *kiseru*, or pipe, only held enough for a few puffs, but it still provided a popular form of relaxation.

As with soldiers throughout history, *samurai* loved to gamble. Although discouraged by clan leaders, games of chance like cards and dice were widespread. Whether the incentive was money or enjoyment, cards, *gô*, and *shogi* were all popular pastimes. Some soldiers even took a set of *shogi* pieces

on campaign, and drew a board on the ground to play on.

Not all diversions were so peaceful. Wrestling, similar in style and technique to modern *sumô*, was a popular pastime whether as a spectator or a participant, and money was wagered, illegally, on the outcome of a bout.

The finer arts were also popular, but not in all clans. Some houses encouraged an interest in music, and the flute was one of the more common instruments.

Writing poetry was believed to be an exercise as much for the mind as the hand. It should be pointed out that these weren't *haiku* being written: they were usually *tanka*, a poem form of five lines with syllable counts of five, seven, five, seven, seven. For the common soldier, they more likely would have been *senryû*, a comic poem structurally identical to the modern *haiku* but having more in common with the limerick (being often scatological or bawdy).

Childhood

In Europe, aspiring knights were required to follow a formal initiation process that culminated with their sovereign dubbing them. By contrast no such process existed in Japan instead *samurai* were trained from birth for the station they would hold. Unlike their European cousins, however, they were not put in the care of friends or relatives for training: it was all done at home.

For the children of the *samurai*, training for their martial way of life began early; from birth if the child showed the unfortunate trait of left-handedness. In Japan, where conformity is paramount, everyone was right-handed. Being left-handed was unacceptable. The left arm was tied down, things were placed in the reach of the right hand, everything possible was done to break the habit.

Particularly between the ages of seven and eight they were encouraged to be sociable and cooperative with their playmates, and discouraged from being confrontational or overly self-absorbed. At nine and ten, they concentrated on more academic subjects like reading and writing, although from the age of seven they were likely to be studying regularly at temple school.

The serious work took place between the ages of ten and twelve, when the child's day could include as

many as twelve hours of work in subjects ranging from abstract academics to learning musical instruments or undergoing physical training.

By the time he was thirteen, he was ready to fight: more than one famous *daimyô* fought in his first engagement at this age. These young *samurai* probably gathered around their campfires at night and listened in awe – in the manner of all new recruits – to the stories told by the more experienced campaigners. This in itself was training.

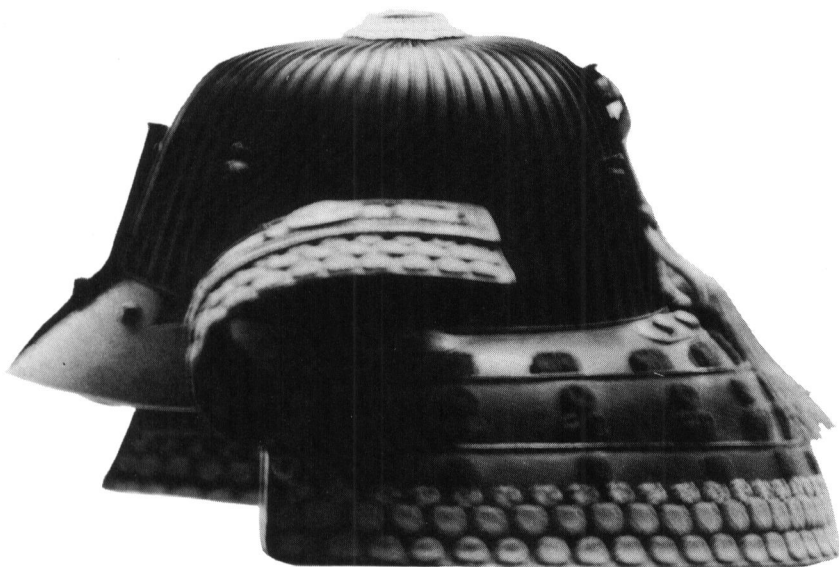
Genpuku

At about this time the young warrior-to-be underwent a ceremony called alternately *genpuku* or *genbuku*. For the sons of the noble families, this often preceded his first battle.

The *genpuku* was the coming-of-age. It was celebrated at the youth's thirteenth or fifteenth birthday. It marked the first time the boy's hair was cut in the manner of an adult: that is, his pate was completely shaven and he was given an adult's topknot. He was also given an adult's cap. In some cases, more often when a clan was at war, the cap was replaced with a suit of armour.

For women of the *samurai* families, at least the more senior, this also marked the first time their eyebrows were shaved and their teeth blackened. The latter, through the application of iron oxide, was an

Right: The gates of a samurai official's residence, re-created at the Kyôto studio.



Left: A 62-plate kabuto with a short, three-lame shikoro. (Private collection, Sôma)



ancient court tradition for upper-class women. It also meant that they were ready to marry, often to cement a family alliance.

Death and duty

'The way of the samurai,' wrote Yamamoto Tsunetomo, an erstwhile retainer of the Nabeshima clan, 'can be found in death.'

This simple axiom, frequently quoted or paraphrased in Japanese historical works, emphasises the *samurai's* concept of duty. Death on the field of battle was an honourable ambition. Warriors occasionally entered battle knowing it would be the inevitable outcome.

There were some things worse than death: failing to serve one's lord well, or bringing shame upon oneself. If wounded, the warrior would usually commit suicide rather than allow himself to be taken prisoner or suffer the dishonour of giving in to pain. In fact, it is impossible to understand the philosophy of the Japanese fighting man – be it in the distant or

recent past – without discussing the subject of suicide.

Samurai who killed themselves after losing a battle didn't have to face the shame of being taken prisoner. They expected to die eventually anyway, so they viewed suicide as merely death on their own terms, with all honour intact.

The preferred method of suicide was *seppuku*. This is the pronunciation of two characters which, when reversed, read *hara-kiri*. To some Japanese the latter term can be roughly equated with the English phrase 'he blew his brains out' as opposed to 'he committed suicide'.

Suicide was the preferred option in many situations. It is possibly most famous as a punishment (although whether an induced suicide should be considered a choice rather than a penalty is open to discussion). It also existed as a purely voluntary method of atoning for some wrong. Suicide was additionally a protestation device, exemplified by one of Nobunaga's more valued retainers, who commit-

ted suicide to draw his lord's attention to affairs of state, which he had been ignoring. It was even occasionally included amongst terms for peace. Hideyoshi had Hôjô Ujimasa commit *seppuku* after the battle of Odawara in 1590 before officially ending hostilities.

Another form of suicide, and one condemned by many as an incredible waste, was *junshi*. When a lord died (or was killed in battle), some of his retainers might kill themselves rather than allow themselves to follow another. The idea was that they could serve no one as well as their late lord, and this was viewed as the ultimate act of devotion. The problem was that sometimes his heirs were deprived of valuable,

trusted retainers. It was such a problem that clans developed rules specifically against it; Tokugawa Ieyasu drafted stern laws forbidding it, using threats of dishonour and death for entire families if their head followed his lord in death. (The tradition survived as late as the 20th century. When Emperor Meiji died in 1912, General Nogi, the hero of the Battle of Port Arthur, committed suicide.)

The history of Japanese warfare is punctuated with references to spectacular suicides, like that of Miura Yoshimoto, who, it is claimed, cut off his own head in 1516. Another *samurai* placed his sword in his mouth and leapt headfirst from his horse. Suicides during and immediately following a battle tended to be very quick and messy affairs, with little time to observe the 'niceties' of the formalised rules that accompanied the ritual of *seppuku*.

Traditionally, there should be a second or lieutenant, ready to assist by cutting off the head. The full act consisted of a horizontal cut, left to right, along the belly below the navel, then a second upward cut from below the navel. At that point, the second administered the coup de grâce. In point of fact, most only made the initial cut before decapitation. Other *samurai*, to show their courage, ordered their seconds to wait until the upward cut had been made.

With no second, it was a long, painful death. It is for this reason that those with no one to assist often followed the one or two cuts with a deep slice across their own jugulars.

Women didn't commit suicide in the same way. Their method was called *ojigi*, and they were supposed to take their dirks and thrust them into their throats, although there are records of women stabbing themselves in the chest. Women often helped each other commit suicide (as shown in Akira Kurosawa's film, *Ran*).

The fixation with death – especially suicide – emphasises the whole concept of fierce loyalty as a motivational force. *Samurai* were expected, and willing, to die for their lords. Anything he asked of them, they were expected to do, even to the extreme of asking a lone man to charge an enemy position. They would die under torture rather than disclose their lord's secrets.

A samurai wearing a suô – semi-formal daywear for the upper classes. The example shown here is of a

common pattern. (Courtesy Kyôto Costume Museum)





This rider at the Sōma noma-ōi is dressed in typical samurai fashion, and has a colourful banner

attached to his back. Note the crest worked into the thigh protector.

Samurai history is full of cases of such bravery in the face of death. Torii Suneemon, one of Oda Nobunaga's men, was captured by the Takeda during the Battle of Nagashino (1575) while on a mission to get reinforcements. The Takeda offered to reward him and let him go if he would call to the Oda castle defenders and tell them no help was forthcoming, and that surrender was their only option. As an encouragement the Takeda had him placed on a cross, and soldiers with lances stood by. He took a deep breath, and bellowed that reserves were on their way, and the garrison should hold fast. His exhortation was abruptly terminated by Takeda lances.

It should be stressed that fanatical devotion of this sort was normal only for *samurai* born into a clan or whose families were hereditary retainers of the clan. *Ashigaru* who had been brought under the clan banner from outside (for example, those whose

masters had been defeated and who had sought service elsewhere), and the sons of farmers conscripted as soldiers, didn't always carry their loyalty to this sort of extreme.

Dress and appearance

One thing the *samurai* wore at all times, whether in or out of armour was a sword, or, more often, two. When indoors, he usually just wore the shorter one. They were thrust edge up through the *obi* (waist sash), at the left side. The fittings, including the scabbard and guard, were generally matching, but when one sword and a dirk were worn, there was no great need for uniformity.

Samurai also carried a fan, and perhaps a supply



of soft paper (as we carry tissues), and a small purse. Smaller items like the purse could be secreted in a sleeve, while larger items were thrust into the waist sash or between the front folds of the *kimono*.

Though the standard image of the fierce *samurai* is one of an armoured warrior, armour was only worn on campaign. Even those on guard duty generally wore only everyday dress in times of peace.

The standard dress of members of the warrior class during the last decades of the sixteenth century was the *kamishimo*, consisting of a matching *kataginu* (like a sideless vest) and *hakama* (baggy, pleated pants). These were worn over a *kimono*. There was also an abbreviated version of the *hakama* worn by the lower class soldiers when the weather was warm.

The fabric used was linen for the masses and silk for the well-to-do. There were no sumptuary laws restricting the colour of the fabric, although there were clans that preferred a uniform appearance and insisted that a specific colour be used for certain occasions. Plain fabric or overall prints or weaves with heraldic crests were equally common.

Shaving the top of the head, something often believed to be an indicator of *samurai* status, was more widespread than often realised. Commoners – farmers, merchants, townsmen – all sported shaved pates and topknots. The fashion certainly originated with the *samurai*, but it caught on with the populace at large. Its origin is believed to have something to do with wearing helmets so often that a shaved head was simply more comfortable.

Shaving the head was by no means universal, and not as common in the sixteenth century as it would be later. One thing that was constant, however, was the wearing of a top knot. Everybody – except the Buddhist clergy – wore their hair long, and caught it up in a queue at the point of the back of the head. Common ways to wear the *motodori* (topknot) included simply tying cord around the base for a few inches, and letting the rest fan out above the cord; this was called tea whisk style, for its resemblance to that utensil. Other methods included folding the knot forwards on the head.

The Japanese beard is not typically heavy, but few older *samurai* lacked facial hair to some extent,

This Mannequin shows the kind of clothing a typical samurai woman would wear in the home. (Courtesy Kyōto Costume Museum)

even if it was only stubble. The younger warriors were usually clean-shaven. Generals and the more flamboyant characters frequently sported moustaches in a style still recognised as *bushô hige*, or 'general's moustache'.

The final part of the warrior's garb is the *eboshi*, a tall, flattened, black cap. The cap is either of soft fabric and worn flat down over the head, or it is folded into a compact shape and lacquered stiff. Varieties worn by the court nobility were lacquered standing to their full height.

TRAINING

The last half of the sixteenth century was a period of almost constant warfare; weapons training was more often than not done 'on the job'. It was a sink or swim mentality, where warriors fought their first battles at a youthful age, and if they lived, they had learnt something for the next time. Tokugawa Ieyasu was a general at sixteen years of age.

Most who fought in the campaigns were in their late teens or twenties. Save the generals and the lords, *samurai* armies were very young in makeup. Few from the ranks attained a venerable age.

Conventional martial training did not follow a common structure throughout Japan; every clan had its own methodology and philosophy. Many clans had certain individual soldiers serve as group teachers, working with younger, newer troops. As a comparison the modern army, where new recruits learn from more experienced veterans on a fairly informal basis, is a similar system.

Some clans actually took the next step, establishing formal *dôjô*, or martial arts schools, to provide instruction to their men. Veterans of many campaigns, whose skill had been noted, would serve as instructors. This became their duty, and they lived to perfect their skills. They were more like drill instructors training recruits rather than modern teachers of martial arts. These *sensei* were teaching their charges how to kill and survive, not how to score points with flair and panache.

The philosophies that became a major part of

martial arts as we now know them may have been in place, but only nominally. The subject of instruction was tricks and strategies to be used in defeating the enemy, not inner peace and self-control.

Another unusual martial art still practised in small numbers is armoured wrestling. Grappling with the enemy while in full gear is very different from conventional wrestling, and it needed practice.



A lady of the military class in street clothes. She covers herself with an

unchikake, worn over her kimono. (Courtesy Kyôto Costume Museum)

Related techniques included seizing and dismounting a rider while passing him.

Even ways to tie up prisoners developed into an art form of sorts, with different schools favouring different knots, and special ways of binding prisoners depending on who they were and what the likelihood of escape was.

Inu ô-mono

Practical training was also found in violent sports like *inu ô-mono*, in which several wild dogs were placed in a large corral, and *samurai* on horseback would chase them down, firing arrows at them. The object of the sport was to kill the dogs and expend the least number of arrows. It was excellent training for shooting from a moving platform at a randomly moving target.

Yabusame

A less violent form of target practice was *yabusame*, which is still practised today as part of a Shintô observance. In this sport, mounted archers dressed in Heian Era (794–1180) hunting garb gallop down a set course and fire three arrows at three wooden targets each a foot square, mounted on tall poles.

Yabusame began in the days of the Kamakura shôgunate (1180–1333), at first as a simple exercise for the warrior aristocracy, but its value as a training exercise is clear.

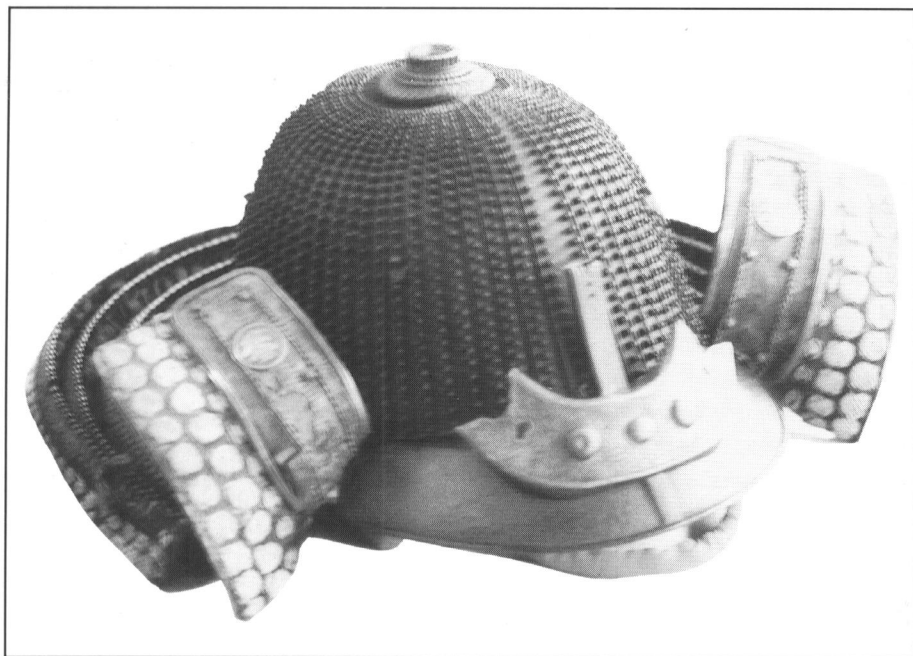
The Sôma *noma-ôi*

The Sôma clan of northeastern Honshû, descended from Taira no Masakado, were extremely fond of horses, and developed a training programme that is still practised in their region. The Sôma *noma-ôi* ('wild horse gathering') is an annual event in Haragomachi for which a few hundred locals – men, women, and teenagers – who are mostly members of an esoteric society that re-creates the armour and equipment of their ancestors, get on their horses and engage in equine exercises.

First they hold the *katchû keiba*, the armoured horse race. Teams will gallop around a course in full armour, their colourful banners waving behind them. Riding and controlling a horse at speed in full armour is a skill that needs training and constant work, so the Sôma turned it into a sport that can only be found today in northern Japan.

The next event is the *noma-ôi*. Several wild horses are let into a huge pen (the size of a few football stadia) one at a time, and the armoured and mounted 'warriors' have to get the horses to enter a narrow gate and then chase them up the side of the mountain to the shrine above. The aim is to do this in the shortest amount of time possible, and it not only develops riding skills, it develops tactical awareness.

The *noma-ôi* can be quite dangerous. It is not



The costly and prestigious 120-plate helmet was popular among generals and great lords. However, the helmet's plates were so thin that armour experts considered it useless in battle. (Private collection, Sôma)

unusual for horses to be put down for injuries sustained, and riders are frequently sent to the hospital with broken bones. It is, however, an authentic historical re-creation of what was both an enjoyable diversion and serious military training.

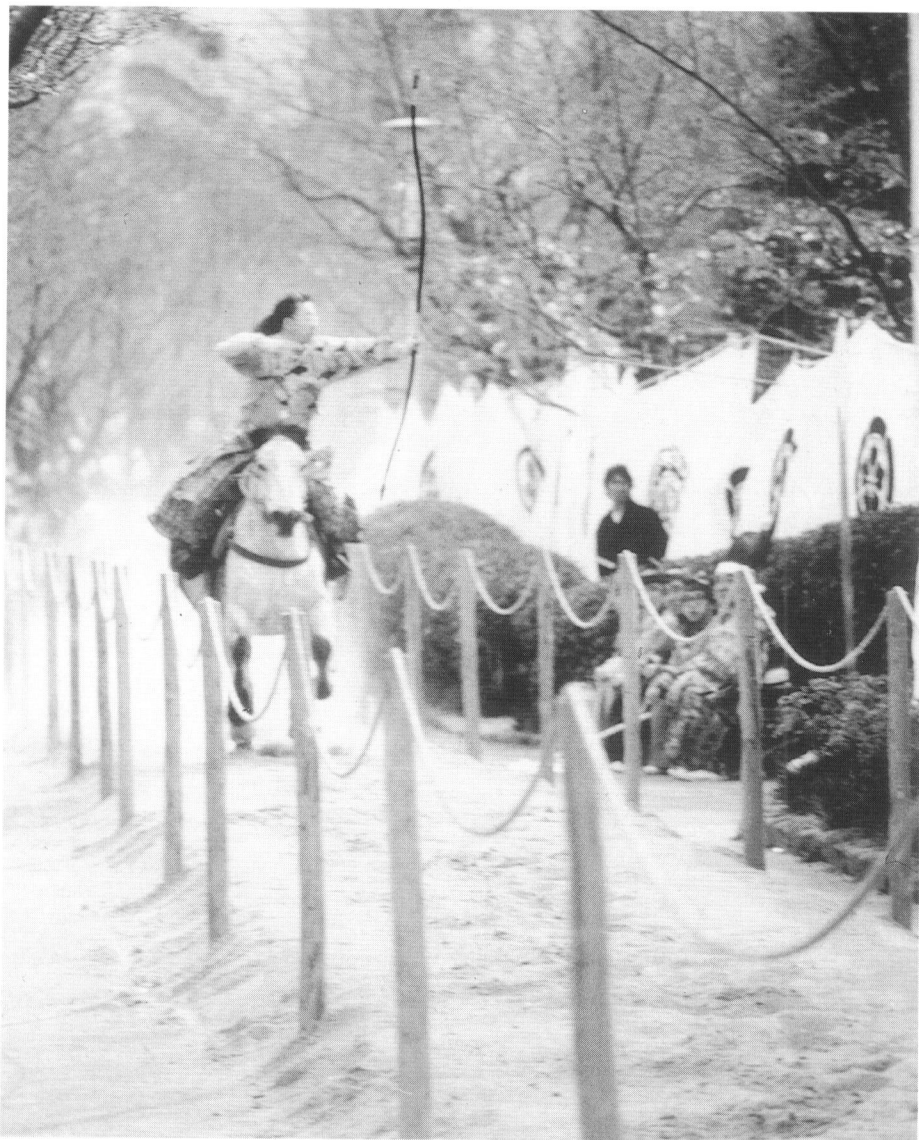
Training the mind

An interesting characteristic of training in Japan is that despite the importance of formal training, a strong emphasis was also placed on the abstract.

Some clans valued this mental training highly, and so recommended the chess-like games *gô* and *shogi* to train the mind in tactics and strategy. For the lower classes of *samurai* and the *ashigaru* it was

considered a useless exercise, so they didn't study the games formally. Those from the ranks who learnt such games often did so for more earthly reasons: they regarded *gô* and *shogi* as pleasant pastimes, and occasionally as a source of extra income when they could find someone willing to bet on the outcome.

What the clans considered valuable for the training of their men often depended on the background of the clan. When one considers that many of the great houses of the sixteenth century were not aristocratic and high-born (rather, they had fought their way to the top from the lower ranks of families), it is clear that they would have different values from those of the older aristocrats.



Yabusame was once battle practice for samurai – now it is a demonstration sport.

*Riders at the Sōma noma-
ōi race in the katchū keiba
(armoured horserace).*



The older clans had appreciation for the arts, and encouraged familiarity with them amongst their retainers. This included such things as playing games, composing poetry, playing musical instruments, and so on.

The newly risen clans in general abhorred such soft and decadent pastimes in favour of strictly martial techniques and exercises. These clan lords often laid down harsh penalties – ranging from demotion or loss of privileges to the extremes of banishment or death – for *samurai* found to be gambling, attending plays, or similarly ‘wasting their time’.

Kakun (household rules given at the hands of the *daimyô* to be used in governing their clans) mark these differences of opinion clearly. The disagreement on the importance of letters (*‘bun’*) and the military (*‘bu’*) was called *bunbu ichi*, or ‘supremacy of letters (i.e., things artistic) or martial’.

Apparent contradictions in collections of *kakun* can be striking and include such rules as ‘clan members shall not play *gô* or attend theatre, nor shall they learn to play the flute or write poetry’ and ‘everyone should learn calligraphy because it is good for the mind’.

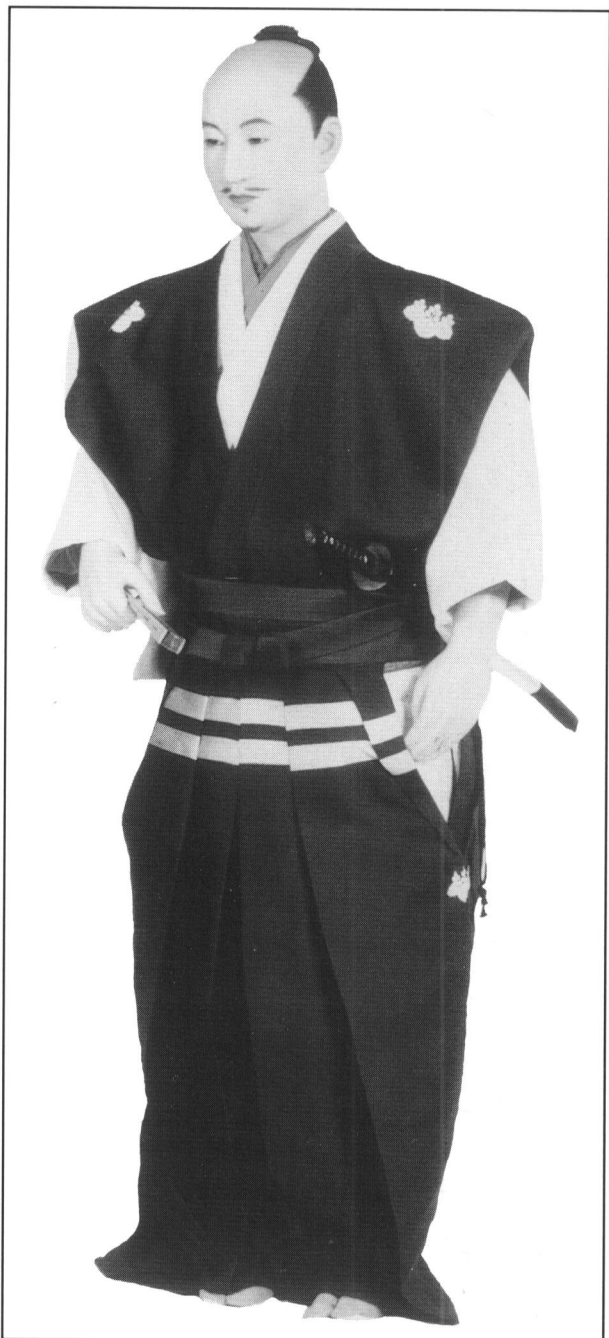
ON CAMPAIGN

Given Japan’s rough, mountainous terrain, and the lack of such things as baggage wagons, campaigns and maintaining lines of supply while in the field were rather more difficult than elsewhere.

Any wounded had to be treated in the field; there was no way to evacuate them behind the lines. After the battle, the best a seriously wounded man could hope for – after a little bit of medical attention – was to be retired from the campaign to a temple or house where he could possibly recuperate. Those with minor wounds had to recover in the field with their comrades.

There was very little professional medical attention to speak of for any but the upper classes. Consequently, there were many field remedies for

conventional ailments. One’s own urine, heated and applied topically to a wound, was used to ease pain; taken internally it was believed to be an antidote to some poisons. Fresh horse feces were eaten to control internal and external bleeding; it was also believed to aid in clotting the blood. There were even specific procedures developed for the removal of an arrow which had entered a warrior’s eye. The ‘treatment’ is



This model samurai wears a combination garment called a kamishimo. Based on a contemporary

portrait of the hegemon Oda Nobunaga. (Courtesy Kyôto Costume Museum)

a little gruesome, but one key was not to attempt removal until the wounded man's head was firmly tied to a tree to immobilise it.

In addition, armies on the march would stop at hot springs and natural spas whenever possible, especially after an engagement, to partake of the waters in the belief that they could help alleviate various ailments. Takeda Shingen was famous for

being a proponent of the health-restoring waters, and his domains are peppered with sites of spas at which he supposedly stayed.

Food

Rice was the staple of the soldier on campaign just as it was for those at home. While his meals were simple, he tried to supplement the diet with whatever was available; if there was a stream nearby, he tried to catch some fish, or perhaps he'd make a soup from fish-stock (usually instant, made with stored dried bonito shavings) and whatever leaves and vegetables he could scrounge. Invariably there was a supply of pickled vegetables that had been brought along in the baggage train.

Warriors considered pork, boar, and rabbit to be 'stamina' foods, useful to help them keep their energy up. Although most were at least nominally Buddhist (and therefore in theory vegetarians), the restriction against eating the meat of living creatures was in fact broken regularly with little soul-searching.

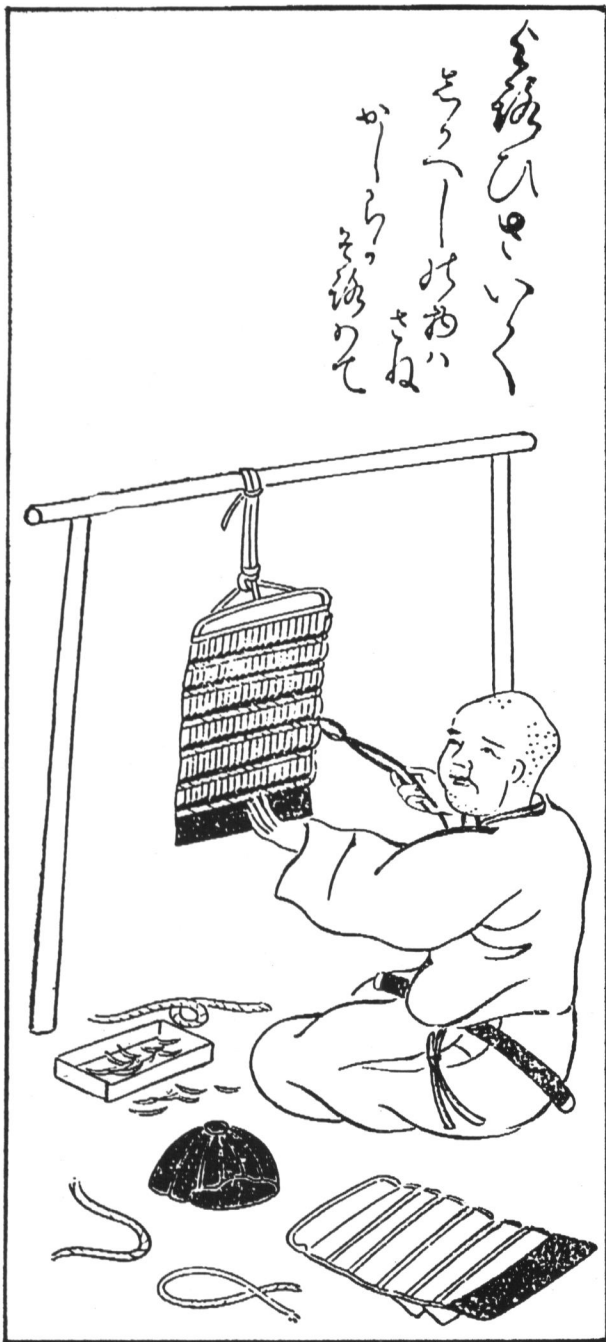
The idea that instant food and 'iron rations' are modern is fallacious. The *samurai* carried their own version on campaign. This common food was rice that had been pre-cooked and allowed to dry. This product, similar to today's minute rice (though slightly more cooked to start with), was carried in pouches ready to eat – crunchy and incredibly dry, but filling – or mixed with a very small amount of water and boiled to make instant rice.

Cooking gear was also carried, but many *samurai* of the lower ranks seem to have done their cooking inside their upturned helmets. Like modern military units, a group of *samurai* may have taken turns running mess duty: Honda did breakfast, Morimoto did dinner, Katayama started off the next day, and so on.

Camps

Samurai had to make do with whatever shelter they could make or find. The generals and lords commandeered temples to billet themselves and their staff, while their guards, servants, and the common soldiery slept in surrounding buildings, stables, under trees, in farmhouses, or in the open air.

An armourer works on a sode (shoulder guard) in this contemporary woodcut.



Ashigaru wearing *tatami-dô*. The helmet is made of folding plates. On the rear view the fitting for the banner pole is clearly visible. (Courtesy Kyôto Costume Museum)



Tents and pavilions don't seem to have played a major part in the campaigns of Japan. This is probably due to the difficulty in transporting such bulky items and the fact that there are temples and shrines in abundance ready made to provide more than adequate shelter.

A *honjin*, or main camp, was always erected as the command centre. It was usually ringed by crested camp curtains (*jinmaku*, or *tobari*). The films *Kagemusha* and *Ran* show such camps accurately. From here, surrounded by guards, the general oversaw the battle.

Field repairs

To cut down on baggage, armour was worn almost constantly. Long summer campaigns quickly became uncomfortable, and armour became host to lice and other vermin. To alleviate this, armour was sometimes suspended over wet fires and 'smoked'.

With all the wear and tear on the armour (be it from damage on the battlefield or through weeks of exposure to the elements), *samurai* often found what little spare time they had occupied with maintenance

and minor repairs. These repairs were done in the field by the warrior himself; armourers never accompanied the armies.

Stringing a few cords through lames that had had their lacing severed was a simple repair. It was also easy to patch the foundation cloth of the armoured sleeves, greaves, or thigh protection. Anything beyond that would likely require a specialist, as lacquer would need to be removed and re-applied in addition to whatever work might be required on the plate itself.

When armour was damaged beyond what these simple field repairs could fix, lower-class warriors often just scrapped it and picked up a replacement piece. It was usually simple to acquire such items on campaign by looting from the enemy or stripping the dead. Upper-class *samurai* were expected to have it repaired or even buy replacements, rather than resorting to scavenging among the corpses on the field. To that end, many clans had specialists in giving battered armour a second life, and after a campaign, these craftsmen were kept very busy.

Other equipment

Due to the mountainous nature of the Japanese archipelago, pack wagons, carts, and indeed any vehicles with wheels were virtually non-existent outside the cities. As a result, the task of hauling supplies and equipment fell upon large numbers of packhorses, and the *samurai* themselves.

A warrior going on campaign was loaded down with more than his weapons. He generally carried his own food, clothing, gear, and medicines, in addition to being a human packhorse for the army's supplies.

Rations were carried to the field by each *samurai* in a long, narrow sack. A meal's worth of cooked rice in the form of *onigiri*, (riceballs), or a day's worth of raw rice (sources conflict, but it is likely that both methods were used, depending on the campaign, although the same amount of raw rice would go farther) was placed in the sack, and then tied off. The next ration followed, and that was tied off. A full rations sack would have ten to fifteen 'spheres' of rice. The remaining ends would be tied together and the



This replica of a helmet of Uesugi Kenshin shows the unusual shita-jikoro (under nape guard) below

the regular shikoro. (Courtesy Yoroï no Kôzan-dô)

sack would be worn around the shoulders. The appearance has caused more than one amateur historian to assume that they were some sort of flotation aid, although the benefits of 'water wings' on campaign would have been limited.

Over his shoulders he might carry a rolled-up straw mat. This mat would be used to cover himself with as he slept, though some used it as a ground sheet.

A second sack, usually worn at the waist, contained a change of clothing and whatever personal items the warrior may need; for example, something to patch his clothing with, a few yards of string for quick field repairs to his armour, fire-starting tools, writing implements, grooming aids, etc.

Just about everything else hung from his waist: canteens formed from a section of bamboo or hollowed-out gourds; pouches for medicines or dried rice; spare matches for his matchlock firearm; spare bowstrings; some spare *waraji* (straw sandals); perhaps even a pipe and tobacco pouch.

If an arquebusier, he may have a case of preloaded matchlock cartridges (*hayagô*) on his waist sash. Spare shot was carried in a pouch at his waist as well. *Samurai* carried the flask for powder hanging from the toggles where the shoulderboards fasten to the cuirass. Each arquebusier also carried his own spare matches (sometimes as many as four spools, good enough for several days in the field).

If an archer, he would carry a bow (*yumi*), and wear a quiver (*utsubo*) at his right hip. The quiver was worn at the hip because in Japan arrows are drawn by grasping the shaft behind the arrowhead, up, out, and down from the quiver. This is unlike European arrows, which are grasped by the fletched end and drawn up over the shoulder.

Samurai serving as lancers made up the backbone of the warring states' armies. He carried a long lance instead of all the equipment of an arquebusier or archer; however, in addition to the *yari*, he was often burdened with other gear as well.

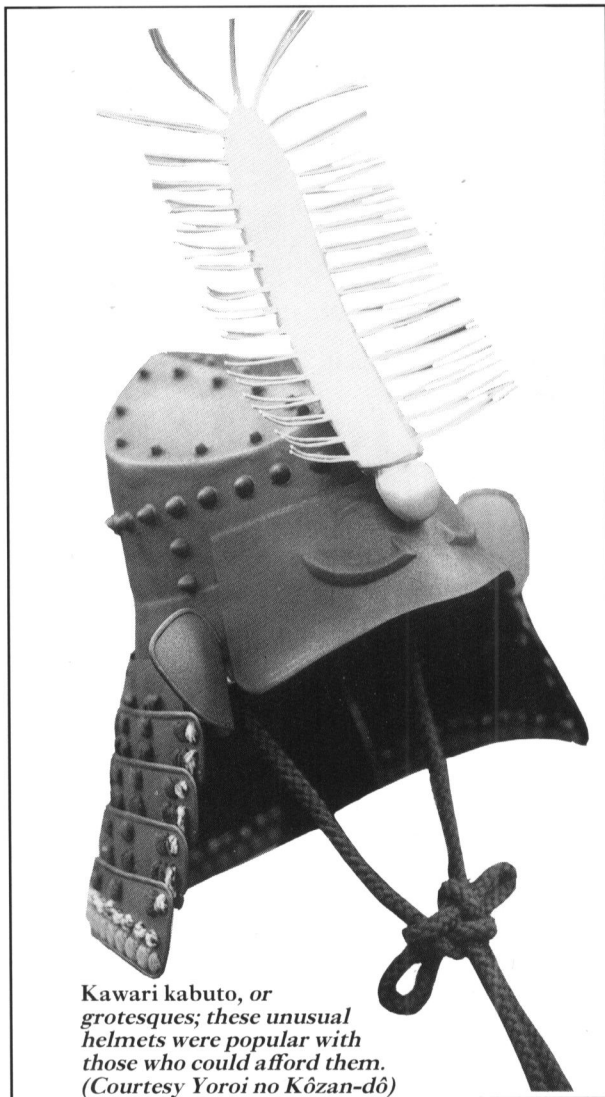
He may have been responsible for carrying on his back one of the gunpowder chests. Each of these contained enough powder for dozens of gunners to maintain hours of continuous fire. He might carry a case of arrows intended to resupply a dozen or more archers. Other items included large drums used for signalling, a unit standard, or even a portable kitchen.

If not packing a large box on his back, the *samurai* wore a large banner bearing his lord's crest. These banners, called *sashimono*, took several forms, including large feathered designs. Sometimes, a smaller banner would be attached to one or both *sode* to identify the unit to which the man was attached.

Combat

The great generals of Japanese history were by and large not born tactical geniuses. They had often studied ancient battles and other great military minds. The *Art of War* by China's Sun Tzu was standard reading, as were chronicles of the ancient battles of their predecessors.

There were, however, recognized standard pat-



Kawari kabuto, or grotesques; these unusual helmets were popular with those who could afford them. (Courtesy Yoroi no Kôzan-dô)

terns of attack and defence; matching one's defence and counter-attacks to an anticipated enemy strike had elements of the child's game 'scissors, paper, stone'.

The majority of engagements still seem to have been frontal charges, however, with tactical sophistications such as flanking manoeuvres coming in a distant second. Certainly for the lancers, the emphasis was on charges and overwhelming the enemy with spearpoints. Defence, also, concentrated on walls of lances. To that end, hand-to-hand training with the lance was important.

Although they had a new weapon in the *teppō* (matchlock), their concept of tactics hadn't yet adjusted to this change. It was similar to the American Civil War, where tactics had failed to keep pace with the capabilities of more modern weapons.

Arquebuses found their way into the front ranks with the archers. The difference in range had an immediate effect, and the reliance on bows began to decline. Despite the slow rate of fire, the arquebus proved the key to victory against many traditional frontal assaults. Generals began to place more emphasis on the arquebusiers in their battle plans once

they realised the full potential of the weapon. They would open and maintain fire, causing damage to and perhaps demoralising the enemy long before his forces could close in for hand-to-hand combat. A clear example is Nobunaga's gunners at the Battle of Nagashino.

The rest of the troops – cavalry and foot – would then charge between the ranks of arquebusiers into the *mêlée*. This was a tactic far more familiar to the average *samurai*.

Some generals ordered the arquebuses placed to enfilade the advancing troop (ideally from the cover of trees as the enemy charged across open ground), so as not to shoot at their own men who were engaged head-on.

Preparing for battle

When preparing for battle, the *samurai* donned a special undergarment that reached up under the chin like a bib. (This, combined with the open-croched design of the *hakama* worn with armour, allowed the *samurai* to relieve himself without taking off his armour: all he would need to do is undo the crotch, loosen the ties behind the neck, and pull the loincloth down a bit.)

Over the loincloth came a short *kimono* often made with a button or tie fastening at the neck to hold it closed. The warrior would next don his *hakama*, a pleated divided skirt, then *kyahan* and footwear, and then the actual armouring up began.

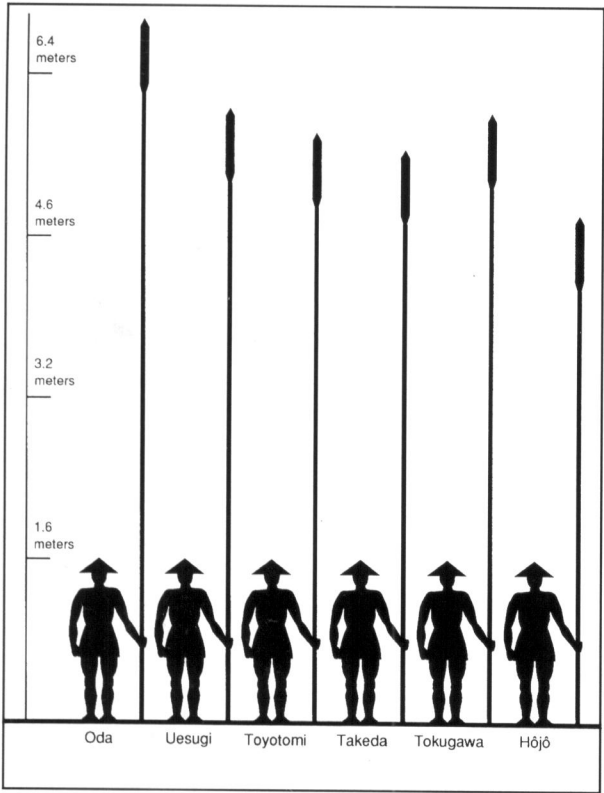
A rule of donning Japanese armour is bottom to top, left to right. The greaves were first, followed by the thigh armour, the armoured vest (if one is being worn), and then either the cuirass followed by armoured sleeves, or sleeves and cuirass (depending on style of sleeve), followed by shoulder armour.

All sashes, weapons, and paraphernalia is donned after, with any face or neck armour, and the helmet being left to last.

In the field, of course, the rank and file spent all their time in armour. Only the officers would have the opportunity to occasionally remove their armour.

Sieges

Sieges were the most taxing form of warfare, both for the besieger and the besieged. Those in the fortress



Different clans preferred different weapons. The relative lengths of the lances favoured by some are shown here.

faced rationing as the least of their discomforts. Boredom could also undermine morale. They also faced the ever-present hazards of disease and starvation. The besiegers were under the constant threat of 'sniping' and feared possible attack by relief forces. They had less to fear from raids, however, and food was usually easier to acquire.

In 1582, Hideyoshi lay siege to Takamatsu castle, a Mōri stronghold. Rather than engaging in a protracted siege, he ordered a mile-long dam built near the low-laying castle, and then constructed dykes. When the rising waters reached the castle compound, marsh animals and vermin fled inside the walls, and the wells and supplies were flooded with brackish water. The Mōri commander sued for peace, and only the assassination of Nobunaga, forcing Hideyoshi to call off the siege, avoided a major defeat for the Mōri.

Usually the sieges were more conventional. The Japanese never really developed effective cannon, although they had a few, and Ieyasu used them (mostly for psychological effect) at Sekigahara. It is due to a lack of conventional artillery that Japanese castles developed along different lines from European castles.

Samurai laying siege to a castle or other fortification would hide behind screens of wood or packed bamboo, firing at the defenders through small slots. The defenders returned fire from arrow and arquebus holes in their own fortifications. Victory for the besiegers was the result of the castle being fired, the garrison surrendering (because of disease, starvation, or the like), treachery from within, or storming the walls. The defenders were reliant on the arrival of a relief force or their own abilities to inflict sufficient damage on their besiegers to force them to withdraw.

The position of the defender in a siege was extremely difficult and it may be for this reason that battles were much more common. A battle might end with the losing side retreating to its nearest fortress, and this could turn into a siege. Few lords trusted to such a defence, however, preferring to take their chances in the field. In most cases (though there were exceptions), when a noble retired to his castle, he was planning to make a last stand, or at least expecting to. Shibata Katsuie and Asai Nagamasa were only two lords who perished in their keeps as the flames rose about them.



A full face mask (sō-men). Few samurai wore these as they were extremely

uncomfortable. (Reconstructed by Robert MacPherson)

ARMOUR

Helmets

The *kabuto* (helmet) is one of the most readily identifiable pieces of armour the *samurai* wore. Warriors liked to stand out from the crowd, and the application of crests to otherwise uniform or standardised helmets was the easiest way to achieve this end.

For the early *samurai* the wearing of crests was a prerogative of rank, but by the 1550s, crests were common. These crests, or *datemono*, were attached to fittings on the visor, or sometimes mounted on either side of the helmet bowl. They took the form of dragonflies, butterflies, large crescent moons, horns, discs bearing heraldic emblems, etc. The material was primarily wood and papier mâché with the details painted on.

As an alternative to crests, some had conventional helmets with decorative details, such as an extravagant application of decorative rivets, or two-

tone lacquer patterns. Unusual helmet designs were also common, and the variety produced during the last half of the sixteenth century was huge.

The *kamari kabuto*, or 'changed helmets', were restricted for practical reasons to those who could afford them (or loot them from the dead after a battle). *Kamari kabuto* ran the gamut from simply unusual shapes like the peach-shaped *momo-nari* and the acorn-shaped *shii-nari*, to elaborate sculptures

constructed of papier mâché and lacquer on a wood frame attached to a simple helmet bowl. Sculptures include animal heads, grimacing sea monsters, evil-looking deities' faces and tall shapes evocative of the *samurai* court caps.

The vast majority of helmets were of the multiplate variety, where between eight and thirty-two curved, wedge-shaped plates are riveted together to form the helmet bowl.

The helmets of multiplate construction were usually ribbed; that is to say, the edge of each plate where it overlapped the one below was turned up in a low flange. This may have been to add strength to the bowl, but could just as easily have been an aesthetic touch. These helmets were called *tsuji kabuto*.

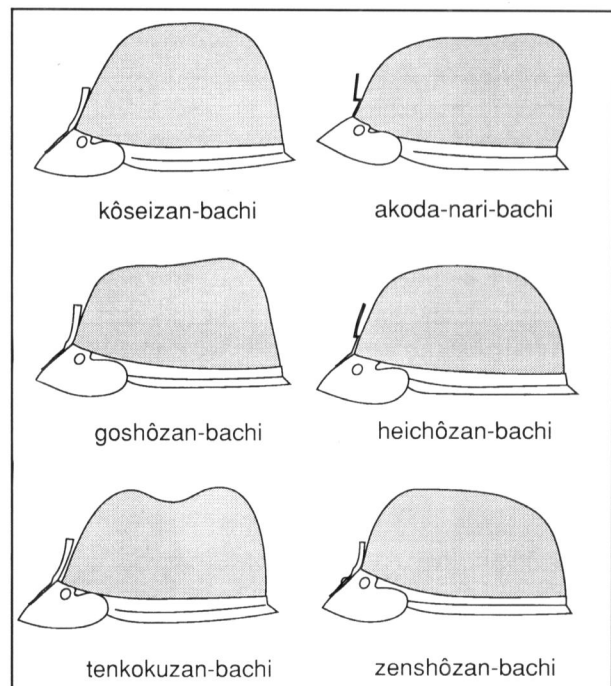
The first and most common multiplate helmets were simple hemispheres, or slightly tapered into an egg shape to fit the head better. A later development was the *zu nari*, or head-shaped helmet bowl, similar in shape to modern military helmets.

The quintessential *zu nari* are the so-called three-plate helmets of the Hineno and Etchû schools. Rather than pie-cut pieces, these featured two halves (left and right sides) joined by a long oblong plate running front to back. There is a large visor plate and a prominent skirt plate, so these can be seen to really be five-plate helmets. These *kabuto* were produced



Right: Common helmet shapes of the late 16th century.

Left: A samurai wearing a cuirass fastened together with leather cross-lacing. It has been lacquered in dark red. The face armour is clearly shown. (Courtesy Kyôto Costume Museum)



by the thousand, and are recognised as the uniform helmet of that period. Although they were often made shot-proof, their simplicity of form made them unfashionable for men of rank. (Men of rank who wore the *Hineno kabuto* usually decorated them: most *kawari kabuto* that include sculptured ornamentation are based on Hineno bowls.)

Another mass-produced helmet was the eight-plate. This was of the conventional multiplate pattern. They were produced in such quantities that they came to be called *hyaku hane mono*, or helmets for a hundred heads. Most of these helmets were not flanged, and were called *hachi-mai-bari*, or 'eight applied plates'.

The purpose of the *tehen* (the hole with the ornamented decorative rim of gilt copper at the crown of the helmet bowl where all the plates came together) is unclear. It was variously believed to allow the spirit of the war god Hachiman to enter the warrior, to allow the warrior to breathe under water, to allow him to sink if he should need to jump into a river, and several other equally unlikely possibilities. The most likely reason seems to be that at the juncture of many pointed plates of metal, cutting out the central section would be easier than joining them or overlapping them. Very few period *Hineno kabuto* have them suggesting the latter is the probable reason.

The *ushibari*, or lining of the helmet, was typically a single piece of heavy hemp cloth. A long, tight spiral of what resembles basting stitches is put in; as the stitches get tighter, the cloth puckers slightly between them, and the lining is pulled into a

bowl shape. It is attached directly to the rim of the *hachi* with small ties.

Hanging from just inside the bowl are a pair of long cords called *shinobi no o*. These cords are tied under the wearer's chin. Most were just a long strip of cloth rolled into a 'snake' and sewn closed; helmet cords of braid or other rope-like materials are almost always modern reconstructions or replacements. Some schools favoured putting a narrow chain in the centre to make cutting through them that much harder.

There was no single correct way to tie these cords. Different designs had three, four, or even five anchor points inside the bowl, so there were many ways to fasten the cords. Period armour books have diagrams of various methods; some clans even had secret methods of securing the helmet which they wouldn't teach outsiders.

Hanging from the rim of the bowl is the *shikoro*, a lamellar nape guard. There were many forms, but the standard was a series of concentric plates suspended one from the other. With the helmet laying on a flat surface, the lames would all telegraph up.

In the Middle Ages, *shikoro* had three to five lames. The topmost, or sometimes the top two, have an elongated section turned back over the *shikoro*. Called *fukigaeshi*, they were originally intended to prevent the downward stroke of a sword from passing between lames and severing the lacing. The Hineno and Etchû schools were responsible for producing the most abbreviated forms of *fukigaeshi* seen: little more than small flanges of metal. The usual decoration was



The Japanese saddle (*kura*) was often elaborately decorated with lacquer painting and mother-of-pearl inlays. This saddle and stirrup set is used in the *Sôma noma-ôi*. (Private collection, *Sôma*)

heraldic, with the crest of the owner or his lord applied, cut out, or painted on.

An unusual variation on the *shikoro* made it look like several sets of *kusazuri* (i.e., it was divided into three sections). Other rare variations included *shikoro* of mail-faced cloth panels, or metal and mail panels resembling folding armour. These variations were

Sendai-dô or Yukinoshita-dô was a popular type of armour. This example is rather plain with little decoration. (Courtesy Oroï no Kôzan-dô)



not limited to specific ranks: it was often a matter of the wearer's taste.

Shikoro were designed – pattern, lacquer, and lacing – to match with the *sode* and *kusazuri*. Gold-tone *shikoro* hanging from a black or red lacquered bowl were not uncommon.

Some warriors (Tokugawa Ieyasu being one) had helmets with the usual lame *shikoro*, and hanging from the inside, a set of mail-faced cloth panels for extra protection. These were called *shita-jikoro*, or under-*shikoro*; the Iwai school is said to have especially favoured them.

The face – one of the most sensitive parts of the body – was usually left unprotected. There were varieties of *men yoroi* (face armour) occasionally worn; these usually took the form of a half mask, covering the nose, cheeks and chin, of metal or leather sculptured into an angry grimace. This was the *menpô*. The nose was nearly always made to be removable, and indeed was more comfortable this way. Noseless varieties – called *hôte* or *hanbô* – were also very common.

Full face masks (*sô men*) were not very highly thought of, for, while providing protection, they restricted breathing and vision; thus they were hardly ever used.

Hanging from these face plates was a bib protecting the throat. This bib could be of anything: mail, brigandine, or plates, but most often it was several narrow lames laced together like *kusazuri* or *sode*.

The greatest benefit of the face armour was that it made tying the chin cord of the helmet more comfortable. The cords could cut into the chin; and while they didn't draw blood, they were never very pleasant to wear.

Regardless of the colour or lacquer patterns used on the rest of the armour, face armour was mostly lacquered red. This was intended to be aggressive and intimidating. Even when the face was lacquered to match the armour, the inside was still most often coloured red. Some schools favoured using gold leaf inside to cause the face to shine, although as the *menpô* sat directly on the face with no padding and no gaps, this reflective quality must have had a fairly limited impact.

An ostentatious moustache was usually applied using horsehair, stuck into a wet lacquer base. Some

cheaper *menpô* (and one or two schools that favoured the habit) used painted moustaches.

When no face armour with its hanging lames was worn, a critical part of the body – the throat and the area of the breast above the cuirass – went unprotected. As defence, some would wear a *nodowa*, a flat metal ring resting on the collar bones with a pendant pair of lames. Alternatively, an *erima* could be worn. The *erima* is similar to a *nodowa*, but it has a standing collar to actually protect the neck itself. Both of these tied closed at the back of the neck. They would be donned before the cuirass and could be worn inside or outside the armour.

Body armour

Old-style armour hung from the shoulders, its full weight supported by the shoulder boards. Around 1450, cuirasses began to taper in at the waist where they could be tightened. What they lost in flexibility, they gained in comfort. This armour, more closely fitting the torso, sat on the hips, and so came to be called *tachi dô*, or ‘standing cuirasses’.

Along with this development came a slight restructuring of the plates making up the armour. While the older styles invariably had two small breast boards (and three back boards) and four wrapping around the stomach, the modern armour appearing in the mid-sixteenth century began to sport narrower lames. This necessitated three breast boards (with four back boards) and five wrapping lames. This new pattern was the most visible indicator of the *tôsei gusoku*, or modern armour. It should be noted, however, that modern armour made in the style of *tôsei gusoku* was still being produced with broader plates in the older pattern of two/three and four; generally these were mass-produced suits, intended for large numbers of soldiers.

As the modern armour was made with solid plates instead of scale (or occasionally solid plate cut and formed to look like scale), the reason for the narrower plates is clear: scale armour needed deeper boards to support the large number of holes for lacing; plate lames simply didn’t need that much depth.

Of all the *tôsei gusoku*, none is more representative than the *okegawa dô*, the consummate form taken

by Japanese armour. The *okegawa dô* was a logical development following centuries of increased simplification. Armour had changed from thousands of lacquered scales laced together into boards that were then laced, one suspended from the other, to solid plate lames with full suspensory lacing, to solid plate lames with sparse lacing, and finally to solid plate lames riveted together.

The appearance of Europeans in Japan with their



Rivets often formed part of the decorative pattern of a piece of armour. This

russet brown armour is laced in black. (Courtesy Yoroi no Kôzan-dô)

solid peascod breastplates (1542), and the appearance of the *okegawa dô* (c. 1550) have led Japanese armour historians to speculate on a cause-and-effect connection between the two; the theory being that Japanese armourers were inspired by the solid, defensive cuirasses of the foreigners and copied them by first making their own armour solid, then later making

actual reproductions of European pigeon-breasted armour.

Nevertheless, it is clear that solid *dô* was the next logical step in armour development even without the European influence.

The solidly riveted lames of the *okegawa dô* were at first horizontal, like all other lames on Japanese armour. A variation that was vertically riveted soon appeared. Both of these versions of the 'tub-sided cuirass' (this is what '*okegawa dô*' means) were extremely popular.

They were made in almost every style imaginable: clamshell armours (breast and back, hinged at the left side, called *ni-mai dô*); five-plate wrap-arounds (*go-mai dô*) of either the conventional type with the opening under the right arm, or the less common type, with the opening at the centre of the back; and half armours consisting of the breastplate and front tassets only (the *hara-ate*). A rare type called *ryô takahimo* was a completely separate breast-and backplate with a set of ties to close it on both sides; this was the first true 'one-size-fits-all' armour.

The popularity of *okegawa-dô* was due to a number of reasons. Firstly they were cheap and could be produced quickly. For the same cost in time and materials it took to make a laced *Môgami dô*, perhaps four or more *okegawa dô* could be produced. The second reason was protection. With the advent of the firearm – another European 'influence' on Japanese warfare – shot-proof armour was necessary. This cuirass was sufficiently tough. Numerous examples survive with deep dents from having been tested.

There are many examples in museums that have holes in them: whether the armour stopped the bullet or not is unknown. At the end of one battle, Tokugawa Ieyasu removed his armour only to have a handful of bullets fall out. They had pierced the metal, but it had absorbed so much of the force that he was completely unhurt, and hadn't even noticed he'd been shot.

One of the most important reasons for the popularity of the *okegawa dô* was its versatility. Most *samurai* were highly individualistic and wanted their armour to reflect this. Getting noticed was a vital part of gaining advancement and promotion. Pictures in lacquer, heraldic emblems, unusual colours or pat-



The ashigaru in the field. He wears simple, inexpensive folding armour (tatami dô). (Courtesy Yoroi no Kôzan-dô)

terns, domed rivets, rivets with decorative ‘washers’ behind them, scalloped or wavy-topped plates, the occasional laced breast board; all were methods used by armourers to ‘customise’ armour.

The smooth-breasted *hotoke dô* (literally ‘Buddha’s torso’) – so named for its resemblance to the smooth, rounded bellies on Buddhist statuary – was first made as customised *okegawa dô*. A layer of fabric or thin leather was glued down over the armour and layer after layer of lacquer was applied until smooth. Armourers soon turned to constructing *hotoke dô* out of single sheets of metal, however, and many surviving examples are of this type. Even more so than the *okegawa dô*, the smooth expanse at the front of the *hotoke dô* was ideal for decorating or detailing.

About the only kind of cuirass in common use during the latter half of the sixteenth century that couldn’t be linked to the family tree of the *okegawa dô* was the *tatami dô*, or folding cuirass. This form of armour, extremely cheap and lightweight, may well originally have been produced for the lowest born warriors, but some spectacular samples have survived, indicating that at least some men of rank used them.

The folding armour consisted of dozens of small, business card-sized plates of metal connected by mail. The cheapest armour had the plates sewn directly to a lightly quilted lining. Most folding armour used rectangular plates, but hexagonal plates were also popular. The styles were seldom mixed, although a *dô* with the torso of hexagonal plates could have *kusazuri* (tassets) of rectangular folding plates. The *kusazuri* for a folding armour ran the gamut from folding plates suspended by panels of mail to conventional lames suspended by cord, including removable variations.

The *kusazuri* for all armours usually appear in sets of seven or eight. Occasionally, there could be more: the *Sendai dô* especially are recognised for the fact that they frequently had eleven sets of six lames (otherwise they had nine sets of five or six lames).

Each row of the tassets would have four or five lames (very rarely six) held together with suspensory lacing. The cheapest of suits might have had only three descending lames per set; such a cuirass was

A smith and two apprentices work on a sword blank in this contemporary woodcut.

essentially munitions-grade armour, made in massive numbers to fill a large order, and most likely worn by the low-ranking *ashigaru*.

The original pattern used for *kusazuri* on *tachi dô tôsei gusoku* would seem to have been designed to mirror the lames of the torso; the same number of lames would be used in the *kusazuri*, and the circumference at the waist would match that of the top of the *kusazuri*, and the circumference below the armpits would be the same as the bottom of the *kusazuri*. This pattern didn’t survive, however, and widths did vary. *Kusazuri* were generally wider at the bottom than at the top in all but the cheapest of suits, and in most cases the sets of tassets overlapped each other slightly.

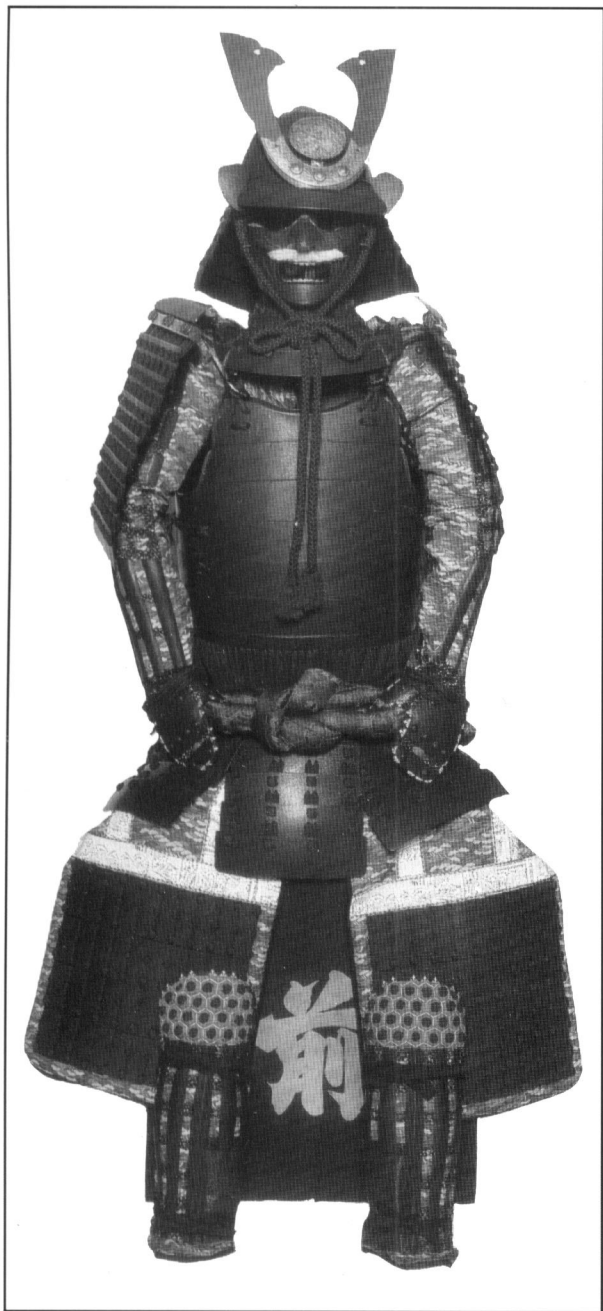
The *kusazuri* seem to have been designed independently of the cuirass; the *dô* may have been of solid plate lame construction, the *kusazuri* could be of scale (*kozane*) or mock scale (*kiritsuke kozane*). They could also be of different colours; e.g., gold *kusazuri* suspended from a black *dô*. The *kusazuri* might be fully laced while the *dô* had only limited lace. Most of the time the *kusazuri* matched the cuirass perfectly, but there were exceptions.

By the end of the sixteenth century, *kusazuri* were increasingly suspended not from the *dô* itself, but from a narrow belt-like strip of leather that was



attached to the *dô*. This leather 'belt' was attached to the bottom of the *dô* either with small cords or frogs. Removable *kusazuri* had the advantage of making the armour easier to pack, but had few other benefits. When fording rivers, they could be removed and kept clean, dry, and out of the way, but some *samurai* tied their *kusazuri* up with cord when doing this anyway so the benefits were minor.

There were even a few unusual models made in



which the suspensory lacing was replaced with solid leather, heavy mail-covered cloth, or just heavy cloth panels. These were probably more sturdy than *sugake odoshi*, but less so than *kebiki* lacing; they would certainly have been less flexible and less comfortable.

Sode are similar in structure to *kusazuri* in that they are both made of several lames of uniform size and shape held together with lacing. *Sode*, however, protect the shoulder and upper arm, rather than the hips.

Unlike the gigantic *ô-sode* of the older armours, the new *tôsei sode* were smaller, narrower, slightly curved and better fitting.

Sode, like the *kusazuri*, could be of a different style from the rest of the armour. The *sode* and *kusazuri* themselves seem to have been made in matching sets.

With the prevalence of hand-to-hand fighting during the Age of Battles, the reduced size of the *sode* was a benefit. However, they still flapped around when the arms were moved violently. To eliminate this, some armourers applied a fabric strip or backing to the *sode*. This made them less flexible and eliminated the accordion-like action. It did not stop the *sode* flapping about on the shoulder, but cord ties, which passed around the upper arm to hold them in place were unusual.

As most *dô* in the last decades of the sixteenth century were designed with padded or brigandined wings projecting over the end of the shoulder, often *en suite* with a low standing collar emerging from between the shoulder straps, the *sode* were often discarded as superfluous. Rather than use *sode*, some armourers incorporated small wings or truncated mini-*sode* of two or three one-inch, deep lames into the shoulder boards.

Other armour

There were many types of *kote*, or armoured sleeves. The most common style were the various splint *kote*. The number of splints on the forearm ranged from

This okegawa-dô gusoku is lacquered rough russet brown, and laced in dark blue. It is typical of the practical armours worn in the second half of the 16th century. The sode are large, and of a style

consistent with the more ornate armour of the past. Sode of this kind would not have been used in battle with this type of armour. (Courtesy Yoroï no Kôzan-dô)

three (broad, sometimes, but not necessarily, overlapping) to more than twenty (narrow and overlapping). The splints were either flat (*hira shino*) or slightly convex (*kamisori shino*).

An ornate type of armoured sleeve generally called *Oda-gote* consisted primarily of tiny plates 'floating' on a sea of mail; appropriately these plates were called *ikada*, or rafts. The distinguishing feature was the gourd-shaped metal plate on the fore-arm. These could be smooth or ridged and were occasionally hollow and hinged. Sources indicate that some *samurai* carried medicines or writing materials in the convenient sleeve pocket. Armour historian Sakakibara Kôzan suggests medicine. His evidence carries some weight as the items were still in use for this purpose when he was writing in the 1790s.

The Etchû school favoured a small number of short, narrow splints connected by bands of mail; a pattern also seen on *haidate* of Etchû make.

Many *kote* had upper arm sections and forearm sections of different design. It is, nevertheless, the forearm style that gives the *kote* its identity, and regardless of the form the *kote* took, there would usually be panels of mail connecting the plates or splints.

The unarmoured inside of the sleeve could either be sewn or closed by ties running through cord loops on either edge. An additional set of cords at the wrist held the *kote* tightly in place.

The material of the sleeve itself had many layers of cloth. To this foundation were stitched the metal (or rarely leather) plates and mail.

There were two ways of securing the *kote* to the arm: in the older style they were put on before the *dô* and tied to the body by cords. The other method was to put them on after the *dô* and fasten them to the shoulder boards with frogs.

The back of the hands were protected by an integral gauntlet that covered the back of the hand as far as the second knuckle joint, and half of the thumb. Small loops of fabric around the thumb and third finger held it in place. It was neither flexible nor comfortable and provided only limited protection, but it remained unchanged for centuries.

Suneate, or greaves, usually matched the *kote*. Two long cords, one at the ankle and one below the knee, secured the *suneate* in place, both cords wrapped around the leg once and tied at the front. The inside ankle area was usually covered with or replaced by a leather panel, regardless of whether the *suneate* was of large, plates or splints. This panel was designed to protect the stirrup strap from abrasion by the metal plates.



The hotoke-dô is based on the smooth belly of Buddhist statues. This suit has the crest of the Date

clan on the elaborate inlay of the dô. (Courtesy Yoroi no Kôzan-dô)

ARMOUR CONSTRUCTION

Though the *kusazuri* protected the hips and upper thighs, *samurai* fighting on foot needed protection for the thighs; the *haidate*, or 'thigh-shields', served this purpose. Many warriors of this period eschewed them, favouring freedom of movement over protection.

Haidate were usually made from horizontal rows of small plates that were overlapped and loosely laced together. Mail versions were also made. *Haidate* were often made with a set of buttoning straps that were used to close and secure them around the thigh. The waist 'belt' was wrapped around the body and tied in the front.

The weight of these thigh-shields was in the front, and despite being tied tightly at the waist, they had a tendency to slide down. To alleviate this, most were made with a single loop of cord at the front centre and where possible toggles secured to the inside of the breastplate at the bottom supported the *haidate*. Many suits of armour were not equipped for this, so warriors simply ran a cord from the top of the *haidate* around the neck and across the front of the body as a form of suspension.

Neither wood nor bamboo, contrary to popular belief, were used as primary components in the construction of Japanese armour. Invariably it was made from iron or rawhide leather, and often a conglomeration of the two.

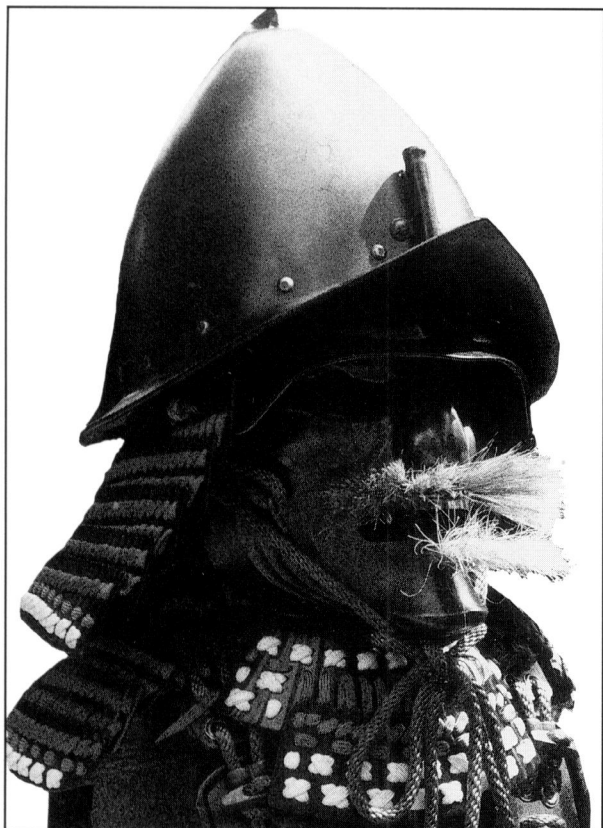
One of the best sources of iron for the armour of what the Japanese consider the Middle Ages (the late sixteenth century) was discarded hoes and spades. The steel edges of these tools were removed, and the iron reformed. This iron formed the inside layer of the plates. The steel for the outside came from two major sources: imported Dutch ingots; and steel mined in the Shiso region.

The armourer heated the plates and folded them over until they were several layers thick. To make a *dô*, he would begin with 18.8 kg of iron, by the end of the process the *dô* contained 5.7 kg of remarkably strong and pure iron, with plates 2 mm thick on average. A complete *okegama dô* with *kusazuri* weighed 7.7–9.5 kg. A full suit – helmet, sleeves, greaves, and all – weighed between 8.3 and 12.5 kg depending on the style of armour.

Lacquering

The lacquering of the armour was a long and tedious process, comprising some eleven different steps. The armourer applied a layer of cloth after the first coat of lacquer. After each application of lacquer (and the layers are different), he had to sand down the lacquer. Any unevenness, or pits, were filled with a lacquer and wheat flour paste. All holes had to be kept clear between each application to prevent them from being closed by the drying lacquer.

Plates intended to look like scale were even more time consuming: the armourer cut each plate along the top to give them a scale silhouette, and then built up the scales' 'ridges' with the application of more lacquer or a paste and lacquer combination.



A European cabasset converted for Japanese use. Foreign armour was highly prized; however, it was usually altered to suit

local tastes. This helmet has been turned around, and a shikoro added. (Reconstructed by Robert MacPherson)

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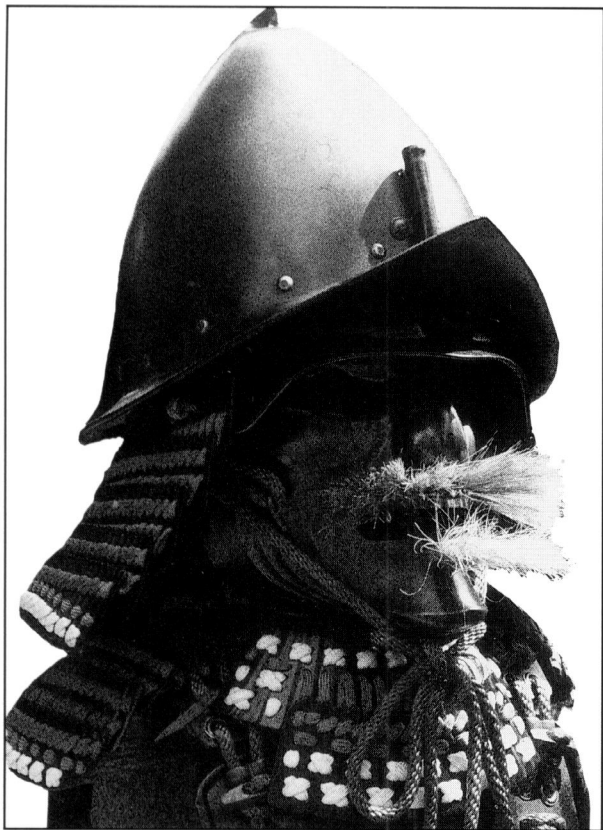
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'dished', with four small holes. The plates were sandwiched between a foundation fabric and a surface fabric, and secured by a series of X-shaped stitches. They were then outlined with thread.

Kikkô was used for the standing collar sometimes attached to a cuirass, the standing knee guards of a *suneate*, and the small wings that extended over the points of the shoulder. Many other non-standard items of armour were also made of *kikkô*, including armpit guards. In the Edo Period (1600–1858) a few entire suits were made of *kikkô*.



Mail

The other flexible armour sections were made of mail. Unlike the closed variety four-in-one linking (often called 'international mail') used in Europe in the Middle Ages, Japanese mail was much more loosely woven and incorporated intricate patterns.

The most common form of Japanese mail, called *fusa-gusari*, was also four-in-one, but the four links were oblong, and at a ninety-degree angle to the central round link. Since the long links are usually of a finer wire gauge than the round links, they were often made with a double twist, this variation being called *futae-gusari*.

It is interesting to note that when the Japanese made use of the international-pattern mail, it was used in its expanded form. In European armour, the mail strips were used horizontally, while the Japanese tended to use it vertically, hanging open.

WEAPONS

Warriors in feudal Japan had a wide variety of weapons to choose from. Nonetheless, four weapons seem to have been favoured by the *samurai*: swords; bows; lances, and matchlocks.

Swords

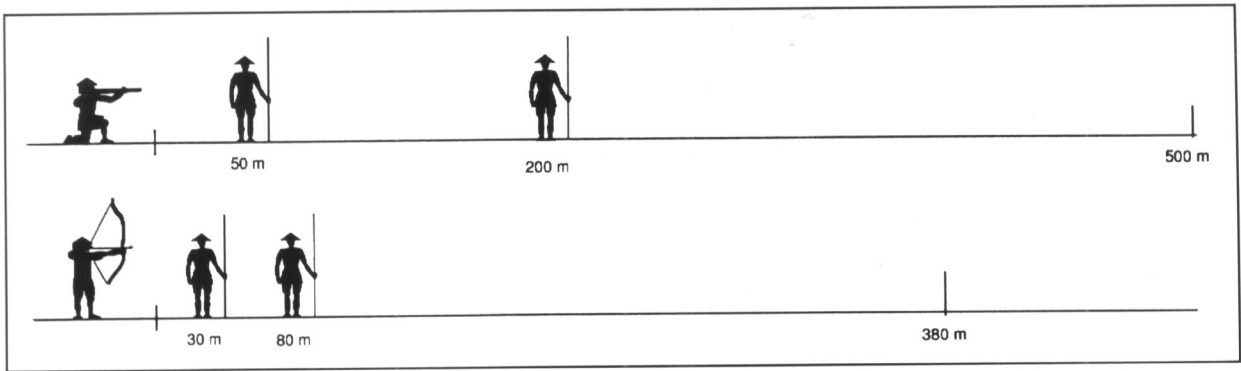
From ancient times, when in armour, a warrior wore a long sword (a *tachi*) cutting edge down, suspended from his waist. He also wore a shorter sword, called an *uchigatana*, edge up though his sash.

The *uchigatana*, being shorter and worn as it was, was ideal for drawing and striking in one motion. This was the proto-*katana*. When the *katana* emerged as the primary weapon of the *samurai*, *uchigatana* were shortened slightly and became the *wakizashi*, the so-called companion sword.

The *tachi* continued to be used. It was standard that all blades not suspended from the waist were worn with the cutting edge up.

The *uchigatana* and the *tachi* were differently

This dô-maru is an older style of armour constructed of hundreds of small scales. The lacing pattern is called omodaka odoshi, or plantain lacing, after its resemblance to the shape of plantain leaves. Armour of this kind would have been worn by a high-class warrior. (Courtesy Yoroï no Kôzan-dô)



The superior range of the arquebus, over the bow, made it easy for generals to make the transition to using the new weapon.

From left to right, the numbers represent: optimum range; effective killing range; and maximum range.

mounted, as they were different weapons. For aesthetic reasons, the *katana* was made *en suite* with the *wakizashi*.

When not in armour, the *uchigatana* was worn thrust edge up through the waist sash: the *tachi* wasn't needed. However, by the 1550s, a *katana* and a *tantō* was worn instead, or in some cases the *wakizashi* and the *katana*.

By the 1580s, wearing the *daishō* (literally 'great [and] small', the matched pair of long and short swords) had become established. While not a mark of the *samurai* as a class, it was a mark of the warrior. Many who were not of *samurai* birth were wearing the swords and fighting alongside their betters. By the beginning of the seventeenth century, however, it was a clear mark of *samurai* status, and their possession or display was strictly proscribed.

Japanese swords are famous the world over for their quality. The blade, a layer of strong, hard steel between more flexible layers, is perhaps the finest non-surgical cutting device ever made.

Blades were made by a master smith working with several apprentices. It was a long process that involved folding and refolding a bar of hot metal time and time again. The shaped sword blank is given to a sharpener and a polisher, before it is returned to the smith for his final details and his signature.

Old swords were – and still are – held in great awe and respect. There are swords in museums that are over 800 years old that still look as if they have just been taken off the polisher's stone.

Despite their great value, at least one *daimyō*

admonished his people against coveting famous blades with a saying that has since been attributed to dozens of individuals: 'A sword worth one hundred *ryō* can be defeated by one hundred lances each costing one *ryō*.'

There is an oft-quoted anecdote about a Japanese sword being tested against a tripod-mounted machine-gun during WWII to show its strength. The story says that, to impress the Japanese soldier with the strength of their equipment, a machine-gun was cut in half along the chamber, barely nicking the blade. After much searching for the origin of this, I can only conclude that it is a wishful myth. At any rate, it was academic, as Japanese soldiers were issued swords stamped out of steel: hardly the masterpieces carried by their ancestors in battle.

The bow

Although the sword is the symbol of the *samurai*, in the ancient period his primary weapon was the bow. This is an interesting reversal of the medieval concept of the bow as a weapon not fit for the upper classes. The off-centre grip of the seven- to nine-foot-long Japanese bow (*yumi*) is a distinguishing characteristic.

The bow was made as a laminate with a core of wood, and strips of bamboo. The whole was lacquered and/or wrapped with strips of rattan.

The bow was drawn using the thumb and forefinger (the so-called Mongolian release) rather than a two- or three-finger European release. Upon release, the bow is allowed to pivot in the left hand so that the string ends up outside and almost striking the outside of the wrist. Some archers have suggested this is a natural release, and others argue that it adds a little strength to the shot.

Considering the importance of the bow, it is no surprise that the Japanese developed over a dozen different types of arrow-heads, all intended for different purposes. There are the large bulbous whistling heads (used variously for signalling or intimidation); narrow, heavy armour-piercers; broader, leaf-shaped heads; and forked heads designed for cutting ropes and cords.

The quiver (*utsubo*) was worn low at the right hip, tilted so that the shafts pointed up behind the wearer. The design made it necessary for the archer to draw arrows from the quiver by the shaft immediately behind their heads; arrows were pulled up to clear the quiver's base, and then down and out.

Lances

Lances (*yari*) were used as the primary weapon of the infantry, and they were even carried by mounted warriors. The actual length of the *yari* varied, although many were easily over eight feet. Some clans had a preference for lances of a specific size and type. (See the table on page 24.)

The shape of the lancehead varied, however the most common was a heavy; long steel point with a triangular cross-section. In addition, there were cross-shaped lanceheads, L-shaped lanceheads, trident-like lanceheads, etc.

Like the bow, the shaft of the lance was a laminate of several strips of bamboo around a wooden core. The shaft was lacquered (usually black or red) and was rarely decorated. When carried, the lancehead may have been encased in a lacquered sheath.

Yari were never thrown; they were strictly in-hand weapons. Only when the shaft broke, the lance was lost, or the quarters were simply too tight to use them, would the lancer discard his weapon and draw his sword. Some lancers were so skilled that even in close quarters they could hold several opponents at bay, picking them off one by one. Watanabe Hanzô, one of Tokugawa Ieyasu's warriors, was so adept with his lance that he became known as 'Yari no Hanzô' or 'Hanzô of the Lance'. While overall career performance can make one famous, as in Hanzô's case, there are also lancers who are remembered for a single event, such as Fukube Koheita, a minor *samurai* who gained eternal fame for thrusting a lance through Imagawa Yoshimoto during the battle of Okenazama in 1560.

Firearms

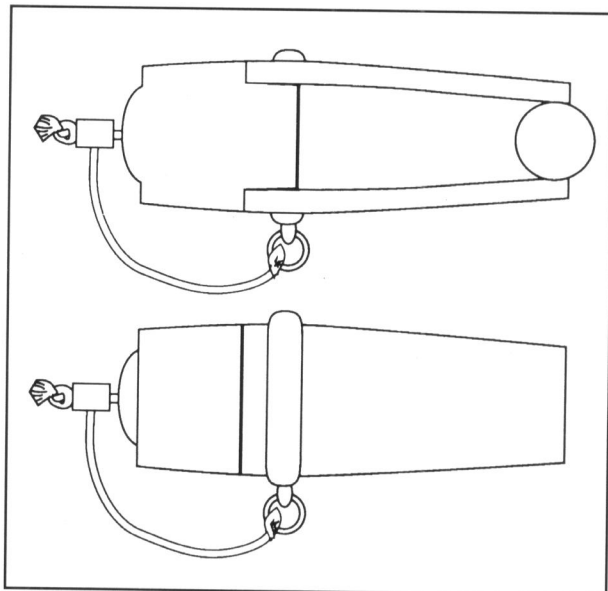
Introduced by the Portuguese in 1542, the matchlock musket came to be known as a *tanegashima* (after the island on which the Portuguese landed and first showed the weapon off) or *teppô*.

The weapon was quickly studied by swordsmiths, who made a few modifications and began to turn them out with amazing speed. The barrels were made by wrapping a strip of hot steel over a removable rod core and forge welding it shut. The lock mechanism, a simple spring release, was made entirely of brass.

The danger of having a burning match three-quarters of an inch from the pan struck the Japanese as foolishly unsafe, so they made a small modification. They added a pivoting pan cover that was kept shut, covering the priming powder, until the arquebusier was ready to fire. It could then be swung aside, the trigger pulled, and the match would ignite the powder.

Multiple-barrelled models rotating along a central rod, large-bore pistols, and immensely heavy, large-bore 'wall guns' (almost miniature cannons) were common variations.

Despite its obvious potential, many old families looked down upon the new weapon as unworthy of the *samurai*. These families were among the first to really feel the effect of the *teppô*, as their more pragmatic rivals leapt upon the matchlock as the device they had been looking for. Oda Nobunaga



made excellent use of matchlocks in the Battle of Nagashino in 1575 when he wiped out most of the Takeda forces by being the first person in history to use rotating ranks to maintain sustained volley fire.

After seeing what the new weapon could do, forward-thinking *daimyô* placed their orders. Even the Takeda had been impressed with the new weapon, and had ordered several hundred.

Divisions of arquebusiers were standard in the armies of the last decades of the 1500s. It took years to learn skill with a sword or bow; however, the *teppô* was something anyone could learn to work within a few hours, and a modicum of efficiency could be gained in a day. Hence it was the ideal weapon for *ashigaru*, whose training was minimal.

MUSEUMS AND COLLECTIONS

Most of the better collections of Japanese armour are of course in Japan, but many fine ones can be found in other countries as well.

Among the most notable are: in England, the Victoria and Albert Museum, the Tower Museum, and a private collection in the possession of Mr. L. J. Anderson; in Italy, the Museo Stibbert and the Museo Orientale; and in the U.S.A., the Metropolitan Museum of Art New York.

Many armours in the British royal collections were gifts from Japanese nobility – primarily from various members of the Tokugawa family. Several

gusoku in the Tower were sent to King James, and those in the V&A to Queen Victoria.

The Tower collection, sent during the late 16th and early 17th centuries, are good examples of the armour of the period. However, as gifts to a monarch they tend to be more baroque than armour commonly in use. Nevertheless, as structural examples, they are ideal for study. There is a wonderful *Môgami haramaki* that belonged to exiled Christian *daimyô* Naitô Yukiyasu (d. 1626) in the collection.

The V&A is also an excellent source, but it holds later period models, incorporating minor oddities (strange lacing patterns, gaudy ornamentation, etc.).

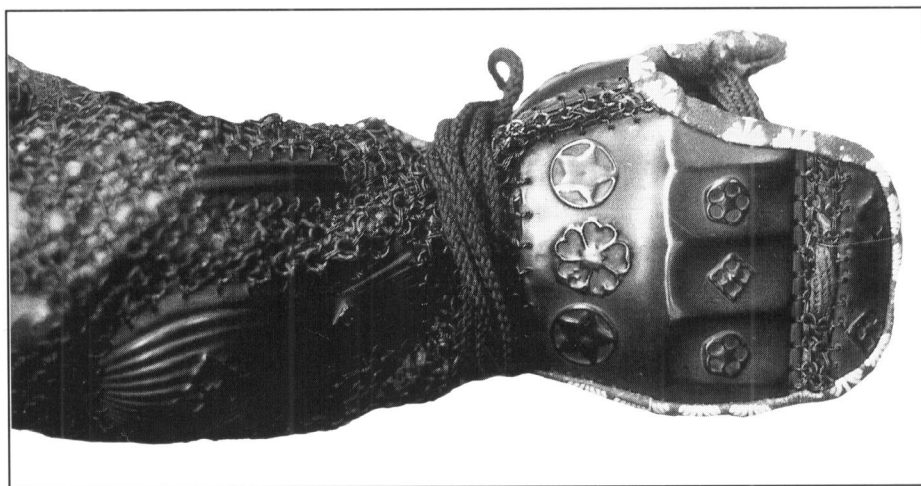
The Italian collections are most interesting, as many of the suits are not the most common varieties. They provide an excellent opportunity to see some of the more interesting variations made, including some fine repoussée armours and unusual helmets.

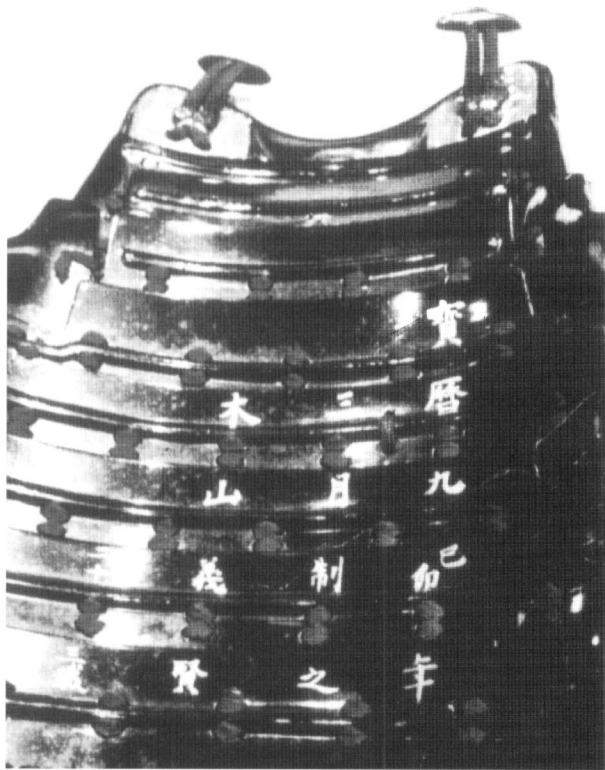
The Metropolitan Museum has armours covering a broad period and diverse styles, and is an all-round first-rate collection of Japanese armour. Although the Museo Stibbert has more of the ordinary variations, the Met also has its share of oddities.

Inside Japan, the best collections of medieval armour are in the Tokyo National Museum (although the amount of armour on display is always low); the private Arashiyama Museum in Kyôto (which has many mis-labelled pieces); and just about every museum attached to a major castle (e.g. Nagoya, Himeji, Ôsaka, etc.). More archaic armour can be found in the Ôyamazumi Jinja on Ômishima Island and Kasuga Taisha in Nara.

Left: The hayagô (pre-loaded cartridge for arquebusiers), was an innovation that made loading and firing much quicker. As many as 20 hayagô could be carried in a cartridge box. The Japanese never adopted the type of bandolier popular in Europe.

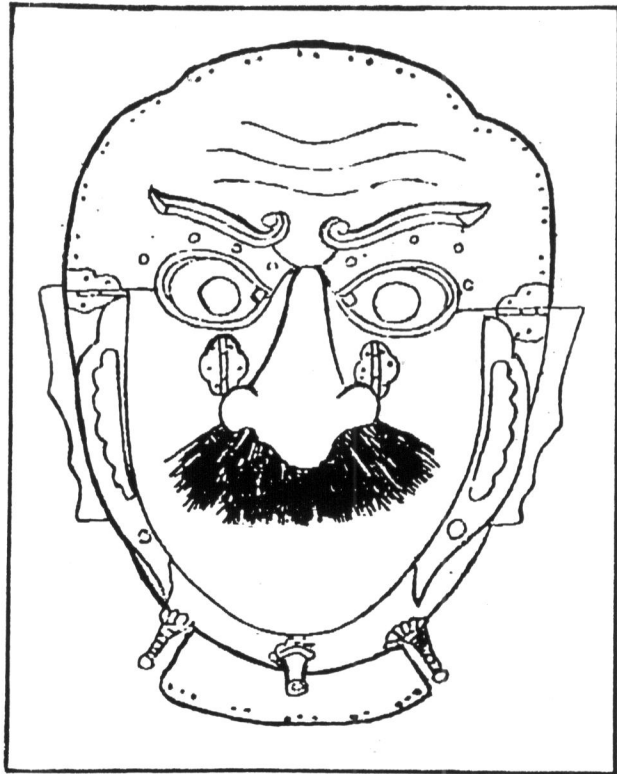
Right: A tekkô (hand armour) and armoured sleeve. Note the ridged gourd-plate on the forearm. (Courtesy Yoroi no Kôzan-dô)





The inside of this dô bears a date – third month, ninth year, of Hôreki (1759) and a name Kiyama Yoshinori. The name may be that of the intended owner. The

horizontal ridges – shiki – add strength and support to the leather base of the armour. (Private Collection, Tôkyô)



A typical full-face armour mask, or sô-men. The pins on the hinges at the sides of the eyes and nose were removable. This enabled the warrior to wear the sô-men as a menpô (lower

half only) or a hanbô (jaw and cheek guard only). Most menpô were made with removable nose section.

GLOSSARY

Dô A cuirass.

Gusoku A suit of armour.

Haidate Apron-like thigh armour.

Hara-ate Armour designed to protect only the front of the torso.

Haramaki [dô] Cuirass opening up along the back rather than at the right side.

Kabuto Helmet.

Katana Long sword, worn edge up.

Kebiki [-odoshi] Full lacing.

Kote Armoured sleeves.

Kusazuri Lamellar tassets.

Manjûwa Armoured vest-like garment worn under a dô to give added protection.

Menpô Armoured face mask for nose, cheeks and chin; has pendent skirt of lames to guard throat.

Nodowa Gorget with no standing neck collar.

Odoshige Armour lacing.

Okegawa dô Cuirass of solidly riveted lames.

Sashimono Banner worn on the back of some armours bearing the wearer's or his lord's crest.

Shikoro The kabuto's pendent nape guard.

Sode Lamellar shoulder armour.

Sugake [-odoshi] Sparse-point lacing, with pairs of braid.

Suneate Greaves.

Tachi Long sword, worn edge down.

Takahimo Toggles and loops for connecting pieces of armour.

Tanegashima Matchlock.

Tantô Dagger.

Tatami dô Folding armour. (Also called *tatami gusoku*.)

Teppô Matchlock.

Yari Lance.

A 16-plate ribbed helmet (16-ken tsuji kabuto). Sixteen was a common number of plates for the multi-plate helmets of the late 17th century. (Courtesy Yoroï no Kôzan-dô)



THE PLATES

Plate A: Samurai on the march, foul weather gear, c. 1550

A1. In the decade that began in 1550, at what is considered the start of the Age of Battles, the *Môgami dô* was a popular style of armour. It appears to have been the first of what came to be called *go-mai dô*, or five-plate cuirasses. This name comes from the four sets of hinges that produce five sets of plates to wrap around the body. This armour retained the older lame-count of two breast plates and four plates around the abdomen. The *tsutsu-gote* that enclose the forearms in a solid tube are very protective. He wears *shino* (splint) *suneate*, and a *haidate* of broad scales laced together on a padded backing to protect his thighs. His helmet is a simple multiplate variety. The armour is worn over a linen *kimono* and *hakama*, and the feet are bare save straw sandals called *waraji* (at this point, *tabi* were only worn by the upper classes). To stay dry, he wears a straw rain cape. A pair of matching woven straw boots, loose-fitting and high-topped, serve in winter as snowboots. Such capes and

boots are still used in rural Japan in the winter. (Source: a cuirass in a private collection, Kanagawa Pref.)

A2. Many of the fastenings on Japanese armour were toggles and loops – frogs – called *takahimo*.

A3. Swords thrust through the sash and worn edge up were *katana*. Swords worn suspended at the hip from a sash or belt were called *tachi*. Short swords were also often worn; by the 1570s they were both considered the badge of the *samurai*. They had become what we now recognise today as the *daishô* (literally, ‘great [and] small’) swords. Top to bottom are two different mounts for *tachi*, a *katana* and *wakizashi* (Source: a *daishô* once owned by Hideyoshi), and an *aikuchi*.

A4. *Waraji*, straw sandals, were common through all ranks. There was no single correct way to tie them. Even in muddy conditions, everyone wore them.

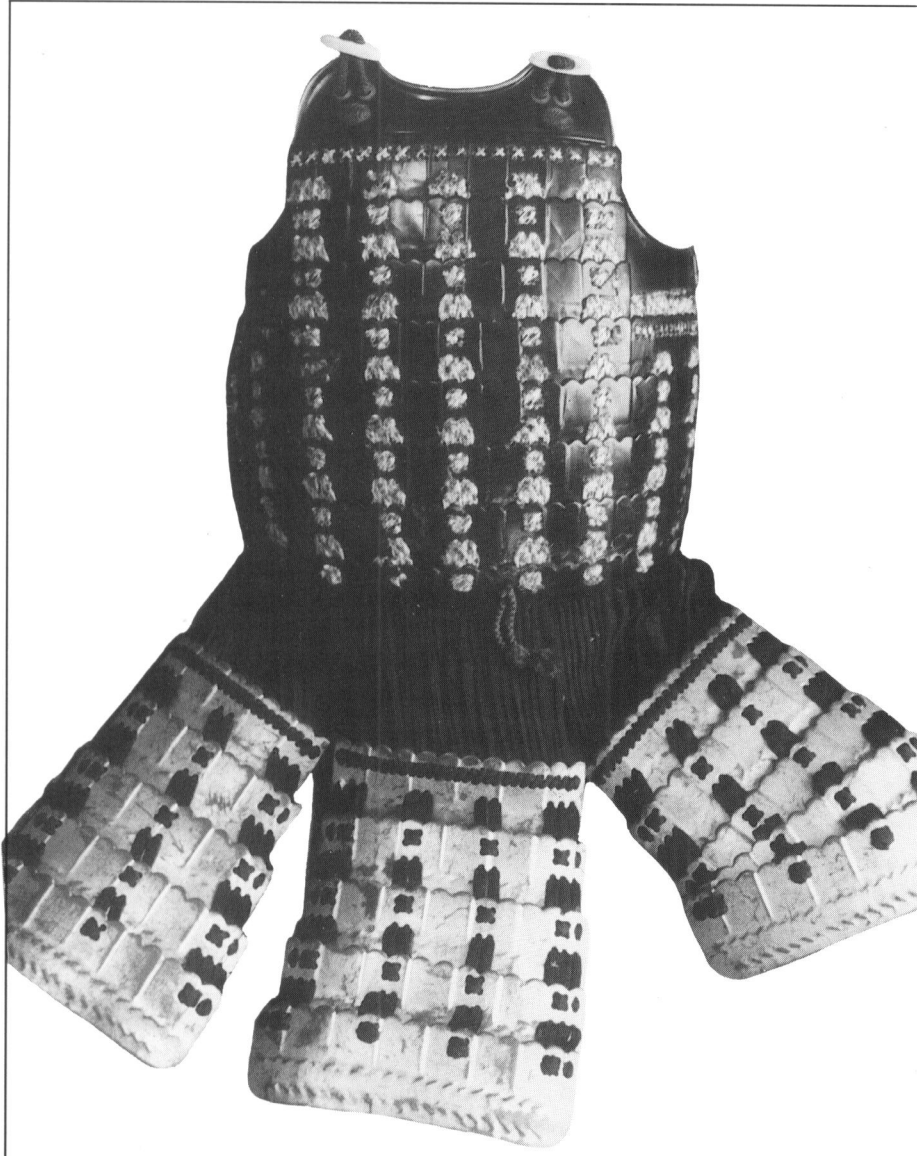
Plate B: Samurai on the march, c. 1600

B1. The *okegama dô* came into being around 1550, and is the quintessential *tôsei gusoku*, or ‘modern suit of armour’. By 1600, it was arguably the most universal style, being worn by everyone from the low-

born *ashigaru* to the mightiest *daimyô*. The splint arms, called *shino-gote*, are of a typical pattern, as are the *en suite* greaves, *shino* (splint) *suneate*. The *sode* were made smaller in the late 1500s, and were often discarded. The helmet is of a style called *momo-nari* (peach-shaped) *kabuto*. Many warriors at this stage eschewed thigh armour, though this man has kept his simple, large-plated *haidate*. Worn at the waist is a pouch for shot, and a bamboo canteen. A powder flask is hung from the fastening on his *dô*. Over his shoulders he wears a long tube of cloth containing a day's rations of rice tied into individual sections. The roll at his shoulder is a mat, this he uses to cover

himself while sleeping. Changes of clothing and anything else that he may need is carried in the bag worn at his waist. The banner at his back identifies him as a retainer of the Honda clan, vassals to Tokugawa Ieyasu. (Source: a suit of armour in a private collection, Kanagawa Pref.)

B2. On the march small personal items and extra clothing were carried in an *uchikoshi-bukuro*, and rations were carried in the *heiryô-bukuro*. For both, the loose ends are tied together and secured to the body. The *uchikoshi-bukuro* is worn on the hip, the rations bag around both shoulders. The *takezutsu* is a natural canteen made of a segment of giant bamboo



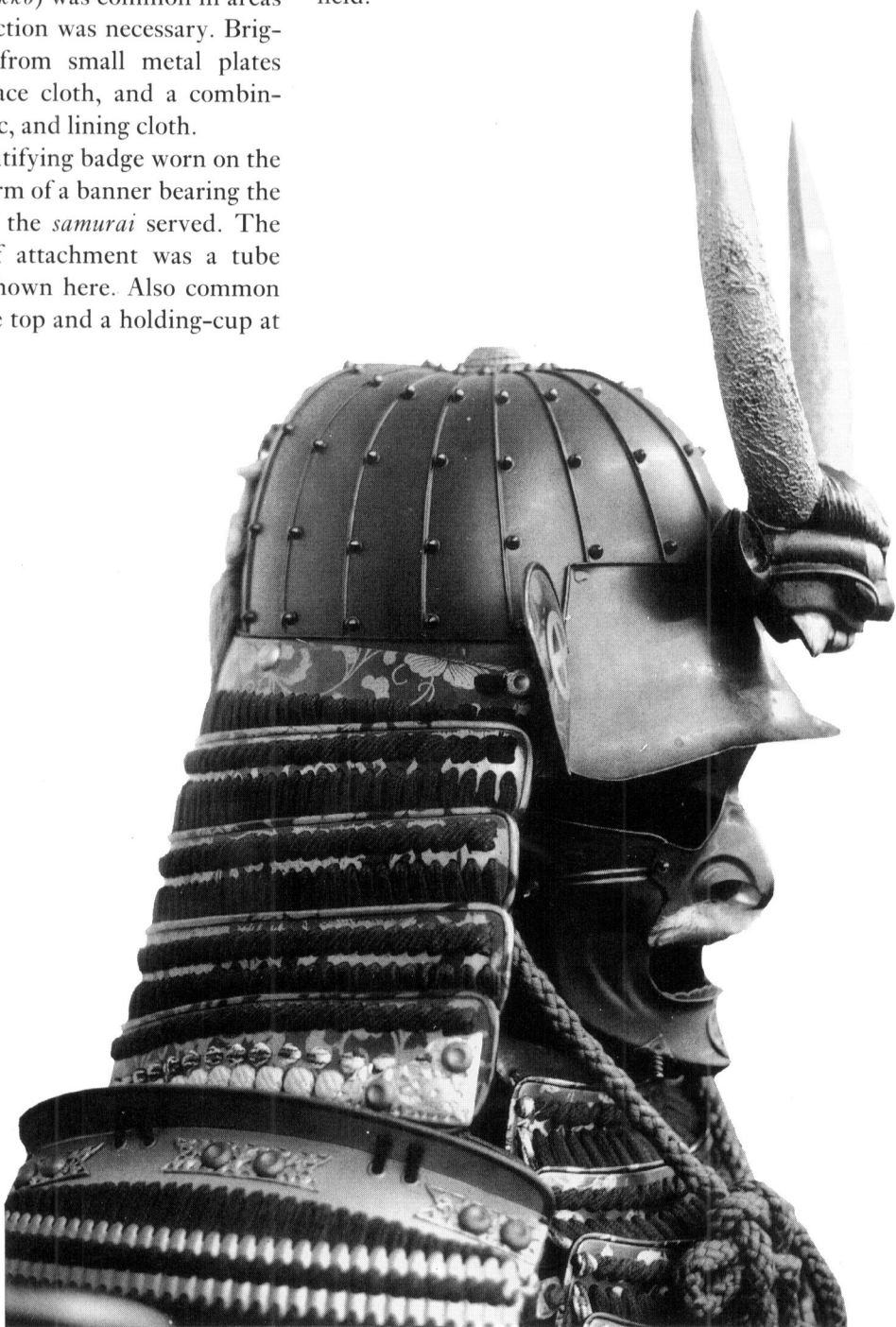
The nuinobe dō was popular in the late 1500s. This typical example has a brown body, laced in light-patterned braid, and has gold tassets. (Author's collection)

cut above and beneath a set of nodes. Some canteens were also made of hollowed-out gourds. Other items often carried in the *uchikoshi-bukuro* were a small towel, a bowl, a compact brush and ink set, grooming supplies, paper, chopsticks, medicine, fire-starting pouches, and a small lunchbox.

B3. Brigandine armour (*kikkô*) was common in areas where light, flexible protection was necessary. Brigandine was constructed from small metal plates sandwiched between surface cloth, and a combination of paper, coarse fabric, and lining cloth.

B4. The *sashimono*, an identifying badge worn on the back, generally took the form of a banner bearing the *mon*, or crest, of the lord the *samurai* served. The most common method of attachment was a tube attached to the back, as shown here. Also common was a simple bracket at the top and a holding-cup at the base of the spine.

The Japanese matchlock was a very well-made weapon, and some spectacularly ornate models were made using gold and silver inlay. The lock mechanism is of brass, while the barrel is made of a long band of steel forge-welded into a tube. The example shown here is a typical model as issued to the troops in the field.



A 12-plate kabuto, typical of the high-sided shot-proof helmets of the 16th century. (Courtesy Yoroi no Kôzan-dô)

Plate C: Swordsmith at work

There were many weapons available to the *samurai*, but none was more important than his sword. Among the styles of swords used were the long *katana* and *tachi*, the shorter *wakizashi*, the dirk-like *tantô* and *aikuchi*. The manufacture of a blade was a time-consuming, arduous task.

C1. The smith here wears a *kimono* and *hakama* in white, symbolising purity, and a *samurai's* cap. Not all wore white. Regardless of whether he is working on something he considers a masterpiece, or 'just another sword blade', he prepares himself for work by observing time-honoured rituals. Before work each day, he prays at the altar, seen in the background, and washes, pouring buckets of cold water over himself to purify his body and spirit. He then binds his sleeves back with a cord and sets to work. Except for a few legendary cases, smiths usually didn't work alone, nor did they produce finished swords themselves. The smith only forged the blade. He had a simple white wood scabbard and hilt made to protect the blade, and then sent the finished sword blank to a polisher for polishing, and a sharpener who put the edge on it. From there, the sword may have been sent for cutting tests, where the subject of the test was often a condemned criminal. When polishers, testers, and edgers were all finished with their work, they returned the blade to the smith for his signature on the tang. The signatures sometimes incorporated details of the cutting tests and the results. Then and only then did the smith send it to his client, or to a sword furniture maker to be fitted for a scabbard, hilt, guard, etc.

C2. This is a typical signature on a blade. It reads 'Kashû [no] jû Kanewaka', or 'Kanewaka, living in Ka[ga] Province'. Other things that may appear on a blade include the date of manufacture (often an infuriatingly imprecise date such as 'on a lucky day . . .'), the name of the person it was made for, and the result of any testing of the blade's strength and cutting ability. Ironically, many master smiths never signed their swords, and many third-rate ones signed the names of great masters to their products in order to increase their value. (There is an anecdote about two neighbouring swordsmiths that suggest this practice went on: one smith had finished work for the day, and sat down for a cup of tea. He listened as the neighbour put the finishing touches on a blade – the signature – tapping away with a chisel. Suddenly he stood up and ran next door, and grabbed the other smith. 'Why were you signing my name?' he demanded. The other smith admitted he was, and asked how his neighbour could have known. 'My name has more strokes,' was the reply. 'Your name would not have taken so long.')

Although the blades for *katana* and *tachi* are virtually identical, the location of a signature (if there is one) is the only way to tell what type of blade the smith was making. There is a convention that places the inscription on the tang on the outside as it is worn, so if a sword is held in the hand, blade edge down, a *tachi* would have the inscription on the right side of the tang, while a *katana* would have it on the left.

C3. The components in a typical sword hilt include the *habaki* (a metal collar that insures a tight fit inside the scabbard), one or more *seppa* (washers, to tighten the hilt), a *tsuba* (guard), the *fuchi* (a metal sleeve for the grip), the *tsuka* (grip), *menuki* (ornamental metal fittings placed under the hilt wrapping to improve the grip), a *mekugi* (fastening pin), and the *kashira* (butt-plate). The *fuchi* and *kashira* (and often the *menuki*) were made as a set usually by the same artist, and masterfully produced sets are prized by collectors today.

Plate D: Training with swords

Training was long, difficult, and often painful. In contrast to modern martial arts such as *kendô*, neither helmets nor heavy padding were used for training

Sword polishers at work. From a contemporary woodcut.



sessions; students simply wore their own clothes. Broken bones and sprains were not uncommon. The one consolation was that the weapons used were usually only heavy wooden practice models. However, real weapons were used to practise cutting techniques. Such techniques required supreme control of the blade in order that killing cuts could be made with a single blow. The targets for these exercises were piles of thick *tatami* matting, wrapped straw mats, and staves of growing green bamboo.

The *sensei*, or master, has seen his share of campaigning, and through practice and experience he has developed his art. He wears his normal clothing, a *hakama* and *kimono*, with his kimono sleeves drawn back and tied with a cord. The weapon he wields is a hardwood ersatz sword capable of delivering a devastating blow to unprotected flesh.

The *deshi*, or disciples, of the *sensei* are also in everyday clothes. Several students of varying levels all study together; as there were no individual lessons for the rank and file. In addition to individual sparring with the master, students had to pair off and spar with each other, to perfect their individual skills. Whether lancers, archers, or even arquebusiers, all *samurai* were expected to be proficient in the use of the sword. Although part of a body of soldiers, the individual's fighting ability was of primary importance. It was up to each man to see to it that his training was as good as it could be. His life – and his lord's success in the field – would depend on it.

Plate E: Samurai armouring up. c. 1574

E1. *Samurai* took turns helping each other put their armour on, although certain shortcuts could make armouring up a one-man job. This *samurai* has only his cuirass left to put on. He wears an accessory not universally used: the *manjûwa*, an armoured and padded armpit protector worn under the *dô*. The *tôsei gusoku* worn on the hip offered little or no protection to the armpits. An alternative to protect the armpit was the *wakibiki*, which took many forms. Note how the *haidate* is supported in front with the cord worn around the neck and torso (like a baldric worn off-kilter) to keep it from slipping down. *Samurai* usually

This functional suit of armour has a plain okegawa-dô. The lacing is murasaki (purple) and the

edge lacing is pale green. (Courtesy Yoroi no Kôzan-dô)

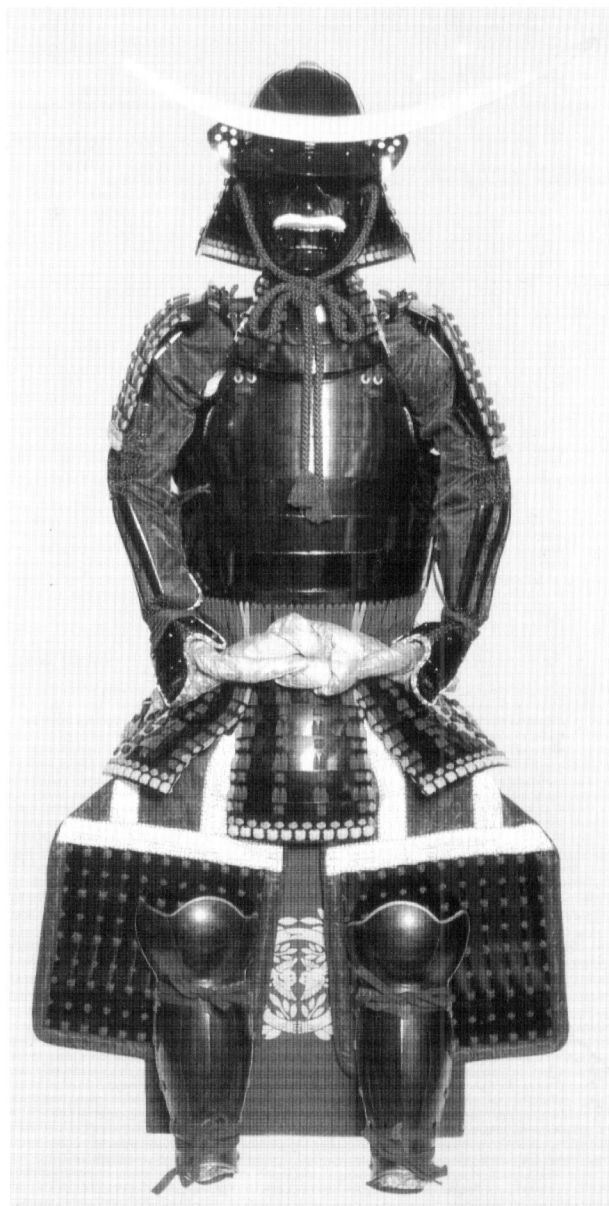
undid their topknots and wore their hair loose when in armour.

E2. Different types of *wakibiki* include mail-faced models, brigandine models, and plate models.

E3. Another item of armour rarely worn was the *nodowa*, a form of gorget. It was worn under the breast plate (occasionally over it) to protect the throat. The *erawa* also protected the neck.

Plate F: The barricades at Nagashino, 1575

The Battle of Nagashino marked the beginning of the end for the once mighty Takeda clan. Takeda



Katsuyori, Shingen's son, led the forces against a combined Oda/Tokugawa army. There were many engagements in the battle, but the most famous is the Takeda charge on the enemy arquebusier position. Nobunaga had arranged three ranks of arquebusiers to fire in turns from behind a sturdy wooden barricade. Between the barricades were narrow gaps to allow the Oda lancers and cavalry to make sorties from behind their defences. The Takeda forces, practitioners of traditional warfare, made several attempts at frontal infantry and cavalry charges across an open plain, in order to cross the small stream in front of the arquebusiers' position. In any terms, it was a massacre. Ten thousand Takeda died that day at the field of Shitarabara. A history of the battle indicates that Katsuyori had anticipated rain would make the matchlocks useless, but unfortunately for him the weather was sunny.

F1. The *teppô taishô* (commander of the musketeers) maintains the rate of fire, calling out rotation commands to retire and reload, make ready, and fire. He is unlikely to have been a crack shot; more usually his knowledge of the gun was confined to how it worked, and how it could be used. That was more important to the Oda army than placing a good shot in command of a regiment. His armour is an *okegawa dô* with some stylistic variations. (Source: a suit of armour in a private collection, Kanagawa Pref.)

F2. The Oda arquebusiers in this unit are armed with swords in addition to their *teppô*. If the Takeda broke through their lines, the swords would be needed. They wear folding armours, although other units may have dressed differently.

F3. The support crew prepares to deliver more shot and fresh flasks of powder to the line, while others are refilling prepared cartridges. As the arquebusiers rotate to the third line, they are given fresh supplies if needed. When armoured, they wear folding armours, since they are low on the list of priorities for armour.

Yamagata Masakage was one of the Takeda generals. Despite personal doubts, he followed orders and led a charge on an enemy position, and he was killed in the assault. He wore an old-style *dô-maru*, made of scales and tightly laced with blue and white silk braid. (Source: A suit of armour in a private collection, Kanagawa Pref.)

The Takeda clan spearmen wore simple munitions-grade *okegawa dô* called *okashi dô*. Such

armours were very cheap, and were made by the hundred.

Plate G: After the battle, c. 1574

Death, and serious, debilitating wounds were only natural products of the bloody vocation of the *samurai*. This wounded man is comparatively lucky: he will only lose an eye. He should be able to continue



as a warrior in future years. His wound may even afford him a certain amount of respect, and tales of his injury and bravery in the face of it will provide the meat for many campfire tale-telling sessions. The most feared arrow wound was one in the face or throat, not only for the potentially fatal outcome, but for the painful ‘treatment’.

The warrior’s head was secured to a tree to keep him still, and the arrow was removed by a physician (or a comrade, if none was available) who would resort to pliers if the arrowhead was barbed. Physicians, though often not from the *samurai* class, still held a respected position in society. In fact, many took to wearing swords that were, in fact, bladeless. The swords gave the aura of class, but as the non-*samurai* physician couldn’t really use a sword, the scabbard was hollow and contained things like medicines, brushes, ink, etc. He wears upper-class day wear, a *hitatare*, while his attendant is less well dressed.

Plate H: Armourer at work

Armourers, like swordsmiths, did not do all the work themselves. Apprentices did much of the work, while the master oversaw the process or concentrated on the armour of special, important clients. Even then, the man who did the metalwork seldom – if ever – did the lacquering. He may not have even done the lacing, and he certainly didn’t make the decorative metal fittings. H1. The armourer is at work lacing up the suspensory braid on a *sode*. No matter what piece of armour was being laced up, it was suspended in this fashion. This method ensured the lacing stayed even, and that the armourer could work it easily, switching between the front and back, or the inside and outside, without causing the plates or lacing to go into disarray. A few pieces of place-holding cord (the armouring equivalent of basting stitches) were put through it to start, one on either end and one in the middle, and then the real suspensory lacing begins. For close lacing with leather, the cords are long enough to make a single pass down and back up; about six inches. Silk braid

was often long enough for several passes. If the armourer were lacing a piece in sparse-point, he would use one length of cord folded over for each pair of cords.

H2. An armourer rivets the *hachi* (helmet bowl) of a simple multi-plate *kabuto*. The *Hachi* of this helmet is of an inexpensive design, with no more than 12 plates, however some master armourers produced



Left: Japanese armourers made copies of Nanban gusoku (European converted armours) with varying degrees of success. (Courtesy Yoroi no Kōzandō)

Right: The tatami-dō gusoku, or folding armour, was cheap and easy to make. As a result it was made in great numbers for ashigaru. (Courtesy Koka Ninja Mura.)

ornate ribbed examples with up to 120 plates. Once the *hachi* has been constructed the *ushihari* (lining) would need to be added, this was usually made from heavy hemp cloth. Most *samurai* helmets incorporated a *shikoro*, lamellar nape guard, these were attached to the rim of the *hachi* and were designed to match the wearer's *sode*. *Shikoro* varied in size and in some cases they were large enough to cover the *samurai's* shoulders. The *shikoro* for the helmet in this plate is on the floor beside the armourer.

H3. A small selection of the tools of the trade: a mallet, a set of files, a hard chisel (for cutting leather scales and making holes), a chisel-edged stylus (for separating scales to insert lacing), a tree-stump 'form' for cutting and piercing scales, punches and a saw.

Left: A warrior wearing a haramaki-dô (a rear-opening cuirass) could protect himself with a sei-ita (backplate). These were also called coward's plates, as only a coward would show his back to the enemy. (Courtesy Yoroï no Kôzan-dô)

Below: This Japanese version of a Spanish cabasset helmet owes little to the model it is based on and much to Japanese styling – note the 'eyebrows' over the visor. (Courtesy Yoroï no Kôzan-dô)



Plate I: Samurai relaxing

The Chinese game of *gô* and the game of *shogi* were the standard strategy games of the Japanese, holding the same position in Japan that chess did in medieval Europe. In addition to being tools for learning strategy these games were also pleasurable pastimes for many. Some even took to betting on the outcome of a game in much the same way as modern backgammon players. For this reason, some clans forbade the playing of these games; others allowed them but outlawed the placing of bets. In practice these regulations were largely ignored.

I1: The outfit worn by the off-duty guard here is called a *kamishimo*, and was typical everyday garb for the *samurai*. It consisted of a *hakama* (a pleated divided skirt) and a *kataginu*, (sideless vest), worn over a common *kimono*. It could be a formal garment, as here, in which case, the *hakama* and *kataginu* were of matching fabrics and patterns. When formal, the pattern and colour was more subdued than the normal daywear version. A comparison can be found with modern suits and sports jackets: like the daywear *kamishimo*, the top and bottom need not be the same colour; but in business suits, like the formal *kamishimo*, not only do they match, their colour and pattern tends to be more subdued. He wears a stiff, lacquered cloth cap called an *eboshi*, which is one of the badges of the *samurai*. The bottom of the *hakama* are caught up in gaiters called *kyahan*. On his feet he wears *tabi*, split-toed socks.

I2. This man wears a *kamishimo* of the more relaxed, day-to-day variety. The use of heraldic designs, bright colours, and contrasting hues and patterns was common. Beside him is a tobacco user's *hibachi*, its drawers holding smoking implements.

I3. The short *han-bakama* worn here were common for the lower classes. This man is a *samurai*, but he is lower-ranked than the other two, and is serving them.

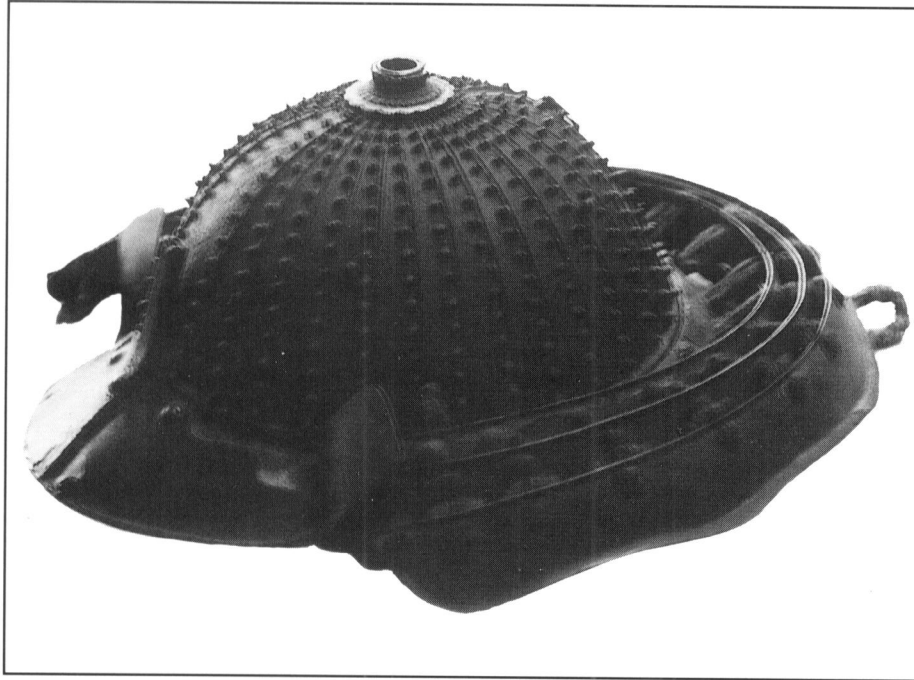
Plate J: Sakai Tadatsugu at Mikata-ga-Hara, 1572

The Battle of Mikata-ga-Hara was going poorly for Tokugawa Ieyasu, who was forced to retreat to his fortress at Hamamatsu. Takeda Shingen's army was close on his heels. Rather than attempt to secure the

gates, he ordered them left open to allow stragglers in. Ieyasu had bonfires lit to guide the way, and one of his lieutenants, Sakai Tadatsugu, went to the tower to pound the great signal drum. All of these signs confused the Takeda army, the leaders of which assumed wrongly the meaning of Ieyasu's show of bravado. Convinced it was a trap, and that Ieyasu's numbers were greater, the enemy never tried to enter the stronghold. Had they done so, it would have been certain defeat for Ieyasu. Once again, blustering paid



A simple okegawa dô with splint arms. Armour of this kind would have been worn by a retainer of the Oda clan.



A 32-plate rivetted helmet by Myôchin Muneyoshi. Note the rounded silhouette. (Private collection, Soma)

off. As Tadatsugu beats away, the Takeda forces mill about outside in confusion. This plate is based on a famous scroll painting now in the Hamamatsu City Museum.

J1. Sakai Tadatsugu, one of Ieyasu's four great generals, commanded the eastern wing of the Mikawa forces at Mikata-ga-Hara. Here Tadatsugu has retired to the castle at Hamamatsu and taken a position in the drum tower, replacing the usual drummer, and is pounding on the great drum with all his might. Tadatsugu wears a simple but striking *nuinobe dô*. (Source: suit in a private collection, Kanagawa Pref.)

J2. The usual drummer is a low-ranking *samurai*. He is bewildered that an army commander should take charge of the signalling drum. He wears only a simple *okegawa dô* over his loincloth. (Source: based on cuirass from a suit in a private collection, Kanagawa Pref.)

J3. Tadatsugu's aide, exhausted by the furious ride back to the castle, lacks the energy to keep up with his commander. He wears a so-called *Sendai dô*, made popular by Date Masamune, lord of Sendai, who outfitted his entire army with them. His *suneate*, or greaves, are ridged, and so are very unusual. The small cloth badge hanging from his *sode* serves as identification. (Source: a suit in a private collection, Kanagawa Pref.)

Plate K: The Siege of Nagashino Castle, 1575

The Nagashino campaign began with Takeda Katsuyori's siege of the Oda garrison at Nagashino Castle. During the siege Torii Suneemon managed to slip through Takeda lines and notify Nobunaga that help was needed. If Torii had failed, Katsuyori may have been in a position to win the battle.

In this plate the brave Torii's body still hangs on the cross, as another attempt is made to take the castle. Lancers are trying to ford the moat and climb the castle walls and the arquebusiers are ready for action, following a much needed rest during a lull in the battle. The unit commander wears a simple *hotoke dô*. All the *sashimono* bear the crest of Baba Nobuharu, one of the Takeda generals.

FURTHER READING

Not surprisingly most of the books on this subject are in Japanese. Only a few of the better ones will be listed here. In English, the works of Stephen R. Turnbull are an invaluable source.

Bryant, Anthony J., *The Samurai*, Osprey (London, 1988).

- Bryant, Anthony J., *The Early Samurai*, Osprey (London, 1990).
- Nihon katchû no kenkyû*, Studies on Japanese Armour, The Journal of the Japan Society for Arms and Armour Research and Preservation (Tokyo).
- Sakakibara, Kôzan, *The Manufacture of Armour and Helmets in Sixteenth Century Japan*, trans. Wakameda, T., ed. Russell Robinson, Holland Press (London, 1963).
- Sasama Yoshihiyiko, *Nihon katchû tokan*, Japanese Armour Illustrated, three vols. (Yûzankaku, Tokyo, 1964).
- Sasama Yoshihiko, et al., *Irasuto saigen: Takeda Shingen, sono gundan to tatakai*, Takeda Shingen: His armies and Battles, Reproduced in Illustrations (Bigman, Tokyo, 1987).
- Sasama Yoshihiko, et al., *Bushi no seikatsu*, Lifestyle of the Samurai (Bushi Seikatsu Kenkyû Kai, Tokyo, 1982).
- Turnbull, Stephen R., *The Book of the Samurai, the Warrior Class of Japan* (Arco Publishing, New York, 1982).
- Turnbull, Stephen R., *The Samurai* (MacMillan Publishing, New York, 1977).
- Wada Yumio, *Jidai koshô hyakka*, A Period Evidence Encyclopedia (Shinjinbutsu Shurai Sha, Tokyo, 1988).
- Yamagishi Motoo and Miyazaki Masumi, *Nihon katchû no kisô chishiki*, Basic Knowledge on Japanese Armour (Yûzan-kaku, Tokyo, 1990).
- Yumoto, John M., *The Samurai Sword* (Vermont, Rutland, Tuttle, 1958).



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- 1: Samurai in foul weather gear, c.1550
- 2: Armour fastenings
- 3a: Two mounts for *tachi* (sword worn edge down)
- 3b: *Katana* (sword worn edge up)
- 3c: *Wakizashi* (the companion sword)
- 3d: *Aikuchi*
- 4: *Waraji* (straw sandals)

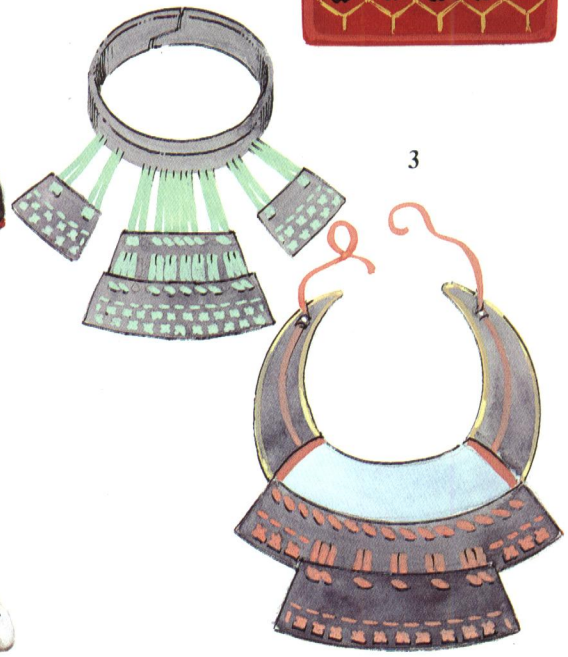


- 1: Samurai in marching order
- 2a: Cloth rations bag
- 2b: Leather shot pouch
- 2c: Bamboo canteen
- 2d: The contents of a *uchikoshi-bukuro*
- 3: A section of brigandine armour
- 4: The fitting for a *sashimono*

- 1: Swordsmith at work
- 2: Swordsmith's signature
- 3: Components of a sword
- 3a: *Seppa* (washers)
- 3b: A *tsuba* (guard)

- 3c: *Menuki* (ornamental fittings)
- 3d: A *mekugi* (fastening pin)
- 3e: *Kashira* (butt-plate)





1: Samurai armouring up c.1574
 2: Mail-faced, brigandine and plate wakibiki
 3: Nodowa (gorgets)



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The barricades at Nagashino, 1575

1: The *teppō taishō* (commander of the musketeers)

2: The Oda arquebusiers

3: Arquebusier support crew



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After the battle, c. 1574

1: Injured samurai

2: Physician

3: Physician's attendant



2

3

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Armourers at work
1: Lacing the braid on a *sode*
2: Armourer works on a *kabuto*
3: Armourer's tools



Armourer's tools

Samurai relaxing

- 1: Samurai in a formal kamishimo
- 2: Samurai in a day-to-day kamishimo
- 3: Lower rank samurai in a han-bakama





The Battle of Mikata-ga-Hara, 1572

- 1: Sakai Tadatsugu
- 2: Samururai drummer
- 3: Tadatsugu's aide

August 1572

The siege of Nagashino Castle, 1575

