

# WAY OF THE SAMURAI ARMOUR AND WEAPONRY

INTERACTIVE BOOK POWERED BY QR CODES



By Ashley Ryle

# Contents

Introduction	3
Sword of the katana Style	5
Sword of the tachi Style	7
A wakizashi Sword	9
The tantō	11
The ōdachi Sword	13
Kabutowari	15
The naginata	17
A tessen War Fan	19
The jitte	21
Kusarigama Chain Sickle	23
Samurai Cannon	25
Hira shuriken	27
A kunai	29
The Mongol Bomb	31
Tanegashima Matchlock Rifle	33
The yumi Long Bow	35
A yari Spear	37
Tsuba Sword Guard	39
Metsubushi	41
Satsumata, Tsukubo and Sodegarami	43
The sashimono Battle Flag	45
Menpō	47
The kabuto	49
A nodowa	51
The dō Chest Plate	53
Kusazuri and sode	55
Haidate	57
Kote	59
Suneate	61
Ō-yoroi Great Armour	63
Haramaki Armour	65
Karuta Armour	67
Picture Credits and Locations	69

## Introduction

This book is an interactive celebration of the elite warrior class, the samurai of Japan. In this book you will learn about the armour and weaponry that helped define who the samurai were. Through a mixture of photography, three dimensional modelling and illustration, you will become immersed in the way of the samurai. With the help of QR codes and three dimensional rendering you will experience a history lesson like none before.

The samurai wore and wielded armour and weaponry that as well as being extremely deadly, were intricate works of art in their own right. Samurai armour, although designed to take the high impact of a musket ball, were also designed with fantastic ornamentation, executed with the highest of skill. Using this book as a physical tool to navigate the virtual, you will be able to experience these artworks first hand.

All original illustrations and three dimensional models within this book have been designed and produced by Ashley J Ryle. All information is based on writings and research by Professor Steven Turnbull, without whom this project would not have been possible.





# KATANA

The *katana* is a deadly sword that is identified by its curved blade. The *katana* evolved from the *tachi*, a long-curved sword that was originally hung from the waist of the samurai. The transformation from *tachi* to *katana* began due to the desire of the samurai to be able to convert the motion of drawing his weapon into a deadly sword stroke, rather than the non-aggressive two-handed movement required to draw the *tachi*. The *katana* quickly became the sword of legend. The sword worn hung around the waist of a man, in its resting position, clearly identified its wielder as being a true samurai. He would be recognised as a member of elite social standing and military prowess.

The *katana*, the supreme edged weapon of feudal Japan, both on and off of the battlefield. There is no better place to look regarding the traditions and teachings of the *katana* than through the lives of a select group of elite swordsmen who lived at this time.



Kengō, the title that is given to the sword masters of Japan. The kengō had considerable military experience, serving in the daimyō's army and were credited with several 'kills' to denote their skill. Some kengō would travel the country seeking opponents to duel on so called 'warrior pilgrims'. These wandering swordsmen were then recruited by daimyō to train the samurai, which in turn passed on the traditions and skills to the next samurai.

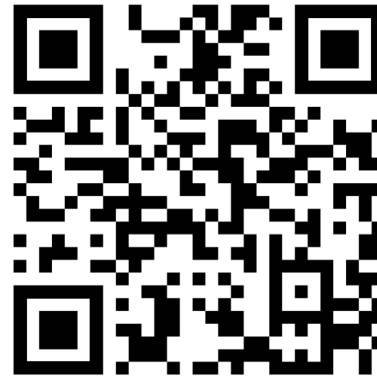


# Tachi



There is no other weapon that is closer associated with its wielder than that of the sword and the samurai. The distinguished curved blade of the samurai evolved from the straight bladed swords of ancient Japan. From these straight swords, the *tachi* emerged.

The tachi was worn on the waist of early samurai, slung with its cutting edge facing down. Very few *tachi* have survived the test of time. This is due to many of them having their blades deliberately shortened so that they could be worn more conveniently in the *katana* style, with its cutting edge uppermost. Due to the blades being shortened from their tang end, many swords would often lose the mark of their maker. This is one way of telling whether or not a *katana* was once a sword of the *tachi* style. After being shortened, many swords were left with only their provenance or other anecdotal evidence to date them.

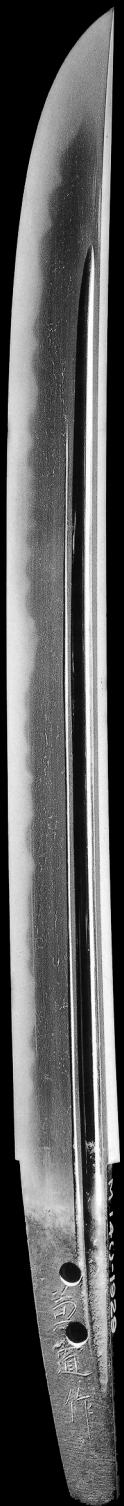


# Wakizashi

*Wakizashi* is the name given nowadays to a short Japanese sword. This reflects the fact that many contemporary illustrations of samurai were depicted with duel side arms, rather than just the one we are used to seeing. In modern times various names are given to the four recognised styles of Japanese swords; *tachi*, *katana*, *wakizashi* and *tantō*. These names given to Japanese edged weapons are used more to do with classifying the blades artistically. More commonly *wakizashi* is the name given to the short sword that paired with the *katana* would make up the *daishō*, a pair of swords worn on the waist of a samurai. Both swords bare identical designs, mounts and fittings. The name *tantō* is given to a shorter bladed weapon that is usually translated to 'dagger'.



Historically the samurai would wield a longsword in a slung scabbard, which would be accompanied by a 'companion' weapon in the form of a *wakizashi* or *tantō* for practical reasons. It was long believed that the *wakizashi* was to be worn alongside a sword of the *katana* style, however later discovery of a hanging scroll, depicting Honda Tadakatsu, was found to depict the samurai general wielding two companion swords and no longsword. This shows quite clearly that there were no solid rules on how many weapons should be worn or how they should be carried.



# Tantō

The *tantō* is a Japanese short sword that was originally used in the traditional martial art *tantojutsu*. A *tantō* is one of the original companion swords worn by samurai along with the *wakizashi*. The weapon dates back to the Heian period of Japan (794 – 1185), when it was originally used as a weapon. However, over the years has evolved into a more decorative, ornate weapon.



## Tantō and Seppuku

*Seppuku* is the term given to the taking of one's own life. This method of death was considered to be highly honourable among the samurai class of feudal Japan. The act was committed by stabbing a short sword, most commonly a *tantō* or *wakizashi*, into the abdomen. During the Shōwa period of Japan the practice of seppuku was also adopted by other Japanese people, in order to restore honour to their families.

# Ōdachi



*Ōdachi*, 'great sword'. The *ōdachi* was a primary weapon used by the samurai of feudal Japan. The sword pre-dates the *katana* and has a similar use to that of the western longsword or Chinese *miao dao*. The *ōdachi* blade measured between 90 and 150cm long, not including the hilt.

On the battlefield the *ōdachi* was too long for the samurai to carry on their waist such as swords like the *katana* or *tachi*, so were usually carried on the back. This did however make for a slow draw, so some samurai opted to carry the sheathed sword in their hand. During the Muromachi period it was not unheard of for the wielder to have a follower on the battlefield to assist in drawing the weapon.





# Kabutowari

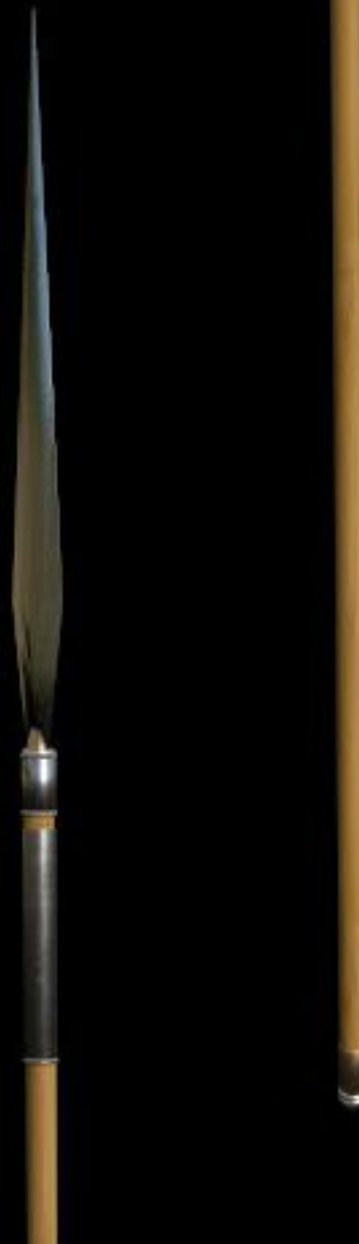
*Kabutowari* literally meaning 'helmet splitter', also known as a *hachiwari*, is a sharp knife-like weapon that resembles a *jitte*. The weapon was carried by the samurai as a companion weapon, much like a *wakizashi* or a *tantō*.

*Kabutowari* in many respects were similar to the *jitte*, however are significantly more deadly. The blade, forged with a sharp point, was used to parry opponents' swords and to hook the cords off of opponents' armour and helmets. The sharp point would be used to pierce unprotected or weak areas of armour, such as the armpit, with fatal results.





# Naginata



The *Naginata* was a bladed pole weapon. The weapon consisted of various styles of *nihonto* (traditional Japanese blade) attached to a long wooden pole. *Naginata* were used by many different warrior classes including the samurai, ashigaru, and sōhei (warrior monks).

The *naginata* in its masculine and feminine forms are *ō-naginata* if wielded by a man, and *ko-naginata* when wielded by a woman.

The *naginata* is the iconic weapon of the onna-bugeisha, who were female warriors that belonged to Japanese nobility. These warrior women would engage in battle alongside samurai men in times of need and were members of the *bushi* (samurai), meaning they were trained in the use of weapons to protect their households and honour in times of war throughout feudal Japan.



## Tessen

The *tessen* Japanese war fan is a weaponized Japanese hand fan. The *tessen* was crafted to look like an ordinary hand fan however, it was made from a sheet of iron.

The fans were used by samurai throughout the years, in areas where weapons were not permitted. Some swordsmanship schools trained their students in the art of the *tessen*. The fans were also used to fend off projectile attacks in the form of arrows and knives, as well as being used as a swimming aid.





## Jitte

The *jitte* or *jutte*, meaning 'ten hands', is another example of the specialised weapons that were introduced to the new police force at the start of Edo Japan.

The *jitte* consisted of two parts, the *tsuka* (handle/hilt) and the *boshin* (shaft). Sometimes there would be a dagger attached to the *tsuka* that was hidden within the shaft. The *jitte* does not consist of a cutting edge and can range between 12 and 24 inches in length, with modern day variants being around 45cm (18 inches). Along one side of the shaft located closely to the hilt is a hook that is usually assumed to be used for catching and stopping the blade of an attacker's weapon, however due to its close proximity to the hand would be a dangerous technique to employ. The *kagi's* (hook) more common use was to hook onto parts of the offenders clothing or body, such as the nose or mouth. The *kagi* was also used to push into delicate areas of the body and as a handle to aid different techniques such as punching and blocking.

The *jitte* was also used in the same manner as a modern day truncheon or baton, to strike large groups and aid in muscle manipulation.



# Kusarigama



The *kusarigama* (chain-sickle) is a traditional Japanese weapon that is made up of two parts. The first is the *kama*, which is the Japanese equivalent of a sickle and the second being the *kasari-fundo*, which literally means chain weight.

The weapon was used by swinging the chain in a circular motion and using it to entangle the opponent and their weapon, before charging them down and striking with the sickle.



# Cannon



The cannon, much like the arquebus, was introduced to the Japanese by Portugal, during the bombing of Castle of Moji. It was not as influential in Japanese warfare as the matchlock rifle. Whilst the Japanese did adopt the cannon, it was rarely used.

During the Satsuma revolution 1887, the Kumamoto Fortress held strong against modern weapons. Although canons were present during the battle, wet weather conditions ensured that none were ever used.



甲越勇將傳

上杉家

松本全助

一

國士



全助の猛臣なり  
百中なり軍功あり  
八月廿二日中嶋を甲越  
二十日將のちふ  
雷名と裏せざる信玄公の  
舎弟あて武田左馬之助  
信繁をまゝ勇卒小軍配  
をもと目かけと鐘と  
おひつやまゝ灰して脇壺に  
うち抜たり  
耐今名双の剛將なまども  
耐が終ふ戦死  
志のいしとあり此松本  
全助が砲術の  
甲越ふなりと者  
志

鹿需

一筆斎





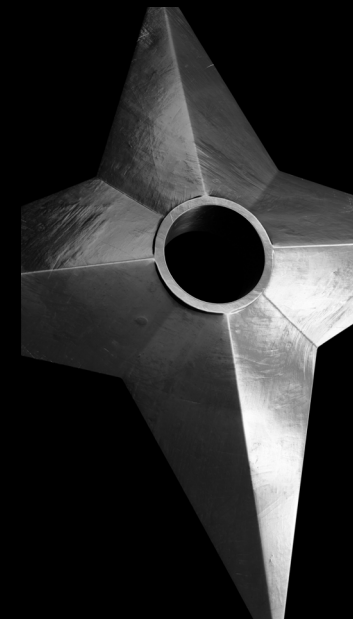
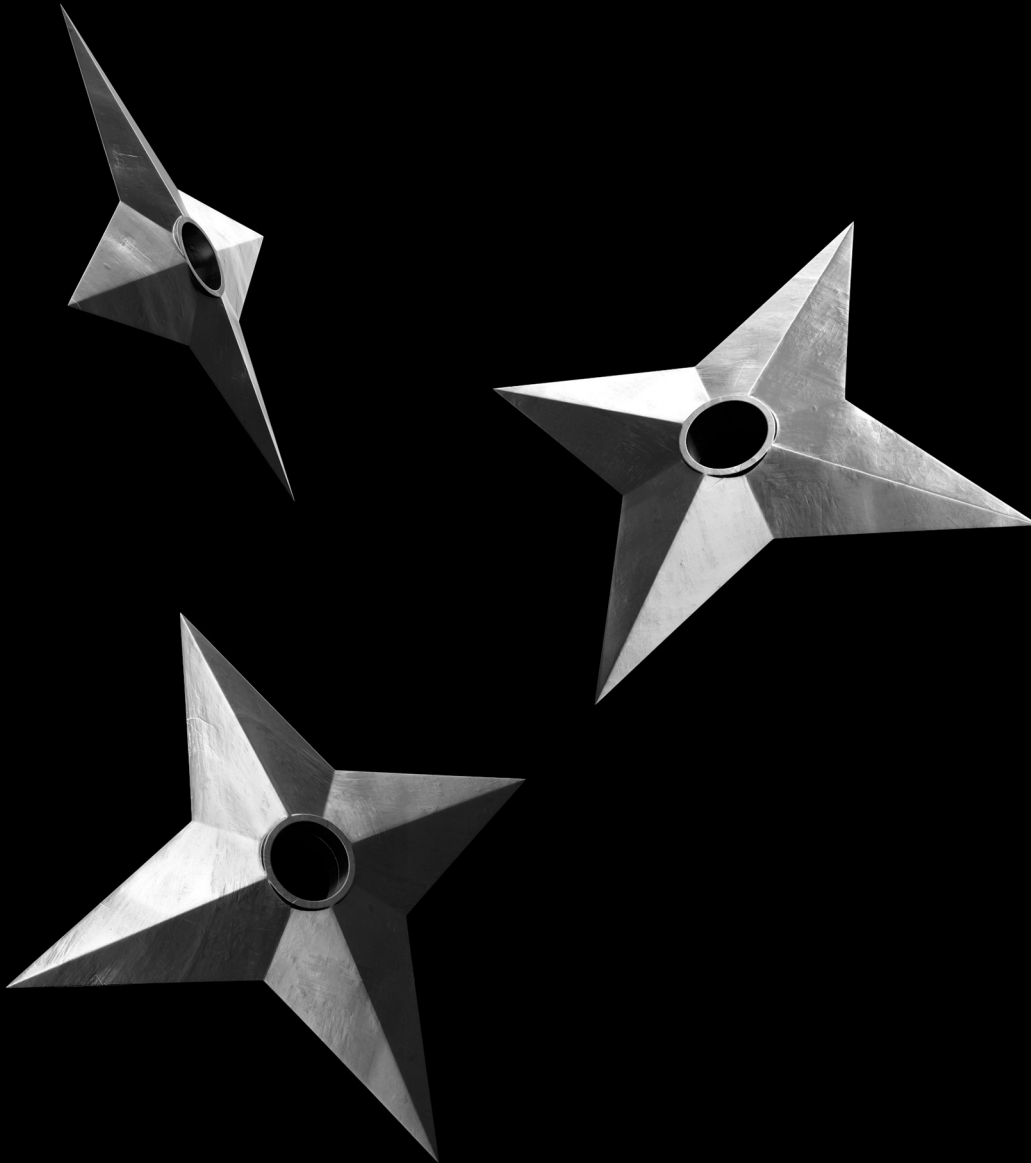
# Shuriken

The *Bo-shuriken* are a type of Japanese throwing weapon. They consist of a 12-21cm length of iron or steel usually with four faces but were sometimes known to be round or octagonal. Some had a single pointed end and others were pointed on both.



*Hira shuriken* usually resemble the popular conception of shuriken. They are constructed from thin rounded plates of metal, often with a hole in the centre and sharpened edges. They are used in the same way as the Bo-shuriken but also as a slashing weapon.

*Shuriken* were also sometimes coated in poison - one method of this was to bury the *shuriken* in dirt and animal faeces in order for it to carry a bacterium.



# Kunai



The *kunai* was a bladed tool used as a multi-purpose gardening and construction implement. The blade was made from soft iron and predominantly used by workers of stone and masonry. The blade differs from other tools as it is left unsharpened; due to the edges being used as a crushing tool for materials such as plaster and wood, drilling holes and prying things open. The *kunai* is often misinterpreted as a weapon through modern day media such as *manga* and *anime*. Contrary to popular belief, the tool was only ever used in self defence as a weapon and although later in history *kunai* were made out of harder metals with sharpened blades, these were seen as a novelty and used as decorative ornaments.







## Mongol Bomb

In the year of 1274 the samurai were introduced to the devastating power of gunpowder for the first time. Through the use of an iron cased, gunpowder filled bomb, the samurai learnt quickly just how destructive it could be. In Chinese *zhen tian lei*, translating to 'the thunder which shakes the heavens', were spheres of iron and ceramic material filled with gunpowder and pieces of shrapnel. These projectiles were ignited via a fuse and flung across the battlefield using simple lever catapults. For centuries the appearance of the exploding bombs remained a mystery until the end of the twentieth century, when samples of the bombs were found among the wreckage of a Mongol fleet sunk in 1281 by a horrific typhoon. The Mongolians were laying an anchor as they prepared for their second attack when sunk by the natural disaster. The storm was regarded as the work of the gods and dubbed 'The wind from the gods', *Kamikaze*. The same name was later given to the suicide pilots defending Japan in 1945.



## Tanegashima



*Tanegashima* is a match lock configured arquebus firearm. Seen on the right-hand side of the stock is a brass serpentine linked to a spring, which causes the serpentine to drop when the trigger is pulled. The serpentine would hold a smouldering match or wick, the excess of which was passed through a hole in the stock of the gun or wrapped around the gunner's arm to ensure it wasn't in the way. The match would plunge towards a closed pan that was filled with gunpowder. The pan would swing open at the last moment, allowing the gunpowder to ignite and setting off the charge in the barrel.

Arquebus was brought to Japan by the Portuguese in the year of 1543. The traders landed on the island of Tanegashima and showed the resident daimyō these strange new weapons. Naturally, the daimyō were intrigued. At this time the island was owned by the Shimazu clan, and the honour of conducting the first battle in Japanese history where firearms were used fell upon their leader Shimazu Takahisa.

Production of this new weapon was reliant on the highly skilled sword smiths of Japan, whose job it was to de-construct and replicate these guns in order for them to be mass produced for the use of samurai and their *ashigaru* 'foot soldiers'.

Recently, tests have been carried out on Edo period arquebus in order to determine the weapons' accuracy and lethality. The tests were carried out by a highly skilled matchlock user and fired an 8mm round over the distance of 30 and 50 meters. The test showed that over 30 meters five out of five bullets hit, but over 50 meters only one bullet hit. If a bullet did however reach its target, even at this distance, considerable damage would be caused.





## Yumi

The asymmetrical bow of the samurai known in western civilisation as the *yumi* was a weapon held in high regard amongst the samurai warriors. In Japanese, *yumi* literally translates to 'bow'. The Japanese bow was longer at the top than at the bottom and fired a Japanese form of arrow known as a *ya*.

The bow stood extremely tall at over two meters and typically surpassed the height of its wielder. The bow was constructed using the lamination of bamboo, wood, and leather. Its asymmetrical design dates back to medieval Japan and is claimed to have been designed with the ability to fire with the same accuracy and manageability as standing, from a kneeling position. Its design later made it the weapon of choice to use on horseback because of its ability to be easily manoeuvred from one side of the horse to the other.





## Yari



The mounted archer was once prolific amongst the samurai warriors. It was noted in the Mongol invasion and the Nanbokuchō Wars that rather than pitting a mounted archer against another mounted archer it was much more effective to set the archer against a number of foot soldiers that were using poles and bows.

Due to the short reach of a samurai's sword, when confronted by a group of foot soldiers wielding poles, their attacks would be rendered ineffective. The way to combat this, to provide each samurai with a *yari* (straight spear). This spear could be used as a lance or as a slashing weapon.



# Tsuba

The sword was long the soul of the samurai, but as the peaceful Edo period continued the sword became much more a symbol of rank and social stature than that of a weapon. As a result of this, the decorative aspect of a fine sword became more prevalent.

This artistic element of sword making was nowhere better illustrated than in the craftsmanship of the *tsuba*, or sword guard. The small size of the guard and its minimal surface area provided a fun and exciting challenge for sword craftsmen, who worked in metal.

For the most part *tsuba* were made from a soft homogeneous iron that was completely free from flaws. Decorative features would then be added with various metal alloys, such as shakudo (copper and bronze) and shibuichi (copper and silver). Some would even be decorated in gold.





## Metsubushi

*Metsubushi* meaning 'eye closers' are various techniques and tools used by samurai police throughout feudal Japan in order to temporarily, or sometimes permanently, blind or disorient an opponent. One of the main forms of *metsubushi* found in feudal Japan was made up from ground pepper. The pepper would be stored in a brass box with a mouthpiece on one side and a spout on the other. The wielder would blow into the mouthpiece when confronted by an attacker and direct the powder towards their eyes. When wishing to cause more damage the powder could also include finely ground glass.



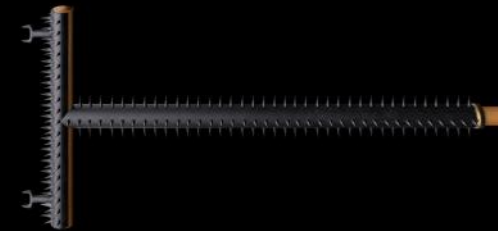


# Satsumata, Tsukubo and Sodegarami

In feudal Japan an individual was primarily responsible for their own self defence up until the unification of Japan in 1603. At this point in time, the beginning of Edo Japan, a new police force and international security force was formed. The samurai that once protected Japan from foreign enemies were called upon to bring peace to the nation, which they succeeded in doing for over 250 years.

Edo police had a variety of different armours and weaponry, of which the most useful and frequently used were the *satsumata*, *tsukubo* and the *sodegarami*. These were three long pole weapons collectively known as *torimono sandōgu*, 'the three tools of arresting'. They were symbols of office and were often kept on display outside police checkpoints while prisoners were being led to their execution.

The weapons were used to push back and ward off attackers, keeping them at a distance whilst allowing the user to remain unharmed and out of reach from the criminal.







## Sashimono

*Sashimono* were small banners used in feudal Japan in order to identify samurai and who they were fighting for. The banners were attached to bamboo poles and then fastened to the back of the soldiers *dō* (chest plate). The banners were worn by *ashigaru* but also by the elite *samurai* and members of the shogunate. The banners resembled small flags that would bear a clan symbol and were most prominent during the *Sengoku* period during the long civil war between the 15<sup>th</sup> and 17<sup>th</sup> century.





# Menpō

*Menpō* also known as *men-yoroi*, are various forms of facial armour that were worn by the samurai. The names given to the different styles include the *sōmen*, *janbō* or *hanpō* and *happuri*.

The *menpō* covered either all or part of the face. Its original purpose was to provide a secure fastening for the top-heavy *kabuto* helmets worn by the warrior elites. The *Shinobi-no-o* or chin cord of the helmet would be tied under the chin. Small hooks called *ori-kugi* or posts called *odame* would sometimes be located in various places to help secure the chin cord. The *menpō* was usually made of iron, leather or sometimes a combination of both. They would have a lacquered or rusted style finish that included various facial features - moustaches, aggressive expressions, fierce teeth, and a detachable nose. All styles of *Menpō*, with the exception of the *happuri*, had a small drainage hole in the chin for perspiration drainage.



# Kabuto

The *kabuto* was the original helmet for warriors in ancient Japan. Over time they became an important part of traditional armour worn by the samurai class in feudal Japan. The *kabuto*, now adopted as the samurai helmet, was first adopted by the samurai in the 10<sup>th</sup> century with the arrival of *ō-yoroi*, 'great armour'.





# Nodowa



A *nodowa* was a piece of armour that war warn tied around the neck to protect the wearers throat. The *nodowa* is composed of sheets of plate armour layered and bound together. The armour was made of various materials including iron, leather, silk and other fabrics. The plates were often mounted to a padded leather collar that fits directly to the wearer's neck.







Dō



Chest armour. Made from iron or leather plates, or sometimes a mixture of the two.



## Sode and Kusazuri

The upper arms and upper legs of the samurai were protected by the *sode*, which protected the arms, and *kusazuri*, which protected the upper legs. Both of these armour components were made out of iron and leather plates that were suspended from the front and back of the *dō* (chest armour). These plates were strung together the same way as the *nodowa*, using silk, leather and various fabrics.





# 長尾輝虎 入道信



## Haidate

*Haidate* are thigh guards worn by the samurai and a key component to what makes up a samurai's armour. The guards were tied to the waist and hung over the thighs, in order to protect from an opponent's attack. They are usually composed of cloth, with small iron and leather plates of different sizes and shapes attached to the surface. They would be connected by chain armour and then sewn onto the cloth.







## Kote

*Kote* are armoured sleeves that somewhat resemble gloves. The sleeve would extend from the hand to the shoulder. Another style of *kote* is the *han kote* (gauntlets) which covered the forearm. *Kote* were made from cloth covered with iron plates of various shapes and sizes, connected by a chain armour called *kusari*.





## Suneate



Suneate are shin guards that were formed from iron splints connected with *kusari*, sewn onto fabric and then tied around the lower leg or calf.





## Ō-yoroi

*Ō-yoroi* was the first form of armour worn by the samurai class during the 11<sup>th</sup> century in feudal Japan. The name *ō-yoroi* translates to 'great armour' and forged the blueprint for samurai armour all the way through to 19<sup>th</sup> century Edo Japan. The armour was originally designed for mounted archer warfare, as it didn't allow much movement and protected from all angles.





## Haramaki Armour

*Haramaki* armour was the name given to another style of armour worn during feudal Japan. This name was given to any style of armour in which the *dō* was put on from the front and fastened from the back.







## Karuta Armour

Karuta armour worn by the samurai class during the feudal era of Japan. The armour was made from a *kusari* that was lined with cloth and had various sized metal plates connected to the outside. This is where the armour's name originated from. The Portuguese word 'karuta', meaning 'card', was given to the armour, as the plates used on the outside of the armour resembled traditional Japanese playing cards.

## Picture Credits and Locations

Katana – V&A Museum London	5
Tachi – V&A Museum London	7
Wakizashi – V&A Museum London	9
Tantō – V&A Museum London	11
Ōdachi – V&A Museum London	13
Kabutowari – Japanese Sword Museum Japan	15
Naginata – V&A Museum London	17
Tessen War Fan – Japanese Sword Museum Japan	19
Jitte – Japanese Sword Museum Japan	21
Kusarigame – 3D model by Ashley J Ryle	23
Cannon – Utagawa Kuniyoshi 1847	25
Hira Shuriken – 3D model by Ashley J Ryle	27
Kunai – 3D Model by Ashley J Ryle	29
Mongol Bomb – 3D Model by Ashley J Ryle	31
Tanegashima – Japanese Sword Museum Japan	33
Yumi – Katsushika Housai at The British Museum	35
Yari – The Metropolitan Museum New York	37
Tsuba – The British Museum London	39
Metsubushi – National Museum Scotland	41
Sasumata – Tokokuni Kunisada 1800's	43
Sashimono – The Metropolitan Museum New York	45
Menpō – 3D Model by Ashley J Ryle	47
Kabuto – V&A Museum London	49
Nodowa – The Metropolitan Museum New York	51
Dō – The Metropolitan Museum New York	53
Sode – The Metropolitan Museum New York	55
Kasazuri – The Metropolitan Museum New York	55
Haidate – The Metropolitan Museum New York	57
Kote – The Metropolitan Museum New York	59
Suneate – The Metropolitan Museum New York	61
Ō-yoroi – V&A Museum London	63
Haramaki Armour – The British Museum London	65
Karuta Armour – The Metropolitan Museum New York	67





This book is an interactive celebration of the elite warrior class, the samurai of Japan. In this book you will learn about the armour and weaponry that helped define who the samurai were. Through a mixture of photography, three dimensional modelling and illustration, you will become immersed in the way of the samurai. With the help of QR codes and three dimensional rendering you will experience a history lesson like none before.

The samurai wore and wielded armour and weaponry that as well as being extremely deadly, were intricate works of art in their own right. Samurai armour although designed to take the high impact of a musket ball were also designed with fantastic ornamentation, executed in with the highest of skill. Using this book as a physical tool to navigate the virtual, you will be able to experience these artworks first hand.

All original illustrations and three dimensional models within this book have been designed and produced by Ashley J Ryle. All information is based on writings and research by Professor Steven Turnbull, whom without this project would not have been possible.