

Greek warfare is a hotly debated subject, with many different viewpoints and interpretations. The suggestions and descriptions within this leaflet are based on my research and the research of historians, archaeologists, weapon and armour experts I have consulted with over the years.

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The Armies of the Greek Cities

Greece was not ruled as a single nation. Each city state had its own army, which consisted of a citizen militia, each of whom were required to buy and store his own armour and weapons.

The exception to this was Sparta, who maintained a full time well trained army.

Ranged and mounted warfare was not a major part of the Greek method of fighting at this time, the hoplite reigned supreme.

A rough guide to representing the phalanx through the ages

As a general rule when building a phalanx, always put the best armoured figures in the front rank, with the less well equipped ones towards the rear. The front rank was reserved for rich men, where they could rightly perform heroic deeds in magnificent panoply. Unfortunately they were not always the fittest of body or mind having lived a life of luxury, unlike the labourers and farmers that made up the majority; who had lived a life of back breaking work and endured many hardships.

The Hoplite was equipped with what he could afford and/or what he thought was necessary. This could have given a phalanx a quite 'rag tag' appearance at times. It is often believed that it was only the Spartans that wore their hair long, this is not true. Many depictions of hoplites from all over Greece are shown with long hair.

Between the periods outlined below there will be some crossover and blend of equipment and styles, so you can be a bit creative when representing a phalanx from this time!

The early Greek Phalanx 530 – 500 B.C.

During the 6th century the phalanx in the classical sense had not been fully realised. With the exception of Sparta, the cities had no full time armies and received limited to no training.

As fighting and especially manoeuvring in formation requires strict training and frequent drill, the phalanx would still be comparatively open in formation, with the exception of the Spartans who trained and drilled daily. There is evidence that light infantry may still have fought from within the phalanx, behind the front line and using the hoplite's shields as cover. You can represent a phalanx of this time by spacing out the figures on their bases slightly more. You can even mix some light infantry into the unit.

As for the hoplites' equipment; you should only use the open Corinthian (maybe a few closed helmets for late 6th century armies), Illyrian and un-helmeted heads on the figures. Tall helmet crests were common at this time The straight sword should be used by the majority. You should not use the muscle cuirass equipped figure on the command frame. The abdominal plate can be used on the figures with bell cuirass, as can the armoured arm. The Boeotian-shield can be used by a few figures; I would recommend putting them on the bell cuirass equipped hoplites.

The Phalanx of the Persian wars 500 – 476 B.C.

Phalanx warfare was starting to take shape during this period, more so towards the end of the wars.

Many of the features mentioned above still apply; armies still were not professional or fully trained.



You have a much wider choice of equipment for your hoplites for this period, you can use any of the parts provided! For a more detailed description of when the different armour styles were used please refer to the reverse of this sheet.

The armoured arms and abdominal plates should be used sparingly, especially towards the end of the period, whereas the shield curtain should be more common towards the end. If you are feeling controversial you can include the Boeotian shield on a command figure, or other high status figure. If you want to take it further you can include a few light infantry in the phalanx, for which there is evidence for.

The Classical Phalanx 475 – 440 B.C.

After the Persian wars the Phalanx reached its 'classical' form. Training was more widespread and many veterans would be present from the wars of the previous decades.

You should not use the bronze bell cuirass, armoured arm, abdominal plate or Boeotian shield.

The Corinthian helmet was worn less, with more open styles being favoured. The 'kopis' style sword was popular at this time, as was the shield curtain. The left out bell cuirass armoured hoplites can be replaced with the muscle cuirass figure found on the command frame or metal figures.

Later armies and the Macedonian era

Many of the figures in this box are useable for later hoplite forces. The Corinthian helmet should not really be used, but helmets that are not included in this box were also used. Most notably the Phrygian, Pilos and open faced Thracian styles.

The Spartan Phalanx

Sparta was unique in that it had a well trained and well equipped full time standing army. As each hoplite was a full time soldier, he was more likely to have spent his money on better equipment and armour than his contemporaries in other city states. Contrary to popular belief it is now thought that Sparta did adopt the linen or composite cuirass, although bronze armour was probably more common amongst the ranks of Sparta than other cities. It is unlikely that many, if any hoplites would remain unarmoured. I would advise creating a separate unit of them, maybe with a few linen armoured figures to represent the helots employed by Sparta in times of war. Warlord Games metal Spartan figures can also be mixed in to replace the unarmoured figures. Other than these points the other period guidelines covered above still apply.

Elite, bodyguard and other specialized units

Most city states had divisions of elite hoplites, marked out by ability, status or wealth. These are usually recorded as numbering 300. These are usually referred to as 'knights' or 'charioteers' not because they fought from these, but because they simply owned them. By combining the contents of several boxes and/or metal figures you can create phalanxes of very well equipped and individual hoplites. One theory suggests that during the late 6th and early 5th centuries, some units of elite Hoplites were still operating in loose formations, carrying Boeotian shields and using lighter spears that could be thrown or used for the thrust. To represent these you can simply cut the butt spike off their spears and place them in a loose formation on their bases.

Arms and armour of the Gr



Linen Cuirass: 530 B.C. onwards

The linen cuirass starts to appear on vase paintings from the middle to the end of the 6th century. It is a rare feature at first, but it soon comes to dominate Greek art, and

presumably would have been equally common on the battle field.

Although often referred to as the 'linen cuirass' we do not know what material it was constructed from. The most likely candidates are leather and/or linen, which were very common materials and easy to manufacture into armour. It was once suggested that linen sheets would have been stiffened with glue or a resin to create a hard and thick material. This has now been widely discredited as linen armour is most effective when quilted; so it absorbs and dissipates an impact, much in the way of a modern bullet proof vest.

Bronze or leather scales were sometimes sewn onto the outside, adding protection to vital areas such as the abdomen, chest or ribs.

On the lower edge extended a series of strips of leather or linen pteryges (wings, or feathers)that protected the groin and thigh.

One reason for its apparent increase in popularity must have been ease of manufacture. Comparatively unskilled workers could almost mass produce this style of cuirass in workshops, while skilled armourers could produce the helmets and greaves, instead of the whole panoply as before.



Bronze 'Bell' Cuirass: Early 8th – early 5th Century B.C.

The Bell cuirass (named after the flared lower edge, which gives it a bell like shape) is depicted on countless vases from the Archaic to Classic periods. If we presume that its frequency in vase paintings mirrors real life



(which can be a risky assumption) its use seems to have declined at the end of the 6th century when the linen cuirass becomes more popular. There are many possible reasons for this; bronze armour must have been expensive in comparison and more labour intensive to produce. Warfare is thought to have undergone changes that may have made lighter more comfortable armour preferable.

Although fairly thin, they would be more than enough to stop a missile or a glancing blow from a spear; even a direct hit would need considerable force to penetrate. Reconstructed examples are surprisingly light and comfortable, although they must have been hot in the Greek sun!

It is unlikely that the bell cuirass simply stopped being worn in the early decades of the 5th century. There are many instances throughout history where soldiers continued to wear armour that is thought to have gone 'out of fashion' decades ago. It is perfectly feasible that a few hoplites would continue to wear this style of armour if they already owned it until as late as the end of the Persian wars or even beyond.

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Bronze 'Muscle' Cuirass: Early 5th century B.C. onwards

Although never reaching the popularity of the earlier styles of bronze armour, the iconic design certainly made an impression on the ancient world, Its influence is obvious in Roman designs centuries later.

Although the same basic construction (aside from the high muscle relief which gives its name) it has a few significant differences from the earlier 'bell' cuirass. The abdomen now extends almost to the groin, with the leather pteryges (wings, or feathers) lending further protection, without impeding movement.

Due to the high level of skill needed to produce a cuirass of this style, it is likely that only the richer members of society and commanders wore this impressive armour.



Other armour

Greaves were in use from the 7th century and common by the 6th and 5th. They were made from sheets of bronze and held on to the lower leg using the materials own elasticity. As with all armour, padding would be worn underneath to protect the skin from chaffing.

If a hoplite could afford it, he could equip himself with extra protective armour. This was more common practice during the 6th century, and decreased in popularity afterwards. Depictions in art fall dramatically in the early part of the 5th century, but as always, this shouldn't be indicative of its use in real life.

Armour for the right arm was popular, was it was the only exposed area left when a hoplite was in fighting stance.

Less common is the abdominal plate that was fitted to the lower edge of a bronze cuirass by rings. This gave added protection to the lower abdomen and groin without inhibiting movement too drastically.





'Corinthian' helmet: 8th century - 5th century B.C.

The so called 'Corinthian' helmet first appeared in the 8th century. At first it was fairly basic in design, but it evolved into one of the most iconic pieces of armour from the ancient world. It is the most common helmet shown in Greek art. Although offering good protection, it must have been very restrictive to fight it, with its narrow field of vision and complete cover of the ears. Later versions of this helmet mirror the increasingly organised and disciplined method of warfare by adding ear cut outs, to allow the wearer to hear orders. This style of helmet seems to have reached its aesthetic peak around the start of the 5th century. Surviving examples show an outstanding level of workmanship, which makes one wonder if they were in reality only worn by the minority.

Existing alongside the above style was the more open faced, simpler version. Which must have been easier to manufacture and more practical to fight in. Although often associated more with the Archaic period hoplite, many have been found dating to the time of the Persian wars. Despite its less attractive appearance, its frequency in vase paintings and the number of physical finds suggest that it was a much more common helmet than the classic Corinthian described above.



'Illyrian' Helmet: 7th century - 4th century B.C.

This is another very old style of helmet, dating back to the early 7th century. It leaves the whole of

the face open, which would grant maximum visibility but at the expense of protection. First made in two halves and later out of a single piece; this helmet must have been relatively cheap and quick to manufacture. Although almost never shown in Greek art, physical finds have been numerous. This highlights the dangers of relying solely on art as an accurate representation of what was used, when and how often.





Chalcidian helmet: Early 5th century B.C. onwards

Appearing at the end of the 6th or start of the 5th century, presumably to solve the issues for need of increased visibility and hearing, while still offering some protection to the face; this helmet remained popular until the Macedonian era. Some surviving examples are very highly decorated in high relief work, especially on the cheek pieces.

Two variants seem to have been present. The earlier type, first appearing in the late 6th century had fixed rounded cheek pieces. The later type had hinged cheek pieces, often shown tied up so they sit around the temples. This would make it more comfortable when not faced with immediate danger.

These coexisted, so the latter was by no means an improvement.



Thracian helmet: Early to middle 5th century B.C. onwards

Seemingly unrelated to any other helmet in design, the Thracian helmet first appeared in the first quarter of the 5th century, after which it soon gained increasing popularity until the Macedonian era. Its extended brow protection would offer added protection from blows from above, without compromising visibility. The helmet often had large angular cheek pieces which covered most of the face, leaving openings for the mouth and eyes.



Helmet crests

Most helmets had a detachable horse hair crest. Earlier a tall crest stemming from the centre of the

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helmet was quite popular, but the classical low crest running the length of the helmet seems to have gained favour by the 5th century. Usually helmets would have two pegs, one on the forehead and one on the back to attach the crest to, but some had an integrated crest holder.

Commanders' helmets often show elaborate crest holders in the shape of snakes, dogs or horns or combinations of these. Spartan generals seem to have favoured the transverse crest, although other styles would presumably be used also.



Argive or Hoplon Shield

The shield is most important part of the hoplites' equipment. It

averaged around 3ft in diameter and had a dished profile, so that the left arm could sit comfortably inside the shield, with its weight supported by the bearer's shoulder. The shield provided excellent defence and left only the armoured head and lower leg exposed.

The shield could also be used to strike an opponent, using the shield's face or its wide rim.

It is likely that the shield had wicker, woven or some kind of laminated wooden structure, as solid wood would be too heavy and would not flex to absorb and dissipate any impact. Leather is thought to have been used as a covering on the front and back, which would give it the solid appearance that is shown on vase paintings. The rim is likely to have been bronze.

The facing was sometimes covered in a thin layer of bronze, less than 1mm thick, which could be highly polished.

The inside is often shown with a bronze reenforcing strip passing vertically up the centre; on top of this would be a bronze fitting which would go around the forearm when it was passed through. There seems to have a series of fittings around the inside circumference through which a rope harness was attached. The left arm would pass through the arm hole so that the hoplite could grasp the rope as a handle. This rope would probably also be used to hang the shield from the shoulder when not in use.





Boeotian or Dipylon shield

This is quite a controversial item, although I believe there is significant evidence to support its

existence. It is shown in pottery regularly from beginning of the 6th to as late as the beginning of the 5th century. Because its appearance in terms of lack of consistent shape and fittings it is often dismissed as artistic licence, harking back to the heroic age. Several historians accept its existence as the frequency it is depicted in art is too high to dismiss entirely. The fact that hoplites are shown in scenes using both styles of shield adds credence to this. It appears to be made in the style of the hoplon, but in the shape of the earlier dipylon shield. Presumably similar construction methods would have been used.

It was probably used before hoplite warfare completely evolved, when the phalanx formation was looser and more fluid.



Shield curtain

Around the beginning of the 5th century hoplites are occasionally depicted with

long curtains of linen or leather hanging from their shields. These would catch or slow down any missiles that might otherwise strike the hoplite in the lower half of his body. This would be particularly effective at deflecting arrows fired at long range. It cannot be a coincidence that they appear in art around the time of the Persian wars, when they would have been facing huge amounts of incoming arrow, javelin and sling shot. These were often decorated with an image of an eye, as it was believed that it would attract and defend against arrows.



Swords

The sword was a secondary weapon that was normally only used if the spear was lost, damaged or probably just when it became impractical to use such a long weapon effectively. When it had to be used, combat must have been a very bloody and brutal affair.

Before hoplite warfare evolved long swords were popular throughout Greece, but by the 6th century they had been developed into a short sword with a strong leaf shaped blade, much more suited to fighting in closer formations. Although primarily for slashing, it could be used equally well for thrusting.

In the 5th century we start to see the' kopis' or 'makhaira' make an appearance. It has a long wide sling edged blade, which is slightly curved; moving the weight to the end. This weapon is perfectly suited to hacking and slashing in long downward arcs.

Both of these weapons remained popular until the rise of Macedon.

Spear

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The spear in this form was adopted sometime around the 7th century and from then onwards remained practically unchanged as the main offensive weapon of the Greek hoplite. The shaft averaged around 9ft long and was made from cornel wood. The spear point was large and leaf shaped and iron or bronze. The spear also had a butt spike that was usually square or triangular in cross section and was sometimes hollow and filled with lead. This weight, combined with the offset grip would balance the spear very well and allow the hoplite to hold the spear quite close to the end (which would then not obstruct the man behind him) without hindering its effectiveness.

Painting your Hoplites

Colours in the ancient world are all made from natural materials obtained from plants, insects or minerals. Colour is a good way of defining the difference between a high status hoplite figure and a low status one. The same figure painted in these two extremes will give a radically different appearance.

Tunics were often off white linen or hues of brown, but could be dyed red, greens, yellows and sometimes blue.

Expensive colours were blue, crimson, true black and purple. Spartans seem to have always worn red tunics, but this practice became more popular across the whole of Greece as time went on.

It is a good idea to mix a small amount of a buff or cream colours into the colours and use increasing amounts of it in the mix when you highlight the colour to represent natural dyes.

Linen comes in a range of colours from brown to white. The whiter the colour the longer it took to produce and more expensive the final product. Leather can also be produced in wide ranges of tans, buff and white, Metallic and leather armour could also be painted, as it was in the Macedonian era and the age of its successors. Some 5th century bronze helmets with traces of a tinned surface have also been found. We know from literary sources and some physical finds that armour was sometimes silvered or even gilded with gold. It is highly likely that electrum (Greek white gold) was also used in the decoration of armour, given its natural occurrence in western Anatolia.

Decorative boarders on tunics and across body armour were also common.

Crests were made from horse hair of natural white, brown and black, or dyed yellow, red; blue or purple; which could be solid, arranged in bands or just with the ends coloured. The same rule with crest colours as those for clothing should be followed.

Shields often had a bronze or solid colour facing, such as white or black. The shield trim should be painted bronze. If you're feeling adventurous you can paint a 'dogtooth' or checkerboard design onto this. The back of the shield can be left as plain leather or painted in colour.

On this page you will find a selection helmet, crest and cuirass illustrations for painting inspiration, these examples are all based on colours and processes that were in common usage in the ancient world. As you can see, Greek armies don't have to be just white and bronze!

