

## A Chinese jar – 2000 years old



Almost all of the intact pieces of ancient Chinese pottery we know of today were found in tombs – in earlier times by adventurers and local people looking for items of value and, more recently, by archaeologists. The types of pottery placed in tombs were dictated by the funeral fashions of the day, probably set by the elite classes of state officials. Around 100 BC, in the Han dynasty, there was a new trend for placing small clay models of everyday objects in tombs. Before that, the preference was for vessels used in funerary rituals. Then, around 50 BC there was a revival of interest in using these ritual shapes, but now made of earthenware pottery coated in a green or brown lead glaze, which was probably intended to imitate the surface coloration of patinated bronze.

The jar in the picture above, 32 cm tall, dates from this time. It is in the shape of a hu, which is a type of wine vessel, and it probably originally had a lid. Hu jars made of bronze have been found in Chinese tombs from as early as the middle of the second millennium BC. They were probably chosen because wine was an important element of the funerary rituals at the time. Bronze had always been an expensive elite product and so it is not surprising that pottery imitations of these vessels started to be placed in tombs.

The lead glaze used for these vessels is interesting because it represents some of the earliest lead glaze used anywhere. Lead glaze was first used in China around the 4<sup>th</sup> century BC, but only on a small scale. It was not until the Han dynasty, around the date of this jar, that it started to be used extensively. In the West lead glaze is thought to have been first used in the Roman empire in the 1<sup>st</sup> century BC - it is not known if this was a discovery independent of the Chinese glaze. I have often wondered how lead glaze was first discovered, as it doesn't seem to be an obvious thing to do, to

apply a lead compound to a pot and fire it. I like the idea that it was discovered by Chinese alchemists, who were always attempting to discover the secret of immortal life by mixing and heating various substances and may have tried melting lead with sand and clay. In Han times lead glazes were only used in the north-central part of China – at the same time in south-east China they were using similar shaped vessels made of stoneware with an ash glaze.

Green was the most common colour for these vessels, though they are also found with various shades of brown glaze. The green coloration comes from the addition of copper to the glaze. Chemical analysis of these green glazes shows that they also contain some tin, which suggests that the copper comes from oxidised bronze – possibly a by-product of a bronze foundry? On my pot there is a subtle vertical streaking in the glaze, which indicates that it flowed under the effect of gravity during the firing. This is confirmed by the observation of drops of glaze which have formed on the rim of the jar – it must have been fired upside down. The rim also has three scars, 120 degrees apart, where the jar rested on supports in the kiln.



*Two glaze drips with a support scar between them*

When there have been damp conditions in a tomb over a long period these green glazes can develop an iridescence, as the effects of water and the copper in the glaze cause the surface to flake repeatedly in thin layers. My jar is not badly affected by this, but the iridescence and flaking can be seen in a couple of positions on the neck (see photo on next page).



*Localised iridescence and flaking*

The jar itself was almost certainly made of the clay-like soil that covers much of northern China. Called loess, it is made from dust that has been blown from the Himalayas over the plains of China, in some places lying up to 350 metres thick. Since lead glazes mature at relatively low temperatures (700 to 1000°C) there is a risk that the clay body of the pot will be underfired at this temperature, and the bodies of Han dynasty lead-glazed pots are often quite soft and friable. Indeed, looking at my pot there are several areas where the glaze has been chipped or scratched away to reveal the soft clay body underneath. In fact, I have discovered that can make a scratch in the base of my pot using my fingernail! This was probably not regarded as a problem at the time, since it is likely that this lead glazed earthenware was reserved for burials and not used in the home. Eight hundred years later, in the Tang dynasty – arguably the peak of Chinese lead glazing, they overcame this problem by firing the jar initially to a higher temperature, without the glaze, and then refiring it with the glaze.

For me, the most appealing feature of this jar is the charming frieze of moulded figures running around the shoulder. This is a common feature on this type of vessel. It has been speculated that it represents a royal hunt, or alternatively that it is a scene from the legendary land of the immortals. On opposite sides are two representations of taotie masks, which had been used to decorate bronze ritual vessels since the second millennium BC. The taotie is a mythological evil creature, and the reason for its widespread use on such vessels is unclear. On bronze vessels a metal ring would often be suspended from the mouth of the mask, as a handle, but on my jar the ring is part of the moulded decoration. Between the masks on my jar there is a panoply of different creatures, all of them masterfully shaped and filled with life and energy. They are shown in the photos on the next page (with my speculative identifications of the creatures).



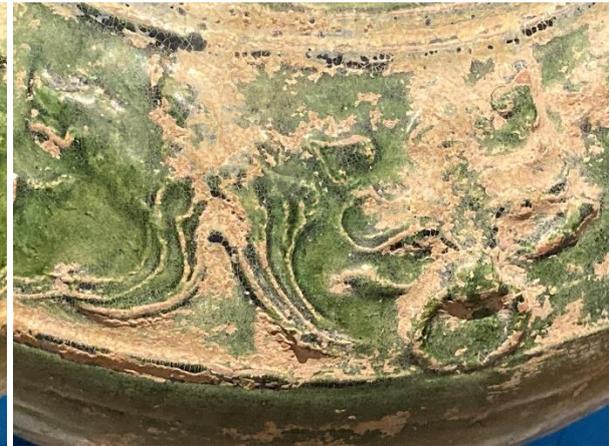
*Taotie (left) and bear (right)*



*Dog (?) and lion*



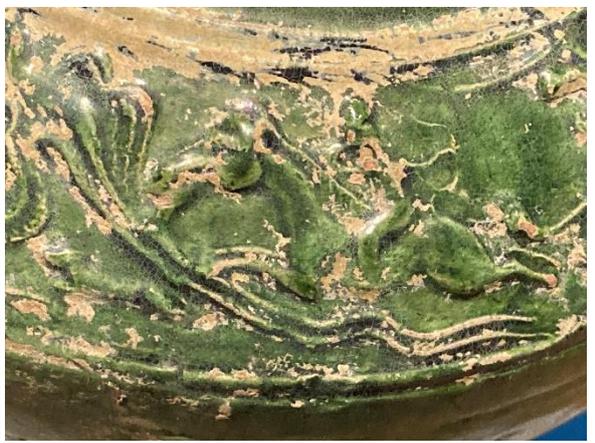
*Person (?) in cave and dragon*



*Boar (?) (left) and taotie (right)*



*Two monkeys on a crocodile*



*Horse and rider*



*Lion*