

## A Chinese tea bowl, possibly 1000 years old – or maybe not



Some of you, especially if you make pottery, may be familiar with a popular Japanese glaze, very dark brown – almost black, called temmoku or tenmoku. The dark colour results from large amounts of iron oxide (maybe 6%) dissolved in the glaze. However, you may not be aware that the Japanese potters who started using this glaze were initially inspired by Chinese tea bowls like the one (12 cm wide) in the photo above. Tea bowls like this first arrived in Japan in the 12<sup>th</sup> century AD.

Tea drinking in China first became popular in the Tang dynasty (618 to 907 AD), when they put dried tea in hot water and added spices and other flavours. Early in the Song dynasty (960 to 1279) there were a number of influential people at the court of the Chinese emperor who had come from the southern province of Fujian, where they made tea in a different way. This involved whipping the powdered tea with hot water in the tea bowl. They used so-called white tea, which involves picking the leaves before they have fully opened, when they are still covered with fine white hairs. When dried, made into a powder and whipped with hot water this results in a white frothy tea, which looks good in a contrasting dark tea bowl.

The courtiers from Fujian at the Emperor's court promoted their way of making tea and also the tea bowls from Fujian such as the one shown above (referred to as Jian tea bowls, from the area in Fujian where they were made). The new approach to tea drinking became hugely popular, with tea competitions held to judge the best teas. The Emperor himself announced that the best tea in China came from Fujian and the best tea bowls were from Jian. The potters in Jian suddenly found themselves inundated with orders and they abandoned the celadon pottery they had been making and focussed solely on making tea bowls.

From the start of tea drinking in China it had been adopted enthusiastically in Buddhist monasteries because of its mild stimulant properties, which were seen as an aid to staying alert during repetitive rituals and meditation. Buddhist monks from Japan visited monasteries in China and, in the 12<sup>th</sup> century, a Japanese monk visiting one in the Tianmu Mountains was so taken with their tea that he returned to Japan with some tea and Jian teabowls. The Japanese pronunciation of the Chinese

characters making the word Tianmu is temmoku or tenmoku, and this became the Japanese name for this new type of tea bowl. This visit initiated the Japanese enthusiasm for whipped powdered tea (matcha) and for teabowls with dark brown or black glazes.

At about the same time, the fashion for Jian tea bowls started to wane in China as, at first at court and then more widely, pale-coloured porcelain became popular. However, the Jian potters were kept busy providing tea bowls for export to Japan and this continued until the 14<sup>th</sup> century, by which time the Japanese were increasingly making their own tea bowls. This marked the end of the Jian potteries – they tried making porcelain, but could not compete with established sources such as Jingdezhen.

The Jian tea bowls were not only favoured because their dark glaze contrasted with the white tea. The local Jian clay also has good insulating properties and the bowls were made so that the wall of the bowl was thicker lower down than it is at the rim. The thick walls and insulating clay meant that the bowls could be held more easily when they contain hot tea, and the tea doesn't cool down so quickly. The depth of the bowl made it easier to whip tea in it and, because the walls were thick at the bottom and thin at the rim, the tea bowls, despite being deep, had quite a low centre of gravity, which made them stable even though they had a narrow foot.

You can see in the photo at the head of this note that the dark glaze has lighter brown vertical streaks in it. This was a greatly admired effect, referred to by the Chinese as hare's fur. The Jian potters did make tea bowls with other glaze effects, such as oil-spot and partridge feather glazes, but the hare's fur glaze was their best seller. There are various explanations of how this effect was produced, but the one I find most convincing starts with the particularly high iron oxide content in the clay used for the body of the tea bowl. During firing, when the glaze material melts, some of this iron oxide from the body clay diffuses into the glaze, forming a layer of glaze with a concentration of iron oxide. At very high temperatures (approaching 1300°C) the iron oxide changes its chemical structure and releases oxygen. This oxygen forms bubbles which rise to the surface of the molten glaze, carrying with them some of the glaze material from this high-iron layer. These tiny blobs of high-iron glaze turn into vertical streaks as gravity causes the glaze to flow down the side of the bowl. When the bowl cools at the end of the firing the surplus iron in the streaks crystallises out of the glassy glaze to form light brown iron oxide (the same material as rust).

Other consequences of the flow of the glaze during firing can be seen on my bowl. At the bottom of the glazed portion several drips of glaze have started to form. This is commonly seen on Jian tea-bowls – sometimes an even roll of glaze would form at the bottom and sometimes one or more drips would develop. The angle of the wall of the bowl has a sharp change just where the glaze ends. This was almost certainly designed to discourage the glaze from continuing to flow all the way to the foot and risk fusing the foot to its support. Japanese tea masters particularly valued those bowls with a single drip and it has been suggested that the Chinese potters sometimes deliberately fired their bowls at a slight angle to encourage this.

At the rim of the bowl the glaze has thinned due to its downward flow and for a few millimetres down from the rim only a thin layer of glaze has been left, which has higher iron content due to diffusion from the body clay. This has resulted in crystallisation of iron oxide on cooling, producing a smooth, matt lighter-brown band.

You might think that these subtle glaze effects imply a sophisticated glaze, but in fact it has been shown that the typical composition of Jian glazes could have been achieved by mixing the high iron Jian clay with wood ash in the proportions of three parts clay to two parts ash. Occasionally Jian tea

bowls are encountered which have other glaze effects, such as a lustre-like appearance, or the so-called white Jian tea bowls, which actually appear greyish or silver. I visited Jianyang, which is close to the Jian kiln sites, in 2012 and bought the tea bowl below from a local potter, who I suspect was experimenting with some of the more exotic glaze effects. I actually had tea (not whipped) in the potter's apartment in this bowl and I was so attracted by the silvery glaze inside the bowl shimmering underneath the tea that I ended up buying the bowl.



The Jian tea bowls were fired in huge kilns which snaked up a hillside, called dragon kilns. Several of the Jian kilns have been excavated and some have been found which were 150 yards long, which must have held a lot of tea bowls! Here is a photo of an excavated kiln which I visited:



To protect the glaze surface the tea bowls were fired in individual saggars (pottery boxes), which stacked in columns in the kiln, each bowl pushed into a soft pad of clay to hold it in position. Inevitably there were occasions when a stack collapsed, or there was some other mishap during firing, and near the excavated kiln we were shown a huge pile of broken pieces of tea bowls left from the times when the kiln was being fired. Our guide, a local academic, encouraged us to take souvenirs and I brought the following piece home (the photo shows the underside of the bowl):



It appears that something fell on this bowl from above and knocked it sideways so that it fused to the sagger during firing. The supporting pad of clay is still attached to the foot of the bowl.

In the 20<sup>th</sup> century, when the modern-day potters of Jianyang realised that old Jian tea bowls were being collected in Japan and the West, they started to make replica tea bowls. I hesitate to call these fakes, as it is not clear that they intended to deceive anyone, but high quality modern replicas can cause confusion. In the title of this note I said 'possibly 1000 years old – or maybe not' because I think it is quite likely that my tea bowl is a modern replica, probably made in Jianyang. All the details of my bowl seem to match the old tea bowls, but it is suspiciously lacking any evidence of surface wear, which you might expect in a bowl which is 700 to 1000 years old. When I bought the bowl the auction house hedged their bets, describing it as 'Song dynasty or later'. One way of resolving this would be to get a thermoluminescence test done, but since that would cost several hundred pounds I prefer to remain uncertain.

Jian tea bowls which are undoubtedly old can fetch quite high prices in auctions – several thousand pounds at least. If they have a documented history as Japanese tea ware they can command much higher prices. In 2015 a Jian tea bowl with a Japanese background sold in Hong Kong for a quarter of a million pounds. Of course, I paid only a minuscule fraction of that for my bowl.

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