

Roman Face Beads

In this project I have worked to develop the skills to produce face cane (or murrine) in order to reproduce a range of Roman style face beads. The process involves many stages, as the individual components must be created separately and combined into the final image, which can then be sliced and added to a bead design. In the following documentation I will document the process undertaken and discuss some of the relevant history. Please note there is very little information available specifically on this topic. I have used 2 main texts, but in the future would also like to access a text called '*Designs in Miniature: The Story of Mosaic Glass*', which is unfortunately not available from the Victorian State Library.

History:

The Roman period in glass ranges from 100 BC – 400 AD, but most authorities date Roman face beads to 1st Century BC – 1st Century AD¹. Glass factories were operating in Syria, Egypt, Italy, Switzerland, the Rhineland, France and England during this time. "Everywhere they went, they brought glass to trade."² Romans were known to trade as far a field as China, Iran and Ethiopia and due to this, similar styles of beads have been found in wide ranging locations.

Dubin states that Hellenistic Alexandria was a particular centre for the production of mosaic glass even before the Roman Empire. Intricate mosaic cane is believed to be produced here from 300 BC – 100 AD³. Liu points out, however, that there is little evidence of the workshops where such intricate cane was produced.⁴

During the 1st Century AD, several developments in glass technology, such as hotter furnaces and the blowpipe, occurred. While they did not directly relate to beadmaking, these positive influences caused the growth of glassmaking into a major industry at this time, and more glass was made this century than in the preceding 1500 years.⁵ During the later Roman period, the beads produced in European centres were often of inferior quality, but those produced in the Mediterranean region and in the Byzantine Empire continued to be of high quality.⁶ During the time that most face beads were being produced, the art produced in Egypt displayed a blending of Hellenistic culture with Egyptian themes. The cane images used on beads were often of Medusa and the Gorgon, but could be combined with Egyptian themes such as Lotus leaves and eyes with distinct Egyptian overtones.⁷

Mosaic beads in the Roman era were made with techniques which had been in use since the earliest days of beadmaking. Mosaic cane is thought to have been invented in Asia, and reappeared in Alexandria and Syria after 4 BC. It declined after 1 AD and was not revived until the 1500 in Venice.⁸ Dubin states that face cane was made by bundling coloured rods of glass in parallel rows so that the cross section formed a design. The glass would then be heated and stretched, fusing the canes together and miniaturising the design.⁹ While this is certainly a likely construction method for some mosaic cane, such as the chequerboard design, I do not believe that the majority of face cane was produced this way, as it is unlikely that smooth curves and clear lines could be formed without showing some of the shape of the initial rods. Liu states that composite mosaic cane and full face beads are made with a combination of hotworked mosaic canes (the method I have used) and bundled cold elements and monochrome canes, which are then bundled, fused and pulled together.¹⁰ This method allows for both straight edges and curved lines with no distortion that could be caused by bundling cold elements alone. *I have previously noticed that archeological reports sometimes describe process quite differently from someone who actually works with glass, for example describing a compound eye bead as having 'pre made' dots applied, rather than layers dots of glass as appears to be the case.*

Liu also described how observational samples have been found that show that the faces were built up from a rectangular cane consisting of the eyebrows, eyes and nose, with the upper and lower areas of the face made separately.¹¹ It is also likely that the central rectangle may have been assembled from several smaller canes in several stages.

¹ Robert K. Liu, *Roman Mosaic: Face Plaques and Beads*, Ornament, Volume 31, #5, p60

² Lois Sherr Dubin, *The History of Beads from 30,000 BC to the Present* Thames & Hudson, UK, 1987, p55

³ *ibid.* p 56

⁴ Liu, p 60

⁵ Dubin, p 57

⁶ *ibid.* p 57

⁷ Liu, p 60

⁸ Dubin, p 60

⁹ *ibid.*

¹⁰ Liu, p 62

¹¹ *ibid.* p63

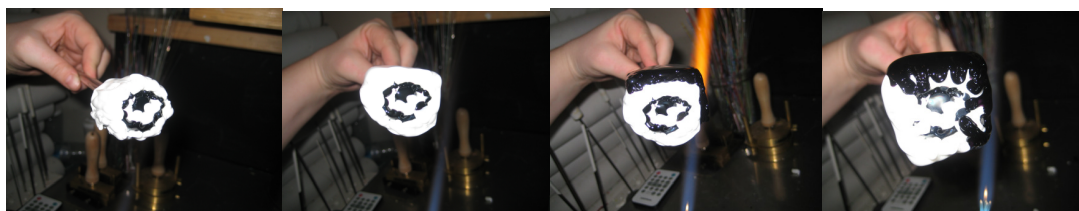
The commonality of time period, themes, colour and technique displayed in many of the face beads found, combined with how restricted the techniques for making intricate cane were, suggests that a limited number of workshops were producing the cane, and may have been supplying a wide range of beadmakers with the material.¹²

Process:

- To begin the process, you must sketch the design you wish to create, and plan which areas can be combined into one cane, and exactly how you will apply the glass. You need to plan this in advance, as it can be hard to visualize what the finished product will look like once you are working with the hot glass.
- The first step that I undertook, was to create a cane for the mouth, and a second cane for the eyes, eyebrows and nose. (In my first attempt, I did these areas separately too, but they work more effectively when created together). To create the eye, I took a full rod of black glass ('monochrome cane' as described by Liu) and encased it with white. I applied the glass by swiping it down the rod for about 5 cm, and building up the layers in this way. Once sufficient glass was added, I used a graphite marver to smooth the edges, and shape the white layer into the almond eye shape. I then changed back to black glass and encased the cane again, to add the black outline. In my earlier attempts, I completed the eye's separately, as shown here –

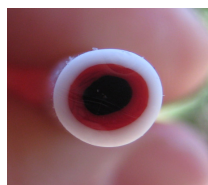


In subsequent cane, I created the eyes and nose together, built up as shown in the pictures below:



Once the design is complete, I have dragged some of the outside layer into the centre of the end, so that when I add a punty and pull the cane, all the areas receive tension equally, and the design will not be distorted as it is stretched.

- Once the cane is ready to pull, you must apply a punty on the end (I use rods of boro glass, which is a harder glass that melts at a higher temperature, so it is less likely to soften when you are heating the cane itself) and gradually build up an even heat into the core of the gather. Once you can feel movement, you can start to slowly pull the 2 punties apart, while continuing to add heat and control the speed of the pull. Too much speed will result in a very thin cane. As this is the first in several stages, I wish to keep the cane quite large, as it will be pulled again.
- The next step is to create the mouth which is a less complicated cane to produce. Black, red and white are layered and shaped. In this example, the mouth is round, but in the final cane, the mouth I used was a flatter oval shape.



- After each cane is pulled, I place it straight into the kiln, where it can be 'garaged' or kept warm until needed. As I made my face cane over several days, at this stage it was slowly cooled in the kiln to avoid cracking. The next day, I cut the cane into usable lengths, placed it in the kiln, which was slowly ramped up to the working temperature (520 degrees C).
- Once the cane was at temperature, I removed the first piece from the kiln – an eye, and attached it to my punty. I then built up a layer of white where the nose would be, before attaching the next piece. The eye/nose cane is to be applied for both eyes, by reversing the cane. This ensures the design is quite symmetrical and the pieces match up.

¹² Ibid, p 62

Once both eyes are in place, I encase the whole area in white, starting to shape the upper face. After applying a thin layer of white below the nose, I attach the mouth cane, again building up a layer of white encasing around it. I can then smooth and shape the external edge of the face, which at this stage is quite round. Once I am happy with the size and shape, I again drag some of the edges into the centre, 'punky up', and again pull the cane.



- This cane is again cooled in the kiln, and the following day I am able to use this one face cane, to create several different designs. I attach a piece to a punty and apply rows of glass to create the Gorgon's hair, or large, curved layers of black, to create the Medusa's long hair. Once the hair is complete, I can encase the face in layers of colour. This not only makes an interesting visual display, but helps keep the design in shape, as it is much easier to pull a round cane – other shapes may distort when pulled.



- The final stage is to cut the cane into slices. This can be quite difficult with glass nippers, as my face cane was larger in diameter than previous canes I had made. Ideally, once would use a glass saw to cut even slices – the straighter and thinner they are, the better the result when applied to the bead. The smaller ends of the cane however, cut well and were applied to the hot bead as part of the design, carefully marvered into place, with minimal distortion.



Some examples of extant Roman Face beads/cane:

