

Clay Lantern

by Lady Tangwystl verch Gruffydd

This lantern is one that could have been made in 12th century Iran. A lantern with cutwork allows light from the oil lamp inside to escape while simultaneously allowing air to get in and fuel the fire, as well as preventing strong winds from extinguishing the fire.

For the basic shape of the lantern, I used Image 1, from Nishapur, Iran during the early Islamic period (819-999 CE) as a model. For the decoration, I saw pictures of early Islamic pottery in Iran from the 11th to 13th centuries (Images 2 and 3) that had knotwork, so I created a knotwork design to use for the cutwork. For the glaze, I used a green glaze to simulate the green glaze ware that was common in the early Islamic period in Iran and was used on lanterns (as well as other items) from the 8th century² to at least the 12th century^{4,5} (Image 4). Finally, I created an unglazed lamp in the typical shape used for centuries^{3,4} (Image 5) to place inside of my lantern.

Methods/Techniques

In period, a lantern like this one would have been made on the wheel. Foot-driven pottery wheels had been in use for hundreds of years⁶, and the uniformity of the lanterns excavated in the area makes it likely that the base shape was made using a wheel. I do not have the skill required to make something of this size and shape on a wheel, however, so I instead used the more primitive technique of creating the base as a slab of clay and cutting a circle out of it, then building up the sides with coils, which were then smoothed together to form a smooth surface.

The dimensions of the lantern whose shape and structure I copied were 24.5 cm high by 15 cm wide. I made every effort to make my lantern close to that same size.

The top piece of the lantern was created separately and then placed in a hole left at the top and pressed together with plenty of scoring and slip to make a secure bond, just as the original was¹. Scoring is the method of drawing cross-hatched lines in the clay where the two pieces meet. Slip is a mixture of clay and water, usually the consistency of a wet mud, that is put over the scoring and used to help seal the pieces together so that they do not crack or come apart when fired in the kiln.

The designs on early Islamic pottery were often made using molds or stamps or drawn free-hand^{2,4}. The few cutwork lanterns that I have seen appear to have been done free-hand, as the designs are either not repeated or are not uniform. Because of the complexity of the knotwork design, it would have required a skilled artist to create the design on the clay and make it look uniform. I do not have the skill to draw complex knotwork freehand, so I printed the design on a piece of paper, cut out the design, laid it over the clay, and used a pin to poke holes through the paper and into the clay at important junctions. From there, I used clay knives and sticks of various sizes to make and smooth the holes in the clay.

While no tools from that period have survived, clay forming tools have changed little in a few hundred years, and it is reasonable to assume that there were similar tools at their disposal, particularly since the tools are very basic and simple. All that would have been needed is a thin-bladed object that was long enough to poke through the clay's thickness and narrow enough to make the small holes. Even a stick filed flat could have done the job.

After drying thoroughly, the red earthenware clay from Nishapur was fired at 950 degrees Celsius (1742 degrees Fahrenheit) in a wood-fire kiln⁷. In period, it may or may not have been "biscuit-fired" (fired before applying glaze and re-firing), as this was done on some clay wares². It was risky to put glaze on an un-bisqued piece, but it was also more expensive to fire the same piece twice due to fuel and labor costs². I believe that given the complexity of the design and the time it took to make such a complex design, the makers of such a piece would have been less likely to take a risk and would therefore be willing to fire it twice, as I did.

My pieces were fired in a modern electric kiln at 1888 degrees Fahrenheit (1031 degrees Celsius). I do not have access to a period kiln, and Mistress Oksana Goncharova, OL was kind enough to let me use her materials and tools as well as fire my pieces in her kiln.

I used a paintbrush to apply the glaze to the outside of the lantern and to the inside of the base. It seems likely that this same technique was used on the glazed lantern in Image 4, as the edges of the cutwork holes do not appear to have glaze on them, while the outside of the lantern and the floor of the lantern do.

The small oil lamp was made by pinching a piece of clay into the desired shape. Many adorned lamps like this in period would have been made using a two-part mold^{2,3}, but it is conceivable that some might have been made with this pinch technique due to its ease.

Materials

Pottery made from red earthenware (low-fire) clay, similar to what I used, has been found in this area and time period^{5,7}. The clay that I used is a modern commercial clay, but it is still a red, low-fire clay (Cone 05).

Green glazed pottery is very common throughout the early Islamic period^{1,5}. While the period glaze would have been a lead glaze^{2,5}, the green color created by using either chromium or copper⁷, I used a modern commercial (lead-free) glaze because I do not have experience making my own glazes. However, because the green glaze was put over a red clay, it ended up much darker than expected.

Complexity

In period, the artist would have had to be skilled at making a large vessel with a small hole at the top on the wheel. He would then have needed to have the artistry and math skills to create the knotwork so that it went around the lantern and met back at the beginning, for both the circle around the top, and the band around the sides. The two knotwork designs also needed to correspond so that they did not overlap. Once the basic layout of the knotwork was created, perhaps using lines extending from the center and/or a grid pattern, he would then have had to draw the knotwork before cutting out the holes in the correct places.

While I used a printed design, it was a design that I created myself, and just like a workman from a thousand years ago, I needed to make sure that it was the correct size and circumference for the lantern and that the two designs corresponded appropriately. I also had to make minor adjustments for curves when laying out my design on the lantern. I then had to make sure I had a large enough opening for the lamp to go inside, while still making sure that the design was not interrupted. Once the design was traced on, I had to make sure that I cut out the holes in such a way that the structural integrity of the lantern was not compromised. In all, this was a very difficult piece to make.



Image 1: Unglazed Lantern from 8th Century Nishapur, Iran^{1,4}

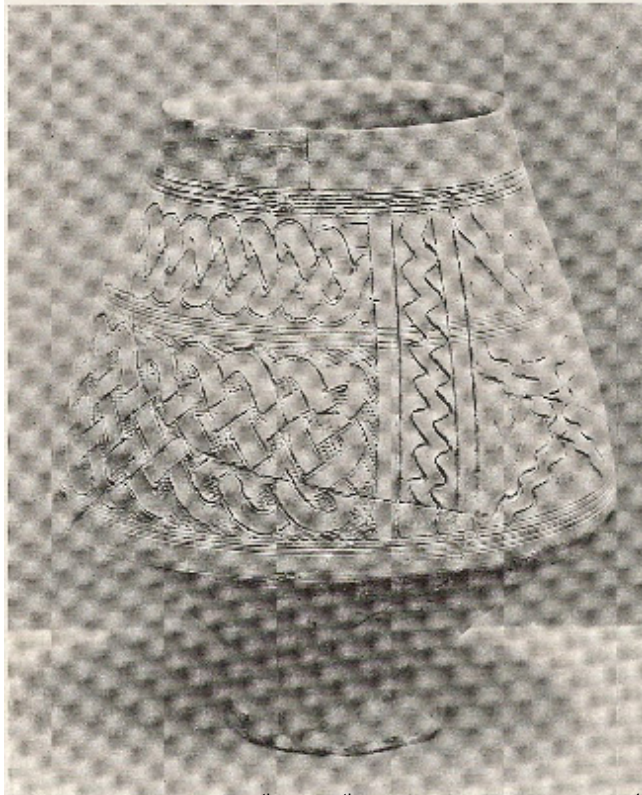
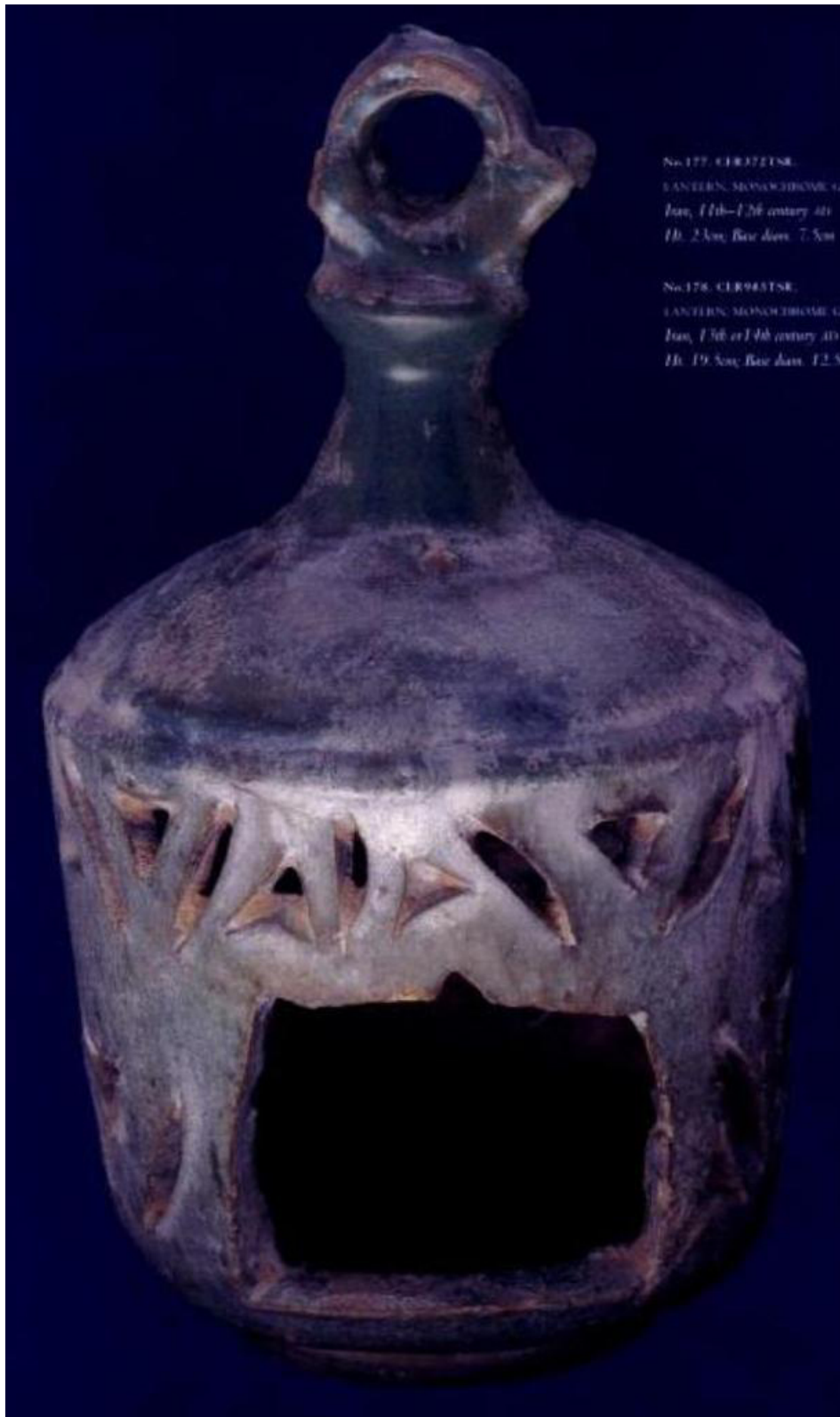


Image 2: Cup from 11th to 12th Century Nishapur, Iran¹.



Image 3: Jug from 12th to 13th Century Iran²



No. 177. CER 3721SR.
LANTERN, MONASTERY OF
Iran, 11th-12th century AD.
H. 2.5m; Base diam. 7.5m

No. 178. CER 943TSE.
LANTERN, MONASTERY OF
Iran, 12th or 13th century AD.
H. 19.5m; Base diam. 12.5m

Image 4: Green-glazed Lantern from 11th to 12th Century Iran⁵



Image 5: Collection of Oil Lamps from Rome and Middle East³

References

- ¹ Wilkinson, Charles K. *Nishapur: Pottery of the Early Islamic Period*. Metropolitan Museum of Art
- ² Watson, Oliver. *Ceramics from Islamic Lands*. Sheikh Nasser Sabah al-Ahmad al-Sabah, 2004.
- ³ "Ancient Roman and Islamic Oil Lamps." *Ancient Glass Blog of the Allaire Collection*. Aug. 8, 2011. <http://ancientglass.wordpress.com/ancient-roman-islamic-oil-lamps/>
- ⁴ Wilkinson, Charles K. *Iranian Ceramics*. Asia House Gallery, 1963.
- ⁵ Fehervari, Geza. *Ceramics of the Islamic World: in the Tareq Rajab Museum*. L.B. Tautis & Co. Ltd., 2000.
- ⁶ Lightbrown, Robert and Alan Caiger-Smith. *The Three Books of the Potter's Art*. Solar Press, 1980.
- ⁷ Keblow Bernsted, Anne-Marie. *Early Islamic Pottery Materials and Techniques*. Archetype Publications, Ltd., 2001.