Building a Clay Medieval Oven

After researching clay and brick ovens through antiquity, I decided to build one to see if it really worked as well as reported. I enlisted the help of my husband Tim Kincaid to help me build a base using salvaged bricks. I then used 2X10 boards to lay on top of the bricks, framed them in and up about two inches of sand on top of them. After that I set fire bricks into the sand.





Based on my research, the oven would have been constructed with clay, mixed with straw and sand. I had plenty of clay by my small pond, and lots of hay for the chickens, and purchased more sand. I read that some ovens were constructed over a structure of willow or other branches bent into shape, but I decided to use a different method. More on that later. The medieval ovens such as this would not have a chimney, as the fire was built inside the oven to heat it, then the coals were removed. The clay and bricks would hold the heat.

This was going to be a big undertaking, so I enlisted the help of the Barony of the Sacred Stone's Cooks Guild. They were more than happy to join in on the project and lots of fun ensued. After digging the clay from the pond, we dumped it on a tarp with sand and straw and mixed it with our feet. It was a lot harder than we thought but we eventually got the right consistency by adding water and the other ingredients as needed.





While some people were playing in the mud, I created a base to put the mud on by determining how high the dome of the oven had to be compared to the opening height. There's a formula for that to ensure proper heating and air current.



We stacked bricks on the platform in the shape of the dome and the opening then covered it in damp sand, forming the shape of the inside of the dome. So that we wouldn't have sand falling into our food when we used the oven later, we covered the dome of sand with damp paper towels.









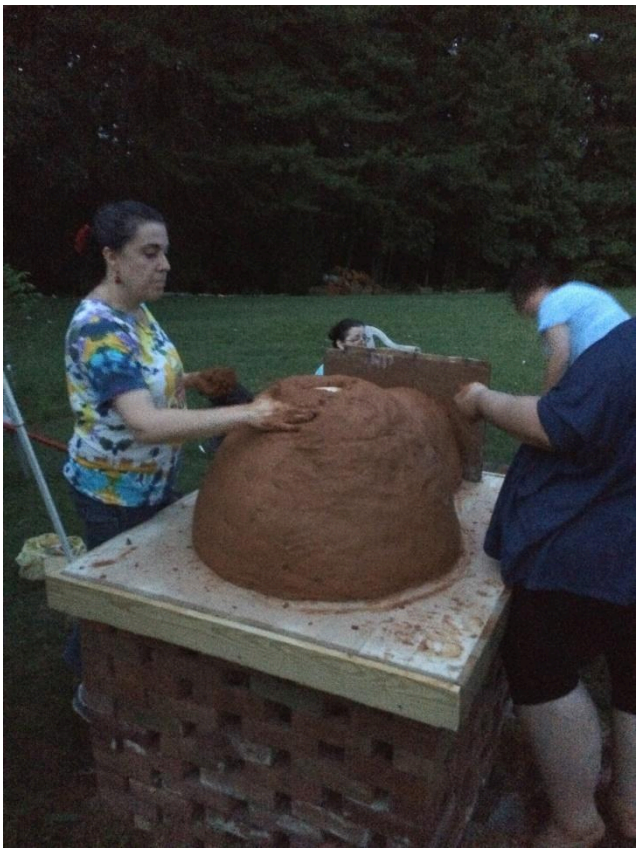


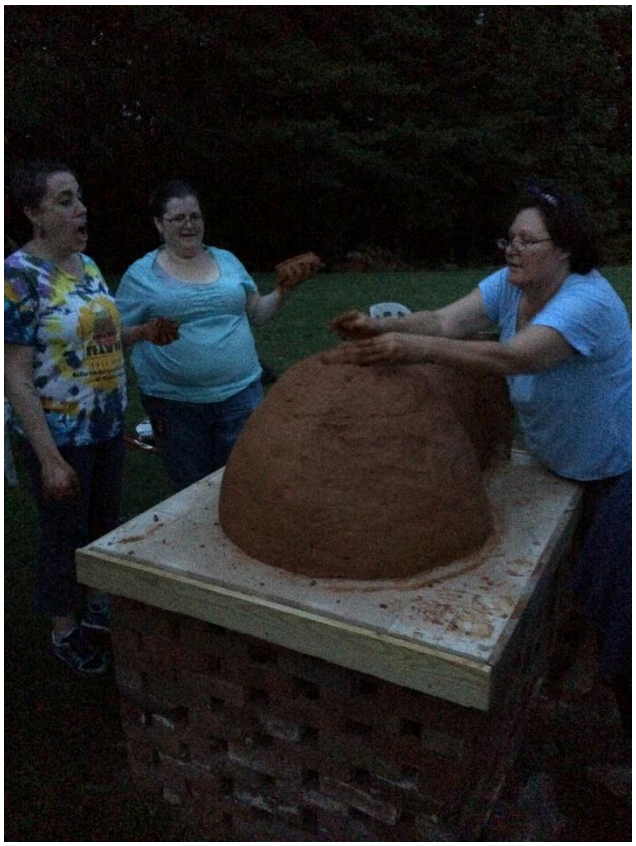
The mud bricks went over this sand structure. We scored the bricks well as we placed them to create a good bond with the brick next to it and used water to smooth out the seams.

The board in this picture is to ensure the front of the oven was flat, so that I could easily put a door on it. Typically, a wooden door was put in place after the items were put in the oven to bake. It was then sealed with dough or mud to seal the heat in.



This was an all-day project! We finally finished up as the sun was going down. There's me putting the final piece of clay on the top. There was no rain in the forecast, but I put the pop-up over it at night just in case. I let it dry for about six days before scooping out the sand and bricks that were on the inside.





After scooping out the sand and bricks, I lit a small fire to "cure" the mud on the inside and burn off the paper that was stuck to the clay inside of the oven. It took several more days to dry completely, but often clay ovens were used the same day they were constructed, if they used branches to build the support around instead of sand. I did not have nice flexible branches since most of my land contains oak and other hardwoods.

I tested the oven, and it worked GREAT! The Cooks Guild came over for an outdoor cooking day two months later and we put it to use.





On the left is a giant meatloaf and on the right is pumpkin bread coming out of the oven. From what I've read, the item that needed the most heat was put into the oven first, then when that was done other items were put in. Lastly, herbs or such were put in the oven to dry on the last of the heat.

I got the oven up to 500 degrees and it dropped 10 degrees every 15 minutes, so the clay and brick are doing their job. It takes about two hours to get to about 400 degrees.

I decorated the top of the oven with beach stones for the fun of it. I kept a tarp over the oven but later covered it with quick lime, as was done in period. Unfortunately, I did not let it cure properly (the lime has to cure slowly to become hard and waterproof), and the lime ended up flaking off. I will do it properly at some point in the future.



I found out later that the wood should not be stored in the front as it is shown below. Since you have to scoop out the coals, they have the potential to set your wood fire alight. However, I scoop the coals into a metal bucket, and the wood below the oven looks cool.

Documentation on separate sheet.

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