

Recreating Bread from Neolithic Çatalhöyük

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Introduction

Bread composed a large part of the diets of people from the Neolithic in West Asia and the Middle East. One such location was the village of Çatalhöyük, which was populated between the 8th and 6th millennia B.C.E, and was located in a marshland in what is now South-central Turkey (Atalay 2006, 288). Carbonized remains provide evidence that people milled a variety of grains into bread, especially during the earlier periods of Çatalhöyük's occupancy (Carretero 2017). They would have prepared it as an unleavened flatbread, and baked it in small, household ovens (Atalay 2006). According to paleoethnobotanical evidence, the grains at the site included emmer and einkorn wheat, varieties of barley, peas, and lentils (Atalay 2006). These would be dried and kept in storage and ground and sieved into fine flours. The goal of this project is to examine the bread of this ancient community in hopes of better understanding daily processes at Çatalhöyük.



Barley bread cooking on a pot.



Location Map of Çatalhöyük

Methods

Recreating Çatalhöyük's bread started with research into the different ingredients that would have been available, based on paleoethnobotanical evidence that was found throughout the extensive excavations at the site. This evidence forms much of the backbone of most of the literature which was used during the research for this project, including the Carretero 2017 and Atalay 2006 papers. The ingredients chosen were einkorn wheat, barley, and lentils. These ingredients were chosen because of a combination of accessibility and being common ingredients at Çatalhöyük. Wheat and barley were the most common types of grain at Çatalhöyük, and einkorn was a commonly used type of wheat there. Other varieties of wheat were also used, such as emmer and spelt, but einkorn was by far the most readily available. Lentils and peas were both relatively common in Çatalhöyük, and their inclusion was mostly to investigate what methods can be used to make a bread from a pulse, so only one was needed. The lentils were prepared in two ways; some were soaked and then mashed, the rest were ground into a fine flour.

These ingredients were used to make six kinds of bread: pure einkorn, barley, soaked lentil, ground lentil, a soaked lentil/einkorn mix, and a ground lentil/einkorn mix. The combination was chosen to simulate the possibility of mixing grains together. To simulate the household ovens from Çatalhöyük, I used a variety of traditional baking techniques including a wood fire brick oven and under a clay pot adjacent to a live fire. As a control, I baked samples on a modern gas stove griddle. Notes on taste, texture, dough feel, and necessary amounts of water were taken as the loaves were made and tested.

Results

Dry Ingredient	Dough Texture	Proportions	Taste	Texture
Einkorn	Elastic, flexible, stretchable.	102g einkorn flour 65g water	Bran, mild.	Depended on thickness- thin was crackery, thick was chewy.
Barley	Soft, moldable, but not elastic.	109g barley flour 76g water	Mild	Chewy, didn't puff up much.
Milled lentil	Crumbly, moldable.	83g lentil flour 60g water	Earthy	Sandy, crumbly.
Soaked lentil	Delicate, wet.	80g soaked lentils, drained and mashed	Earthy, complex	Dense
Milled lentil/einkorn	Flexible, not stretchable or elastic.	54g lentil flour 61g einkorn flour 50g water	Bran, earthy lentil taste.	Similar to einkorn.
Soaked lentil/einkorn	Elastic and flexible.	23g soaked lentils 40g einkorn flour 20g water	Bran taste, complex lentil taste.	Similar to einkorn.



Top: Einkorn dough
Bottom: Einkorn/soaked lentil dough.



Top: Milled Lentil/einkorn dough
Bottom: Milled lentil dough



Soaked lentil dough



Barley dough

Discussion

Unfortunately, the oven and pot cooking were less successful than hoped. The oven should have been allowed to have an active fire going to allow for a much higher temperature, and the pot should have been kept in hotter coals. As it was, the oven peaked at 350F and lowered down to about 320F. Further tests may be done.

Generally speaking, the bread was dense and filling, and would have suitably served as meals in their own rights, but are simple enough to fit alongside any other foods that would be served with them. Future work could be done to attempt to determine the sizes and shapes of the loaves that were made in Çatalhöyük, possibly through attempting to create similarly shaped carbonized remains.

Conclusion

Both the cooking method and grain choice had major impacts on the way the bread cooked, what it would have been useful for, the texture, flavor, and everything else. It would have been very possible to have a diverse range of foods, even with just these few ingredients. Of course, more foods than grains and lentils were used at Çatalhöyük, but bread would have accounted for a major portion of the diet. They aren't terribly labor-intensive compared with other forms of food, with the main work being in milling the grains rather than cooking. Milling would likely take up a long time, which could have been passed with socializing or storytelling activities.



Top left to bottom right: Milled lentil, milled lentil/wheat, milled lentil/wheat, soaked lentil/wheat, wheat, barley, soaked lentil. Oven baked.



Top Left: Einkorn. Top right: Barley. Bottom left: Soaked lentils. Center: Milled lentil. Bottom right: Soaked lentil/einkorn. Skillet cooked.

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Map Referenced:
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