Making Millet Bread

Giulia Chiostrini

Columbia University Student

Jef Palframan

Columbia University Student

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Abstract

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Abstract

The entry "For Making *Millas*" (fol. 20r (http://edition640.makingandknowing.org/#/folios/20r/f/20r/tl)) describes how to make *millas*, a type of millet bread, and bake it using terracotta molds. The purpose of our historical recipe reconstruction is to investigate the original identity of the dish *millas* in relation to the background of the anonymous author-practitioner, and to analyze the recipe alongside relevant contemporary and modern sources.

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Introduction

The entry “For making

millas

” (fol. 20r (http://edition640.makingandknowing.org/#/folios/20r/f/20r/tl)) describes how to make *millas*, a type of millet bread, and bake it in terracotta molds. Drawing on contemporary and modern sources, we undertook a reconstruction of this recipe to investigate the original identity of *millas* in relation to the background of the anonymous author of the recipe.

The Text and Interpretation of the Recipe

The recipe, which is written in a different hand from most of the rest of Ms. Fr. 640, is clearly structured in two paragraphs under the title “For making

.” The first paragraph lists the required ingredients and describes how these must be prepared. In the second paragraph, the technology needed for the actual baking process is discussed, including a specific type of terracotta baking mold.

The recipe’s primary ingredient is millet grain. The baker is instructed to “remove the husks and then [...] clean it well.” Millet is widely grown in temperate countries and regions with poor soil, and its seeds can be ground to produce coarse flour.1 The recipe continues, “it is necessary to mix the flour with melted fresh butter and milk, and that there be as much of one as the other, in such a manner that it is very light in color, like the dough to make fritters.” This reference to fritters, or beignet pastry, might be a helpful comparative reference for contemporary readers or bakers, signaling to them when the *millas* dough was ready for use. For modern readers, further research is needed to understand the allusion, as this type of pastry has changed in preparation since the sixteenth century.

Beignet pastry does not appear in the most obvious contemporary source, François Pierre de La Varenne’s 1651 *Le*

patissier françois.2 Thus we relied on a modern Italian online source that describes how to cook beignet pastry using an oven rather than a deep fryer (as is the general modern practice).3 This corresponds to the method used in the *millas* recipe. The writer of the *millas* recipe assumes a reader will already know the appropriate proportions of flour, milk, and melted butter. The recipe specifies "two egg yolks [are needed] for each *millas*," from which the reader is supposed to deduce the amount of flour needed. Similarly, saffron is suggested as a colorant, but the amount used or depth of dye to be achieved is not specified. The reader is assumed to know what the pastry should look and feel like before baking.

In the second paragraph, the recipe provides more detailed instructions about the material and shape of the baking mold required. This suggests that the writer expected readers to be more familiar with the type of bread being made than with the specific shape of the bread and the baking technique of the recipe. It calls for "molds, and it is necessary that they be earthenware, in the fashion of the crown [*fons*] of a catholic hat, but it is necessary that they be open at both ends." This odd terminology requires some consideration. Excluding symbolic

or slang meanings, it most likely refers to the shape of certain sixteenth-century hats fashionable among Catholic priests. Among these, we can identify the *zucchetto*, the *biretta,* and the *Camauro*. It is most probable that the last of these is intended.4 The small, hemispherical shape of the *zucchetto* could not contain enough dough if "open at both ends." The square, horned *biretta* hat would make a creative shape for a baking mold, but the recipe explicitly advises to use a mold open at both ends, which implies cutting off the horns. A terracotta version of a *camauro* hat, though, would produce a practical cylindrical shape, tall enough to contain a certain amount of material and with a large bottom [*fons*] (*Fig. 1*), that is the "crown," or the internal area in contact with the head during wear, which could easily be filled "with the aforementioned dough" if it were open at both ends (*Fig. 2*).5 In addition, since the fifteenth century, the *Camauro* hat was exclusively worn by popes, making it "the Catholic hat" most easily recognized at all levels of society (*Fig. 3*).

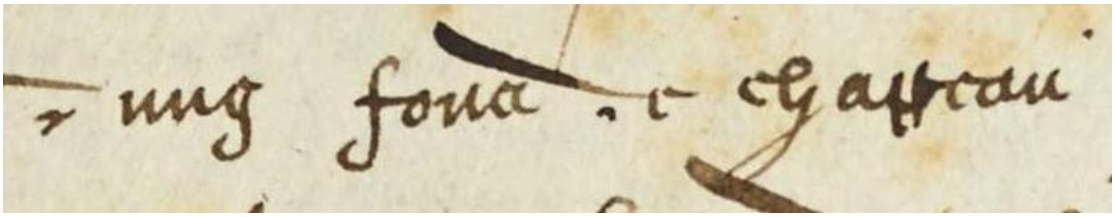

Fig. 1. "*Fons de chappeau*" in the text of the entry, Ms. Fr. 640, fol. 20r. Bibliothèque nationale de France, Paris. Source: gallica.bnf.fr.

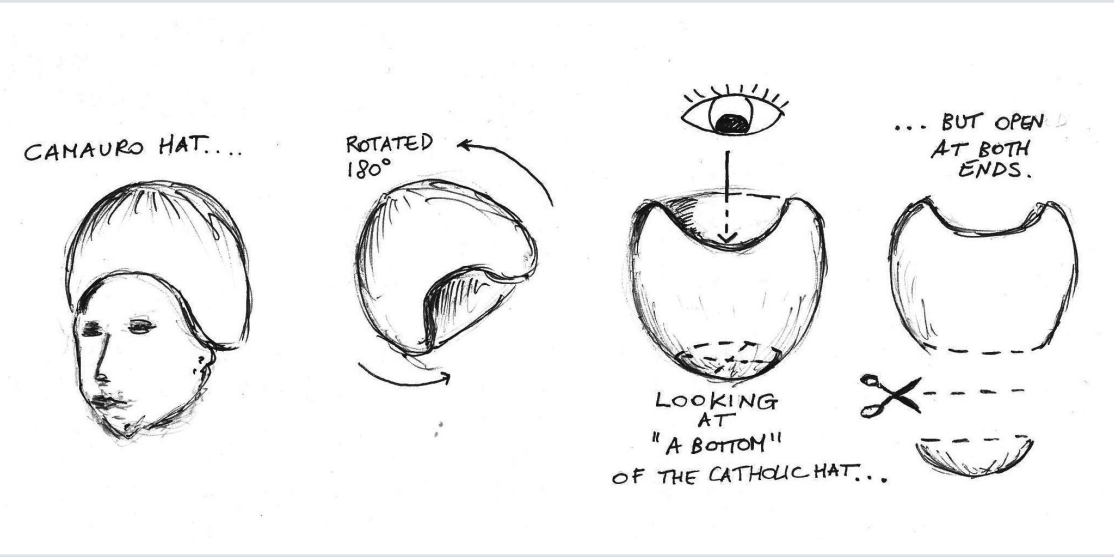

Fig. 2. Drawing of the *Camauro* hat used as a mold. Giulia Chiostrini and Jef Palframan, 2015. Left to right: the *Camauro* hat as shown in Fig. 2; the hat turned upside down; its crown, the internal part in contact with the head during wear; finally, the removal of the crown to create a mold in the shape of a *Camauro* hat but open on both ends.

Fig. 3. Nicolaus Van Aelst. *Portrait of Pope Sixtus V*, 1589. Etching and engraving, 50.9 x 35.5 cm. The Metropolitan Museum of Art, New York, Elisha Whittelsey Collection, Elisha Whittelsey Fund, 1949, 49.95.146. This image shows a portrait of Sixtus V wearing a *Camauro* hat. Permalink: https://www.metmuseum.org/art/collection/search/369588 (https://www.metmuseum.org/art/collection/search/369588)) (CC0 1.0 (https://creativecommons.org/publicdomain/zero/1.0/)).

The baker is directed to keep the mold open on both ends, indicating the dough was poured inside the cylindrical mold and placed directly on the flour-sprinkled oven surface. The recipe also provides a detailed description of the lid used to cover each mold. In the same shape as the mold, but larger and closed on the top, the lid allowed the baker to place “a little hay [...] and plenty of embers” on the mold, while a charcoal fire was set around it.

Although this analysis of the recipe text and terminology helps in visualizing the appearance of the final baked *millas* and clarifies that its finished consistency was probably hard, it is still not clear what *millas* actually was. Millet was, historically, an ingredient used in savory dishes. In southern France, as well as in Italy, locally available millet or barley was cooked with milk to make polenta or bread until maize was introduced to Europe in the sixteenth century.6 Consumption of the new grain spread rapidly, especially in southern Europe, and, as it replaced millet and barley, maize polenta became a dish consumed by a variety of social classes.7 By the end of the sixteenth century, the writer of this recipe could have been aware of maize as an alternative,8 but the eating of millet also continued, since some physicians

preferred that people stick to familiar foods.9 A contemporary source, Bartolommeo Scappi's *Opera* (1570), uses millet or "panico" in the recipe "Per far la minestra di miglio e panico infranto."10 In this recipe, millet is presented as a good grain with a stronger taste than wheat.

The replacement of millet with maize was also linguistic. In many southern European dialects, the word used for the new grain was simply a variation of "millet." For example, in the Occitan dialect spoken in Toulouse, where the author-practitioner probably lived, "maize" was called "millette."11 This raises the possibility that the recipe is actually referring to maize, not millet. However, the text clearly calls for "*millet*" not "*millette*." While the words are similar and confusion is possible, millet rather than maize still seems the most likely ingredient. This is reinforced by the existence of a modern southern French dish, now made with maize flour and sugar, "*millas, gateau du Sud-Ouest*," that apparently was made by mixing locally available millet flour and water in the sixteenth century.12 Today it is served both as a savory and as a dessert dish, and has the consistency and taste of Italian maize polenta.

Experiments

After studying this recipe, we decided to experiment with three versions: one using only the ingredients directly mentioned in the recipe, and two adding either salt or sugar.13 The addition of one of these two ingredients might have been assumed by contemporary cooks. Salt in particular might be implied, as in the sixteenth century it was consumed by all classes. Sugar is less likely to remain a “silent” ingredient, as it (like saffron) was still enough of a luxury to deserve specific mention.14 However, we were curious to experiment with the information provided in the modern recipe mentioned above and to explore the origins of this French millet flour dessert in a sixteenth-century southern French culinary tradition.

In all our experiments, we used the following basic ingredients and instructions, combining the information given in the recipe on fol. 20r (http://edition640.makingandknowing.org/#/folios/20r/f/20r/tl) with quantities specified in a modern recipe for beignet pastry: take 3 cups of flour from ground millet, 2 egg yolks, 3 tablespoons of melted butter, 1 cup of milk, a large pinch of saffron, and enough pork lard or butter to grease the molds. Pour the flour into a medium bowl, and mix it with the egg yolks and the milk. Melt the butter

on a low fire, and pour it into the center of the flour mixture. Stir the ingredients until the dough softens. Add a fair amount of saffron to give color to the dough. Grease three molds generously. Place two tablespoons of dough into each of the molds and cover with a lid. Place in a preheated 350 ° F oven for 30 to 40 minutes, until the dough is golden brown.

Apart from our molds (of which more in a moment), we used the same basic cooking equipment for all three experiments. It was clear from our first reading of the recipe text that we could not use the hay and charcoal it specifies inside our oven due to safety considerations, which naturally affected the authenticity of the results.15 Other equipment was easier to incorporate. A traditional ceramic mortar and pestle, for instance, was used to grind the millet (*Fig. 4*).

Fig. 4. Beginning the grain grinding process. Giulia Chiostrini and Jef Palframan, 2015. © Making and Knowing Project (CC BY-NC-SA (https://creativecommons.org/licenses/by-nc-sa/4.0/)).

For each version of the reconstruction, the physical challenge of grinding a large number of the tiny seeds was surprisingly tiring. The ground seeds had to be very fine in order to pass through a cloth sieve as described in the text. Several layers of cotton cheesecloth were used to extract the finest flour from the ground

seeds. This first step of the process required focused, time-consuming labor, and the flour thus obtained was still characteristically coarse and heavy (*Fig. 5*). This step of our recipe reconstruction raised questions about the average sixteenth-century French peasant's use and consumption of grain.

Fig. 5. Left to right: the small amount of flour recovered from a cup of ground grain after being passed through a single layer of cheesecloth; the same amount of flour passed through three layers of cheesecloth. Giulia Chiostrini and Jef Palframan, 2015. © Making and Knowing Project (CC BY-NC-SA (https://creativecommons.org/licenses/by-nc-sa/4.0/)).

A few types of mortars are listed among the cooking utensils at the beginning of Scappi's *Opera*, while just one single mortar is included in the kitchen equipment owned by a fifteenth-century French peasant discussed by Le Roy Ladurie.16 Mortars could be used to grind grains as well as spices, but none of Scappi's

sophisticated recipes include instructions related to grain grinding. By contrast, the recipe on fol. 20r (http://edition640.makingandknowing.org/#/folios/20r/f/20r/tl) explicitly instructs to clean the millet grain from its chaff and grind it very finely. Therefore, we assume that "For making *millas*" has its origins in a rural environment, where the population produced and consumed its own product.17 According to Le Roy Ladurie, in sixteenth-century rural France, the annual quantity of grain produced for sale was very low. Most of the grain collected during the seasonal harvest was stored in bins by local farmers and consumed within the family. It is even more interesting to note that in the early seventeenth century, when maize became profitable in the markets of the Toulouse region, French peasants were still keeping millet exclusively for their own consumption while simultaneously producing maize for sale.18

These historical considerations offer us a clue about the rural and modest economic context within which *millas* bread was most likely baked and consumed. From this perspective, our experiment with adding expensive, luxurious sugar seemed less valid. However, as shown later in this essay, the third, sweet version of our baked *millas* actually helped us better understand

the phenomenal success of maize in the early seventeenth-century grain market.

Our most puzzling challenge in executing the recipe was reproducing the terracotta molds and their lids. Initially we attempted to purchase a suitable terracotta item, but it was impossible to find an appropriately shaped piece. We therefore decided to buy commercial clay and make our own molds, focusing on the reconstruction of the original shape according to our interpretation of the author-practitioner's description.19

For our first experiment, we made three different molds to test our ability in modeling the clay. We made one mold in the shape of a *Camauro* hat open at both ends, foregoing a lid because we did not yet clearly understand the text concerning it.20 The second mold we formed in the shape of a small plate with a round lid. The third mold we made in the shape of a flower with large open petals. This mold was also baked without a lid (*Fig. 6*). Once the molds were formed, we turned to making the dough. In this experiment, the proportion of ingredients we used led to a "light" dough that was probably still too dense for our purposes. After we greased the molds well with butter and filled

them with dough, we put them in the oven. All three versions produced a pleasant and appealing aroma during baking.

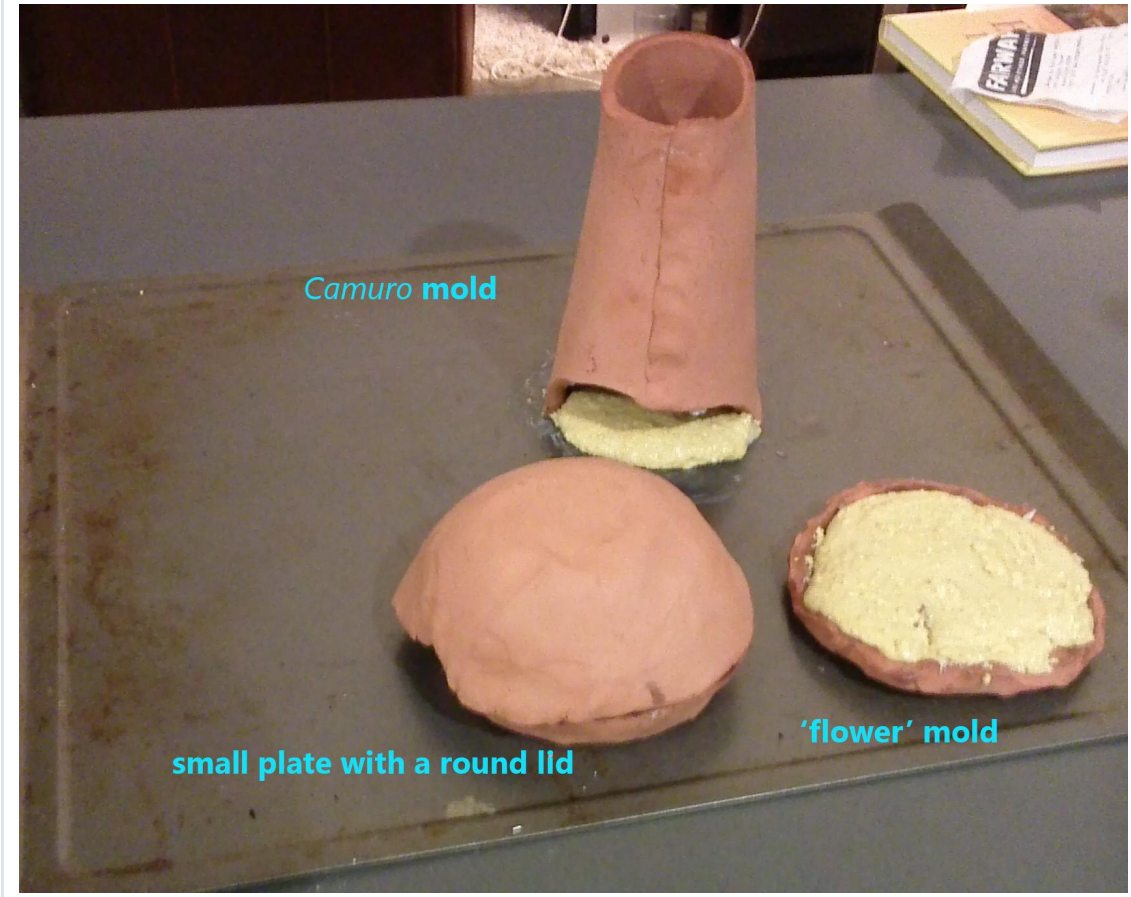

Fig. 6. The three terracotta molds filled with *millas* dough before the baking process. Giulia Chiostrini and Jef Palframan, 2015. © Making and Knowing Project (CC BY-NC-SA (https://creativecommons.org/licenses/by-nc-sa/4.0/)).

Our first *millas* tasted good at first bite, but a bitter aftertaste soon changed our perception (*Fig. 7*). We surmised that the bitter taste might have been caused by our not having soaked the grain before grinding it, since we discovered that according to

modern nutritional literature soaking millet is an important step. It reduces the unpleasant taste, removes phytic acid, and makes it easier to digest.21 Apparently this practice was also known in the early modern period. In Scappi's treatise, for example, most of the recipes that involve the use of any kind of grain begin by instructing the reader to soak it in water for "ten hours" before mixing in other ingredients.22 Reflecting this, in our last two experiments, we soaked the millet overnight in a large bowl of water, with enough liquid to completely cover the grains. Though the bitter aftertaste was diminished, it did not really disappear from our baked *millas*, suggesting one possible reason why in the sixteenth century maize swiftly replaced millet for making certain dishes.

Fig. 7. The baked *millas* in the *Camauro* mold resulting from our first experiment. Giulia Chiostrini and Jef Palframan, 2015.

Adapting the instructions in the modern French recipe "*millas, gâteau du Sud-Ouest*," we made our next two batches of pastry with less millet flour but with a large amount of boiled milk: 3 cups milk added to the 3 tablespoons of melted butter and 2 cups of ground millet flour. We added ¼ cup of salt to the second trial and ¼ cup of sugar to the third. The 2 egg yolks were added to the dough once it cooled down, before pouring it into the mold and baking it as described above in our basic methodology. In both cases, the consistency of the pastry was creamier than that of our first experiment (*Fig. 8*).

Fig. 8. Left to right: in our first experiment the dough's consistency was light but still dense; in our two last experiments the consistency of the dough was light but creamy. Giulia Chiostrini and Jef Palframan, 2015. © Making and Knowing Project (CC BY-NC-SA (https://creativecommons.org/licenses/by-nc-sa/4.0/)).

We decided to use only one of the previous molds. Further reading and better understanding of the recipe text supported our choice of a mold in the shape of "the crown of a Catholic hat" (presumably a *Camauro*), while a larger lid made of the same red clay and closed on the top was constructed and used (*Fig. 9*). We sprinkled flour on the surface of the oven tray, and placed onto it the mold previously greased with butter and open at both ends. We poured a small amount of pastry into the mold and used the lid to cover it. After baking, both salty and sweet *millas* came out of the oven golden brown (*Fig. 10*). The pastry became hard after a bit of time, and the end of the recipe notes that the *millas* should be hard. Although over the course of our

experiments we doubled the amount of saffron from one single small bag or pinch, we did not notice significant changes in dough color. Further trials should be done in order to establish the necessary amount of saffron.

Fig. 9. Left to right: our final reconstruction of the *Camauro* mold; its lid; the two pieces placed together, before covering the lid with a flat piece of clay. Giulia Chiostrini and Jef Palframan, 2015.

Fig. 10. The baked *millas* resulting from one of our last two experiments in the *Camauro* mold. Giulia Chiostrini and Jef Palframan, 2015.

The taste of the salty *millas* resembled common polenta, while the sweet version had no flavor beyond a hint of sugar in the first bite, suggesting perhaps that the original *millas* was intended to be savory. The addition of the salt to the *millas* dough did not noticeably affect the flavor when compared to that baked strictly according to the recipe's instructions. Thus, the recipe on fol. 20r (http://edition640.makingandknowing.org/#/folios/20r/f/20r/tl) may in

fact be complete, not necessitating the reader to bring any prior experience to it.

Conclusions

In addition to our experiments, we also focused on the location of “For making

millas

” within the manuscript, since there are no other culinary recipes in Ms. Fr. 640 concerning millet grain or *millas*.23 On fol. 19r (http://edition640.makingandknowing.org/#/folios/19r/f/19r/tl), an entry entitled “Clysters” precedes the culinary recipe under discussion, while an entry entitled “Glassworker” follows it. These three entries from three different fields (medical, culinary, and technical) are presented in succession, reflecting the manuscript’s sometimes seemingly random ordering of its contents. In these three entries, differences in the formulas of the texts reveal something of the author-practitioner’s “identity” as an artisan, or as an observer of the practices he describes.

The “Clysters” entry is described from the perspective of an observer, using an impersonal “one” (*on*) to refer to the people

actually executing this medical technique, though the author-practitioner also comments that “it is true that it always causes wind at the end,” suggesting he had first-hand knowledge of the technique. In the “Glassworker” entry, the author-practitioner is not only knowledgeable about the technique of making plate glass, but he is may even have had practical experience with it, for he uses specific adjectives to describe different types of glass that would not necessarily have been known to a casual observer, as in, “glass from Lorraine is smoother & more even than plate glass.”

In the case of “For making *millas*,” the writer follows a formula common to contemporary culinary recipes.24 As was normal at the time, the recipe does not provide quantitative measurements for its ingredients, but it does give clear instructions on technique in the imperative and concludes with information about the desired consistency of the baked *millas*.25 The author-practitioner was not likely employed as a cook, but he was obviously familiar with explaining how to perform an unfamiliar process and had probably personally eaten the end results of this one.26 He probably also had a personal connection with *millas* via the culinary tradition of his apparent location in southern

France, and he seems to assume the readers come from a similar cultural context. For instance, he assumes readers will understand references to molds shaped like the crown of the Catholic hat and the qualities of the "dough to make fritters." Because this entry is in a different hand from most of the rest of the manuscript, we may speculate that the author-practitioner collected this recipe, perhaps asking an acquaintance or a scribe to write it in his book.27

In conclusion, our experiments and research gave us the opportunity to sensorily and intellectually "taste" *millas*. Although further study is required for a better understanding of the original identity of this dish within its traditional culinary context, our initial analysis of the recipe text provides clues to the author-practitioner's background, contributing to a better comprehension of the manuscript within its historical and cultural contexts.

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