

ANE 103: Ancient Lives
Instructor: Gojko Barjamovic
TF: Ari Schriber
Vanessa Li
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Documenting the Process of Ancient and Contemporary Beer Brewing

As part of the journalism team for Ancient Lives, I decided to create a photo series to illustrate the course of Project C: beer brewing. This set of 30 best photographs serves to showcase the methods as well as the details in procedures conducted by the brewing team. Beyond the final written report and data collected from the experiments, these images give an additional visual dimension of understanding to the process that the students undertook over the course of the semester. It also acts as a document of other aspects of the process

My main role as a photojournalist was to document the brewing team's efforts. To best capture every step of the process, I had to document all the labs as well as outings, such as our visit to the Aeronaut brewery in Somerville. To best suit the different environments, I used a variety of lenses accordingly. For instance, during most of the lab sessions, I used an 18-55mm zoom lens to be most versatile in capturing the whole scene as well as the small details. When the final products had come to fruition, I used an 85mm lens to better capture close-ups of texture of the brews.

At the end of the project, I had taken around 340 images with an average of 50 per lab session or event. From this collection, I had to choose 30 best ones to represent the process. The three main factors that I considered in making this decision were content relevance, aesthetic principles, and how effective the image was at communicating the process. By aesthetic principles, I am referring to composition, lighting, and balance of the photograph between subject and surrounding space. Additionally, I considered the ratio of images in each step of the project to ensure that no one part was over-represented nor under-represented. My final selection of 30 images strive to meet these visual standards while serving to inform the viewer about the scientific principles behind the experiments.

Please see below for the procedures and findings defined by the brewing team from their final report as a reference guide for the photo series.

Ancient Lives brewers attempted to mimic the process of ancient as well as modern brewing, for comparison.

- We boiled large pots of water to kill off any bacteria or germs
- We soaked malted barley in water for 60 minutes at 165 degrees Fahrenheit to create the “mash” solution.
- We boiled the mash for 60 minutes, adding either hops (modern brew) or date syrup (ancient brew) at 30-minute intervals throughout.
- We pitched the mixed yeast (modern brew) or sourdough yeast (ancient brew) into the boiled mash solution and fermented for 2 days (ancient brew) or 2 weeks and 3 days (modern brew).
- Upon completing the brews and testing them on alcohol content, pH, taste, color, and flavor, our results compared quite well to what we would have expected from ancient texts.
- Testing the pH with litmus strips, we found that our ancient beer had a pH of about 4 while our modern beer had a pH of around 5, fulfilling our expectations that ancient beer is relatively more acidic than modern beer due to its sourdough yeast (tested pH of 3.5) and its lack of bitter hops.
- In terms of alcohol content using a tool known as a hydrometer, we discovered that the ancient beer had an alcohol content of around 1.4% versus the modern beer with an alcohol content of 6%, also in tune with our expectation that ancient beer would be much less alcoholic due to its relatively short fermentation time¹.
- Finally, in terms of taste, color, and flavor, our ancient beer had a relatively mild, watery taste with a hint of date flavor, compared to our modern beer which had a much stronger and “maltier” taste.
- On the “Standard Reference Method (SRM)” ale, a standard color scale used by most brewers that ranges from 1 (extremely pale/yellow) to 40 (black), our ancient beer had a very pale yellow, straw-like color (~3 on SRM scale) compared to our modern beer with a dark yellow, medium amber-like color (~9 on SRM scale). Therefore, in terms of taste, color, and flavor, our results also seemed to match with what we would have expected.
- Flavored with the likes of date syrup and only fermented for a short period of time, ancient beer would have probably tasted quite mild and diluted with hints of dates as described above.
- On the other hand, modern beer would have tasted much stronger and more bitter due to its higher alcohol content and bitter hop addition. In summary, our results corresponded almost directly with our cultural expectations—ancient beer was more acidic, less alcoholic, and more mild in taste than its modern component.