

## A PINT OF THE PAST: ASSESSING AUTHENTICITY IN MODERN VERSIONS OF ANCIENT AND HISTORIC ALES

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### Introduction

Authenticity is a topic of continual debate in the field of gastronomy. How can we know whether so-called ‘authentic dishes’, one’s which claim to capture the exact qualities of certain food from the past, are what they are purported to be? Is it an unachievable task to begin with, since the vagaries of ingredients and implements from bygone days are difficult to replicate? In 2009, Chris Kimball, the founder of America’s Test Kitchen in Boston, attempted to recreate a twelve-course Christmas Dinner held by American culinary icon Fannie Farmer in 1896.<sup>1</sup> The subsequent book and documentary film *Fannie’s Last Supper: Re-creating One Amazing Meal from Fannie Farmer’s 1896 Cookbook* record a three-hour ‘Iron Chef’ style attempt to make this exact meal, in ‘a Victorian kitchen complete with an authentic 1880s coal cookstove’.<sup>2</sup> Certainly the setting for the dinner was authentic, only a few houses down from, and similar to, Fannie Farmer’s abode, so the endeavor was promising from the outset.

While watching a short video on the projects’ website, however, I was struck by the inconsistencies that abound in only a three and a half minute clip. Mr. Kimball states,

To build this culinary time machine ... let’s go back and cook that food. Not just cook the food, but cook a lot of variations of it and let’s research it and see what different people did. [Promising as far as authenticity goes, but he continues] and then even work with and try make to make it even better by modern standards. That’s going to tell us

a lot about who those people were I think and what life was like for them because just looking at a recipe doesn’t tell the story.

If modern standards are considered, or even used, is the result authentic? Does that tell us what late Victorian era Americans were like? The longer documentary reveals other lapses in authenticity, including the use of modern ingredients in place of some that appear in Fannie Farmer’s recipes.

The question of authenticity also exists in the world of beer, particularly in the current age of craft beer and microbreweries. Some individuals, such as Dale Jacquette, Professor of Philosophy at Penn State University, liken the perfect pint to ‘a metaphor for a deeper thirst for authenticity. A properly poured glass, served at the right temperature, with just the right balance of hops and malted barley, refreshing and fortifying, like truth itself, is something pure and worth pursuing for its own sake’.<sup>3</sup> Others, such as Garrett Oliver, the brewmaster at the Brooklyn Brewery in New York City, apply authenticity as a means of questioning where the American mass-market beer industry has taken beer. Using the 1999 film *The Matrix* as his lead into the subject, Oliver points out the simulacra of food and beer that abound in today’s grocery and liquor stores.<sup>4</sup> His goal is to understand the historically accurate traditions, ingredients, and brewing methods that have been transmogrified by mass-production, and demonstrate how the modern craft brewing industry is ‘bringing reality back to brewing and sending beer facsimiles packing into the darkness’.<sup>5</sup> Still, there is an urge to use modern technology, and as many craft

breweries increase their production scale every year, 'temptations are rife'.<sup>6</sup>

The British Campaign for Real Ale (CAMRA) is a similar movement towards authenticity and quality in the mold expressed by Oliver. In the 1970s, British breweries decided to move away from traditional cask-conditioned ale<sup>7</sup> in favor of filtered, artificially carbonated beer that emerged as the world standard at the time. In opposition to this trend, CAMRA was founded. According to the organization's history, four men from the north west of England came up with the idea in Kruger's Bar in Dunquin, County Kerry, Ireland, while on vacation.<sup>8</sup> They were tired of the diminishing quality of British beer, and its lack of traditional standards. They formed the Campaign for the Revitalisation of Ale-as it was originally named-and as the movement picked up steam, they changed their name to the Campaign for Real Ale in 1973.<sup>9</sup> Their mission states:

CAMRA campaigns for real ale, real pubs and consumer rights. We are an independent, voluntary organisation with over 100,000 members and have been described as the most successful consumer group in Europe. CAMRA promotes good-quality real ale and pubs, as well as acting as the consumer's champion in relation to the UK and European beer and drinks industry. We aim to: Protect and improve consumer rights; Promote quality, choice and value for money; Support the public house as a focus of community life; Campaign for greater appreciation of traditional beers, ciders and perries as part of our national heritage and culture; Seek improvements in all licensed premises and throughout the brewing industry.<sup>10</sup>

Like the early sixteenth-century German purity law, the Reinheitsgebot,<sup>11</sup> CAMRA has been very successful in creating a strong movement back towards traditional English ale both in England and the United States, and sparked a similar renaissance of traditional beer in the United States in the 1970s-the craft beer movement.

The myriad of interpretations of authenticity discussed to this point-which focus mostly on problems within the modern brewing industry-lead to an important question that needs further exploration - 'What is authenticity?' According to Dale Jacquette:

The concept of authenticity, in its most general terms, applies specifically to cultural products ... To characterize

something as authentic is additionally a term of praise ... We can only judge that something is authentic if and when we have experienced disappointing imitations that do not measure up to whatever qualities contribute to make something that people produce particularly enjoyable or that lend it a special occasion for appreciation and celebration. To be authentic is something good, something positive, valuable and worthwhile ... Whatever we consider to be authentic assumes a level of perfection in an indigenous context that is expressive of aesthetic values as distinctive, original, or characteristic rather than imitative, derivative or contrived.<sup>12</sup>

The key component of Prof. Jacquette's lengthy definition is the last sentence, which gets at the crux of authenticity and has led to a distinct movement in the beer world. As an offshoot of the attempts by CAMRA and craft microbreweries to revive lost styles of beer, there has been a strong interest to recreate beers from the ancient world and historic period with the help of academics and scholars.

The Anchor Brewing Company of San Francisco organized one of the earliest documented attempts at a collaborative ancient beer project. Anchor is viewed as one of the principal breweries responsible for the emergence of American craft beer in the 1970s, owned and operated since 1965 by Fritz Maytag, the great-grandson of the patriarch of the famous appliance company.<sup>13</sup> Their project was inspired by an article written by Professor Solomon Katz of the University of Pennsylvania, an anthropologist who promotes a theory that ascribes the motivation for the agricultural revolution to brewing instead of bread making. Anchor contacted Professor Katz, and after a few conversations, they decided to craft a beer based on the earliest organized brewing in ancient Sumeria.<sup>14</sup> In their quest to make this beer as authentic as possible they used the Sumerian poem, the 'Hymn to Ninkasi', as their principal guide.<sup>15</sup> This poem dates from around 1800 BCE, and while it is an ode to one of the oldest deities of mankind-the Sumerian goddess of beer, Ninkasi-it is also an accurate record of the methods employed to make beer.

As we studied this beautiful poem, we were intrigued to find almost every detail had its counterpart in modern brewing practice. So many of the details ring familiar to a practical brewer's ear ... We would follow it where we could

understand it, and where there was a mystery or a question, we would answer it as best we could. If we deviated from it, we would know why.<sup>16</sup>

Anchor's project soon became a collaborative effort with scholars from many fields. Professor Miguel Civil of the Oriental Institute at the University of Chicago, whose English translation of the hymn was the principal document for Anchor Brewing, was an enthusiastic contributor. Anchor consulted with bakers and food technologists, grain millers and Sumerologists, and farmers and archaeologists. Along the way, they made decisions that straddled the line of authenticity. For example, they decided to use only barley and not emmer and other types of wheat that were most likely used by ancient brewers in small quantities as well. They based this approach on a hunch that an all barley beer would have been the earliest form brewed, derived from the hymn's phrase: 'the piles of hulled grain'.<sup>17</sup> While Anchor was correct in omitting hops, which were unknown of at the time,<sup>18</sup> they chose to add dates and honey based on the hymn's mention of a sweet substance of an uncertain nature. There is inconclusive evidence that Sumerian beer contained alternate flavorings or spices, so this was a judgment call by Anchor's brewers.<sup>19</sup>

Patrick McGovern, Scientific Director of the Biomolecular Archaeology Laboratory for Cuisine, Fermented Beverages, and Health at the University of Pennsylvania (UPENN) Museum of Archaeology and Anthropology, tasted two versions of Anchor's Ninkasi in 1989.<sup>20</sup> McGovern is the foremost expert on ancient beverages, and notes that the first example 'had an effervescent, champagne-like quality, with a hint of added dates'.<sup>21</sup> The second incarnation of this beverage

was distinctly different. Its more toasty, caramelly, and yeasty character was due to well-baked-bread, also mentioned in the Ninkasi beer hymn, that was added to the brew kettle.<sup>22</sup>

There is quite a difference between two versions of the same beer, and one wonders, then, how accurate either is. Of particular note is the fact that Sumerian beer, and most ancient ale, would have been consumed soon after it was ready as it lacked natural preservatives to avoid spoilage.

Anchor claims that their Ninkasi ale was

an attempt, a try, an essay. We do not claim to be correct in all details, but we have made a sincere effort to bring the art and craft of today's brewer to bear on the mystery of how the ancient beers of earliest man might have been made over 5,000 years ago.<sup>23</sup>

Anchor's efforts have not gone unnoticed, and since their Ninkasi project in 1989, brewers from around the world have organized similar collaborative endeavors with scholars to uncover the secrets of ancient brewing. But what is the objective of these ancient and historic ale projects? Are they a quest for authenticity in the mold alluded to by Paquette and Oliver, or are the goals based in historical research to refine hypotheses or dispel myths concerning old brewing methods? Perhaps these recreation beers are simply clever marketing tools? In this essay, I will apply the measuring stick of authenticity to better understand why these projects continue to flourish in today's modern brewing industry.

As a baseline standard for analyzing the authenticity of these ancient ale projects, the beer must be made by an established brewery and based on primary sources: archaeological remains or historic documents. Beers made in honor of a certain style or crafted to reintroduce a style without the use of hard evidence will not be considered, nor will those beers made by a historical societies or homebrewing classes (a topic for another paper, perhaps). What remains, then, are three categories of recreation ale projects: beers brewed based on archaeological finds, beers crafted from extant historic documents, and beers made using integrated research or brewed purely for scientific inquiry. Each category is marked by certain goals, and each has a distinct market. To further narrow the lens for this analysis, I will focus on two principal styles that have been recreated using the distinct approaches outlined above - ancient Egyptian ales and British porter. With this rubric in tow, it is time to go into the pub.

### **Archaeology and the brewer**

Perhaps the most fascinating beer in the eyes of modern brewers comes from ancient Egypt. While the ancient Sumerians are the first documented culture to produce beer, it was most widely celebrated and consumed among the Egyptians. At this time, according to Michael M. Homan, 'beer was in many ways a super-food', since



*Figure 1. New Kingdom scarab with a Beer Drinking Scene, 1550-1070 BCE. Steatite. Peabody Essex Museum, Salem, Massachusetts, USA. (Photograph courtesy of the author; used by permission of the Peabody Essex Museum - Catalogue Number: E22565.)*

it contained essential calories and vitamins.<sup>24</sup> It was also a safe product, as the combination of heating the water used to make beer and the resulting alcohol killed harmful microbes. From archaeological excavations, artifacts, and Egyptian art, we can see that beer was more than an essential dietary staple to this civilization; it had divine significance. A New Kingdom scarab in the collection of the Peabody Essex Museum in Salem, Massachusetts [Fig. 1], depicts a rare scene on its reverse.<sup>25</sup> Two figures, perhaps nobles or deities, are seated on chairs and are sipping out of a large jar by means of long straws. It might surprise many to learn that this was the principal means of consuming beer in the ancient Near East, depicted as early as 3850 BCE on a Mesopotamian cylinder seal [Fig. 2]. Instead of tapping the ‘proto keg’ - the jar where beer was both fermented and consumed from - people would use a long drinking tube or straw to suck this unfiltered beverage, as we would drink from a Scorpion bowl today.<sup>26</sup> Models of breweries, jars filled with beer, and occasional scenes of beer drinking on objects and wall

murals accompanied the dead in ancient Egypt, symbolizing the importance of this beverage for the afterlife. As both the living and the dead wore images of scarab beetles - a symbol of protection as well as rebirth and resurrection - this example that includes a scene centered on beer drinking enhances the cosmological importance of this beverage.

While academics agree that beer was important to the ancient Egyptians, the brewing methods used by this civilization are still debated. Artistic evidence points to the connection between bread making and brewing at this time, such as model of a joint brewery and bakery found in the Middle Kingdom tomb of Meketre, ca. 1981-1975 BCE. Based on this material evidence, along with tomb paintings, scholars theorize that Egyptian brewing involved crafting loaves of bread and breaking them into small pieces that were then mixed with water: in essence, a proto-mash.<sup>27</sup> After straining the grain, the liquid, or wort, was transferred to jars to ferment naturally with the aid of wild yeast in the air. Beer historian Ian Hornsey thinks this hypothesis, however, is incorrect: ‘This relationship seems to have been perpetuated by the time that the ancient Egyptians started to



*Figure 2. The earliest known depiction of individuals drinking barley beer through straws, from a clay seal from Tepe Gawra, Iraq, ca. 3850 BCE. After a drawing in the University of Pennsylvania Museum of Archaeology and Anthropology, Philadelphia, USA.*

brew'.<sup>28</sup> Hornsey points to the work of Dr Delwen Samuel, an archaeobotanist at Cambridge University, who has analyzed residue from New Kingdom Egyptian brewing artifacts in the past 20 years. Samuel's findings indicate that both emmer and two and six row barley were used to make beer, but since emmer was the only wheat grain used to make ancient Near Eastern bread, Samuel's research suggests that the bread-beer theory is incorrect. Still, there is no definitive word on ancient Egyptian brewing techniques.

In 2002, the Kirin Brewery Company in Japan decided to re-create an ancient Egyptian beer from the Old Kingdom-not for sale, but as a research project. Working with Waseda University professor and Egyptologist Sakuji Yoshimura, their aim was to prove a new hypothesis regarding how the ancient Egyptians made their beverage.<sup>29</sup> Yoshimura advised using a recipe transcribed from hieroglyphics found inside the tomb of Kenamen in Saqqara, southwest of Cairo. In order to ensure authenticity and accuracy, Kirin obtained the earthenware jugs, vessels, and pots that were used 4,000 years ago. Kirin researchers believed that only partially baked bread was used to make beer, and invited an oven-maker from Egypt to build a kiln to bake bread specifically for the project.<sup>30</sup> Over a three-week long labor-intensive process, replica beer was made using barley and wheat at their plant in the town of Takanezawa in the Tochigi Prefecture. The result of this project was a dark tea colored beer with no head that tasted like white wine, at roughly 10% alcohol by volume - more than double the strength of a Budweiser lager but very different from modern day beer. Kirin never sold their Old Kingdom Egyptian beer commercially, stating it was made purely for research purposes and the amount of work involved in producing a small amount of ale prohibited large scale production.<sup>31</sup>

Afterwards, Kirin attempted to brew beer representative of the New Kingdom of Egypt. Kirin discovered that by this time period, brewing techniques had shifted from one-step fermentation - cultivating yeast while the mixture was still a liquid with lactic acid added to control the growth of contaminating bacteria - to two-step fermentation. In addition, the mash of Old Kingdom beer was filtered and mixed with sweet wort for fermentation, while the dough used to make New Kingdom beer was thinned with water and date juice added for the primary fermentation, with wheat malt bread and wheat

malt flour added for the secondary fermentation.<sup>32</sup> Those in attendance at the beer's debut, 'Intrigued by the possibility of tasting Tutankhamen's tippel', did not have as favorable a view of Kirin's New Kingdom project as they had for the Old Kingdom beer:

Looking like something that had just been dredged from the Dotombori, the New Kingdom beer had the consistency of the bitter, white Japanese sake known as nigori-zake and was in effect just an alcoholic yeast sludge - as vile as anything we've ever tasted.<sup>33</sup>

Kirin was well prepared for this reaction, and had bottles of water on hand as well as dried dates and some sourdough bread to help ease the palette. 'This is the most revolting thing we've had so far', complained a reporter from the *Brewery Times*.

Understandably, Kirin is not making the New Kingdom beer available either, though in this instance they're doing everyone a favor. Nonetheless, the interest in what Kirin likes to call 'beer culture' is growing.<sup>34</sup>

Many wondered why Kirin would spend millions of yen on these research projects. Some believed that it was evidence of 'Japanese corporate showboating: doing something just for the sake of doing it'.<sup>35</sup> Kirin countered this opinion with an explanation that points to the importance of understanding authenticity:

We wanted to recreate this beer as exactly and as precisely as we could to try to better understand the history of beer-and what it is that people have found so appealing about beer over the years. Kirin is not just about making profits from product: We want people to appreciate and understand beer culture better, and spread the word.<sup>36</sup>

Kirin's other motive centered on scientific testing of a hypothesis that,

refutes the conventional theory that bread was baked, soaked in water to make a mash and fermented naturally with the yeast in the air. Rather, it reinforces the theory that brewing in ancient Egypt employed sophisticated and systematic management of microorganisms, and shows that there were several different methods for producing beer.<sup>37</sup>

In addition, Kirin showed inherent differences in Old Kingdom and New Kingdom brewing.

Six years earlier, the Scottish & Newcastle Breweries in the United Kingdom worked on a similar ancient Egyptian beer recreation. This ale was based on an excavation led by Barry Kemp of Cambridge University, which discovered the ancient worker's village of Amarna, built by Akhenaten in 1350 BCE, and destroyed by Tutankhamun just 17 years later. Kemp found several breweries, including the royal brewery, and Dr Delwen Samuel used both optical and scanning electron microscopy to analyze residue on artifacts found at the site.<sup>38</sup> At the time, Dr Samuel believed that the grain used in the beer was either barley or emmer - grains that were usually used separately and not as a mixture - and found evidence that the grain was malted and may have been heated while still wet. Another interesting discovery was the complete lack of flavoring in this ancient beer residue, specifically dates. Many scholars believe Egyptian brewers used this fruit in beer, but Samuel believes this theory is based on a mistranslation of hieroglyphic text concerning beer recipes depicted on wall paintings. He believes that the word translated as 'dates' is actually 'sweetness' derived from the malt.<sup>39</sup> Finally, Samuel believes the wet malt was sieved to remove grain hulls, and was not used for filtering crumbled bread as had been previously hypothesized.<sup>40</sup>

In an effort to recreate the beer discovered in Amarna, brewers from Scottish & Newcastle went to the site to conduct first hand research on the correct water and grains to use. They found that only a little gypsum<sup>41</sup> was required to make the beer, and decided to use emmer as the main grain for the beer even though Dr Samuel's finds suggested otherwise. Emmer is hard to come by, so they imported enough seeds from Turkey for the National Institute of Agriculture and Botany in Cambridge to grow 770 pounds for the project.<sup>42</sup> The brewers also decided to flavor the beer with coriander and juniper. While coriander grew widely in ancient Egypt and there is evidence that it was used in baking, there was no rationale for the use of juniper.<sup>43</sup> In addition, a modern yeast strain was used, not a wild one from Egypt. The beer had a hazy, gold color, with notes of fruit, grain, caramel or toffee, and a dry finish.<sup>44</sup> Unlike Kirin's ancient Egyptian beer, Scottish & Newcastle sold a limited edition, 1,000-bottle batch of the beer named 'Tutankhamun Ale' for £50 (\$75) at Harrods department store in London. The beer was packaged in a box resembling the crates used by Howard



Figure 3. Bottle of Scottish & Newcastle's Tutankhamun Ale.

Carter to store his discoveries from Tutankhamen's tomb in the early 20th century [Fig. 3].<sup>45</sup>

How can a brewer attempt to make a beer that is thousands of years old without some concrete evidence of its actual contents? Though Kirin worked hand-in-hand with academics, and used original pottery from the time period, the finished product's authenticity can be questioned since these beers were based primarily on artistic evidence, not archaeological remains. Scottish & Newcastle's beer may be closer to an authentic product as it was based on archaeological samples and residue analysis, but the brewer took liberties when flavoring the beer. What these examples demonstrate, though, is an evolving methodology for creating ancient beer since 1989, one that points to the use of scientific analysis and archaeological evidence to not only recreate as authentic a beer as possible, but also to refine accepted theories on ancient brewing techniques.

The work of American craft brewing giant Dogfish Head of Rehoboth, Delaware, has taken the collaboration of brewers and archaeologists to another level.

There obsession with ancient ales began in 2000, when Patrick McGovern issued a challenge to a group of microbrewers at a UPENN Museum ‘Roasting and Toasting’ celebration in honor of the beer and scotch authority, Michael Jackson. McGovern was eager to have a brewer recreate an ancient beverage based on his recent reanalysis of archaeological material from a tomb excavated by UPENN archaeologists in 1957. These archaeologists discovered a ca. 700 BCE kings’ tomb at the site of Gordion, sixty miles southwest of Ankara in central Turkey, the royal seat of the Phrygian culture who originally migrated into Anatolia from Southeastern Europe ca. 1200 BCE. The tomb was an elaborate burial for King Midas or his father Gordios, and contained furniture and service for a funerary banquet eaten by the mourners during the burial ceremony. Among this spread were three large 150-liter bronze cauldrons and at least 100 bronze drinking bowls that still contained residue of their original contents.<sup>46</sup>

In the 1990s, Patrick McGovern used infrared spectrometry, gas and liquid chromatography, and mass spectrometry, to identify the fingerprint or marker compounds for specific natural products in the residue. He found traces of tartaric acid, ‘the finger-print compound for grapes in the Middle East’; marker compounds of beeswax, which

told us that one of the constituents was high-sugar honey, since beeswax is well-preserved and almost impossible to completely filter out during processing; honey also contains yeast that will cause it to ferment to mead [and] calcium oxalate or beerstone pointed to the presence of barley beer.<sup>47</sup>

McGovern called this unusual mixture of grape wine, barley beer, and honey mead, a ‘Phrygian grog’ - a braggot-style ale fermented with barley, grapes, honey, and saffron for color, taste, and preservation.<sup>48</sup> McGovern believes that ancient beverages don’t always fit into neat, distinct categories, and this chemical evidence supports his theory of mixed concoctions.<sup>49</sup>

McGovern had Phrygian grog in mind when issuing his challenge, and many brewers from the area took on the task. Dogfish Head Brewery was the victor with its now widely celebrated recreation named Midas Touch. It is somewhere between wine and mead; a smooth, sweet, yet dry ale which they say will ‘please the Chardonnay and beer drinker alike’. But is it authentic? McGovern

states he lacked definitive evidence for the exact grape cultivator used at the time. In its place, he suggested using the Muscat grape, related to the earliest cultivated grapes in the Near East.<sup>50</sup> In addition, as hops were not used at this time, saffron was substituted as the bittering agent. Saffron was the most expensive spice in the world at the time and Turkey was renowned for this spice in antiquity. Still, McGovern admits that his conclusion that the yellowish color of the residue was evidence of saffron was something he has ‘never proven’.<sup>51</sup>

This project marked the beginning of an ongoing collaboration between Dogfish Head and Patrick McGovern. Since Midas Touch was released, they have worked on a few more ‘liquid timecapsules’<sup>52</sup> - Chateau Jiahu, a beer made from 9,000 year old remains from China; Theobroma, crafted from pottery found in Honduras dating to 1200 BCE and purported to be among the earliest chocolate beverages in the New World; and the recent Ta Henket, an ancient Egyptian beer based on wall mural paintings (like Kirin used), but brewed with loaves of hearth baked emmer bread, flavored with dom-palm fruit, chamomile, and zatar, and fermented using a native Egyptian *Saccharomyces* yeast strain collected at Giza.<sup>53</sup> All these projects, however, are marked by inauthentic characteristics similar to Midas Touch. Dogfish Head substitutes ingredients that they believe will appeal to modern day palettes. In the case of Theobroma, they fully acknowledge that their beer is a celebration of the importance of chocolate to all New World cultures, not solely ancient Hondurans. In fact, Dr McGovern claimed:

I kept complaining that it needs more chocolate. I wanted to make it more reddish, because it was equated with blood and human sacrifice. [Calagione responded humorously:] And I told him, ‘O.K., I’ll get back to you on that’.<sup>54</sup>

### **Beer and the historical record**

Perhaps the most influential beer in the eighteenth and nineteenth century was porter: an ale characterized by dark roasted malts that produced chocolate and coffee-like flavors, a strong hop balance, and a dark-brown to black color. Its origins have been debated, and mythology abounds. According to Stanley Baron’s definition in *Brewed in America*:

It had been for some time the practice of customers in English public houses to ask for a combination of beer, ale, and ‘twopenny’ (a pale small beer)-which meant that the barman had to draw from three different casks. Ralph Harwood, of the Bell Brewhouse in Shoreditch, seems to have been the first, in 1722, to conceive of a brew in which the three elements were already mixed. It was called ‘entire butt’ or ‘intire,’ but eventually became colloquially ‘porter’ because of its popularity with London porters.<sup>55</sup>

A similar definition can be found on the label for the Mayflower Brewing Company’s porter. Located in Plymouth, Massachusetts, they state: ‘Taking its cues from “Three Threads”, a bartender’s blend of three distinct ales, Porter became the beer of choice for 18<sup>th</sup> century Londoners’.<sup>56</sup> In addition to this theory, some people believe that porter got its name from the popularity of the style among railway porters, even though the beer predates this technological development.

With the emergence of CAMRA, the scholarly community in Britain has focused its attention on finding authenticity in beer. Porter fell out of favor at the close of 19<sup>th</sup> century, and was revived in the 1970s,<sup>57</sup> but was it being brewed authentically? Martyn Cornell and Ron Pattinson, two British beer historians, have turned their pen towards the inaccuracies that exist in modern understanding of porters. According to Cornell:

In 1802, a man called John Feltham, bought out a guidebook called *The Picture of London* which included three pages on ‘The Porter Brewery’ ... Feltham said the story he was about to tell of the origins of porter, ‘not having yet been printed, we think ... proper to record in this work.’ What he then wrote has been the basis of almost every history of porter ever since. Sadly, little of it appears to be true.<sup>58</sup>

Cornell goes on to recount the same story described in Baron’s book and on Mayflower’s label, which ‘has been repeated by nearly every writer on beer since 1802, often using exactly the same phrases’, and traces the origins of Feltham’s definition to two sources from 1760 and 1788.<sup>59</sup>

Cornell shows through a detailed breakdown of primary sources that ‘porter was never “invented” at all, but evolved out of the brown beer already being made in London’.<sup>60</sup> His work has led to a more definitive and accurate definition of the beer:

Developed around 1718 by London’s brown beer brewers and taking its name from London’s street and river porters, the strong, hoppy, aged porter eventually became the world’s first widely drunk beer style, and was imitated by brewers from America<sup>61</sup> to Russia.<sup>62</sup>

Its popularity in England is attested by the account of the Swiss traveler Cesar de Saussure. In 1726, while traveling in London, he notes:

Another kind of beer is called porter, meaning carrier, because the greater quantity of this beer is consumed by the



*Figure 4. ‘Liverpool Porter Brewery’ Jug, ca. 1790. Earthenware, enamel. Peabody Essex Museum, Salem, Massachusetts, USA. A youthful Bacchus or cherub straddling a barrel and holding a wreath and goblet surmounts the image of this short-lived brewery (ca.1790-1815), which is based on a contemporary engraving in the Binns Collection at the Liverpool Public Library. Sheaths of barley and implements used for harvesting and malting this grain line the top of the cartouche surrounding the transfer print. The reverse image shows the Bidston Lighthouse and its distinctive signal system. The pitcher is inscribed to a ‘John Pridget’ under the spout. This is one of only two known examples of a pitcher with the transfer of the brewery, the other in the collection of the World Museum in Liverpool featuring the Brewers’ Arms on the other side. (Photograph courtesy of the author, used by permission of the Peabody Essex Museum - Catalogue Number: M7225.)*

working classes. It is a thick and strong beverage, and the effect it produces, if drunk in excess, is the same as that of wine; this porter costs threepence a pot ...<sup>63</sup>

Porter was popular enough to have designated breweries for its manufacture, as seen on a Liverpool creamware jug [Fig. 4], and was also a popular beverage among British sailors. Joseph Banks, naturalist on Captain Cook's first voyage of exploration aboard the *Endeavor*, notes in his account of the voyage on 25 August 1769:

It was this day a twelvemonth since we left England, in consequence of which a peice of cheshire cheese was taken from a locker where it had been reservd for this occasion and a cask of Porter tappd which provd excellently good, so that we livd like English men and drank the hea[l]ths of our freinds in England.<sup>64</sup>

With a clearer understanding of the origins of porter, what does an authentic porter taste like, and how was it made? Unfortunately, porters are now synonymous with stouts, which originally emerged as a stronger form of porter. Today's beer drinker would have a hard time identifying the two styles in a blind taste test, and that is because they are basically one in the same. Porters can be stronger than stouts, and vice versa, as both styles went in and out of favor since the 18<sup>th</sup> century and were revived without much distinction. Fortunately, Ron Pattinson - who has amassed a large archive of original British brewing records - put his research-focused mind to the task of uncovering an authentic porter from the nineteenth century.

The Pretty Things Ale project of Somerville, Massachusetts, has created a special series of beers in the past few years entitled 'Once Upon a Time'. Each of the five beers made for this line to date has been a collaboration between the brewery and Pattinson, and Pattinson's research has been the basis for each beer. In 2011, they created an East India Porter (EIP), a beer made from a 6 December 1855 brewsheet from the Barclay Perkins brewery in London. This version of the style has a stronger hop presence as it was designed to survive the voyage overseas to India-similar to India Pale Ale, or IPA-and was consumed primarily by sailors and troops. The founders of Pretty Things, Dann and Lynda Paquette, state that they're not into replicating beers, and their 'One Upon a Time' line are not inspired beers, homages, or tweaks.

There's a lot of interpretation of historic beers out there, [Dann says.] The George Washington, Thomas Jefferson stuff, it's silly. Those recipes have no amounts on them. Our hands are tied; we take the recipes right out of the brewers' handbooks from that particular day. We try to keep it as authentic as possible.<sup>65</sup>

The EIP does more than attempt to recreate an authentic version of 19<sup>th</sup> century porter. It captures a distinct moment in time when porter was an important means of combating drunkenness and death in India,<sup>66</sup> and also serves to 'punch holes' in the mythology of the now popular style we colloquially refer to today as IPA. IPA is noted as being the preeminent beer for British ex-pats in India in the 19<sup>th</sup> century, and was born out of a myriad of factors connected to the shipment of beer to India. According to Pattinson:

We've all heard the romantic tale of beer being shipped half way around the world to quench the thirst of the British in India: the birth of IPA. But Pale Ale wasn't the only beer sent to India: In fact, it wasn't even a majority of the beer sent. That honour belongs to beer that's been lost to history: India Porter. British military units in India had a big problem. Their men were dying at an alarming rate. Climate and disease played a role, but so did the troops' drink of choice: rum. What was the solution? Give them Porter instead. The effect was dramatic. In Bengal soldiers mostly drank rum, in Madras Porter: Porter-drinking troops had a significantly higher life expectancy than their rum-drinking colleagues! The East India Company, which effectively ruled large areas of India and had its own military units, took notice and began ordering beer. Lots of it. Casks of Porter out-numbered the Pale Ale 2:1. Between 1849 and 1857 the East India Company ordered 23,511 hogsheads of Pale Ale and 46,363 hogsheads of Porter.

Indeed the evidence bears out Pattinson's theories. There was a deliberate effort on the part of the East India Company to import as much porter as possible, and it certainly conforms to a 2:1 ratio in comparison to IPA.<sup>67</sup> In addition, an 1840 pamphlet entitled *Letter to Field Marshall The Duke of Wellington, on the Soldier's Condition in India in 1840*, is an appeal for using wine and beer to counter the ills of hard liquor affecting soldiers. The author, Francis Straton, states:

It appears by investigation, that inordinate drinking in the British army chiefly prevails in the colonies, or external

possessions of Great Britain, and most so in those parts where ardent spirits are substituted for wine or beer, or other beverage; and it will be found in proportion as the use of ardent spirits are anywhere permitted, or the facilities of obtaining them prevail, a sufficient supply of wholesome beverage being excluded, so is the scale of intoxication, the amount of crime, insubordination, and sickness, all proceeding from one fountain, and carrying along with it disease and death in all its shapes... Having shown the injurious effects of the use of spirits in different parts of the world, and the superior quality, beyond comparison, of wine and beer as a beverage, it must next be shown in what manner it is to be obtained in sufficient quantity for the consumption of 24,000 troops.<sup>68</sup>

While many types of beer are mentioned by Straton, specific reference is made to ‘Barclay’s ale’, which

has been purchased at Madras for 40 rupees the cask ... and I have no doubt, from what I have ascertained, that the house of Barclay & Co., the great London brewers, would be happy to undertake the contract for that sum.<sup>69</sup>

The recipe Pretty Things used was based purely on the brewsheet supplied by Pattinson, but made on a smaller scale due to the limitations of their facilities.<sup>70</sup> Instead, Pretty Things recreated this EIP at 1/34<sup>th</sup> the capacity of the original, but the rest of the components of this beer were the same. They used the exact proportions of pale, brown, black, and amber malts specified on the brewsheet, and purchased all these malts from Thomas Fawcett & Sons in Yorkshire, which has been in existence since the 1780s, ‘so this is pretty authentic stuff’.<sup>71</sup> In another nod towards authenticity, Pretty Things used amber malt even though they wondered, ‘why did they use it back then?’<sup>72</sup> The hops used, Kent Goldings & Spalt, were also to 19<sup>th</sup> century standards. The end result is a ‘dry, malty beer with a substantial pipe-tobacco bitterness, dark garnet colour and 6% abv’.<sup>73</sup>

Brewlab, established in 1986 at the University of Sunderland, also took on the task of recreating 19<sup>th</sup> century porter while providing a unique slant on the subject in asking: ‘How authentic can a traditional beer be?’<sup>74</sup> This laboratory studies old and new brewing techniques, combining scientific analysis with contemporary methods. They advise many clients who are interested in crafting historic beer, ‘to achieve a contem-

porary traditional beer ... from a mix of historical vision and laboratory challenge’.<sup>75</sup> Their interest in porter beer, specifically those made in Victorian England, led to some collaborative work with The Flag Brewery, then based at the Pitfield brewery in London.

A porter workshop was held at Brewlab on 23 April 1988, to dissect all of the particulars of this style, from color to taste. A few weeks before the workshop, however, one of Brewlab’s technicians found a bottle of porter while diving in the English Channel just off of Littlehampton.<sup>76</sup> The bottle came from a sailing barge which sank in 1825, carrying a consignment of bottled and cask porter, pottery, and other sundry items. Brewlab sponsored a dive just before the workshop to obtain more bottles, which were all tightly sealed with wax. One bottle was brought to the workshop and opened to analyze the color and flavor of real nineteenth century porter, but due to contamination from a bottle leak, all that could be decisively concluded was that the beer was 6.3% alcohol by volume and its color was lighter than expected. The taste was noted to have traces of ‘ancient leather and salty sea spray’ due to the contamination.<sup>77</sup>

Sediment was preserved at the bottom of the open bottle, however, and a few yeast cells were intact or shrunk. A second bottle was opened under sterile conditions, and further yeast samples were removed and transferred to a nutrient growth media.<sup>78</sup> After successfully growing new cells, the yeast was used in a test batch of Flag Porter, which was based on an 1850 recipe from the original Whitebread Brewery in London.<sup>79</sup> This beer was modeled on the brown porter style prevalent at the turn of the 19<sup>th</sup> century rather than on the richly roasted Victorian porters, as Brewlab believed this former style was more akin to the porter carried by the sunken ship.<sup>80</sup> Brewlab believes that the beer

is authentic within the limits of analysis. It is impossible to say whether the yeast provides the full character of the beers of the time. It is only one strain and we would expect most beers of the age to use multiple strains. However, its spicy and estery character is distinctive and does blend well with the brown malts and moderate bitterness.

To test the authenticity of their Flag Porter, Brewlab gave samples to individuals who drank porter before it disappeared after the First World War.<sup>81</sup> Mr E. Poutard,

who served in the war and was fed a steady diet of porter for months after surviving a gas attack - the only nourishment he could stomach - sampled Flag Porter. It brought back synesthetic memories: 'This bottle of porter is much purer but it tastes like real porter. It is a good pure drink'.<sup>82</sup> Though Brewlab acknowledges that 'No beer can ever be exactly true to its origins but we believe that we are as close as we are likely to get, or almost,-until we can retrieve another bottle', their unique data source and testing strategy put their project at the forefront of authenticity. Pretty Things, too, used precise historic documents, and unlike many of the ancient ales projects discussed earlier on, they stuck to the recipe without modern modification. They, too, have produced an authentic beer, and with the research of Ron Pattinson, have made an important contribution to the scholarship of beer.

## Conclusion

After exploring the various attempts to recreate ancient Egyptian ale and historic English porter, it is clear that a variety of approaches have been used to recreate these liquid time capsules. What unifies these projects - whether they are derived from archaeological artifacts, scientific research, or archival documents - is a strong desire to connect with the past. This is the reason the quest for authentic ancient and historic ales continues today, and is more mainstream than ever. In November 2011, Daniel Fromson, former associate editor at the *Atlantic*, wrote a column entitled 'Historic Brews Being Poured Once More' for the 'Lifestyle' section of *The Washington Post*. Fromson briefly describes the various recreation beers made over the years as a means of arguing, 're-creations of historic beers are as old as the craft beer movement itself'.<sup>83</sup> What has changed, however, is how popular this phenomenon has become. 'Brewers now probe history books for beers in need of rescuing and crisscross the globe to research forgotten recipes'.<sup>84</sup> It is not solely the craft brewing circles and 'beer geeks' that are interested in reviving lost beers, but now the macro breweries are taking notice. Patrick McGovern states that he has been approached by MillerCoors, one of the growing numbers of breweries that has contacted him in the past six months. This all points to McGovern's belief that 'There's really a growing interest in re-creations-huge interest, I think'.<sup>85</sup>

Authenticity does not seem to be the principal concern for all the ancient ale projects. Dogfish Head seems to be more concerned with marketing and creating a beer to satisfy the modern palette rather than sticking to complete historical accuracy. Sam Calagione does believe that 'the story is critical because it's what differentiates a beer from any other beer', but also acknowledges that

just because you hear of some creepy group of Norwegians that 300 years ago put the blood of virgins into beer doesn't mean you should replicate it. You have to have a story, but can you have a story and also make a world-class beer?

Froman believes that it is possible to have both, however, and points to the work of Ron Pattinson. In addition to his collaboration with Pretty Things, Pattinson has worked with the Dutch Brewery De Molen in recreating an SSS triple stout brewed in London on 8 July 1914, which pleased the modern consumer as it tasted like 'thick coffee with notes of caramel and whiskey'.<sup>86</sup> For beer historians like Pattinson, recreation beers offer physical proof of his scholarly pursuits.

I can write stuff and bang on about, 'Oh, the beers were very different back then,' but people don't listen very well. If you give them a bottle of something to drink, they'll understand.<sup>87</sup>

The ultimate question concerning this growing trend to recreate ancient and historic ales is why beer? What is it about this frothy, foamy beverage that has led brewers to explore its ancient roots in such elaborate means? Why has there not been a similar movement in other popular liquor industries around the world?<sup>88</sup> Perhaps the answer lies in the nature of beer itself. Beer has been an integral part of our lives since the dawn of man, and has traveled throughout the globe to influence many cultures. In one form or another, statements such as, 'Man, thanks for your help. I owe you a beer', 'Ugh, what a day! I need a beer!' or 'Great plan. How about we sit down and discuss this over a beer?' have been asked in cultures throughout the world. Beer has always been a social lubricant, a deal 'sealer', an escape from our ordinary lives, a religious or spiritual conduit, the embodiment of sin, a method of relaxation, or a staple of our diet. It has also been the inspiration for fine art, as people of all cultures have celebrated their love and reverence, or expressed their distaste and abhorrence, for beer. Recreation beers, whether authentic or not,

illuminate our understanding of beer and culture and show us that we are actually very similar to our ancestors; beer is still a ubiquitous influence in our lives today.

## References

1. Farmer had published her well-known volume *The Boston Cooking-School Cookbook* the same year.

2. [www.fannieslastsupper.com](http://www.fannieslastsupper.com)

3. Jacquette, D. (2007) 'Thirst for Authenticity: An Aesthetics of the Brewer's Art', Hale, S.D. & Jackson, M.C. (eds.) *Beer and Philosophy: The Unexamined Beer is Not Worth Drinking*. London: Blackwell Publishing Ltd. p.15.

4. Oliver, G. (2007) 'The Beer Matrix', in *ibid.* pp.31-32.

5. *ibid.*, p.40.

6. *ibid.* A more elastic definition of authenticity comes from Dan Feinberg, one of the proprietors of Vanberg and DeWulf, an importer of well-known Belgian beer brands such as Dupont and Scaldis. He states, 'Authentic doesn't mean ancient, because then you'd never have innovation'. Feinberg is alluding to the concept of terroir in the wine industry - a theory that claims land on which grapes are grown imparts a unique flavor to wine - that he believes is a limiting construct as enthusiasts have used this idea to counter replication. 'I believe in the concept of terroir ... but it can't become an excuse for exclusivity'. [belgianexperts.com/news-and-opinions/2338/cheers-to-the-pour-curator/](http://belgianexperts.com/news-and-opinions/2338/cheers-to-the-pour-curator/)

7. A beer that is cask-conditioned is stored in a barrel shaped vessel - today made out of metal like a keg - complete with the original yeast that fermented the ale. In addition, a priming element-often sugar-is added to the cask to spark a second fermentation. This imparts a distinctive flavor to the beer, complete with fruity aromas from the ale yeast strains and other ingredients. When the ale is served, a hand cranked pump is used so only gravity itself brings beer from the cask to the pint glass. The lack of added carbonation, characteristic of keg beer, makes British ale appear 'flat' in comparison to other beers. In essence, cask-conditioned beer has not changed since the medieval period.

8. 'How CAMRA Started'. [www.camra.org.uk/-page.aspx?o=about](http://www.camra.org.uk/-page.aspx?o=about)

9. *ibid.*

10. 'About Us'. [www.camra.org.uk/page.aspx?o=about](http://www.camra.org.uk/page.aspx?o=about)

11. The original decree by the Bavarian Duke Wilhelm IV, made on 23 April 1516, states: 'We wish ... forthwith that ... in all our towns and markets and in the countryside not other items be used for beer than barely, hops, and water' (yeast was unknown until Louis Pasteur's experiments in the 1860s).

This law focused on consumer protection, and while it has been amended and revised over time, it is still part of modern German tax law. Dornbusch, H. and Heyse, K-U. (2011) 'Reinheitsgebot', in Oliver, G. (ed.) *The Oxford Companion to Beer*. New York: Oxford University Press. p.692.

12. Jacquette, D. (2007) *op. cit.* pp.23-24.

13. Anchor Brewing traces its origins to the Gold Rush, when German brewer Gottlieb Brekle arrived in San Francisco and founded a brewery on Pacific, between Larkin and Hyde. In 1896, German brewer Ernst F. Baruth and his son-in-law, Otto Schinkel, Jr., bought the old brewery on Pacific and named it Anchor-perhaps for its allusion to the great Port of San Francisco, but the exact reason for the choice of the name is unknown). [www.anchorbrewing.com](http://www.anchorbrewing.com).

14. 'Sumerian Beer Project'. [www.anchorbrewing.com/beers/ninkasi.htm](http://www.anchorbrewing.com/beers/ninkasi.htm).

15. *ibid.* They also used recipes noted on clay tablets.

16. *ibid.*

17. *ibid.*

18. Hops were not used in beer on a consistent basis until the 13<sup>th</sup> century in Germany.

19. *ibid.*

20. One was served at a University of Pennsylvania Museum tasting with the late beer and scotch authority, Michael Jackson, and the other at a special event organized by *Archaeology* magazine in New York City.

21. McGovern, P. (2009) *Uncorking the Past: The Quest for Wine, Beer, and Other Alcoholic Beverages*. Berkeley: University of California Press. p.69.

22. *ibid.*

23. *ibid.*

24. Homan, M.M. (2010) 'Did the Ancient Israelites Drink Beer?', *Biblical Archaeology Review*. 36, 5, Sept/Oct, p.50.

25. The Egyptian Art collection of the Peabody Essex Museum contains the first Egyptian antiquities to be displayed in an American museum. The collection began in 1803 when Captain Apthorp donated a mummified ibis from the 'Catacomb of Sakkara' to the East India Marine Society, the founding institution for the Peabody Essex Museum. Over the years, the collection has grown to around 300 objects, relatively small in comparison to the other collections in the museum. In the early 20<sup>th</sup> century, Amy and Clara Curtis of Crow Island, Manchester, MA, donated this cream-brown glaze scarab.

26. McGovern, P. (2009) *op. cit.* pp.69-70, 97-99. The Tiriki, a Bantu-speaking group in Western Kenya, still drinks millet and sorghum beers in this manner, and it is an important instance of male social bonding. *ibid.* p.149, figure 24b. In addition, the matriarchal society of the Qiang of Yunnan

Province, China, consumes a rice-wine in this fashion, with both men and women partaking in the activity. *ibid.* Plate 4.

27. Hornsey, I. (2011) 'Egypt', in Oliver, G. (ed.) (2011) *op. cit.* p.320.

28. Hornsey, I. (2003) *A History of Beer and Brewing*. Cambridge: Royal Society of Chemistry. p.10.

29. Al-Badri, D. (retrieved 2012) 'Kirin Plaza Osaka Applies Brains to Beer'. *Japan Inc.* 31 December 31. [www.japaninc.com/article.php?articleID=1241](http://www.japaninc.com/article.php?articleID=1241).

30. *ibid.*

31. *ibid.*

32. *ibid.*

33. *ibid.*

34. *ibid.*

35. *ibid.*

36. *ibid.*

37. 'Reproduction of Beer from Egypt's New Kingdom Period. Second Phase of the Beer of Ancient Egypt Re-creation Project. 6 August 6 2003'. [www.kirinholdings.co.jp/english/ir/news\\_release040726.html](http://www.kirinholdings.co.jp/english/ir/news_release040726.html)

38. Foster, T. (2010) 'Tutankhamen Ale Story', *Brew Your Own Magazine*. November. [www.byo.com/stories/article/-indices/17-brewing-history/2223-tutankhamun-ale-story](http://www.byo.com/stories/article/-indices/17-brewing-history/2223-tutankhamun-ale-story)

39. *ibid.*

40. *ibid.*

41. Gypsum is a natural form of calcium sulfate that constitutes 'hardness' in water. When dry, it is known as Alabaster or Plaster of Paris, but in brewing it is the main component of the famed well water of Burton Upon Trent, England, used to make the distinctive pale ales from this region. Today, brewers around the world add gypsum to the mash before sparging to impart this distinctive flavor to their beer. Marchbanks, C.J. (2011) 'Gypsum', in Oliver, G. (ed.) (2011) *op. cit.* p.414.

42. Foster, T. (2010) *op. cit.*

43. *ibid.*

44. *ibid.*

45. Several years ago, I found a bottle of this beer for sale on craigslist for \$3,000. While well beyond my means, it speaks to the scarcity of this special ale.

46. McGovern, P. (2009) *op. cit.* p.135

47. [www.penn.museum/sites/biomoleculararchaeology/-?page\\_id=501](http://www.penn.museum/sites/biomoleculararchaeology/-?page_id=501).

48. It was also a combination of both European and Near Eastern brewing traditions given the origins of the Phrygian culture.

49. McGovern, P. (2009) *op. cit.* p.135.

50. *Ibid.* DNA analysis supports this connection.

51. [www.penn.museum/sites/biomoleculararchaeology/-](http://www.penn.museum/sites/biomoleculararchaeology/-)

[?page\\_id=501](http://www.penn.museum/sites/biomoleculararchaeology/-?page_id=501).

52. This term was coined by Dogfish Head to label these ancient ale projects.

53. [www.dogfish.com/brews-spirits/the-brews/brewpub-exclusives/ta-henket.htm](http://www.dogfish.com/brews-spirits/the-brews/brewpub-exclusives/ta-henket.htm)

54. Bilger, B. (2008) 'A Better Brew: The Rise of Extreme Beer', *The New Yorker*. 24 November. [www.newyorker.com/reporting/2008/11/24/081124fa\\_fact\\_bilger?currentPage=all](http://www.newyorker.com/reporting/2008/11/24/081124fa_fact_bilger?currentPage=all)

55. Baron, S. (1962) *Brewed in America: The History of Beer and Ale in The United States*. Boston: Little, Brown and Company. p.58.

56. [mayflowerbrewing.com/mayflower-porter.php](http://mayflowerbrewing.com/mayflower-porter.php).

57. Samuel Smith brewery in Yorkshire, England, claims to have revived this style.

58. Cornell, M. (2003) 'Porter Myths and Mysteries', *Brewery History*. 112, Summer. p.31.

59. *ibid.*

60. *ibid.* p.39.

61. Porter quickly became a popular beer in America, one of the favorite beverages of the founding fathers, particularly George Washington. He often imported the beer from England, as it was not made in America until after the Revolution. With the call to "buy American" in the New Republic, the new President showed his support and started to buy porter in the United States from Robert Hare of Philadelphia. He was also fond of the porter made by Samuel Fraunces, who was the first official steward for the presidential mansion in New York City. Washington was also fond of Fraunces' Tavern as a site to conduct presidential business, but I am sure it was a handy excuse to drink some porter! Baron, S. (1962) *op. cit.* pp.59, 114, and Smith, G. (1998) *Beer in America: The Early Years, 1587-1840*. Boulder, Colorado: Siris Books. p.124.

62. Cornell, M. (2011) 'London's Brewing, London's Brewing ...' Blog post. 3 November. [zythophile.wordpress.com/](http://zythophile.wordpress.com/)

63. Quoted from 'Distant Mirror: Ale Through the Ages'. [distantmirror.wordpress.com/2010/12/20/ale-through-the-ages-colonial-porter/](http://distantmirror.wordpress.com/2010/12/20/ale-through-the-ages-colonial-porter/)

64. Banks, J. (1768-1771) *The Endeavour Journal of Sir Joseph Banks*, Journal from 25 August 1768-12 July 1771. [gutenberg.net.au/ebooks05/0501141h.html](http://gutenberg.net.au/ebooks05/0501141h.html).

65. Bryson, L. (2011) 'Making It!', *Massachusetts Beverage Business*. September. [www.beveragebusiness.com/archives-/article.php?cid=1&eid=90&aid=2124](http://www.beveragebusiness.com/archives-/article.php?cid=1&eid=90&aid=2124).

66. This is certainly not the first time a government or major business looked to beer, specifically porter, as a means of 'sobering up' the populace. Thomas Jefferson saw the value of porter in curing the ills of rum in the early 19<sup>th</sup> century.

Jefferson, like Washington, was a beer enthusiast. He designed Monticello with its own small brewery, and the beer crafted by his daughter, Martha, at the home was highly sought after. Jefferson himself was interested in brewing beer, and owned a copy of Michael Combrune's *Theory and Practice of Brewing*, 'which introduced the scientific approach of using a thermometer for the malting and brewing processes'. In addition, he sought out a copy of Joseph Coppinger's *American Brewer and Malster* in 1801 - which contained a description on how to use Indian corn in beer, a precursor to today's Budweiser - written by a porter brewer from Europe that had recently come to America. Coppinger tried unsuccessfully to gain Jefferson's ear in the coming years to establish a national brewery for the new Republic. Jefferson believed that whiskey was killing Americans. In a letter to Colonel Charles Yancey from 6 January 1816, he writes: 'There is before the assembly a petition of a Captain Miller which I have at heart, because I have great esteem for the petitioner as an honest and useful man. He is about to settle in our county, and to establish a brewery, in which art I think him as skilful a man as has ever come to America. I wish to see this beverage become common instead of the whiskey which kills one-third of our citizens and ruins their families. He is staying with me until he can fix himself, and I should be thankful for information from time to time of the progress of his petition'. Jefferson was not the only one to consider beer a temperance drink, and this mindset continued into prohibition in the 1920s. Smith, G. (1998) op. cit. pp.131, 134, [www.monticello.org/site/research-and-collections/beer](http://www.monticello.org/site/research-and-collections/beer), and (1904-5) 'Letter from Thomas Jefferson to Colonel Charles Yancey, January 6, 1816'. *The Works of Thomas Jefferson, Federal Edition*. New York and London, G.P. Putnam's Sons. Vol. 11. [oll.libertyfund.org/?option=com\\_staticxt&staticfile=show.php%3Ftitle=807&chapter=88152&layout=html&Itemid=27](http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=807&chapter=88152&layout=html&Itemid=27)

67. <http://barclayperkins.blogspot.com/search/-label/India%20Porter>

68. Straton, F. (1840) *Letter to Field Marshall The Duke of Wellington, on the Soldier's Condition in India in 1840*. London: Richard Barrett. pp.28, 36.

69. *ibid*, 38.

70. <http://www.prettythingsbeertoday.com/wp/our-beers/once-upon-a-time/once-upon-a-time-eip/>

71. *ibid*.

72. *ibid*.

73. *ibid*.

74. Thomas, K. 'The Story of Flag Porter', 1. <http://www.darwinbrewery.com/FlagPorterHistory.PDF>.

75. *ibid*.

76. *ibid*, 2.

77. *ibid*.

78. *ibid*.

79. Founded in 1750 by Samuel Whitebread (1720-1796), the Whitebread Brewery was the first purpose-built mass-production brewery in the UK. It was in existence until 2001. <http://georgiangentleman.posterous.com/samuel-whitebread-1720-1796-master-brewer-and>

80. Thomas, K. op. cit.

81. *ibid*.

82. *ibid*.

83. Fromson, D. (2011) 'Historic Ales Being Poured Once More', *The Washington Post*. 29 November. [www.washingtonpost.com/lifestyle/food/historic-breeds-being-poured-once-more/2011/11/23/gIQAeHNA9N\\_story.html](http://www.washingtonpost.com/lifestyle/food/historic-breeds-being-poured-once-more/2011/11/23/gIQAeHNA9N_story.html)

84. *ibid*.

85. *ibid*.

86. *ibid*.

87. *ibid*.

88. There have been some similar projects in regards to other alcoholic beverages. One example is the 2010 discovery and subsequent recreation of of Chas. Mackinlay & Co. scotch whiskey found under the Antarctic research hut used by Sir Ernest Shackleton during his Nimrod expedition from 1907-1909.