

A Short History of Beer

Once upon a time, perhaps 10,000 years ago, some person, no doubt a woman, left a bowl of uneaten gruel in a corner of her humble abode. It was found a few days later by another person, no doubt a man, and preparing to toss it out, he first tasted it and exclaimed, Wow! He so enjoyed the froth and fizz and his fuzzyheadedness that he repeated the process – that is, mixing grain, probably barley, with water, perhaps heating it over a fire, and then letting it stand around in the air for some time. That was somewhere in the Middle East, perhaps where Iran is.

Millenia later it was discovered what caused the 'Wow'. It was alcohol – ethanol – brewed from sugar in the grain by the action of wild yeast which very commonly hovers about in the air. It was the first alcoholic beverage, the precursor of our beer and wine. Yeast plus sugar from grapes gives wine. Yeast plus sugar from grains gives beer.

Chemical tests of residues on ancient pots and pans proved that alcohol was being consumed in the Middle East as far back as 7,000 years BCE, and in China, Egypt and Europe 5,000 years ago, Old Sumerian tablets refer to the drinking of grog through straws from a communal bowl. Alcohol was included in the daily diet of Egyptian Pharaohs, and the builders of the Great Pyramids of Giza got, as pay, a daily ration of 4-5 litres of it. Egyptian texts contain more than 100 medical recipes containing it, and if a gentleman offered a lady a sip of grog it was a mark of betrothal, the equivalent of an engagement ring. As a source of sugar rice, honey and fruit were used by the early Chinese, and dates and pomegranates by Egyptians, but barley was the commonest.

In ancient Mesopotamia the majority of brewers were women, well respected and they worked under divine protection. The Epic of Gilgamesh records that the strong wild man, Enkidu, drank 7 pitchers of grog and 'his heart grew light, his face glowed and he sang out with joy'. Noah's provisions for his passengers on the Ark were said to include alcohol and there is a suggestion that the Biblical manna from heaven was really a bread-based, porridge-like beer called wuss. In the Pacific and in South America grain was chewed and mixed with spittle to convert starch to a fermentable sugar.

A damper was put on the 'wow' factor by Aldobrandino of Siena in 1256 who wrote: "But from whatever it is made, whether from oats, barley or wheat, it harms the head and stomach with bad fumes and as a result anyone who drinks it along with wine becomes drunk quickly; but it does have the property of facilitating urination and makes one's flesh white and smooth".

And so alcoholic beverages were appreciated, recorded and developed throughout the ensuing years, with Brewer' Guilds being established, Patron Saints enlisted and religious Monks coming into the business.

What about beer – from the german 'bier'? What is it?

One definition is 'an alcoholic drink made from yeast-fermented malt flavoured with hops'. Malt and hops are generally regarded as essential ingredients, but variations are not uncommon, with malted barley, millet, sorghum, cassava, potato and agave and other items being used. Hops began to be used in the 800s AD. As for yeast, its origin goes back hundreds of millions of years and there are some 1500 species of it. It was seen under the microscope in 1680 and recognised as a fungus in 1837 but it was Louis Pasteur who really brought it into prominence. In 1857 he proved that alcoholic fermentation was not simply a chemical reaction, but was caused by living yeast, and pasteurisation of beer – that is, heating which stops the growth of yeast, kills bacteria and increases shelf life – was introduced in about the 1880s, more than 20 years before the pasteurisation of milk. The quality of water used in brewing beer makes a big difference in the final product. Quote: "Brewing water affects the beer in three ways: It affects the pH of beer, which affects how the beer flavours are expressed to your palate; it provides 'seasoning' from the sulfate-to-chloride ratio; and it can cause off-flavours from chlorine or contaminants".

There are many varieties of beer, such as stout, porter, wheat beer, lager, craft beers. Ale is the term generally applied to brews which lack hops. In an Iceland poem: 'Ale it is called among men, but among the gods, beer'. Queen Elizabeth the First drank strong ale at breakfast. It has been said that ale is the natural drink for English men, beer for the Dutch. There was a big upsurge in the amount of beer being brewed when the Christian Monks, led by Benedict, entered the field about 1500 years ago. They introduced it as a safer drink than the prevalent contaminated water, and as part of their hospitality to travellers – 'charity beer', nicknamed 'liquid bread' – but, they claimed, beer also helped them through the fasting periods of Lent and Advent. The first run-off 5% brew was for the travellers and the second run-off

25% brew was for the Monks and later, for paying customers. It is said that the Monks revolutionised and perfected the beer-making process, so, as a saying is, 'If you love beer, thank a Monk'. One advertisement for their beer was that it was made 'by honest-to-God Monks'. A Benedictine Monastery which opened quite recently in Italy has the motto for its product 'That the heart might be gladdened' and one of their members, speaking at the celebration of their first year of operation said that the product helps them 'preach the Gospel without preaching the Gospel'. Another big upsurge in the production of beer was after the second world war.

As is obvious to us all beer is widely advertised. One over-the-top ad, for Virgin Beer, reads as follows: 'Imagine a woman of your dreams, your object of desire. Her charm, her sensuality, her passion... Try her taste, feel her smell, hear her voice... Imagine her massaging you passionately and whispering into your ear everything you want. Now free your fantasies and imagine that with a magic wand you can close it in one bottle of beer. The golden drink brewed with her lure, grace and flavoured with instincts. Imagine the beer of which every sip is a rendez-vous with this hot woman of your dreams... she hugs you and kisses you gently, looking straight into your eyes... How much would you give for that beer?' I think I saw a price of \$39 per bottle.

Originally beer was held in pottery or stoneware containers. Bottled beer is said to have been introduced 440 years ago by an English Rector and a fanatic fisherman. Initially bottles were considered a luxury. Cork stoppers for bottles are said to have been introduced in about 1620. Then there were wooden kegs and barrels, followed by metal ones patented in 1898. Cans were first introduced in the 1930s, twist-off caps for bottles were patented in 1858 and the now familiar Crown Caps with 24 teeth (now 21) around their rim in 1892. Draught beer in pressurised casks and kegs came on the scene in the early 1900s.

Beer is assessed according to its bitterness (in International Bitterness Units), colour (determined by the malt) and strength. The later normally varies between 3 and 14%, by volume; but many brands are stronger, such as some in Britain 23%, in Scotland 28% and the strongest, recorded in 2011, at 57.5%! Light beers are usually around 4%, and de-alcoholised beers less than 0.05%. Home brews are not uncommon. One home brewer was reported in the Adelaide Review in 2006 as saying: 'luckily I've got a most understanding partner who recognises the twitchy mannerisms that precede a full day in the shed – grinding up malted barley by hand, steeping and boiling, weighing out hops and pitching the yeast to the strains of Pavarotti. The full six-hour catastrophe produces a piddling 20 litres of beer, but none can articulate the pleasure it involves to give life to your own flavoursome beer'.

In one account Australia was ranked 19th country in the world of beer drinkers, consuming 74 litres per person annually. Czechoslovakia topped the list with twice that amount, 143 litres. The beer industry in Australia underpins the national economy to the tune of 16.9 billions of dollars per year, supports 105,148 people in full-time-equivalent jobs, and contributes 3.8 billion dollars per year in tax. Every Australian-made beer contributes almost 4 dollars to the GDP. But the trend in consumption has been declining since the 1970s. Fifty years ago 75% of alcohol consumed was from beer; now it is 40% (with wine accounting for 37% and spirits for 19%). Under-age binge drinking has declined from 17% in 2004 to 5.4% in 2016, while under-age abstinence has risen from 54% to 82%.

Bob Hawke put Australia on the world map by getting into the Guinness Book of Records in 1954 by drinking a yard of beer, that is 2.5 pints, in 11 seconds. But this pales in comparison with later world records: one litre (~2 pints) in 1.3 seconds in 1977; and 7.75 litres in 5 minutes in 2003. Other world records include John Evans of the UK balancing 235 pints of beer on his head in 2002. Closer to home, the largest pub crawl – 1,198 people having at least one drink in each of ten pubs within 6 hours – was in our own Queensland town of Maryborough in 2005. And let's not forget the famous, or infamous, 16 to 18 days-long Oktoberfests in Munich: they cater for more than 7 million visitors consuming almost 7 million litres of beer (and, incidentally, being provided with 980 toilet seats and 875 metres of urinals).

The greatest flood of beer – 135,000 gallons – was in London in 1814 when a three-story-high wooden vat exploded, sending a 15-foot high tsunami of beer through the streets of Tottenham Court Road destroying two houses and claiming 8 deaths. "Soaked in poverty, the St Giles neighbourhood was now saturated in beer". An American visitor wrote: "All at once, I found myself borne onward with great velocity by a torrent which burst upon me so suddenly as almost to deprive me of breath". A jury cleared the brewers of wrong doing declaring that the beer flood was an 'unavoidable act of God'!

So much for beer on earth. What about beer in space? Astronauts spend time there and there is talk of people living there in the future.

Well, surprise, surprise! There are two huge clouds of alcohol in space. One of them is 10,000 light years away, 1000 times the diameter of our solar system, and contains, it has been estimated by, no doubt a beer-drinking Astronomer, the equivalent of 400 trillion trillion pints of beer – ‘space booze’. ‘To down that amount of alcohol, every person on earth would have to drink 300,000 pints each day – for one billion years’. But: it is not an appetising or healthy cocktail as it’s 32 compounds include carbon monoxide, hydrogen cyanide and ammonia. The other alcoholic cloud, described as an ‘intergalactic liquor cabinet’, is in the constellation Sagittarius B near the centre of our Milky Way Galaxy. It is 100 light years wide, and ‘holds 10 billion billion billion litres of cosmic hooch’, mostly undrinkable methanol. It also contains ethyl formate making it likely that ‘the centre of our galaxy may taste and smell like raspberry-flavoured rum’.

In addition to these clouds there is Comet Lovejoy which, it has been said, is ‘zipping around space, vomiting up ethanol [and sugar and 21 other organic compounds] wherever it goes”; in fact, according to a Parisian Astronomer, no doubt a wine-drinker, ‘releasing as much alcohol as in at least 500 bottles of wine every second’. The findings provide additional evidence for the theory that comets could have been a source of the complex molecules necessary for the emergence of life on Earth’. Now there’s an interesting thought: that alcohol may have contributed to the very beginnings of life on earth.

Buzz Aldrin drank communion wine with bread on the moon in 1969. NASA chose cream sherry as the most stable alcoholic drink and least likely to undergo change in space conditions and included it on the menu for a short time – rationed to four ounces every four days – but it produced an ‘awful stench’ and such was the public outcry that it was withdrawn. NASA also experimented with fermenting beer in space but [it was found that] it contained too few yeast cells, generated a protein which causes stress, and ‘didn’t taste great’.

Now no alcohol is allowed in space, officially, but the Russians are notorious for having found ways of smuggling cognac aboard their International Space Station, for example, in a blood pressure measuring bag, in bags concealed in spacesuits, in a bottle hidden in a book from which the pages were removed. In space the liquid has the same zero weight as air, which is why it doesn’t spill out if a bag of it is squeezed; it just mixes with the air into froth, so (quote): ‘You hold (it) the bul’ka in your mouth, on your tongue, and then you slowly swallow it ... The tiny drop of alcohol has a fantastic effect in space: it calms you down, removes the tension. You quickly fall asleep and in the morning you get up invigorated I am convinced [says the cosmonaut] that it’s necessary to legalize alcohol in space in small quantities’

If I was a fair dinkum zythologist (a new word for me, and perhaps for you, too) – that is someone who studies beer and beer-making, is a connoisseur and is knowledgeable about all aspects of beer – I could go on and on dealing with the role of alcohol in nutrition, its health effects, the beer belly, binge drinking, the 3 million deaths attributed to it in one year, and its history in greater detail. But I am simply a part-time Googler, a scribbler, a tippler, conscripted to prepare a talk on this subject by Ron Wells to fill a slot in his U3A program. So, I am now calling a halt, reckoning it’s time for a drink.

Malcolm Whyte
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Egyptian wooden model of beer making in ancient Egypt, Rosicrucian Egyptian Museum, San Jose, California



