



BEER BUZZ clubs

Pale Ale

What is Pale Ale?

- Water –** Hard (especially with sulphates of calcium and magnesium).
- Malt –** Pale ale malt and invert sugar (a mixture of glucose and fructose made by splitting sucrose into these two components).
- Hops –** Loads of hops are used for both bittering and aroma
- Yeast –** A high temperature fermenting “ale” yeast, traditionally multistrain but nowadays many modern brewers use single strain cultures. The original Burton yeasts have become highly adapted to the “Burton Union” system.

History?

In the late 18th Century most of the beers being produced in both London and Burton (England's main brewing centres) were dark, porter and stout porter styles of beer

Pale Ales were first brewed by Hodgson's in London from the first malts to be dried using malt kilns fired by coke which produced a cleaner, lighter, malt. Hodgson's held a monopoly on the export of this beer to India as they held the sole supplier contract with the East India Company. By 1784, advertisements were appearing in the Calcutta Gazette for "light and excellent" pale ale.

Hodgson's domination of this lucrative export market was, however, not destined to last forever. Hodgson's persistently pushed their luck with aggressive price rises, stopped the credit of East India Company officers and hatched a plot to ship beer themselves and cut the East India Company out of the arrangement. However, Hodgson's had seriously underestimated the power of the East India Company.

In 1822 the East India Company entered into negotiations with the Allsopp Brewery of Burton-on-Trent and asked them to replicate the Hodgson's beer for them. At the same time the Burton brewers had lost export trade to Russia because of huge trade tariffs recently imposed on beer.

What nobody realised at the time was how momentous this moment was to be.

The calcium sulphate rich well water of Burton was to produce a much finer pale ale than the calcium carbonate rich water of London. This was due to its natural acidity and the fact that it drew less colour from the malt during brewing, thereby producing a lighter coloured beer.

The first half of the 19th Century was an important period in history for beer as many factors came together to change the face of the brewing landscape across Europe forever:

- Malts were becoming paler and capable of producing drier more highly attenuated beers.

- Glass manufacture had become cheaper making glasses affordable for pubs for the first time.
- Industrialisation brought more automation and greater size to breweries.
- Scientific advanced brought greater understanding of the brewing process and yeast for the first time.
- The birth of the railways made it easier to transport bulky products like beer, greater distances.

Demand for Pale Ale really took off in the 1840s and 1850s. Burton became criss-crossed with private railways that brought in raw materials and connected breweries to their maltings. And, of course, fed trucks laden with barrels of beer into the railway network and onwards to every corner of the kingdom.

In the late 19th Century large quantities of barley were being imported from around the world with the best being Czech, although it was still malted in the UK.

How is Pale Ale Brewed (Traditional Burton Method)?

Fermentation vessels were relatively small. And a mix of round and square fermenting vessels. So although the shape of the fermentation vessels was unimportant, these were, traditionally small, shallow and open.

After primary fermentation the most distinctive feature of Burton pale ale brewing was used – the Burton Union System – the beer was dropped from the fermentation vessels into wooden casks each about twice the size of a traditional 36 gallon barrel. These casks were arranged in rows and were all connected together. Suspended above the casks was an angled trough. Excess yeast and unwanted proteins were allowed to overflow from the casks through swan-neck shaped pipes into the trough above. Because the trough was set at an angle, any overflowing beer flowed to one end where it was returned to the fermentation / conditioning vats. The beer stayed in the union system for several days after which it was conditioned for several months, since Pale Ale was one of the types of beer described as a “keeping beer” as opposed to a “mild” which was a beer brewed to be drunk fresh.

The 19th Century Burton brewers included:

- Evershed
- **Bass**
- **Truman** (also in London)
- Marston
- Thompson
- **Allsopp**
- Eadie
- **Salt**
- **Ind Coope**

Which brewer still uses the classic Burton Union system to this day?

Marstons.

Scotland was another important centre for 19th Century Pale Ale production and, indeed, Edinburgh and Alloa anticipated the demand before London. In fact Scotland seemed to be ahead of England in beer style popularity by about 30 years at this time with milds became unpopular earlier and lager in demand sooner. In contrast by the 1840's only Truman (of the big 3 London breweries – Barclay Perkins, Whitbread) was brewing a pale ale. The main difference with Scottish Pale Ales was that they were often darker than English ones.

Since the rise of pale ale in the middle of the 19th Century, when they were typically between 6% and 7.5% abv. and used Shitloads of hops both political and historical factors have led to the typical alcohol level falling significantly:

- By the end of the 19th Century the abv had dropped to between 4.5% and 6% with proportionally less hops as well
- Between the wars typically 3.5% to 4%
- After WWII typically 3% to 3.5%
- Present day typically 4% to 5%

In the 20th Century Pale Ales were often the bottled version of a brewers Bitter with a higher abv to position them as a premium product.

Today Pale Ales are still produced in the UK as well as Belgium, USA and other parts of the English speaking world. However, the style is becoming more and more popular with modern micro-breweries the world over. The international examples tend to differ from the UK examples in a number of ways. In the USA (and generally around the worlds micros) pale ale tends to be higher in alcohol, more highly hopped and paler in colour. In Belgium, again the pale ales tend to be higher in alcohol as well as being sweeter and less hoppy than their American counterparts but maintain the traditional rich amber colour of the UK examples.

Sub-styles include:

Bitter

Since the early 20th Century, Bitter is similar to Pale Ale but usually has the addition of a small amount of darker, Crystal malt, which gives a nutty flavour. Bitter tends to vary more in colour than Pale Ale, is available in a wide range of strengths but has the same hop characteristics.

IPA

IPA is not really a different style to PA although brewers often produced a range of both IPA's and PA's. Although there is little historical evidence to support the theory that they were stronger and more highly hopped than PA's of the period, these factors together with high attenuation reduced the level of food available for bugs in the tropics and meant that these beers could be kept for long enough to be shipped around the world. It is not, however, true that other beers of the period did not keep for long enough to be transported around the world. Porters and Stouts were also amongst the range of beers available to colonists throughout the British Empire but did not experience the popularity of the newer paler beer styles.

Beer Tasting

Marston's – Pedigree – 4.5% – Burton-on-Trent – England

Fuller's – London Pride – 4.7% – London – England

Adnams – Southwold Bitter – 4.1% – Southwold – England

Wye Valley – HPA – 4.0% – Hereford – England

de Koninck – Pale Ale – 5.2% – Antwerp – Belgium

Sierra Nevada – Pale Ale – 5.6% – Chico, CA – USA