

History of English Bitter

September 2025

English Ale and Beer in the 1700s

In England, it used to be a beer if it had hops, and an ale if it didn't.

- Hops were probably first introduced in England in the late 15th century by Flemish immigrants
- A debate went on for two centuries over whether or not hops were a "proper" ingredient for ale - ale and beer were two separate malt liquor classifications
- Recognition of its value as a preservative, and a ban on hop substitutes for ale by Parliament in 1710 moved drinkers away from ale and towards beer. [1 p 9-10]
- Ales were then hopped at roughly 1/4 the rate of the equivalent beer

Pale malt was available starting in the late 17th century, with the invention of "coke", coal heated in the absence of air to drive off undesirable characteristics, a treatment similar to making charcoal.

- Pale malt was very expensive and had limited availability at first, and was only used for premium, expensive beers [1 p 15-16]
- The invention of the saccharometer revealed the false economy of darker base malts and every beer started using pale malt for extract efficiency

Ales and beers were made in various strengths and colors according to base malt, most of each had "mild" (unaged) versions, and "keeping" beers versions were made with more hops, & dry hops. [2]

- Keeping beers would age, get vinous character, and be blended with fresh beer for serving. The very weakest (and very strongest) usually were beers, since low gravity ales didn't keep well.
- They were made with several mashes in a row, the second usually with hotter water, to make beers of various strengths [1 p17]
- "Pale ale" originally meant a lightly hopped strong ale, precursor to the X mild ales of the 1800s [3]
- The line between the two malt liquors had blurred by 1800 since all of them were now unified in using hops, and the term "pale ale" came to be associated with the more hop forward drink [3]

From October Beer to Pale Ale Revolution

The strongest, most aggressively hopped beers were "October beer" - seen as the ancestor of IPA and barleywine and made with the most recently harvested malt and hops [1 p.13-14]

- October beers were well-aged beers in barrels with dry hops for aging after a month-long primary fermentation. Stoppers were loosened during the summer to allow for refermentation in the barrel
- October beers had high starting gravities of 19-25 degrees Plato, hopped at 2 oz of hops per gallon and had an alcohol content of 8-12%

By the late 1700s, Hodgson's Bow Brewery of London produced a keeping "pale ale" they shipped to India, often credited as the first "IPA", though that term would not appear until nearly 50 years later [1 p46-47]

- It is worth noting that Hodgson *also* started shipping porter, strong ale, and table beer to India shortly after establishing the brewery [1 p36]

Burton brewer Allsopp started producing Pale Ale to ship to India around 1820.

- Allsopp's invented a new "white malt" to do it, even paler than the pale malt in use before, and reportedly similar to Pilsner malt [1 p 71]
- The high gypsum water produced clearer Pale Ale, which were preferred at the time as a sign of higher quality beer [1 p 67-70]

A British tax system that was abolished in 1830 may inform the practice of marking barrels with T or X, to indicate table or strong ale [5]

- The latter of which *might* have indicated 10 shillings per barrel. This system survived in the codes the brewers used to identify these beers for the next century or so
- "Keeping" beers would be marked also with a K at the end (e.g. XXK, XXXK)

A Bitter Divide

In 1839 the expansion of the British railway to Burton-upon-Trent made it easier for them to ship beer around England, some brewers had huge demand for hoppy Pale Ale and others had to make similar Pale Ales to compete. [6 p14]

- These would be referred to as “bitter” by bar patrons by 1850 to differentiate from the sweeter, (but also pale) Mild - this was about 80 years before we would start to see pump clips [6 p10]
- Internally, and with bottled products would all continue to refer to them as pale ale. The term IPA and Pale Ale would be used surprisingly interchangeably for a long time, with little regard to our modern notion that IPA should be the “stronger” beer [7]

Breweries in the south around London started offering IPAs in the 1840s, but it wasn't until the 1860s that many brewers started offering an IPA and a lower priced “bitter” ale [6 p15]

- In 1875 a brewery outside of London offered “IPA”, “BA”, and “LBA”, a pattern followed by many brewers, sometimes without an IPA in the range

Other beer styles lightened from increased use of pale malt and got hoppier in the 19th century

- However, hop rates dropped from 3-5 lbs/bbl in the late 1800s to 1.9 lbs/bbl by 1908. The change in customer preferences away from stock ales, as well as adoption of artificial refrigeration meant much less was necessary [1 p59]
- Scotch Ale and Burton Ale previously were brown ales, but were pale in the 19th century [8 p17-19]

Demand for hops was so great that loads of foreign hops were imported to the UK from the 1850s [10 p16]

- American hops could be used for bittering, but usually they were not very fresh. Saaz, Hallertau, and East Kent Goldings were prized finishing hops [9]

Barley was also imported from all over the world wherever it could be grown, but was malted in the UK [11]



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XXX Extra Strength ...	24/ ... 12/	XAK Extra Strength ...	24/ ... 12/
XXXX Best Quality ...	30/ ... 15/	XXAK Best Quality ...	30/ ... 15/
XXXXB A Strong Bitter Beer...	36/ ... 18/		
PALE BITTER ALES.		STOUT AND PORTER.	
XS Light Bitter ...	15/ ... 7/6	P Porter ...	18/ ... 9/
VPA VICTORIA PALE ALE.		SS Single Stout ...	24/ ... 12/
Tonic Bitter... (Strongly recommended.)	20/ ... 10/	*S Best Quality ...	27/ ... 13/6
XVPA Extra Strength...	24/ ... 12/		
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Rise of the Running Bitter

Due to malt shortages, the Brewing from Sugar Act 1847 incentivized cane sugar use in brewing, but required it to bear the full customs duty to match malt excise revenue [12]

- There was little adoption at the time, since the duty was prohibitively expensive, and its use invited more scrutiny from the tax man, risking a hefty £200 fine for violations
- The act effectively prohibited molasses, honey, and other saccharine substances unless they paid equivalent import duties, effectively banning them due to lower duties (e.g., 5s 9d for molasses) or non-sugar status (e.g., honey) [13]
- The import duty was changed to an excise duty in 1851, incentivizing more use as the full import duty could be avoided, but adoption was still low until a rise in the price of malt in 1866 [14 p40]

By the 1870s a new class of hoppy beers, drank young were available, sometimes called “tonic” pale ale, crystal ale, or dinner ale,

- In the price list it would sometimes be listed as an “intermediate ale”, neither mild, nor a full bitter or aged beer, called “AK” on the price list - indicating its one class less strong than X, but would be the same price as it, usually 36 shillings per barrel [15]
- These “running beers” (as opposed to keeping beers) were a precursor to the modern bitter family, cask beer meant to be drank young rather than an bottled aged product [1 p59]
- The tonic name comes from the idea at the time that all the hops were good for you [16 p14]
- They were sold to private families by the cask to have with dinner, since you didn’t know if the barkeeper was adulterating the casks there, and bottled beer was still fairly expensive at the time. This practice continued until around WW1 [10 p23-24]

Despite earlier legalization of brewing sugars, British pale ale mostly would have been comprised of all pale malt, until adjuncts were allowed by the Inland Revenue Act (more commonly known as the Free Mash Tun Act) of 1880.

- Rice became popular at first but corn became the adjunct of choice, along with invert sugars [17]
- Invert sugars became popular, some of which had unfermentable sugars for stock ales to provide food for long secondary fermentations, and others helped running beers come into condition sooner [18]
- Previously, brewers were taxed on the amount of malt, which is why substitutes were banned - the Free Mash Tun Act changed this to tax by the original gravity, per standard barrel of 36 imperial gallons at 1.057, later 1.055.

Example: Fullers Ales in 1887

	Style	OG	Hop Rate (lb/bbl)
X	Mild	1.055	1.41
XX	Mild	1.065	1.94
AK	Light Bitter	1.050	2.26
AKK	Premium Light Bitter	1.050	2.53
XK	Bitter Pale Ale	1.057	2.83
XKK	Bitter Pale Ale	1.059	3.12
IPA	India Pale Ale	1.061	3.45
XXK	Strong Old Ale	1.079	4.2

Source: <https://barclayperkins.blogspot.com/2009/08/beer-codes-partial-explanation.html>

20th Century Into Modernity

Grain shortages during WW1 impacted British brewing, with gravities limited by law. e.g. The average OG of all beer produced by a brewery could be no higher than 1.030 at one point [3]

- There was big incentive to drop gravities for X Mild ales, the cheapest and best selling beer, bitters were less affected

WW2 brought another round of gravity cuts that killed off some of the lighter beers in brewery portfolios, but at least three “AK” beers were still produced into the 1980s, and McMullen AK persists to this day [10 p32]

- Crystal malts had been available since around the 1880s but were not used in bitters until around WW2

In the 19th century, Scottish beers overwhelmingly used pale malt and were hoppy.

- The shilling system primarily indicated price per hogshead, but the same base pale ale recipe could be sold under different marketing labels — Mild Ale, Stock Ale, Pale Ale/IPA, etc. — depending on the intended market (pub, grocer, export) [7]
- Shilling Stouts existed, but these were outliers; most beers in the system were variations on pale ale.
- After WWI, the old shilling system and its wide variety of products largely disappeared. The remaining beers were still pale ales with “shilling” designations, although some eventually became darker through added color or roasted malts.

Similarly, the modern Irish Red is essentially a differently balanced bitter, with marketing built off of stories of red ales from the past that likely would have been quite different [19]

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