History of Development of English Bitters and Pale Ales.

For such a popular category of beers, style guidelines are rather blurry. In particular, the distinction between English Bitter and English Pale Ale is elusive. British brewers themselves appear to use the two terms indiscriminately, along with Strong Ale, Premium Ale, Strong Pale Ale and others. Australian style guidelines recognize EPA, but fail to satisfactorily distinguish it from English Special Bitter. American BJCP guidelines completely omit EPA as a separate style.

In modern terms, this omission may seem justified: 89.6% of all English pale beers in a 1997 survey were designated bitter, only 6.9% designated pale or light ale, and 3.5% IPA. (Terry Foster, Pale Ale, 1999) Thus even in England the term "pale ale" is almost extinct, and the style itself has become absorbed into the broader bitter category.

It wasn't always so, and the history of development of these beers gives quite a different picture. History is open to interpretation and some of the stories may be apochryphal, but it becomes evident that Pale Ale preceded Bitter by half a century or more, and when Bitter eventually did emerge, it was a distinctly different beer from Pale Ale.

India Pale Ale.

1790: George Hodgson of London is credited with the first shipment of "Hodgsons India Ale", a somewhat paler beer specifically designed for export. He employs huge quantities of hops as a preservative during the long hot voyage to India. OG is around 1.070, comparable to the dominant porters of the day. He cornered the India trade for a time due more to his shrewd and aggressive marketing tactics than the quality of his beer - "We neither like its thick and muddy appearance or rank bitter flavour" commented one brewer. Such problems could be expected when trying to brew a pale highly hopped beer with London's carbonate water.

1817: Englishman Daniel Wheeler patents his "Improved Method of Drying and Preparing Malt". Wheeler replaced the traditional direct fired kiln with an iron cylindrical drum in which grain is blow dried by clean hot air, allowing greater temperature control and the production of paler malts. "It was Wheeler's invention, more than anything else, that spawned the explosion of beer styles, especially of paler beer styles, in both Britain and Germany during the nineteenth century." (Horst Dornbusch, Bavarian Helles, 2000).

1823: Small regional brewer Allsopp of Burton on Trent perfects the IPA style using their own specially developed "white malt". This is arguably the world's first true pale beer, predating Pilsener by 20 years. Hodgson quickly loses his grip on the India trade. Other Burton brewers, notably Bass and William Worthington, quickly follow with their own IPAs. The Burton style becomes well defined:

- 100% pale malt
- OG around 1.070
- High hopping rates, including dry-hopping in cask, to preserve and stabilize beer
- High sulphate Burton water enhances bitterness and hop character
- Very high attenuation using powdery non-flocculent yeasts
- Matured for several months prior to shipping

English Pale Ale.

1827: Cargo of Bass IPA destined for India is shipwrecked, salvaged, and auctioned off in Liverpool. Locals demand that the beer be made available on the home market.

1830 – 1880: Explosion in the domestic popularity of Burton IPA. By 1876, Bass and Allsopp have become the worlds two biggest breweries on the strength of this domestic demand. Exports to India, Australia, Canada, America and the West Indies establish the pale ale style in those countries, but even at its peak in 1859, the export trade accounts for only 2% of English brewing output.

The Burton brewers have established a reputation at home for their superior pale ales, and brewers throughout England are now selling pale ales in the classic IPA style. OG remains fairly constant around 1.060 – 1.072 during this period, with an average of 1.068 in 1846. Most brewers, including Bass, drop the word "India" from their domestic pale ale brands. Hopping rates appears to have been slightly lower than the export versions, but evidently still very high at 65 – 95 IBU.

The removal of a heavy tax on glass in 1840 leads to widespread introduction of glass, rather than pewter or earthenware drinking vessels, further enhancing the appeal of these pale sparkling beers. However, pale ale during this period was a premium quality bottled product within a brewery's range of beers. As such it found favour with more affluent and growing middle class consumers for its light refreshing character, but never managed to outsell the dark beers of the day, namely porter and its successor, dark mild. These cheaper, more sustaining draught beers remained the staple beer of the working class.

Bitter

1880 onwards: Around this time, the term "bitter" starts to appear. Many brewers, including those of Burton, start to offer one or more Bitters in their range, alongside their existing pale ales, porters and milds. This is clear indication that it was a different beer.

The origins and characteristics of bitter are not as clear as those of pale ale, but they appear to fill the wide vaccuum in the market between the two dominant but very polarized styles, ie. dry bitter pale ale and dark sweet mild ale. Early bitters were distinctly bitter and hoppy, but darker than pale ales. OG was comparable to or even slightly higher than pale ale, and usually slightly lower than mild.

Such a beer, which offered some of the characteristics both styles, might logically have wide appeal. Served mainly on draught, it might compete successfully with mass produced dark mild. This is in fact what eventuated, although it took a long time. Michael Jackson states that even as late as 1940, the term bitter may not have been fully established. The British love of dark beers would die hard – as late as 1960, dark draught mild ale was still outselling bitter in England.

If brewers perceived bitter as being somewhere between pale ale and dark mild as suggested, then its potential colour and bitterness range would be quite large. Bitters today have become quite diversified as brewers seek to differentiate their products. Any attempt to define them will necessarily be somewhat arbitrary. What is clear is that bitter was not pale in the sense of the Burton pale ales, which represented the deliberate pursuit of a true pale beer, as was now occurring with lagers in Europe.

Various brown or roasted malts may have accounted for the darker colour of bitters, but it is worth considering the role played by crystal malt. This was a recent English development, made possible by the same technological advances in malting which led to pale malt itself. Crystal malt production involves "stewing" the still moist germinated malt at around 70^0C in a closed vessel to saccharify the malt starch before drying and kilning, essentially "mashing in the kernel". Such close temperature and moisture control was not possible with traditional direct fired kilns.

It would be highly speculative to suggest that the novel caramel and toffee flavours of crystal malt gave birth to the entire bitter style, but these malts have certainly found their greatest expression in bitters, to the extent that they are now considered a defining characteristic of the style.

Sugar and Cereal Adjuncts.

1847: Changes in taxation laws allow the use of sugar in brewing. Sugar and other malt substitutes had been banned during the eighteenth century, not for reasons of purity, but in order to protect revenue from the tax on malt. Sugar now crept into English brewing, but its use was initially limited, as it was now also heavily taxed.

1880: The Free Mash Tun Act abolishes all taxes on brewing ingredients, replacing them with a single tax based on wort gravity alone. This cleared the way for a rapid escalation in the use of sugar and cereal adjuncts. By 1900-1910, sugar comprised 30% of the total amount of malt used in English brewing, and cereals around 10%. By 1914 total usage settled out to 80% malt and 20% sugar and other cereals, where it remains today.

Another significant provision of the Free Mash Tun Act was the imposition of a higher tax rate on beers over 1.057 OG. Although its effects were not immediate, this policy would ultimately spell the end for IPA, and initiate a steep downward trend in gravity of all beer styles. In 1900 the average OG of all English beers was still a respectable 1.055. After two world wars, increases in the beer tax rate, and progressive lowering of the OG tax threshold, average OG has fallen to just over 1.037 today.

Fortunately, a number of the smaller independent and regional breweries have managed to resist these trends, and today still offer all-malt beers of distinction which are recognizably in the pale ale or bitter styles, despite often being labelled otherwise.

Summary.

A debate is required to address the inadequacies of the current style guidelines, especially in respect of EPA and its differentiaton from bitter.