

Brown Ales

Bob Mac Kay

History of Brown Ales

The key to discovering the origins of brown ale is malt. The color and flavor of malt dictates the character of the finished beer more than any other ingredient or process.

Two schools of thought about the origins of Brown Ales:

1. All ales were brown prior to introduction of Pale Malt via the introduction of coke as a smokeless, controllable fuel source around 1680 to 1700. Prior to that, many believe, all beers were smoky and brown because malts were dried over a wood fire.
2. However, delving into the more general works of historians, and the few available works that dealt with brewing as a part of medieval and pre-industrial life in Britain, we find this was not the case:
 - a. In the earliest reference to beer in the British Isles, Arnold 1 quotes the terms of a lease from 688 whereby payments were to include “12 casks of strong ale, 30 casks of small ale.” This confirms brewing activity at this early date but also provides evidence that different types or styles of ale were made much earlier than the 18th century.
 - b. Stopes 2, writing in 1885, praises monastic brewing before 1300, noting that the reverend fathers “loved their nut-brown ale.” This, therefore, puts color on ale at an early date.
 - c. Corran 3 in his *History of Brewing*, mentions several points that indicate lighter-colored ales existed:
 - i. “Unmalted grain was used to a considerable extent, more than would be reckoned judicious today.” Use of unmalted grain would produce a paler beer than those produced with malt alone.
 - ii. Grains other than barley were common in the medieval times. Corran states “The monks at St. Paul’s Cathedral made beer using equal quantities of barley and wheat, plus some oats.” Such high proportions of wheat would tend to produce a lighter-colored beer.
 - iii. At times, wheat was almost certainly used as the only grain in making beer. In 1302, for example, wheat was considerably cheaper than barley. And it appears the use of wheat and oats was widespread.

Timeline:

13th and early 14th century – Oats were preferred above all other grains. Also, wheat and dredge (a combination of oats and barley) were also sometimes malted.

15th century – Brewers started shifting towards barley.

16th century – Barley became the favored brewing grain.

- iv. Corran’s comments on the medieval brewing process: “For light-colored beer, the wort was moved at once after boiling, but for brown beer it was boiled for several hours.”

Social changes in brewing

Before the ravages of the Black Plague (1348 – 1349), brewing was a domestic occupation practiced primarily, and perhaps exclusively, by women.

Ale – Identified malt beverages brewed without hops. Instead, various herbs and spices were used for bitterness.

Beer – Identified malt beverages brewed with hops for bitterness to counteract the malt sweetness.

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Poor Stability – In general, ales were fast to sour. This meant they:

- Lasted only a few days. In fact, consumption would begin as quickly as 12 hours after brewing.
- Could not be kept in inventory.
- Could not be transported any significant distance for sale.
- Could not commercialize ale for widespread consumption.
- Brews of any size would outstrip the needs of the household, thereby prompting the brewster to quickly sell ale to neighbors and townspeople.

Sporadic Brew Sessions – The efforts of early brewers were sporadic. Some brewed only once or twice a year, while others continued for a few months, then ceased altogether. Few brewed regularly for many years on end.

No Recipe and Brew Process Standards – Further, each brewer followed his or her own recipe and procedures in brewing, thereby introducing a myriad of variations.

All this meant that the nature of medieval ale probably varied widely, not only from town to town, but also from week to week within a town and even within the same neighborhood.

Malt

Between the end of the Black Plague in 1349 and the creation of Porter in 1720, the nature of brewing in Britain changed considerably. The most important issues in efforts to understand this period relate to the character and use of the key ingredient, malt.

Malt – Many brewers and Alewives throughout this time made their own malt. And malt lies at the heart of the brown ale issue. If the malt was brown, then the ales and beers made from it would likely be the same.

Malts were dried by several techniques:

Sun - natural drying under the sun – limited to summer months only and to the English weather.

Kiln – probably most widely used method of drying the malt prior to the development of coal and coke as fuels. Various sources discuss the use of wood, straw and fern as the fuel for the kiln. Straw was the preferred source, since this would result in a lighter and less smoky beverage. Because of the use of straw for kilning, it appears that a paler sort of malt was being made before coke came along.

Kiln Designs a Major Emphasis – The kiln's design also influences the malt character. Beginning in the early 1600s, there are references to kilns that prevent contact of smoke and malt. The first patent in any subject connected to brewing appeared in 1634. Altogether, 14 patents appeared before the end of the century, and 13 dealt with fuel and heating problems. From them, we can draw the following conclusions:

1. That smoke was a great nuisance in the drying of malt.
2. The ale and beer brewed from smoked malt was “unsavory and unwholesome,” but presumably must have been accepted to some extent.
3. The straw, wood, peat and turf were being supplanted by coal, both in the drying of malt and hops and in the boiling of coppers.

It was this introduction of coke as a smokeless, controllable fuel source that led to the “invention” of pale malt, (circa 1680 to 1700).

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These examples indicate that smoky-flavored, brown-colored ales must have existed in pre-industrial Britain. Because many brewers and consumers disliked smoke - and to a lesser degree, brown color - they sought to remove these properties from their malts and beers. No doubt, some succeeded. As a result, ales both pale and lacking in smoke must have been available to some significant extent long before 1700.

With Hops Comes Beer

Between the end of the Black Plague and the introduction of Porter, many changes in beer and brewing occurred. None were more significant than the use of hops. The introduction of hops created beer - as distinct from unhopped ale. With this new beverage came many other changes in the production and consumption of fermented grain beverages in Britain.

According to Bennett, hops may have been introduced to Britain as early as the late 13th century. But it didn't take until almost 100 years later in southeast England. It would take nearly 400 years for beer to fully prevail and for the distinction of ale as an unhopped beverage to disappear.

The use of hops brought many advantages to brewers:

- Hops helped prevent spoilage, which meant they lasted much longer, providing more opportunities for sales
- Allowed brewers to make products lower in original gravity & alcohol vs. ales of the time
- Allowed brewers to make more drink for their grain (e.g., 20 gallons of beer versus 9 gallons of ale out of one bushel of malt).

Brewing Changes

Many other changes came with the coming of beer:

- Brewing shifted from the domestic and often occasional trade of women to being the task primarily of men, who were lured into full-time brewing by the greater opportunity for profit offered by a stable, higher-margin product.
- The disappearance of occasional home-based commercial brewing
- The evolution of common victualers, who baked bread, brewed drink and managed alehouses.
- Herbs and spices were also used in pre-industrial beers.

These early beers probably showed the same variations in color and smokiness as their ale-like brethren. Many of the earlier points made about ale applied to early beers as well. Thus, as early as 1400, there may have been an English beverage that resembled what is today thought of as Brown Ale.

Industrial Brewing and Brown Ale

Porter was the first distinct and lasting beer style to emerge from the hodgepodge of brews being made into the early 1700s. It began as a cocktail of 3 beers:

- Pale ale
- Stale ale
- Mild ale

The stale and mild ales were brown colored, and were simply called "brown ale". Legend credits Ralph Harwood with the creation of a distinct porter beer in 1722. Indeed, by 1726, consumption of a drink by that name was well recognized in London. Most likely, both the porter made by Harwood and the cocktail by the

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same name shared the title for some years, along with similar beers offered under different names by different brewers. Only in retrospect do people call all of these beers Porter.

The popularity of Porter-like beverages soared in the 1700s, and by the end of the century, due to tremendous capital investments in a number of small porter production plants, Porter became the world's first truly industrial beer and ruled both in London and beyond. From 1750 to 1900, we find references to "brown beer" that mean porter or stout rather than some other variation on the theme as occurred earlier (i.e., mild ale and brown ale). Aside from this reference to porter or stout, there are no other references to a specific "brown ale" product prior to the 20th century.

Drum Roaster Severs Ties

In 1817, Daniel Wheeler invented the **drum roaster** and changed the course of beer history. He also severed the close ties between porters, stouts, brown ales and mild ales. The drum roaster brought black malts to the brew house and black beers to the tavern. Henceforth, porter and stout would be associated with black malt and roasted barley; the others would not. One example is seen in the chronicles of a 19th century brewer who denotes porter and stout brewed without Wheeler's patent malt as "**brown beers**" and those brewed with it as "**black beers**."

Pale Ale Starts Its Ascent

At about the same time, pale ale began its ascent. By 1850, it had passed porter's position as the number one beer in Britain. Although porter and stout would survive in a secondary role for many more years, the auxiliary brown beers would mostly disappear. Thus, for nearly a century, brown ale made from malt was essentially unseen in Britain. There were a few exceptions, notably Treacle-Beer, which used molasses to produce a brown beer, although not similar to today's brown beers.

The 20th Century

Between 1820 to 1920, brown ales appear to have been quite rare. However, its brother, mild ale, was often seen, and products sold under that name fit into a wide spectrum of beers with gravities ranging from 1.055 to 1.080. The original meaning of **mild** was a beer that was **young** and **unaged**. It also meant "not bitter" and had nothing to do with its strength. In the modern sense, it means "mildly hopped," although in the old sense it meant not sour.

The origins of the term mild ale stem from the early days of commercial brewing when many people did not feel that a beer had matured properly until it was beginning to turn sour, i.e., until an acetic acid taste was beginning to develop. Mild beer was a fresh, immature beer, as opposed to stale beer, which was the same beer only it had been kept for up to a year and was beginning to turn sour. A customer would mix these in his tankard in appropriate quantities to give him the desired tang.

The milds of 300 years ago were simply immature versions of the standard brown beers of the day, which were brewed using the only malt widely available: brown malt. Brown malt was kilned over a hardwood fire, which smoked the malt as it dried it, giving it a rich, smoky character.

Over the centuries, dark mild has evolved into its present form, after being first influenced by 18 century Porter, 19th century tastes and then 20th century greed.

- 1.085 in 1805

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- 1.070 in 1871
- 1.050 in 1913
- 1.034 today

Over this time, the term mild came to mean lightly hopped, rather than not sour.

The character of a modern dark mild is derived from the use of dark, roasted malts and cereal adjuncts, giving it a luscious depth of flavor.

Light colored mild ales are “mild” in the literal sense, i.e., they are an ordinary pale ale that is mildly hopped. They are not expected to have the same depth of character as genuine dark mild ales.

Thanks to black patent malt, brewers called their black beers either porter or stout. But the brown beers that remained needed a new name. Since they were unaged, mild seemed most suitable.

Today, mild ale is a style distinct from brown ale, but the close relationship between the two can't be denied. In the 20th century, brown ale emerged as the bottled product, and many authorities describe it simply as the bottled version of mild. Indeed, Greg Drury, head brewer at Fuller's in London, says that the brown ale once marketed by the company was precisely that. Most of the mild ale brewed was cask conditioned and served on draft. But a portion was filtered, primed with a substantial amount of sugar, and then bottled as brown ale.

“The Dog” Fetches Brown Ale from Oblivion

In 1924, Barras Ramsey, chairman of Scottish and Newcastle Breweries, was aware of the increasing demand for bottled beers. He set his star young brewer, Colonial Jim Porter, to work with the brewery's chief chemist, conducting experiments in brewing and blending to develop a product that would suit the bottled-beer market. Three years later, he had developed a deep amber-colored ale that he believed would quench the thirst of the hard-working locals. In 1927, **Newcastle Brown Ale**, or “Newkie Broom,” was launched.

The following year, this won gold medals at the International Brewers' Exposition in London, securing its reputation and an enduring name for brown beers in the 20th century. Its popularity has increased over the years, and today is the largest-selling bottled beer in the UK! This popularity has spawned another nickname for this beer in its local market: the Dog. Pub goers in the Northeast often refer to their nightly trip to the pub as “going out to walk the dog.” And because Newcastle Brown Ale is often the beer they are seeking, the company has launched a whole advertising campaign referring to its beer as “the Dog.”

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Brown Ale Styles Today

There are currently four styles of Brown Ale as defined by AHA and BJCP style guidelines (Category 10): Mild, Northern English Brown, Southern English Brown and American Brown.

- **Mild Brown Ale (10A)**

This light to medium bodied, medium to dark brown colored ale has a slight mild malt/brown malt aroma, with some fruitiness, but no hop aroma. It should have a lightly nutty, malty character, but not roasty. Additional flavors may include vinous, licorice, plum, raisin or chocolate. It is usually fairly well balanced, though some are sweetly malt-oriented. Mild ale should be a light-flavored, malt-accented beer that is readily suited to drinking in quantity. Should be refreshing, yet flavorful!

OG	FG	Alc/vol	IBUs	Color (SRM)
1.030-1.038	1.008-1.013	2.5-4.0%	10-20	10-25

Commercial examples: Brain's Dark, Banks's Mild, Highgate Mild, Fuller's Hock, McMullin AK, Robinson's Best Mild, Theakston Traditional, Tetley Mild, Grant's Celtic Ale

- **Northern English Brown Ale (10B)**

Northern English Browns are slightly stronger and darker than Milds, brewed with English mild ale or pale ale malt base with the addition of caramel malts. There should be restrained fruitiness to the aroma, with little to no hop presence. The flavor of this dark golden to light brown colored ale should exhibit a gentle to moderate sweetness, with a nutty character. The balance should be nearly even, with hop flavor low to none. Some fruity esters should be present, and low levels of diacetyl are acceptable. This medium light to medium bodied ale should have a nutty rather than caramel character, and should finish dry.

OG	FG	Alc/vol	IBUs	Color (SRM)
1.040-1.050	1.010-1.013	4.0-5.0%	15-30	12-30

Commercial examples: Newcastle Brown Ale, Samuel Smith Nut Brown Ale, Adnams' Nut Brown Ale.

- **Southern English Brown Ale (10C)**

Southern English Browns are darker, sweeter and less hop-oriented than Northern English Browns. This dark brown, almost opaque colored brown ale is brewed with a healthy proportion of caramel malts and often some darker malts to produce an aroma of malty and moderately fruity character and a gentle, moderately sweet flavor. Malt dominates the balance, with hop bitterness sufficient to prevent an overly sweet impression. Hop flavor is low to non-existent, and sharp or roasty flavors are inappropriate. This low to medium bodied ale leaves a caramel impression, and requires moderate to high carbonate water to appropriately balance the dark malt acidity. This is an increasing rare style of brown ale.

OG	FG	Alc/vol	IBUs	Color (SRM)
1.040-1.050	1.011-1.014	3.5-5.0%	15-24	20-35

Commercial examples: Mann's Brown Ale, Oregon Nut Brown Ale

- **American Brown Ale (10D)**

A strongly flavored, hoppy brown ale, originated by American home brewers. American Brown Ales are dark amber to dark brown in color, with a mild to strong hop aroma, which is often citrusy. Estery aromas and dark malt aspects are mild to moderate. Hop bitterness and flavor dominate the malty richness that is a characteristic of brown ales. The flavor is slightly drier than English versions, and the malt plays a supporting role to the hops, although some toasty malt character (or even some restrained roastiness) should still be evident. A bigger, hoppier, dryer version of brown ale, typically including the citrusy-accented hop presence that is characteristic of American varieties. The body is medium to medium-full, with a dry, resinous impression contributed by the high hop bitterness. Pale malt, plus crystal and darker malts should make up the grain bill, with generous amounts of American hops.

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OG	FG	Alc/vol	IBUs	Color (SRM)
1.040-1.060	1.010-1.017	4.0-6.0%	25-60	15-22

Commercial examples: Pete's Wicked Ale, Brooklyn Brown Ale, Hart's Pacific Crest Ale, Smuttynose Old Brown Dog, Il Vicino Tenderfoot Brown, Shipyard Moose Brown

Brewing Techniques

The brewing process for brown ales is a simple one, and brewers with various experience levels can make excellent brown ales.

Malts:

Pre-packaged malt extract (either liquid or dry) or all grain brewing techniques, with specialty grains

Mash:

Simple single-step infusion mash works well with the well-modified malts used in brown ales. The standard ratio of 1.33 quarts of hot liquor per pound of grain is commonly used. For Milds and Northern English Browns, the mash temperatures should be fairly low (150 to 152 deg. F) to produce a light bodied ale. For Southern English Browns, a higher saccharification temperature in the range of 156 to 158 deg. F is used to produce fuller-bodied, more dextrinous wort. American Browns split this range, with a medium to medium-full body that suggests a mash temperature of about 154 deg. F.

Boiling:

Brown ales benefit from longer than normal boils through increased caramelization that adds both color and flavor complexity to the beer. Boiling for 90 minutes is common.

Hopping Rate:

While Milds and English style brown ales typically employ two or even one hop addition (for bitterness and balance), American browns have a more complex hop schedule.

Special Additions

At the end of the boil, some English brewers, such as Scottish and Newcastle Breweries, add their kettle sugars to the wort. The additional sugar increases the OG of the wort and dries out the finish by increasing overall fermentability as compared to a grain-derived wort.

Separation and Cooling

After boiling, most commercial breweries perform separation of the wort from trub and hot debris by either employing a whirlpool or by transferring the hot wort to separate settling tanks.

Fermentation Temperatures

Will depend upon the actual yeast strain employed as well as the brewer's own equipment and preferences.

Conditioning and Finishing

In Britain, most brown ales are bottled, but some are sold on draft in cask or keg form.

Casks – Receive only a short settling period before packaging, typically at 50 deg. F.

Kegs & Bottles – May receive one or more of the following before packaging:

- *Diacetyl rest* at 50 to 70 deg. F for 24 to 48 hours to reduce excess diacetyl produced during fermentation.
- *Cold conditioning* at 35 to 40 deg. F to help speed precipitation of the yeast from the beer.
- *Filtering* to produce a clean beer.
- *Dry hopping* – may also be added during maturation either pre or post filtering.

Packaging

Brown ale is a style that does quite well either on draft or in bottles. Because it requires no special aging, you decide how to package your beer. The rich malt flavor of a brown ale lends itself to lower carbonation levels than found with lager styles. Therefore, if you are:

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- *Bottle Conditioning* - then you should adjust your priming accordingly (reduce from $\frac{3}{4}$ to $\frac{1}{2}$ cup dextrose or from 1 cup to $\frac{2}{3}$ cup DME).

-*Kegging* – Carbonate the beers as follows:

- o English Browns to about 1.75 volumes of CO₂; American Browns to 1.75 - 2.0 volumes of CO₂

Glassware – *Milds & English Browns*: glass with fairly wide opening to help with delicate aromas; also a dimpled mug, straight-sided pint or English-style pint with bulge near rim; *Am.Browns*: simple pint glass.

Serving Temperature – 42-48 deg. F to enhance malty sweetness & toffee flavors of English Brown Ales and accentuate the hop aroma and complex flavors of American Brown Ales.

Recipe Formulation

Mild Ales

Base Malts: English Pale Malt
(75-85%) English Mild Ale Malt
Marris Otter Malt
English Brown Malt, Amber Malt
Pale Ale Malt (2-row)

Yeast: WLP002 English Ale-White Labs
WLP005 British Ale

Specialty Malts:

Pale Mild

(0-10%) Crystal Malts
Northdown

Hops: English Varieties:
Fuggles, Goldings, Challenger,

Dark Mild

(10-15%) Crystal Malts
(2-6%) Chocolate, Black or Roasted Malts
Adjuncts: (Typically English, not American Milds)
(11-14%) Cane, dark or brown sugar, syrup
(5-11%) Wheat, flaked barley, corn

Water: High in calcium sulfate & calcium chloride, but softer than used for brewing English Pale Ale

Northern English Browns

Base Malts: English Pale Malt
(70-85%) Amber Malt
Marris Otter Malt
English Mild Ale Malt
Brown Malt
Pale Ale Malt (2-row)

Yeast: Attenuation: medium to high, with slight diacetyl; want a yeast to accentuate malt character;
Flocculation: medium to high

White Labs: English Ale(WLP002), British Ale (WLP005), Australian Ale (WLP009),
Burton Ale (WLP023)

Wyeast: London Ale (1028), British Ale

(1098),

Specialty Malts:

(5-10%) Crystal Malts
(2-3%) Chocolate Malt
(0-5%) Wheat, Dextrine Malt
Adjuncts: Cane sugar, brown sugar, molasses, (Note: Sugar more common commercially, than
(0-7%) treacle, malto-dextrin, corn with homebrew recipes)

London Ale III (1318)

Hops: English varieties

Water: Moderate carbonate levels

Southern English Browns

Base Malts: English Pale Malt
(70-85%)

Yeast: Attenuation: medium, with moderate fruity esters, slight diacetyl; Flocculation: medium to high

White Labs: English Ale (WLP002),

Specialty Malts:

Burton Ale (WLP023)

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- (10-15%) Crystal Malts
- (4-8%) Chocolate Malt
- (0-6%) Black Patent, Roasted Barley

American Brown Ales

Base Malts: American Pale 2-row
(75-88%)

Specialty Malts:

- (5-30%) Crystal Malts
(1272)
- (1-5%) Chocolate Malt, Black Patent
- (5-19%) Munich Malt
- (0-1%) Black Patent, Roasted Barley
- (5-15%) Wheat, Dextrine/Cara Pils Malt
levels

Wyeast: Irish Ale (W1084), London Ale III
(1318), Special London (1968)

Hops: English varieties

Yeast: Attenuation: medium to high; clean with low
levels of esters and little or no diacetyl; Flocc.: med.

White Labs: California Ale (WLP001), German
Ale/Koelsch (SLP029)

Wyeast: American Ale (1056), Am. Ale II

Hops: American varieties:

Cascade, Chinook, Centennial,
Galena, Willamette

Water: Moderate to high carbonate