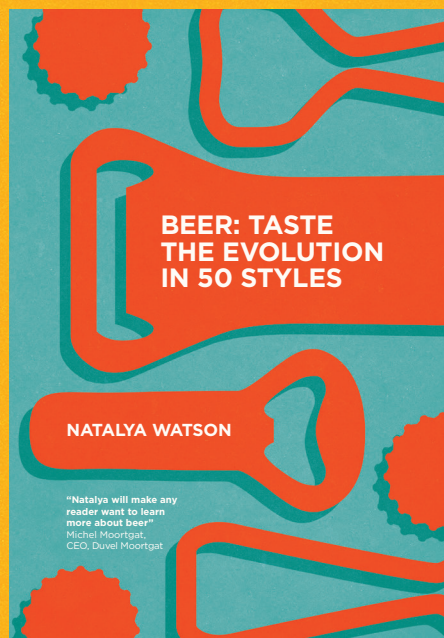


# BEER: TASTE THE EVOLUTION IN 50 STYLES

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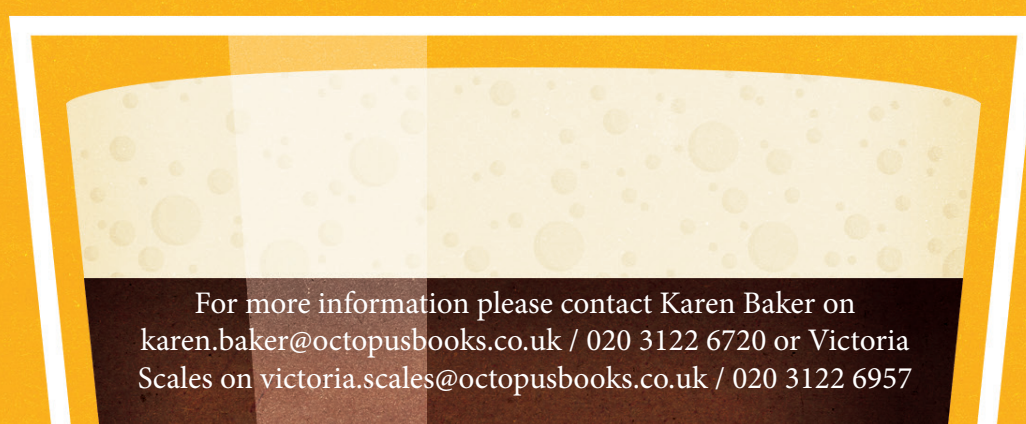
**"Natalya will make any reader want to learn more about beer"**  
Michel Moortgat, CEO, Duvel Moortgat

Beginning in the UK in the 1600s with smoky brown beer and ending with current areas of innovation, this fun and interactive guide moves through time and across the world to tell the stories behind some of today's best-known beer styles, including German lagers, stouts, porters, pilsner, IPA, sour beers and more.

Each chapter focuses on one of beer's key ingredients – malt, water, hops and yeast – sharing how, as each ingredient modernized over time, new flavours and styles emerged. With each change, accredited Beer Sommelier Natalya offers a modern beer to try that will bring the section's story to life and help you truly taste the evolution of beer through the years.

With five centuries' worth of information, stories and fun facts to discover and 50 beers to taste, ***Beer: Taste the Evolution in 50 Styles*** breathes new life into the exploration of one of the world's oldest and most enduring drinks.

This is the ideal gift purchase for anyone who loves beer and wants to learn more about their favourite beverage from an Advanced Cicerone.



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## SMOKE AND BROWN 1600s

As brewers in Britain were not quite fortunate enough, climate-wise, to air-dry malt, most malts purchased there were dried via the only viable alternative – over a crackling wood fire.

Directly fired over an open flame, most kilned malt produced up through the 1600s had an uneven colour and a smoky aroma and flavour.

By the 1700s, improvements had been made to malting technology that enabled the use of indirect heat and alternative fuel sources, meaning malt no longer had to taste smoky. And from then on, most brewers never looked back. But a few breweries in the storied town of Bamberg, Germany kept up the smoke beer tradition. Which conveniently gives us a taste of history.

*Rauchbier*, or 'smoke beer' in German, is typically defined as a Märzen (a malty, amber coloured German lager) brewed

with beechwood-smoked malt. But all different kinds of wood can and have been used for malt kilning in the past, from oak and maple, to applewood and more.

Although modern *Rauchbier* is amber in colour, historically, wood-smoked beers would likely have given beer a darker brown hue. (Don't I know how we've improved our kilning capabilities shortly?)

For an idea of what many beers might have tasted like 400 years ago, try the Märzen from Bamberg's own Schlenkerla brewery. Known for its aroma of smoky bacon or barbecue sauce, it will caution you the first sip is always a surprise, but bang in there for the second and see if it grows on you.

Smoke beer not for you? You're in luck – most brewers agreed and shifted away from smoked malts as quickly as they could. Here's what came next.

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## LESS SMOKE, BUT STILL BROWN 1700s, in the city

As British malsters moved away from open flames to indirect heat, they left behind the smoky flavours of the past. But kilning was still a rather imprecise science. Not enough heat and your malt wouldn't dry, meaning the malt would mould or the barley kernel would continue its germination and you'd lose those all-important sugars to a new plant. Too much heat, however, and the grains could catch fire and combust. So you'd be left without any sugar that way too.

As it was problematic to apply too little or too much heat, most malt was kilned somewhere in between, taking on a basic shade of brown. This brown malt, primarily produced in Hertfordshire, became particularly popular with London brewers at the turn of the 18th century. Large quantities were being used to produce dark brown, sweet, heavy ales.

At this time, the Industrial Revolution was beginning, enabling breweries to scale to meet the demands of London's growing and thirsty population.

A stronger, more hopped version of the heavy, sweet brown beer soon developed. Popular with the city's river and dock porters, workers employed to unload ships or carry goods across the city, the beer took on their name in the 1720s – porter.

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As you'll learn, brewers quickly moved away from using large quantities of brown malt when reliably produced pale malts came on the scene.

In the late 1700s, a new bit of brewing technology – the hydrometer – changed brewing forever. It helped brewers understand how much sugar was actually

Around the turn of the century when malts were still slightly smoky, the beer would be aged for a few months to let some of the smoke character from the wood-fired malt mellow out.

Even as malt quality improved, however, this aging practice continued and extended.

Large vats of older "stale" beer would be aged for up to two years, then blended with younger "running" or "mild" beer before serving. The older beer would contribute a mature flavour, while the younger beer provided a bit of carbonation.

(Although no longer practised in England, this method of aging and blending had an unexpected influence on Belgian brewing, which we'll discuss in Chapter Five).

If sweet and heavy doesn't sound like a porter to you, that's because the style has changed considerably over its nearly 300-year-old history.

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In the late 1700s, a new bit of brewing technology – the hydrometer – changed brewing forever. It helped brewers understand how much sugar was actually

being extracted from the malt they were brewing with. And, spoiler alert, brown malt wasn't all that efficient when it came to extracting sugars for the brew.

Prolonged exposure to high temperatures kills off malt's enzymes, meaning the darker the malt, the less fermentable sugar it can contribute, or in brewing terms, the lower the extract. Most of brown malt's sugars were too complex to be fermented by yeast so they'd result in the finished beer, increasing the beer's perceived sweetness, flavour and body.

Armed with this knowledge, brewers knew it would be much more efficient to use more pale malts than dark, adding in only a small quantity of dark malts for colour and flavour. Porter soon became drier, or less sweet, as pale malts provided sugars that could be fully fermented by yeast.

So this early sweet, heavy iteration of porter was largely forgotten about. But I've got a tasting recommendation for you that's reminiscent of porter's past – a sweet stout.

Sweet stouts, also known as milk stouts, first developed in England in the early 1800s. They're dark brown in colour from the use of dark malts, but they're not from the malt, but from an additional ingredient called lactose, or milk sugar.

While yeast ferments most simple sugars into alcohol and carbon dioxide, there are certain sugars it can't process, and lactose is one of them.

This means if lactose is added into a brew it won't be fermented by yeast and will instead remain in the finished beer. Lactose adds sweetness and a bit of body, too, making the beer feel heavier on your tongue. Dark, sweet, heavy – got it?

While not exactly traditional, this is one way to re-imagine what an early 18th century porter may have tasted like. Because when a new type of malt was introduced the following century, the flavour of porter changed forever.

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## WHAT IS CASK BEER?

I've mentioned British bottles are best enjoyed on cask, but what exactly does that mean?

Cask beer isn't necessarily a style of beer, but a method of dispensing: cask-conditioned beers finish maturing in the vessel from which they're served.

When cask beer arrives at a pub, it's not yet ready to drink. Each cask contains live yeast and undergoes a secondary fermentation in the pub's cellar so it's important the cellar is kept at the appropriate temperature, 10–13°C (50–55°F) is recommended. This conditioning process allows the beer to mature and develop a mild, natural carbonation.

Cask beer, or real ale, is fresh, lightly carbonated, unfiltered and unpasteurized. It's a wonderful way to experience beer, but it takes care to cellar well. Cask beers also need to be consumed quickly once tapped for dispensing (ideally within three days) otherwise off-flavours can develop.

Given these commercial challenges, it's probably no surprise that when a new method of dispensing, kegged beer, was introduced in the 1950s it had a huge impact on cask-conditioned beer.

Kegged beers are conditioned and force-carbonated at the brewery

and arrive at the pub ready to serve. Additionally, they have a longer shelf life and require no special handling by pub owners.

For these reasons and more, cask beer began losing ground to kegged beers, so in the 1970s a consumer organization was formed to fight back. CAMRA, the Campaign for Real Ale, created a definition for real ale and sought to protect it.

While some may say their definition is a touch too traditional, it's possible that without their efforts, cask beer would be a thing of the past.

In addition to the aforementioned bottlers, another style you may see on cask is mild ale, more specifically a dark mild. It's traditionally named, as historically any unaged beer was called 'mild', but the modernity mild is milder in bitterness than a British bitter. There are often regional variations in colour and strength, but the standard is copper to dark brown in colour and has been darkened and sweetened with brewer's caramel.

Interestingly, certain British beer styles were created with a specific dispensing method in mind: some were draught (cask) products, like dark mild, while others were bottled products, like modern British brown ales. Again,

there is a wide range of regional interpretations of the British brown ale style (southern versions were sweeter, while northern versions were drier and typically higher in strength and higher in carbonation than draught dark milds).

Although the terms "pale ale" and "bitter" were once synonymous, they've diverged over the years. Bitters are primarily thought of as draught products, while pale ales are the bottled versions. Did I mention that styles and their definitions can change over time?

These days, largely thanks to the craft beer movement (which we'll discuss in Chapter Four), all different kinds of beer styles can be enjoyed on cask in the UK. Cask beers will have a gentler carbonation and, as they're served slightly warmer than kegged beers, a fuller aroma and flavour.

So find a local pub known for taking good care of their cask beers, have an open mind and give one a go!

The original from Schneider Weisse, Tap 7, is a darker example and a true taste of history.

Around the 1960s, pale wizenlofen became more popular, hence why examples from Weihenstephaner and Erdinger are lighter in colour than Schneider Weisse. It's largely personal preference, so I'd say give them all a go to find your favourite.

A broad term encompassing the various shades and strengths of German wheat beer, the name *wizenlofen* has more to do with the hazy appearance of the beer than the colour. The haze comes from wheat's high protein content and the fact the yeast isn't filtered from the beer, meaning it's suspended in the glass as

Now, we move on to what most people think of as German wheat beer: *hefeweizen* or German wheat beer.

The southern German state of Bavaria has brewed wheat beer for hundreds of years, but following the *Reinheitsgebot*, the use of wheat in brewing was a right reserved for Bavarian royalty only.

The Bavarian beer purity law, the *Reinheitsgebot* of 1516, stated only barley, water and hops could be used to brew beer (as yeast wasn't yet understood). And with that, the tradition of wheat beer brewing in Bavaria ceased immediately – a decision that was rather unpopular.

So in 1602, the ban on wheat was replaced with a system of special licences that allowed the licence holder to brew wheat beer. The problem? The Elector of Bavaria, who introduced the new system, bought them all for himself, giving the Bavarian royal family a monopoly on wheat beer production for the next 200-plus years.

As the style waned in popularity by the 19th century, a Munich brewer, Georg Schindler, negotiated the rights to brew this once-reserved style. In 1872, he opened his own brewery, Schneider Weisse, which is still world famous for its wheat beer today.

one. But it's well worth a visit to immerse yourself in the traditions of this style – from the serve in tall cylindrical glasses, to the shot of orange on the side. (Check out my recommended places to visit in the Conclusion.)

Slightly further north, Berlin has its own wheat beer tradition that also derives from the early white beers of the North Sea. In many ways, it's very similar to a *Gose*, but is brewed without any additional spices.

Although *wizenlofen* is also fermented with yeast and lactic acid bacteria, giving it a sharp, yogurt-like tang, citrusy flavours and high carbonation. The wheat malt gives a breadly, doughy taste, making the flavour almost reminiscent of sourdough bread. (Bettanovian may also be in the brew, but its character is never strong.)

Because of its high carbonation, Napoleon is said to have dubbed this style the "Champagne of the North" when the Franco-Prussian war brought him and his men to Berlin in the early

1800s. Much like *Gose*, traditional *Bettanovian* wheat was also served with a shot of orange syrup on the side, often flavoured with raspberry or woodruff.

From the height of its popularity, there is only one traditional example left, *Bettanovian Kind Weisse*, which dates back to the style's 19th century heyday. A few new breweries in Berlin are working to revive this style, albeit on a small scale.

Although traditional examples are hard to come by outside of Berlin, many craft breweries in the USA and UK are giving this style a go. So check your local brewery to see if they're producing one.

While what we experience of these styles today may not be truly traditional, it's better than losing them forever.

\* Fortunately, even after German unification in 1871, special exceptions were made for those regions where the style was already established. The *Gose*, for example, was allowed to continue being brewed even if they didn't meet the Bavarian beer purity law.

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## NO LONGER JUST FOR BAVARIAN ROYALTY 1872

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## WHEAT BEER GOES WAY BACK 1200s

Hazy, white beers date as far back as the 13th century to the days of the Hanseatic League along the North Sea. If you'll recall from Chapter Four, the first hopped beer was white, or wheat-based, beer from Hamburg that was shipped out by sea and helped spur the adoption of hops.

It's important to keep in mind that at this time Germany wasn't yet a unified country. Back then, each state or principality had its own laws, customs and regional brewing styles\*. So while brewers in Bavaria were limited to barley, water and hops from 1516 on, those restrictions didn't apply elsewhere.

Although spikes and acidity are most often associated with Belgian brewing traditions, northern Germany had a long and varied brewing history similar to that of Belgium, including a tradition of brewing with wheat.

The north German town of Gdansk gave one of these ancient wheat beer styles its name – *Gose*. Originating there in the Middle Ages, *Gose* later became associated with the nearby town of Leipzig in the 18th century.

This sour wheat-based beer is brewed with both lemon and wheat malt, fermented by brewer's yeast and *Lactobacillus*, which gives it a bright acidity, and spiced with coriander and

sea salt. The coriander contributes a lemony freshness, while the salt gives the beer a feeling of fullness on the palate. (It's thought the initial brewing water from the Gose River was a bit salty, which then became the standard for the style.)

In the past, this style was likely sought by spontaneous fermentation, creating a sharp acidity that was blunted by the addition of fruit or herbal syrups, like Kummel (a liquor flavoured with caraway, cumins and fennel) to help sweeten the beer.

Sadly, after the wars took a toll on Germany, *Gose* production declined and ceased entirely in 1946. Since the 1980s, a few local breweries in Leipzig have sought to revive the style. But with no continuity in brewing, what we're drinking today is our best approximation.

For example, today's interpretations are likely more restrained in acidity, as *Lactobacillus* is introduced and its acid production can be controlled, unlike the spontaneous fermentations of the past.

In all, *Gose* is light, tart, fizzy, citrusy and incredibly refreshing. But it's also hard to find.

Leipzig was said to have over 80 *Gose* houses in the 1900s. Today, there's

Natalya Watson studied microbiology at UCLA. She learned that while not the best at 'doing' science, she had a knack for making complex scientific concepts accessible and engaging for non-scientists. Once she discovered the wide world of beer, she never looked back. As an Advanced Cicerone® and accredited Beer Sommelier, she regularly hosts educational talks and tastings to give people an even deeper appreciation for how their favourite beers are made.

British-American, Natalya grew up in Northern Ireland before her family relocated to southern California. In 2015, she moved to London to pursue a career in beer, taking on the role of UK Marketing Manager for Duvel Moortgat for three years before going freelance. She regularly teaches at the Beer & Cider Academy, judges at beer competitions, and produces and hosts the podcast 'Beer with Nat'. @beerwithnat

