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Burton Ale

BY GORDON STRONG

BURTON ALE

Burton ale was the beer that originally put Burton on the map, beer-wise. It pre-dates IPA, and was a big export beer to the Baltic countries from about 1740 to 1822.

BURTON ALE BY THE NUMBERS

OG: 1.055–1.075
FG:. 1.018–1.024
SRM: 14-22
IBU:. 40-50
ABV: 5.0–7.5%

Photo by Charles A. Parker/Images Plus

Once again, I find myself writing about a style I hadn't anticipated. While giving a talk to prospective judges in Christchurch, New Zealand at a brewpub called The Laboratory, someone recommended that I try their Burton ale on hand pump. My ears perked up – a proper Burton ale? In New Zealand, of all places? Yes, please…

The beer was dark and chewy, with a rich malty base and a strong bitterness. I knew I had to tweet this find to my friend Ron Pattinson, who has written extensively about the style. I sent him a picture of the beer and tap, and told him what I found. He just said, "What's it taste like?" I responded, "Rich, deeply toasted malt without roast, fairly fruity but in a figgy way, strong bitterness, moderately sweet finish, chewy, noticeable alcohol without being a booze bomb. Served on hand pump. Dangerous." Ron responded, "Sounds perfect. I guess Burton ale will be an official BJCP style soon." Challenge accepted.

I had considered adding Burton ale when we revised the Beer Judge Certification Program (BJCP) Style Guidelines in 2015, but I didn't have any real examples to cite and wasn't really sure about the flavor profile. In Category 17 (Strong British Ale), Style 17A (British Strong Ale) specifically mentions Burton ale as one of the types of beer that would fit in this style, making it a substyle of this category.

When tasting the beer in New Zealand, I was also struck by the similarity in the profile of this beer to the beer I made while at Sierra Nevada Beer Camp in 2009. Our group (#13) called our beer Old Cantankerous, and termed it a Stock Ale, which was a traditional name for historical beers in the United States that were designed to be aged and served in pubs. Some of the choices we made were actually the same as made by the brewer in New Zealand, so I guess that makes sense – more about that later in the article.

HISTORY

Both Ron Pattinson and Martyn Cornell have written extensively about this style, so I refer interested readers to their works (Ron Pattinson in *Strong!*, *The Home Brewer's Guide to Vintage Ale*, and the *1909 Beer Style Guide*; Martyn Cornell in *Amber, Gold & Black*; both have blogs where they have discussed the style as well).

Burton ale was the beer that originally put Burton on the map, beer-wise. It pre-dates IPA, and was a big export beer to the Baltic countries from about 1740 to 1822. At the time, it was a very strong, very sweet, dark beer; think of the old stories about imperial stout – it also applies to Burton ale of that era. In 1822, Russian tariffs killed the trade and brewers had to find new markets for their beer.

Burton brewers reformulated the beer to be less sweet and more bitter than the original, but it still needed time to properly mature (although much less than the 18 months that the original version required). This type of beer found favor both in domestic markets as well as trade to India. Throughout the rest of the 19th century, the beer was very popular in England and was made in London as well as other brewing locations.

As with many of the types of beer of the era, there were several versions (strengths) available – so Burton ale was basically a family of beers. Names were not standardized, so it only really helped to differentiate products from a single brewery. Bass made up to six different versions, from the No. 1 at OG 1.110 to the No. 6 at 1.055. Some breweries termed them keeping beers and marked them with a series of Ks (e.g., KK, KKK, KKKK – the more Ks, the stronger the beer).

The strongest beers were the ancestors of English Barleywine (back then, it was exclusively a dark beer –

BURTON ALE

(5 gallons/19 L, all-grain)
OG = 1.071 FG = 1.020
IBU = 42 SRM = 16 ABV = 6.7%

INGREDIENTS

12 lbs. (5.4 kg) UK pale ale malt
2 lbs. (907 g) continental Munich malt
12 oz. (340 g) UK dark crystal malt (76 °L)
5 oz. (142 g) chocolate malt (360 °L)
5.5 AAU Magnum hops (60 min.) (0.5 oz./14 g at 11% alpha acid)
8 AAU Northdown hops (15 min.) (1 oz./28 g at 8% alpha acid)
8 AAU NZ Taiheke hops (aka NZ Cascade) (10 min.) (1 oz./28 g 8% alpha acid)
1 oz. (28 g) NZ Pacifica hops (aka Pacific Hallertauer) (1 min.)
0.5 oz. (14 g) NZ Taiheke hops (hop back)
0.5 oz. (14 g) NZ Pacifica hops (hop back)
0.5 oz. (14 g) NZ Taiheke hops (dry hop)
0.5 oz. (14 g) NZ Pacifica hops (dry hop)
Wyeast 1318 (London Ale III) or White Labs WLP023 (Burton Ale) or Lallemand London ESB yeast
¾ cup corn sugar (if priming)

STEP BY STEP

This recipe uses reverse osmosis (RO) water. Adjust all brewing water to a pH of 5.5 using phosphoric acid. Add ½ tsp. each of calcium sulfate and calcium chloride to the mash.

Mash the two base malts for 60 minutes at 154 °F (68 °C). Add dark and crystal malts, recirculate for 15 minutes. Then sparge and collect 6.5 gallons (24.5 L) of wort. Boil the wort for 60 minutes, adding hops at the times indicated in the recipe.

Chill the wort to 64 °F (18 °C), pitch the yeast, allowing temperature to rise to 68 °F (20 °C), and ferment until complete. Dry hop the beer for five days. Rack the beer, prime and bottle condition, or keg and force carbonate.

BURTON ALE

(5 gallons/19 L,
extract with grains)
OG = 1.071 FG = 1.020
IBU = 42 SRM = 16 ABV = 6.7%

INGREDIENTS

7.8 lbs. (3.5 kg) pale liquid malt extract
1.3 lbs. (590 g) Munich liquid malt extract
12 oz. (340 g) UK dark crystal malt (76 °L)
5 oz. (142 g) chocolate malt (360 °L)
5.5 AAU Magnum hops (60 min.) (0.5 oz./14 g at 11% alpha acid)
8 AAU Northdown hops (15 min.) (1 oz./28 g at 8% alpha acid)
8 AAU NZ Taiheke hops (aka NZ Cascade) (10 min.) (1 oz./28 g 8% alpha acid)
1 oz. (28 g) NZ Pacifica hops (aka Pacific Hallertauer) (1 min.)
0.5 oz. (14 g) NZ Taiheke hops (hop back)
0.5 oz. (14 g) NZ Pacifica hops (hop back)
0.5 oz. (14 g) NZ Taiheke hops (dry hop)
0.5 oz. (14 g) NZ Pacifica hops (dry hop)
Wyeast 1318 (London Ale III) or White Labs WLP023 (Burton Ale) or Lallemand London ESB yeast
¾ cup corn sugar (if priming)

STEP BY STEP

Use 6.5 gallons (24.5 L) of water in the brew kettle; heat to 158 °F (70 °C). Steep the dark and crystal grains for 30 minutes. Remove and rinse. Turn off the heat. Add the malt extracts and stir until you no longer feel liquid extract at the bottom of the kettle when stirring. Turn the heat back on and bring to a boil. Boil the wort for 60 minutes, adding hops at the times indicated.

Chill the wort to 64 °F (18 °C), pitch the yeast, allowing temperature to rise to 68 °F (20 °C). Following the remaining fermentation and packaging instructions as provided in the all-grain recipe.

the pale golden versions didn't exist until after WWII). In the pre-WWI era, the more common version of Burton ale (KK) was around 1.070 to 1.075 with an ABV of 6.5%. After the war, the strength had dropped to 1.055 and 5%, a phenomenon that affected every British beer style. The weaker versions were renamed to milds, and intermediate versions vanished. In 1950, it was still a popular style (although mostly as a winter specialty beer), but by 1970 Burton ales were essentially gone (at least in name).

Fullers made a beer called OBE (Old Burton Extra) that was replaced in the market in 1969 by a strong pale bitter or winter bitter that eventually became Fullers ESB. Fullers 1845 is perhaps a better example of a Burton. Youngs made a lower-strength Burton that was renamed in 1971 to be their Winter Warmer. Marston Owd Rodger is called a barleywine, but is basically a 7.6% Burton ale. The name Burton has disappeared from the market except as an IPA descriptor, which can confuse those seeking the older style.

Changing consumer tastes (a preference for paler, lighter, less sweet, more bitter beers) and the government-induced weakening of beers during the world wars impacted the style. So when discussing the style, the time frame in question is pretty important. I've chosen to define the style mostly as how it was before WWI, when brewers were making the beer they wanted for customers and at its peak of popularity. The style guidelines allow for the later versions that might still be remembered by some.

SENSORY PROFILE

A Burton ale is a rich, malty, bitter, warming beer that has a comforting feel about it, which does make it a good winter beer. However, it traditionally was served year-round when tastes differed.

The color of the beer is light copper to dark brown, but usually brown-ish in color. With a color in that range, clarity is often hard to see, but the beer should be clear under a strong enough light. The head of the beer is usually cream-colored; it shouldn't have beige and tan colors associated with using darker malts.

The aroma and flavor of the beer is similar; malty-sweet with a richness of malt depth. The character of the malt is bready and biscuity with a strong caramel or toasty overtone. The richness of malt is accentuated by fruity notes that take on characteristics of dark or dried fruits like plums, figs, prunes, or raisins. A light alcohol note may be present in stronger versions, but that aspect shouldn't be too prominent or sharp. The malty sweetness helps mask the alcohol present, which can make this a dangerous beer to drink.

The bitterness level is quite high, which helps offset the malty sweetness present. Historically, the beer was very highly hopped, but aged for many months (years, even). Modern versions are less strongly hopped but also not stored for as long. I don't think of the beer as bittersweet, but rather malty and bitter. Cloying tastes, overly heavy finish, and clashing flavors shouldn't be present.

Late hops are often used, particularly dry hopping, which can impart a fresh hoppiness to the beer. Hops are welcome in the aroma and flavor, and should blend well with the malt flavors and any fruitiness from the malts, sugars, and yeast. Classic English varieties such as Goldings are common, although any varieties can be used that have a fruity, floral, spicy, or woody character.

The beer is strong enough to be warming without being overly boozy. I think a similar strength to Belgian dubbel is appropriate, something in the 6 to 7.5% ABV range, although late-era Burton ale can be lower. However, I think some of the warming strength of the beer increases the authenticity and helps evoke that 'comforting' feel to the beer.

The body of the beer is substantial but it doesn't have to be thick. I think of it as having a chewy character, with a body in the medium-full to full range. It has a luscious character, but I don't think of it as heavy, creamy, or silky, so I wouldn't add oats or similar adjuncts to boost the mouthfeel. I have developed a draft BJCP style description for this beer, which is available at Byo.comburton-ale-bjcp.

BREWING INGREDIENTS AND METHODS

As an English ale, a good top-fermenting English ale yeast is the traditional selection. Good choices from Wyeast would be 1968 (London ESB Ale), 1318 (London Ale III), or 1335 (British Ale II) yeast. White Labs also has a wide range of English yeasts such as WLP023 (Burton ale) or WLP002 (English Ale), while dried yeast users can utilize Lallemand's London ESB Ale or Mangrove Jack's M15 (Empire Ale) strains. Ferment on the warm (but not hot) side, around 68 °F (20 °C) to accentuate fruity notes would be appropriate.

Single infusion mashing is also traditional in English brewing, but with a chewy beer, a higher mashing temperature is typical. I would use something in the 154 to 156 °F (68 to 69 °C) range to help get a final gravity around 1.020. Starchy adjuncts were not traditional in this style, although sometimes corn was used.

Brewing sugars were traditionally used for color and flavor, but modern brewers are likely to find crystal and chocolate malts more accessible. Darker crystal malts (something in the 60 to 90 °L range) will help give the dark fruit and deep caramel flavors. Check the color of chocolate malt; pale chocolate is too light and gives more of a nutty flavor, while darker versions give a dark chocolate flavor. You are only using this for color and some background flavor, so aim for a mid-range version around 350 to 370 °L.

Historically, the beers used something called "high kilned" malt as part of the grist. Modern English versions can be found as mild malt, but continental Vienna or Munich malt is also a high kilned malt. You want the bready, toasty richness from the malt, but not a drying burnt cracker flavor that you might get from something darker (like amber or brown malt). I find it easier to obtain Vienna and Munich malt, so I prefer to use those.

Hops provide an area of creativity in this style. Any clean bittering hop can be used to get the bulk of the IBUs of the beer; my preference is Magnum, but look for something that won't give you harshness. Historically,

English hops would be used for the late hops, but I don't mind using some continental hops (Perle, Saaz, Styrian Goldings, etc.) in the mix. In the Sierra Nevada version, we chose some New Zealand hops, which were new to the market at the time. Pacific Hallertauer (now called Pacific) and Southern Cross were what we used. In New Zealand, I found the brewer using Pacifica and Taiheke (previously called NZ Cascade) as well. The Pacifica gives an orange marmalade quality that works particularly well with this style, and is part of the profile that I think I recognized. If I were playing around, I would consider using Mandarina Bavaria, Glacier, Goldings, Styrian Goldings, or First Gold as late hops.

The aroma dimension of the hops is more important to the style than the flavor dimension, especially since the style is traditionally dry hopped. Repeating the same late hops used in the beer in the dry hopping is a good move. Adding hops in the whirlpool or hopback is a good way to get the late hop character, but dry hopping in the cask is a classic English technique when serving via a beer engine.

Despite being from Burton, there isn't a big water character to the style. I tend to use a balanced water profile with both gypsum and calcium chloride. Note that the beer was widely adapted, including being brewed in London, so don't let people argue that a classic water profile has to mimic the water from Burton.

HOMEBREW EXAMPLE

I'm basing my version here on the beer I tried in New Zealand (thanks to brewer Martin Bennett for sharing his recipe with me) and the beer I made at Sierra Nevada Beer Camp. I make no claims that it is an authentic historical recreation (so don't email me, Ron). The bready and biscuity base malt character comes from British Maris Otter pale ale malt, although a blend of base malts could work as well. If your base malt doesn't have a biscuity character, adding in a quarter pound of biscuit malt can give your finished beer some of that character.

My choice for the high kiln malt is continental Munich malt, which is my go-to method of boosting maltiness. I often will use both Munich and Vienna malt, and if I want to go super malty, I will work in some aromatic malt as well. Any of these will satisfy the need for a richer malt character.

Using crystal malts in the 5-10% range of the grist should give a sweetness, fruitiness, and caramel flavor appropriate for the style. In my Beer Camp beer, I used Caramunich® III with a bit of Special B, but the beer from New Zealand just used a dark crystal malt of around 80 °L (200 EBC). Chocolate malt for color, around 2% of the grist, is about right. If you are getting a noticeable chocolate flavor, that's probably too much (or too dark of a chocolate malt – I'm calling for a malt that is 360 °L/200 EBC, which is what the beer in New Zealand used).

This beer can be widely adapted to using malts from around the world, as was demonstrated by the New Zealand beer I tried. Martin was using Gladfield malt, which is grown, malted, and kilned within a short drive of the brewery. I used British and German malts, which are widely available in North America. Any malts with sufficient flavor will work, but quality matters since this is such a malt-forward beer.

As for the strength and balance, I'm going for that pre-WWI heyday so I'm targeting a starting gravity of 1.071 and a FG of 1.020, which produces a 6.7% ABV beer. 42 IBUs gives it balance to the 1.020 of sweetness. The New Zealand beer was 1.070, 6.6%, and 40 IBUs, while the Sierra Nevada beer was 1.075, 7.2%, and 41 IBUs.

I'm using Magnum hops for a clean bitterness with Northdown, Pacifica, and Taiheke hops, which I took from the New Zealand recipe. I really like the Pacifica hops for the orange marmalade character, so try to use those if you can find them.

The yeast used is Wyeast 1318 (London Ale III), same as the New Zealand recipe, although any of the examples I listed previously could be used. Selecting a yeast strain that is described as favoring malty beers is a good idea, and one that adds a pleasant fruitiness that complements the malt character is welcome. I would avoid strains that are sulfury, minerally, or highly attenuative.

The beer benefits from some age, but can be enjoyed right away. It is a favorite of mine as a winter seasonal, but if you keep the alcohol in check, you should be able to enjoy this beer most of the year. After all, I did try it in New Zealand in very late spring, so it could be something we're able to repeat in the Northern Hemisphere soon. BYO