



BIER NOTES

MARCH 2006

This Month's Style... **American Ales**

American brewers have always been innovators. As European immigrants brought their traditions, their tastes, and their habits to new shores, they usually tried to continue their lives as they had begun them, but new cultures, new languages, and new environments demanded that they adapt.

Brewers were no exception. The earliest brewers in the New World were Dutch and British, producing ales and porters. (Among the best, apparently, were the so-called Puritans. Although they had some strict moral standards, they had no problem with ale at dinner.) By the mid-1800s, however, a new wave of immigrants from Northern and Central Europe introduced different brewing styles and technologies.



Pale, clear lagers rapidly replaced the once-popular ales. American breweries responded by adopting the new beer styles and incorporating indigenous grains (primarily corn), which allowed them to more easily brew very pale, very bright beers. Eventually, ales had almost disappeared from the United States, although a few survived in the Northeast. Among these the finest was undoubtedly Ballantine's, whose IPA was a serious attempt to preserve the British traditions, surviving almost to the dawn of the craft brewing age. Ballantine's IPA was brewed to a respectable gravity (1.076), with plenty of hops (especially Brewer's Gold, at 45 IBU), and was well-aged in oak. In time the brewery was acquired by a larger firm, the ale's production moved to the Midwest, and the beer was toned down to a shadow of its former glory.

Other ales, of considerably less character, continued to be produced in the Northeast somewhat as novelty items. Many, in fact, were not true ales at all in the sense of being top-fermented. Fred Eckhardt, author of *Essentials of Beer Style*, refers to them as "sparkling ales" and notes that they were brewed to compete with the American pale lagers. Like those beers the ales had "minimal taste profile, minimal hopping, and [were] lacking in hop bouquet."

In due time many of these beers were labeled "cream ales," and whatever special character they possessed diminished further. Most were "bastard ales," formulated as a standard beer (although perhaps brewed to be just a little stronger) and fermented with the brewery's regular lager yeast at a slightly elevated temperature for a slightly harsher, slightly fruitier taste. In some states the term "ale" was a label applied to beers of barely more than normal strength and had nothing at all to do with the beer's method of production.

From The Board

A story is told of a missionary nun caring for dying, homeless people in the India. A reporter, observing her gruesome task, told her, "I wouldn't do that for all the money in the world". After a moments pause this kind hearted woman responded, "neither would I". Like this saintly nun, I'm sure most of us, looking back over our lives, would agree that our best efforts had nothing to do with money or a paycheck. Perhaps it was caring for a sick relative or comforting a friend through a difficult tragedy; whatever, money was not a factor. On a much lighter but similar scenario, the Kansas City Bier Meisters braved frigid temperatures and a few mechanical obstacles to host another successful annual competition. There were no time clocks to punch or paychecks in the mail as rewards for hours of dedicated service; just the desire to make it work for the club. It all came together and a good time was had by all as we celebrated our 23rd annual event. I was impressed by the dedication, the sacrifice, and the pride our members had to make this a special weekend.

Special thanks goes to Neava and Robin for creating, coordinating, and bringing to completion this enjoyable event. From the sign in on Friday until clean up late Saturday (probably very early Sunday!) all involved left their egos at home in order to come together for the good of club. I'm sure there were some SNAFU's but you wouldn't have known it; everyone was able to go with the flow. Additional thanks to other members of the Committee - Laurie - what an awesome array of sponsors; your stewards were the best! Pancho and Danny O'Neal from the Roasterie, muchos gracias for a super breakfast and presentation Saturday morning. To Jim Nelson and the McKinney Family (Jim, Diane, kids & a boyfriend) - gratitude and appreciation for a feast fit for a king & queen! That dessert was to die for; the Shepherd's Pie was a "party in my mouth". Kudos to Donald and wife, Maria, for hosting our bottle sorting day and whipping us up a fantastic lunch. We'd have been lost without our Cellar Fellers - Rob, Marty & Fred who braved wind chills and a couple of bruised knuckles to make sure no one went thirsty. 1,000 thank you's to numerous new members who helped out as stewards and friendly hosts to our out of town guests; what a joy to see so many of you helping and enjoying our annual "Super Bowl". Danke Schoen to our friends at Holyfield - always rolling out the red carpet. Finally, we'd be hurtin' without Alberta and Jackie. I must have heard various judges and stewards ask 20+ questions over the weekend and the answer was always the same - ask Alberta or Jackie. Thanks to you all! It was a massive undertaking that took a lot of planning and behind the scenes, unnoticed service. I speak for many in saying our competition made me grateful to be a Bier Meister. But next year, let's beat those Minnesota Munchkins!

On a separate note, a hearty pat on the back and a barley wine toast to two Bier Meisters, Rob Beck & Steve Holle for articles in the recent edition of Zymurgy. Rob won MCAB Best of Show for his River Forest Pale Ale (I've already got the ingredients!) and Steve wrote about fermentation flaws (which will come in handy after I botch Rob's recipe). Rob's gracious story referred to the Biermeisters as "perennially gifted". How true! You guys make us proud!

Happy Brewing!
Bob Clark



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By the late 1970s and early 1980s virtually no true top-fermented ales were being produced in the United States, and America's oldest brewing tradition was in imminent danger of disappearing entirely.

The new tradition arose in California. Anchor Brewing Co. began tinkering with a real ale in 1975 (which eventually emerged as Liberty Ale), and New Albion (perhaps the first true microbrewery) introduced an ale a year later. Within a few years homebrewers Ken Grossman and Paul Camusi launched Sierra Nevada Brewing Co., also in Northern California, and the craft-brewing industry began to take its first, faltering steps. No one at the time had any idea of how much would change, of course, or how quickly.

Since California (and soon the Pacific Northwest) had no ale tradition to revive, the brewers were free to create a new one. Although they were, in a sense, emulating the British styles of beer, what emerged was a distinctly American version.

In fact the American ale arose as the British ale was doing its best to sink. In England industrial consolidation had caused small breweries, with their distinctive beers, to disappear. New, "convenient" technologies were replacing the delicate care of the old traditions and further defusing the character of the ales. Outrageous excise taxes, levied on the original gravity of the beer wort, caused brewers to curtail the alcohol content of their beers.

In the United States, however, consumers had begun a reaction to the long trend toward homogeneity in much of what they ate and drank. Boutique wineries were blooming, and newly affluent customers were looking at everything from mustard to pizza, coffee to bread, in search of new, more interesting flavors. The radical approaches of Sierra Nevada Pale Ale and Liberty Ale, and all the pale ales to follow, met with a surprisingly positive reception.

In many ways Sierra Nevada's ale can be taken as the prototype of the new American pale ale (in fact there are two Sierra Nevada Pale Ales, the draft version and a slightly different bottled version; both are classics). With an original gravity near 1.048 to 1.052, Sierra Nevada's ale is 10 to 15 points higher than a

Kudo's!
Congratulations to
All Who Won Medals at KCBM's
23rd Annual Homebrew Competition!

Marty Ammon...

3rd place North German Altbier

Rob Beck...

1st place Baltic Porter

2nd place Dusseldorf Altbier

2nd place Specialty Beer

3rd place American Pale Ale

Bob Clark...

1st place Christmas/Winter Specialty Spiced Beer

Roger Gibson...

3rd place Metheglin

Lauri Glasgow...

1st place Specialty Beer

Joshua Johnson...

1st place Belgian Dark Strong Ale

3rd place Fruit Cider

3rd place Robust Porter

Mike Larkey...

2nd place English Barleywine

Brandon O'Brien...

3rd place Fruit Beer

Paul Pilcher...

2nd place Munich Dunkel

2nd place Imperial Stout

2nd place Strong Scotch Ale

3rd place American Wheat or Rye Beer

Michael Robertson...

1st place Special/Best/Premium Bitter

Rob Smith...

3rd place Bohemian Pilsner

Jack Sykes...

3rd place Oktoberfest/Marzen

Congratulations to Lauri Glasgow
for winning **Extract Best of Show** with
her Carnegie Porter!

Way to go, Bier Meisters!

British equivalent. It is an all-malt beer, and the malts are very American (two-row pale, caramel, and dextrin). And significantly, the hop flavor is unabashedly American. In fact they are primarily the signature Cascade hops, citrusy and floral. Of all the American hops, Cascade and her sister varieties are the most obvious stamp of an American pale ale, unmistakable in their assault on the palate.

Sierra Nevada Pale Ale falls smack in the middle of the style's color range, somewhere between very pale golden and ruddy copper. Unlike many British ales the Sierra Nevada yeast finishes very crisp and dry, with none of the characteristic British fruitiness. (The yeast is Sierra Nevada's one serious link to the old American ale tradition -- it is the same strain once used to brew the classic Ballantine's ales.)

Within a few short years American pale ales in their myriad variations began to appear throughout the Pacific Northwest and, eventually, around the country. In its purest form the style seems to still be a West Coast beer, with Eastern brewers slightly more influenced by British brewing revivals and traditions.

For a time it seemed as though the brewers around Portland and Seattle were competing to produce the most intense, most bitter, and most hoppy beer imaginable. Amazingly, there were a lot of us willing to egg them on, and the mid-'80s hopping rates went up and up. Among the great Cascade-drenched beers of the time were Grant's Scottish Ale, Portland Ale, and the real Cascademonster, Pyramid Pale Ale. Other beers emerged with different blends of hops, and different character, but always with an eye to challenge and engage a new style of beer drinker.

With very few exceptions these first American pale ales were draft-only beers. Not only were bottling lines expensive and demanding, but liquor laws in Oregon and Washington had ensured that few drinking places served anything but beer and wine. An unusually high percentage of beer sales were in taverns, and drinkers were already used to the notion of going out for a beer.

As the craft-brewing movement spread and the demand for market share increased, brewers began to scale down the intense characters of their beers, and those that survive today are far more restrained than they once were. Admittedly, many of those beers were out of balance and one-dimensional, but for avowed hop freaks it was something of a Golden Age.

Plenty of American pale ales survive, of course. Like amber ales, American pale ales appear regularly on the lists of brewpubs and microbreweries. As amber ales are defined by their malt -- caramel malt giving a characteristic copper color and sweet taste -- American pale ales are defined by their hops. More specifically they are defined by the assertive use of American hops -- good, pronounced bitterness and a noticeable, floral hop nose. Although various hops are used, Cascades are nearly a cliché for the style.

American pale ales can vary in color from very pale to copper and are generally medium-bodied and well-attenuated (dry). They are invariably all-malt, based on very pale American two-row malt, with some caramel and dextrin malts. Original gravities range from 1.045 to 1.060, generally in the middle of the range. Mash cycles are very simple: single-step infusions at 152i to 154i F.

**Have Questions About What's
Happening In The Club?
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Talk about the latest issues in the home
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**Thank you to those who've
contributed to the newsletter
this month:**
Donald Bing
Bob Clark
Marc Gaspard
Steve Holle
Mike Kalny

Yeast strains are typically very neutral, although some rare examples such as Bert Grant's Scottish Ale have a fruitier, more obvious contribution. Sierra Nevada's strain is one of the most widely used in the microbrewery industry. This yeast is aggressive, neutral, and capable of fermenting at relatively low temperatures (around 60i F). It is variously known as 1056 (Wyeast's number), Chico (Sierra Nevada's hometown), and American Ale. Since the brewery bottle-conditions its beer, the bottled products can be a source for the yeast, but nowadays its bottling procedure leaves very little to harvest.

Anchor uses open fermenters but most craft breweries use closed, cylindro-conical fermenters. Homebrewers can exercise their own options: open primary fermenters or carboys with blow-off hoses.

Very good American pale ales can be produced at home with malt extracts and grains, as long as plenty of care is taken with sanitation and a good, healthy yeast starter is pitched. Hopping rates for partial-wort boils should be increased to make up for a lower extraction rate. Dry hopping is particularly useful in brewing this style of beer, as it really emphasizes the hop nose. Another alternative is the use of a hop back, passing hot wort through a screen or basket of fresh, whole hops.

American Pale Ale
5 Gallons, Partial Mash

Ingredients:

8 lbs. Alexander's Extra Pale Liquid Malt Extract
1 lb. two-row pale malt
0.5 lb. crystal malt
0.5 lb. cara-pils malt
2.5 oz. American Perle hops (6.5% alpha acid), for 75 min.
1.75 oz. Cascade hops (5.4% alpha acid), 0.75 oz. for 15 min., 0.5 oz. at end boil, 0.5 oz. dry hopped in secondary or keg
1 qt. Wyeast 1056

Step by Step:

Soak crushed grains in 0.5 gal. of 150i F water for one hour, then rinse with one gallon hot (170i F) water into kettle. Add malt extract and water to bring volume to 2.5 to 3 gals., depending on kettle size. Boil for 15 minutes. Add American Perle hops and boil an additional 60 minutes. Add 0.75 oz. Cascade hops and boil 15 minutes more. Add 0.5 oz. Cascade hops at end boil. Total boil is 90 minutes. Add wort to sufficient amount of pre-boiled, chilled water to bring volume to 5 gals. Aerate thoroughly and pitch yeast.

Ferment in open primary at 65i F for one week or until head falls. Rack to carboy and finish fermentation at same temperature. If bottling, dry hop with 0.5 oz. Cascade hops in carboy and hold in secondary for two weeks. If kegging, add dry hops (in hop sack) at kegging time and condition cold for two weeks before tapping.

KCBM Membership Rosters...
will be available at all meetings
or can be snail mailed to you
by contacting Bob Clark at
saranacbob@webtv.net.

Did You Know? As A KCBM Member...

- ♦ You can ship your entries to any homebrew competition for only \$1 per entry... KCBM will pay the remainder of the shipping cost. Contact the Shipping Coordinator, Roger Gibson, for details.
- ♦ Members can be reimbursed \$15 for full kegs brought to KCBM events. Contact the Treasurer, Donald Bing, for the \$15.
- ♦ You receive a discount of 10% off of your purchases at Bacchus & Barleycorn the week of the monthly meeting or the week preceding the second Friday of the month.

5 Gallons, All-Grain

Ingredients:

8 lbs. Great Western two-row pale malt
0.5 lb. crystal malt
0.5 lb. cara-pils malt
1.5 oz. American Perle hops (6.5% alpha acid), for 75 min.
1.5 oz. Cascade hops (5.4% alpha acid), 0.5 oz. for 15 min., 0.5 oz. at end boil, 0.5 oz. dry hopped in
secondary or keg
1 qt. Wyeast 1056

Step by Step

Mash in 3 gals. of 170i F water for 90 minutes or until iodine test is negative. Sparge with 170i F water to 6 gals. Boil for 15 minutes. Add American Perle hops and boil an additional 60 minutes. Add 0.5 oz. Cascade hops and boil 15 minutes more. Add 0.5 oz. Cascade hops at end boil. Total boil is 90 minutes. Cool, aerate thoroughly, and pitch yeast.

Ferment in open primary at 65i F for one week or until head falls. Rack to carboy and finish fermentation at same temperature. If bottling, dry hop with 0.5 oz. Cascade in carboy and hold in secondary for two weeks. If kegging, add dry hops (in hop sack) at kegging time and condition cold for two weeks before tapping.

Maifest

Saturday, May 13th

You won't want to miss this one!

We'll be having a **Pig Roast** at Wyandotte County Lake Park...

Prizes will be given for 1st, 2nd and 3rd place best side dish, dessert, and beer. Plus, we'll have a horseshoe pit and lots of fun!

Members cost is \$10,

\$12 for guests, kids up to 10 - free, \$7.50 for kids 11 and over.

See Paul Pilcher for complete details.

Cat. 10 - American Ale

- ◆ 10A. American Pale Ale
- ◆ 10B. American Amber Ale
- ◆ 10C. American Brown Ale

10A. American Pale Ale

Aroma: Usually moderate to strong hop aroma from dry hopping or late kettle additions of American hop varieties. A citrusy hop character is very common, but not required. Low to moderate maltiness supports the hop presentation, and may optionally show small amounts of specialty malt character (breadly, toasty, biscuity). Fruity esters vary from moderate to none. No diacetyl. Dry hopping (if used) may add grassy notes, although this character should not be excessive.

Appearance: Pale golden to deep amber. Moderately large white to off-white head with good retention. Generally quite clear, although dry-hopped versions may be slightly hazy.

Flavor: Usually a moderate to high hop flavor, often showing a citrusy American hop character (although other hop varieties may be used). Low to moderately high clean malt character supports the hop presentation, and may optionally show small amounts of specialty malt character (breadly, toasty, biscuity). The balance is typically towards the late hops and bitterness, but the malt presence can be substantial. Caramel flavors are usually restrained or absent. Fruity esters can be moderate to none. Moderate to high hop bitterness with a medium to dry finish. Hop flavor and bitterness often lingers into the finish. No diacetyl. Dry hopping (if used) may add grassy notes, although this character should not be excessive.

Mouthfeel: Medium-light to medium body. Carbonation moderate to high. Overall smooth finish without astringency often associated with high hopping rates.

Overall Impression: Refreshing and hoppy, yet with sufficient supporting malt.

History: An American adaptation of English pale ale, reflecting indigenous ingredients (hops, malt, yeast, and water). Often lighter in color, cleaner in fermentation by-products, and having less caramel flavors than English counterparts.

Comments: There is some overlap in color between American pale ale and American amber ale. The American pale ale will generally be cleaner, have a less caramelly malt profile, less body, and often more finishing hops.

Ingredients: Pale ale malt, typically American two-row. American hops, often but not always ones with a citrusy character. American ale yeast. Water can vary in sulfate content, but carbonate content should be relatively low. Specialty grains may add character and complexity, but generally make up a relatively small portion of the grist. Grains that add malt flavor and richness, light sweetness, and toasty or bready notes are often used (along with late hops) to differentiate brands.

Vital Statistics:

OG	FG	IBU's	SRM	ABV
1.045-1.060	1.010-1.015	30-45+	5-14	4.5-6%

Commercial Examples: Sierra Nevada Pale Ale, Stone Pale Ale, Great Lakes Burning River Pale Ale, Full Sail Pale Ale, Three Floyds X-Tra Pale Ale, Anderson Valley Poleeko Gold Pale Ale, Left Hand Brewing Jackman's Pale Ale, Pyramid Pale Ale, Deschutes Mirror Pond

10B. American Amber Ale

Aroma: Low to moderate hop aroma from dry hopping or late kettle additions of American hop varieties. A citrusy hop character is common, but not required. Moderately low to moderately high maltiness balances and sometimes masks the hop presentation, and usually shows a moderate caramel character. Esters vary from moderate to none. No diacetyl.

Appearance: Amber to coppery brown in color. Moderately large off-white head with good retention. Generally quite clear, although dry-hopped versions may be slightly hazy.

Flavor: Moderate to high hop flavor from American hop varieties, which often but not always has a citrusy quality. Malt flavors are moderate to strong, and usually show an initial malty sweetness followed by a moderate caramel flavor (and sometimes other character malts in lesser amounts). Malt and hop bitterness are usually balanced and mutually supportive. Fruity esters can be moderate to none. Caramel sweetness and hop flavor/bitterness can linger somewhat into the medium to full finish. No diacetyl.

Mouthfeel: Medium to medium-full body. Carbonation moderate to high. Overall smooth finish without astringency often associated with high hopping rates. Stronger versions may have a slight alcohol warmth.

Overall Impression: Like an American pale ale with more body, more caramel richness, and a balance more towards malt than hops (although hop rates can be significant).

History: Known simply as Red Ales in some regions, these beers were popularized in the hop-loving Northern California and the Pacific Northwest areas before spreading nationwide.

What's Happening at the March Meeting?

Nominations will be accepted for the **2006-2007 Board** positions. Be thinking of who you'd like to see serve on the board and be prepared to nominate them... Maybe *you'd* like to serve?? Elections will be held at the April meeting.

Want better and more thorough feedback on your homebrew?

Bring 2 extra bottles to future meetings and we'll assemble a panel of 2-3 BJCP qualified judges to evaluate your beer in a quieter setting using the BJCP score sheets. Learn how to improve your brew!

Comments: Can overlap in color with American pale ales. However, American amber ales differ from American pale ales not only by being usually darker in color, but also by having more caramel flavor, more body, and usually being balanced more evenly between malt and bitterness. Should not have a strong chocolate or roast character that might suggest an American brown ale (although small amounts are OK).

Ingredients: Pale ale malt, typically American two-row. Medium to dark crystal malts. May also contain specialty grains which add additional character and uniqueness. American hops, often with citrusy flavors, are common but others may also be used. Water can vary in sulfate and carbonate content.

Vital Statistics:

OG	FG	IBU's	SRM	ABV
1.045-1.060	1.010-1.015	25-40+	10-17	4.5-6%

Commercial Examples: Mendocino Red Tail Ale, North Coast Red Seal Ale, St. Rogue Red Ale, Avery Redpoint Ale, Anderson Valley Boont Amber Ale, Bell's Amber, Hoptown Paint the Town Red, McNeill's Firehouse Amber Ale

10C. American Brown Ale

Aroma: Malty, sweet and rich, which often has a chocolate, caramel, nutty and/or toasty quality. Hop aroma is typically low to moderate. Some interpretations of the style may feature a stronger hop aroma, a citrusy American hop character, and/or a fresh dry-hopped aroma (all are optional). Fruity esters are moderate to very low. The dark malt character is more robust than other brown ales, yet stops short of being overly porter-like. The malt and hops are generally balanced. Moderately low to no diacetyl.

Appearance: Light to very dark brown color. Clear. Low to moderate off-white to light tan head.

Flavor: Medium to high malty flavor (often with caramel, toasty and/or chocolate flavors), with medium to medium-high bitterness. The medium to medium-dry finish provides an aftertaste having both malt and hops. Hop flavor can be light to moderate, and may optionally have a citrusy character. Very low to moderate fruity esters. Moderately low to no diacetyl.

Mouthfeel: Medium to medium-full body. More bitter versions may have a dry, resinous impression. Moderate to moderately high carbonation. Stronger versions may have some alcohol warmth in the finish.

Overall Impression: Can be considered a bigger, maltier, hoppier interpretation of Northern English brown ale or a hoppier, less malty Brown Porter, often including the citrus-accented hop presence that is characteristic of American hop varieties.

Comments: A strongly flavored, hoppy brown beer, originated by American home brewers. Related to American Pale and American Amber Ales, although with more of a caramel and chocolate character, which tends to balance the hop bitterness and finish. Most commercial American Browns are not as aggressive as the original homebrewed versions, and some modern craft brewed examples. IPA-strength brown ales should be entered in the Specialty category.

Ingredients: Well-modified pale malt, either American or Continental, plus crystal and darker malts should complete the malt bill. American hops are typical, but UK or noble hops can also be used. Moderate carbonate water



would appropriately balance the dark malt acidity.

Vital Statistics:

OG	FG	IBU's	SRM	ABV
1.045-1.060	1.010-1.016	20-40+	18-35	4.3-6.2%

Commercial Examples: Brooklyn Brown Ale, Great Lakes Cleveland Brown Ale, Avery Ellie's Brown Ale, Left Hand Deep Cover Brown Ale, Bell's Best Brown, North Coast Acme Brown, Lost Coast Downtown Brown, Big Sky Moose Drool Brown Ale

Hops: Its History and Its Use

by Jim Layton

Various herbs and spices have been added to beer to improve its flavor throughout history. Hops were first used in continental Europe, where it was noted that they helped preserve the beer as well as provided a pleasant bitterness. Hops were introduced to England during the 14th century. Nowadays, hops are an essential ingredient in almost every sort of beer.

The hops used in brewing are actually the flower of the hop vine. The hop flowers are stripped from the vines, then dried to prevent decay. Hops are commonly available to home brewers in three forms: whole, pellet, and plug. Each form has some advantages and disadvantages, and each form can be used to make excellent beer. Here is my take on the subject:

Whole hops (you may hear them referred to as "whole leaf" or "whole flower") are simply loose dried hop flowers. High quality whole hops cannot be surpassed for flavor and aroma. They can be easily removed from the wort by straining. Their physical structure, being something like a small, soft pinecone, allows them to form a filter bed that can be used to trap hot break particles after the boil. On the other hand, they don't store as well as the other forms, so getting and keeping high quality whole hops can be a bit difficult. They also behave like a sponge and absorb sweet wort, which may result in a significant loss if you are doing concentrated, partial volume boils.

Pellet hops are made by first grinding whole hops into a powder. Heat and pressure are applied and the powder is extruded through a perforated plate. In use, pellets immediately return to the powdered state and disperse when put into the boil. Pellets, because they have less exposed surface area, stay fresh much longer than whole hops. They also take up less storage volume. These advantages have led to wide use of pellet hops by commercial breweries, both large and small. On the down side, some of the more volatile aroma oils are thought to be lost during the pelletization process. Separation from the wort can be a problem, as the tiny particles tend to pack together and clog any screen fine enough to catch them. One method to deal with this is to do like the big boys do: give the kettle a strong stir to create a whirlpool. Cover the kettle and leave it alone for 15-20 minutes. The hot break and hop particles will collect in a heap in the center. Drain the wort from the side of the kettle using either a valve or a siphon. Try to get the liquid stuff out and leave the solid stuff behind. Don't worry if some of the hop and break particles get past, its no big deal. Another technique is to use a cloth bag to contain the pellets during the boil. I've used both methods numerous times and they both work.

Plug hops are really just whole hops in a fancy package. They have been pressed into ½ ounce tablets but will quickly resume their original form in boiling wort. Use them exactly as you would whole hops.

Boil time has a great effect on the amount of bittering, flavor, and aroma that hops impart to the beer. As the boiling period increases, hop bitterness goes up while hop flavor and aroma decrease. Hops boiled in excess of 45 minutes are commonly called bittering additions. Boil times from 15 to 30 minutes provide less bitterness but more flavor, hence these are sometimes referred to as flavor hops.

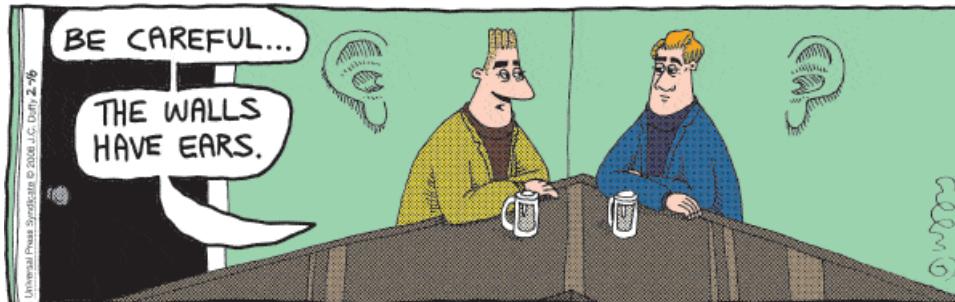
Aroma hops are boiled 10 minutes or less. These are just generalities, of course. Bittering hops will provide some flavor and aroma, aroma hops will provide some bittering and flavor.

The alpha acid rating measures how much bittering material the hops contain. Everything else being equal, hops with a rating of 8% will provide twice as much bitterness as an equal amount of hops with a rating of 4%. The alpha acid content of hops depends on breeding (genetics) and culture (factors such as climate, soil fertility, amount of rainfall or irrigation). The alpha acid rating of hops will vary from year to year and farm to farm. The concept of Homebrew Bittering Units, or HBUs (sometimes called AAUs), was developed to help homebrewers compensate for this variation. Simply put, HBUs equal the alpha acid content multiplied by the weight. To calculate the ounces of a certain hop needed to equal a given HBU number, you divide the HBU number by the hops alpha acid rating. For example, suppose the recipe says to add 4 HBUs of Cascades. Your Cascade hops may be rated at 6.6% alpha acid. To determine how much of the Cascades to use, $4 / 6.6 = 0.6$ ounces.

Beer bitterness is measured in International Bittering Units, or IBUs. Many beer recipes note the IBU content of the finished beer. The ability to predict how many IBUs your beer will contain is a powerful tool when trying to nail a style, clone a commercial beer, or just tweak a recipe. The exact amount of bitterness extracted from the hops depends on the boil time, boil volume, specific gravity of the wort, hop alpha acid content, the amount of hops, whether the hops are loose in the boil or in a bag, and whether the hops are whole or pelletized. With all of these factors involved, you can see how predicting the IBUs in your homebrew can be fairly complicated. Fear not, other folks have developed hop utilization tables and equations that make the calculations fairly simple. Norm Pyle's Hops FAQ at <http://realbeer.com/hops/FAQ.html> has the most complete treatment of this subject that I have seen. Highly recommended reading.

Dry hopping is the practice of adding hops directly to the fermenter. The purpose of dry hopping is to add a strong hop aroma to the beer, though some hop flavor also results. The quantity of hops used for dry hopping 5 gallons

may vary from ½ ounce up to 2 ounces. The proper way to do this is to wait until the fermentation activity has nearly ended, otherwise the escaping CO₂ will carry most of the hop aromatics away. Leave the hops in the beer for a week or two before bottling. I prefer whole



or plug hops for dry hopping, as the larger pieces are easier to separate from the beer. I find that placing a large nylon grain bag, sanitized by boiling for 10-15 minutes, over the racking cane works well to keep the hop bits back when racking to the bottling bucket. You can also dry hop in the keg if you bag the hops, otherwise the pickup tube may clog. Many brewers worry that adding hops to the green beer will result in an infection. Forget it, it just doesn't happen.

Heat, light, and oxygen are the enemies of hop freshness, so store your hops somewhere cold, dark, and airtight. The best container is an oxygen-barrier bag, either vacuum sealed or purged with inert gas. A glass jar with a tight lid, such as a mason jar, is good. Plastic sandwich bags are lousy. The freezer is the coldest place in your house, so that's where hops belong when you aren't using them. Great beer requires fresh hops (OK, lambic excepted).

Hop varieties can be confusing. I offer these general groupings and recommendations as a way to make some sense of it all. If the particular variety called for in a recipe is not available, one of the other hops in that group will provide a reasonable substitute. This list is far from complete but it contains a fair number of the more popular types. The style suggestions are my personal preferences, you are free to develop your own.

American "C" hops (Cascade, Columbus, Chinook, Centennial) have distinctive flavor and aroma that many describe as citrus-like. They are widely used in American-style ales. Some commercial examples which feature the "C" hops are Sierra Nevada Pale Ale, Red Seal Pale Ale, Anchor Liberty Ale, and Bigfoot Barleywine. I highly recommend these hops for American pale ales, American amber ales, and American IPAs. They are not, in my opinion, appropriate in English ales, Belgian ales, German ales, or any lager beer.

English Ale hops (Kent Goldings, Fuggles, Challenger, Target, Styrian Goldings, Willamete) are not necessarily grown in England but they provide the hop flavor and aroma associated with English ales. Recommended for English pale ale, bitters, porters, stouts, English IPAs, and brown ales. Also recommended for Belgian ales.

Lager hops (Tettnanger, Hallertauer, Saaz, Spalt, Liberty, Mt. Hood, Crystal, Tradition) are recommended for lager beer, of course, but also in German ales. Many American ale recipes use a bit of these in addition to the "C" hops for added flavor and aroma complexity. Also recommended for Belgian ales.

General purpose bittering hops (Nugget, Cluster, Magnum, Perle, Galena, Northern Brewer) are commonly thought to have poor aroma and flavor, so are normally used only in early kettle additions. As an exception to this rule, Anchor Brewing uses only U.S. Northern Brewer hops for bittering, flavor, and aroma in their famous Anchor Steam. The rough and earthy flavor of Northern Brewer adds a distinctive character to this beer.

Steve Holle has provided us with this answer that he recently submitted relating to a question to the Wizard in the last issue of "Brew Your Own". *(The homebrewer was worried about tannins leaching into the wort when using decoction mashing because of the heat.)* You'll recall Steve's hobby has been free-lance writing for various beer periodicals. He has a Diploma in Brewing from the Institute of Brewing and Distilling, London and he has written articles for Zymurgy, Brew Your Own, Brewing Techniques, All About Beer, New Brewer, and Brewers Digest. He also wrote a book published by the Master Brewers Association of the Americas entitled *A Handbook of Basic Brewing Calculations*. It's available at: www.mbaa.com.

Dear Wizard,

I read your answer to Darrin Walraven who had a concern about decoction mashing extracting tannins from malt. While in college, I studied International Business with a double major in German. While my German never provided me with a high paying career as an international financier, it has allowed me to read German brewing texts, particularly those by Narziss, Kunze, and Heyse.

Germans are renowned for their attention to detail and obsession with perfection. Their approach to brewing science is equally precise, and their focus on mashing technology seems much keener compared to the Brits and Yanks. The difference probably relates to the intensity that Germans apply to their mash regimes relative to their English-speaking brethren. While many Brits are perfectly happy to use a single temperature infusion mash, such a simplistic approach to mashing is virtually unheard of in Germany. If its worth doing, its worth overdoing, and Germans have developed specific mashing regimes to suit various beer styles. The basis for these differences often stems from the differences in phenolic character between low phenolic pale lagers and more phenolic amber/dark lagers. These differences deal largely with mash dilution, intensity of sparging, and decoction vs. infusion mashing.

The impact of mash dilution (water to grist ratio) receives light treatment in English texts. English brewers tend to use thicker mashes often consisting of 3 parts water or less to 1 part malt (i.e., 3 lb. water to 1 lb. malt, or almost 1.5 qt./lb malt). Homebrewers may use even thicker mashes because they are trying to fit as much malt as they can in their undersized mash tuns. Because Germans typically use multiple temperature rests, the mash has to be thin and liquid so it can be easily stirred to distribute heat equally through the mash during temperature ramp ups.

However, Germans also use the mash thickness to influence the character of the beer. For a delicate Pils, they use a very thin mash with a water-grist ratio as high as 5:1. The thin mash not only promotes enzymatic activity that produces a highly fermentable wort, but the thin mash followed by minimal sparging tends to extract fewer phenols from the husks. The character of the wort from this procedure is described as "edel" (noble) because it contains few harsh tannins. As the Wizard pointed out, the more intense the sparging, the more tannins are leached from the grain.

Germans also recognize that the heat of decoction mashing extracts more character (i.e. tannins) than infusion mashing. The Wizard is again right, Germans don't always perceive this leaching as negative if applied to the appropriate style. Therefore, a pale lager might be brewed with an infusion mash, but if it is decocted, the decoction regime would involve boiling the mash for shorter periods and perhaps limiting the number of decoctions to just one. This limits the extraction of tannins and also the formation of color.

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In contrast to delicate pale lagers, German texts indicate that dark beers benefit from thick mashes. A thick mash (e.g., 3:1) reduces wort fermentability that contributes substance to the beer, and the greater quantity of sparge water that follows leaches out greater amounts of tannins. The result is greater color formation and a more dextrinous beer with a pleasing maltiness from the liberated phenols. Bold beers like Doppelbock may undergo a triple decoction, and each decoction may be boiled for extended periods of time to liberate the maximum amount of tannins and to also caramelize wort sugars.

The German term the Wizard may have been searching for was "Gerbstoff" or tannins that add structure to robust beers. These tannins are said to lend a "vollmundigen, kernigen Geschmack" to

the beer (full mouthfeel and grainy flavor).

Perhaps it is the domination of light pale lagers during the last 100 years of American beer history that are not compatible with phenolic character, which has created the paranoia about tannins. Let's not forget that tannins are what contribute structure and character to red wines like cabernet and Bordeaux. Makers of bold red wines intentionally leave the must in long contact with the tannic grape skins to increase the harsh phenolic character of their wines. (The grape skin is analogous to grain husks in contributing phenols and color.) Bold red wines can be much more tannic than even the stoutest beers, yet people still love them.

As the Wizard points out, Germans don't automatically view tannins as negative. In the correct proportions and in the right beer style, tannins can actually improve the character of certain robust beers.

Getting An Attitude with Altitude

by Mike Kalny

At 10,152 feet you can feel a lot of things, like altitude sickness, shortage of breath, throbbing teeth, and dry mouth.

If you're in Leadville, Colorado, a town that time and urban renewal forgot, you can quench your dry mouth and possibly cure your altitude sickness at America's highest brewpub – Rosie's. It's across the street from a genuine haunted hotel – The Delaware, I should know, I slept there. Rosie's offers five signature beers from a pilsner miss-labeled as an Ale (Mineral Belt Pale Ale) to a half way decent Stout (Ragged Ass Miner).



Two of the more popular beers, Aggie's Amber Ale and Mt. Massive Malt Liquor were not available for tasting because they ran out.

The Mt. Massive had an ABV of 7.1% and was advertised as a nice combination of caramel and Tow Row malt creating a light amber high alcohol beer.

Aggie's Amber was described as a deep amber red beer with medium body and hop. A long roasting time of the malts gave the beer a sweet toffee flavor with a hint of burnt character.

The best tasting of the three beers I sampled, the Silver Rush Scottish Ale, had a complex flavor of caramel and toffee with a good EK Golding and Willamette hop balance. It is said to be a Leadville favorite.

"Character is what you are in the dark."

— Unknown

"Character, not circumstance, makes the person."

— Booker T. Washington, American educator and civil rights activist (1856-1915)

The other half-way decent beer, Ragged Ass Miner, was a coffee colored stout with twelve malts combined with oatmeal to produce a slightly spicy and roasted taste.

Rosie's used to be called "Boom Town" Brewery. It changed ownership late last year and reopened on January 1st as Rosie's, named after the new owner's, Gary Yonocsko, wife Rosemary.

The brew master happens to be a female by the name of Leaf Treinen who worked for the previous owners and hails

from the west coast. Leaf is in charge of a 10 BBL Specific System comprising of brew kettle, mash tun, three fermentors and five bright beer tanks. The brew house also has a nitrogen system and state of the art carbonation system.

Brewing at 10,000 feet has its challenges as well as benefits. A boil can be achieved at 90-94 centigrade depending on atmospheric pressure. Carbonation can be tricky usually on the over side of the equation due to the altitude.

The pub serves a nice selection of meats and fish with daily specials. The Yonocsko's two sons serve as chefs.

So if you're looking for a Colorado high, head for Leadville – don't forget the spectacular mining museum – and Cooper mountain, the highest ski area in America at 12,000 plus feet that served as a training area for the famous 10th Mountain Division in WWII.

Meeting Minutes - Feb. 10, 2006

Note- minutes have not yet been approved by the membership but are here for your review and information.

Meeting called to order at 7:40pm by President, Alberta Rager.

Two new members were introduced: Doug Davidson and Wes Parminter.

Guest Speaker: Tom Ciccateri, Beer Drinker of the Year (BDOTY) - Tom, a KCBM member gave details and interesting stories about becoming the BDOTY. Tom underwent a rigorous round of questioning about beer history, styles, brewing procedures as well as skills used to listen and talk to your beers. He now gets free beer for life at Wynkoop's in Denver.

January Minutes - read and accepted.

Treasury Report : Donald Bing reports that there is \$8,636.18 in our treasury. Report accepted.

Beer of the Month: Porter - February is a non COC month and the local clubs decide on a particular style.

We tried 3 commercial porters. A member provided a blackberry porter - well done, nice balance but a bit thin. Jackie brewed a Poor Richard's Ale that was much appreciated (a Ben Franklin recipe in honor of his 300 birthday. A maltic Baltic porter -needed complexity. Dapplebock, Red Ale & Steam Beers sampled - very good.

Member Talk: Steve Holle presented on fusel alcohols and esters; well received and interesting.

Neava had positive things to say about McCoys in Westport. Roger spoke highly of Granite City at Zona Rosa as did Marty Ammon about the one at Village West in KCK.).

Lauri Glasgow had positive things to say about the Upper Mississippi Mashout Competition in the Twin Cities. Pancho Luna and Ed Vandegriff also went. There were 600 entrees and KCBM folks were treated with great hospitality.

Committee Reports:

Beer Coordinator - Brandon O'Brien has agreed to be our new beer coordinator.

Competition Committee: Neava and Robin reviewed plans for our annual competition Feb. 17 & 18.

We still have room for dinner and the Red X Beer tasting event. Members are encouraged to support our sponsors; let them know you appreciate their support and patronize their businesses. Judges and stewards are still needed.

Maifest: Paul Pilcher (with help from Chris Stenger & Jim Nelson) presented the proposal. We will have a pig roast and the event will be Saturday, May 13th, at Wyandotte County Lake: farmer/country theme. Prizes will be given for side dishes, desserts, and beer. We will have a horseshoe pit. Members cost be \$10, \$12 for guests, kids up to 10 - free, \$7.50 for kids 11 and over. Proposal was as approved.

GABF Road Trip : Nancy presented and said that there were two options for lodging: a Residence Inn - .2 miles from the festival, costing \$129/night & an Adams Mark .3 away costing \$99/night. We need people to commit for this event which runs 9/28-10/1 in Denver. Other clubs will be invited to join us.

Shipping Coordinator: Roger gave dates for shipping entrees to the Bluebonnet (TX) and IBU (Iowa) competitions.

PR Committee: Lauri Glasgow asked that anyone interested in helping at the IBU Competition in Des Moines March 4th, please contact her. She will be going. Schlafly also donated beer to our competition.

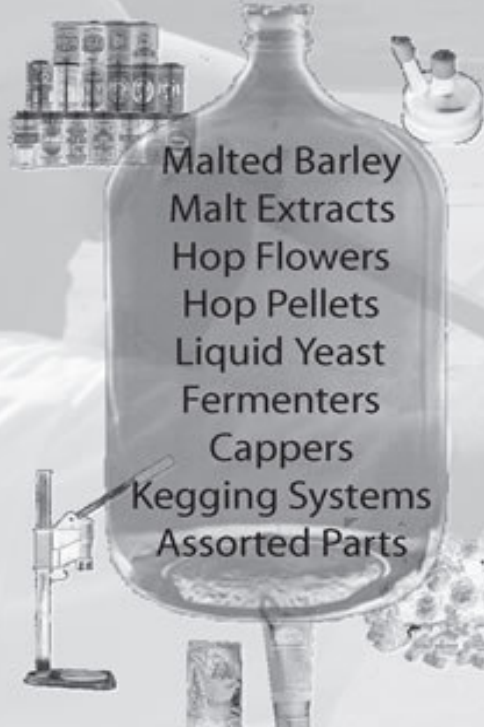
Old Business: None

New Business: Nominations will be submitted in our March meeting for board positions. Elections will be in April. It was suggested that better feedback be given to new brewers at monthly meetings. Starting in March, 2-3 of our judges in attendance will be asked to provide official score sheet feedback to members who want this more substantial feedback.

Answer Person: Good interchange about sparging issues.

Adjourned at 9:10pm

Respectfully submitted by Bob Clark



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Club Discount Week March 6th-11th



Trying to decide what to brew this year? The styles we are featuring at our club meetings are:

March – American Ales, Cat. 10 — *AHA COC*
April – Extract (50% or more of the fermentables extract) — *AHA COC*
May – Maifest
June – Cream Ale
July – Mead, Cat. 24-26 — *AHA COC*
September/October – Stout, Cat. 13 — *AHA COC*
November/December - Light Hybrid, Cat. 6
— *AHA COC*

AHA COC = Club Only Competition Selection

Have An Article You'd Like to Share?

Let Robin Beck or Bob Clark know...

3rbecks@sbcglobal.net

bobclarkkc@msn.com



Think As You Drink

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Calendar of Events

March 10th
KCBM Monthly Meeting
7:30pm Meeting
Style: American Ales (Cat 10) - * AHA COC

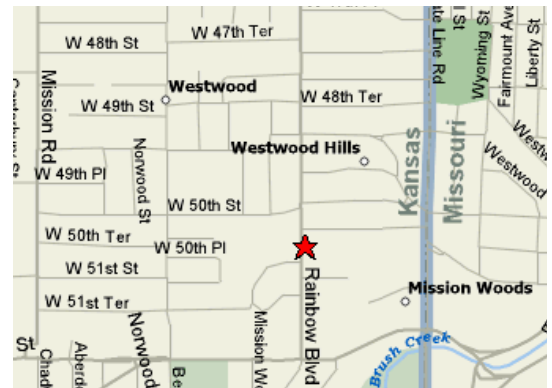
April 14th
KCBM Monthly Meeting
7:30pm Meeting
Style: Extract (50% or more of the fermentables extract) - * AHA COC

May 13th
Maifest Pig Roast
Wyandotte County Lake Park

June 9th
KCBM Monthly Meeting
7:30pm Meeting
Style: Cream Ale

July 14th
KCBM Monthly Meeting
7:30pm Meeting
Style: Mead (Cat 24-26) - * AHA COC

Doors Open at 7:00pm for All Meetings
* AHA COC = Club Only Competition Selection



MEETING INFO!!

Westwood Lutheran Church

5035 Rainbow Boulevard
Westwood, KS

Doors Open at 7:00 p.m.
Next Regular Meeting March 10th

Meeting Fees:

Members – 6-Pack of Beer
Non-Members – 1st Meeting FREE
\$4 Thereafter
(6-Pack Welcomed)