



The Cellar

The Official Newsletter of the Colonial Ale Smiths and Keggers

January Meeting Round-up

By Norman W. Schaeffler

CASK kicked off 2006 in style by holding the January meeting at Coastal Wine Connection in the Port Warwick area of Newport News. Graciously hosted by CWC owner, and new CASK member, Brian Holloway, the meeting was packed full of activities and set among a great selection of beers and wine. In keeping with the AHA, the "Style of the Month" was Belgium strong ales. We had a presentation and tasting of the various sub-styles lead by CASK VP, Steven Davis and a club-only competition that was won by Dave Bridges, with his strong golden ale sent off to represent CASK. CASK President Norm Schaeffler, lead a special tasting for the beer flavor diacetyl, which featured some "doctored" American megabrew with butter flavoring added and then a tasting of the flavor in its natural setting in a Samuel Smith's Organic Ale and a Legend Oktoberfest. Several new members joined the club, so a big CASK welcome to Chandos Brown, Brian Holloway, Preston Jones, and Michael Price. A raffle rounded out the evening and a good time was had by all.

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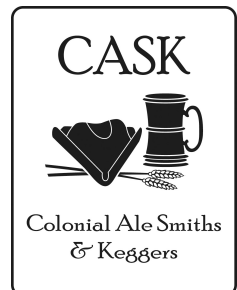
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The Cellarmaster

By Norman W. Schaeffler

A Flavor Two-fer

This month, I have two flavors to be explored at the meeting. The first is a flavor that is probably familiar to everyone and the second is somewhat of a surprise when you think of it as a flavor.

Up first, the "skunked" beer. If you have ever had a Euro-lager in a green glass bottle, I'd bet dollars to donuts that you are familiar with this flavor. It tastes, well, like a skunk. Chemically it is 3-methyl-2-butene-1-thiol, which is commonly known as mercaptan and is actually a component of skunk spray. Humans are very sensitive to it. But what causes it? Basically, exposure to light. Specifically light in the blue-green portion of the spectrum (400-520 nanometers). The light reacts with the humulone, or hop alpha acid, present in a beer and transforms it into a free radical, hydrogen sulfide, and the "skunk" molecule, 3-methyl-2-butene-1-thiol. It is a particular problem in beer packaged in green bottles, like most Euro-lagers, and also clear bottles. Brown bottles offer the best protection, filtering out the harmful wavelengths, like a sunblock for your beer. European Lagers are particularly susceptible because they tend to be golden in color, so the beer itself offers no filtering of the harmful wavelengths. Put a copper colored ale in a clear bottle and the beer can protect itself somewhat, but given enough exposure to light, an ale will skunk too. English ales sometimes have this problem. Hobgoblin, which used to be packaged in clear bottles, had this problem most of the time. Thankfully, the brewer has switched to clear glass.

The second flavor is an ingredient in every beer, alcohol. Ethanol, the final product of fermentation, is usually perceptible as a flavor only in high-gravity beers like barleywines. When a beer has a high alcohol content, it is detectable in the aroma of the beer and in its flavor. An warming will be felt in the mouth due to the high alcohol levels. There may also be a spiciness, sometimes described as a hotness, present. This is typically described as an off-flavor. Instead of the sweet two carbon ethanol molecule, these are caused by alcohol molecules with multiple carbons in the molecule. Usually caused by high fermentation temperatures in low gravity beers, these molecules are also usually present in a high gravity beer as a by-product of excessive yeast activity.

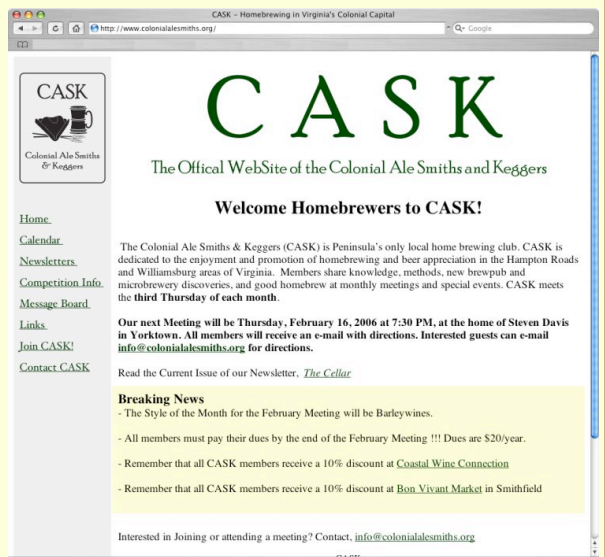
There you have it, two more beer flavors to quietly reflect upon. 'Till next time, Cheers.

New CASK Website Up

The new CASK website is up at www.colonialalesmiths.org. We have tweaked the organization of the pages, added some new content and new offers for members of CASK.

We now have three local business offering discounts to our members, Homebrew USA offers a 10% discount on homebrewing ingredients, Coastal Wine Connection offers a 10% discount on beer purchases, just tell the cashier that you are a member of CASK. Bon Vivant Market in Smithfield also offers a 10% discount on beer purchases. All of these offers are for current CASK members only, we have to provide a list to each establishment of current paying members. Another good reason to pay your dues on time!

Another new feature of the web site is our new Message Board. You need to register to use the Message Board, but once you do you will find 15 forums for discussing with your fellow members all about homebrewing, wine, and mead. Join today!





Flavor Profile: Diacetyl

By Harrison Gibbs

If you have tasted a buttery or butterscotch taste in your beer, you have experience the chemical compound called diacetyl. Diacetyl is a natural byproduct of fermentation and occurs to some extent in just about all beers. Too much diacetyl can overwhelm a beer's flavor profile. A small amount of diacetyl is considered appropriate for a couple of ale styles such as Scottish ales and American Amber. Smaller amounts are usually found in other ales as well and can contribute fullness to the overall flavor. In Lagers, however, it is considered a flaw to taste diacetyl.

Normally, diacetyl forms in the early stages of fermentation as a byproduct of the yeast. The level builds up as primary fermentation proceeds. High temperatures lead to higher levels. Then, during secondary fermentation, yeast consumes diacetyl and the level drops again. Higher temperature also leads to a faster rate of reduction.

Manipulating fermentation temperature provides some control over the amount of diacetyl in your brews. If your ales have too much diacetyl, try keeping the primary fermentation a bit cooler, about 63°F. Once the beer is in secondary, raise the temperature to about 68°F. This minimizes the initially levels, and more quickly reduces the amount that is left. Moreover, when you bottle or keg your beer, give it enough time to age. Diacetyl levels will drop with longer ageing.

If you are making a lager, always give the beer a *diacetyl rest*. Since lagers are kept cold throughout fermentation process, you will want to warm up the beer towards the end of secondary fermentation. This should make the diacetyl level drop. Bring the beer up to the low sixties for 48 hours. Then drop the temperature back down to lager temperature by about 2 degrees per day.

In rare instances, some types of bacterial action or wild yeast may contribute diacetyl. In addition, low levels of protein will inhibit diacetyl reduction. This may occur if you use high levels of refined sugar or adjuncts. If temperature control does not reduce your diacetyl level, check into these possibilities.

If you are unsure of what diacetyl actually tastes like, try a bottle of Fullers ESB or one of the Samuel Smiths lines of beers. Legend Brewing often has diacetyl in many of its beers; some, where it is appropriate and others where it is not.

The Beer Olympics

By Harrison Gibbs

The big homebrew competitions that CASK usually enters are concentrating this year's in the months of April, May and June. In April, entries are due for the first round of the American Homebrewer Association's National Homebrew Competition on April 3-14, 2006. This is the largest event of its kind in the world. It is also a great competition to enter since the first round requires only one bottle. However, if your beer advances to the second round, you will need to send in three more bottles.

In May, Brewer's United for Real Potables (BURP), the homebrew club centered in DC and Northern Virginia is hosting its annual Spirit of Free Beer Competition. This is a large nationally recognized competition. The actual entry and judging dates will be announced in the near future.

Finally, June 3, 2005 sees the return of the Dominion Cup, hosted by the James River Homebrewers out of Richmond. This is a local favorite. CASK has done well every year its members have entered. For the last two years, CASK's Steve Davis has walked away with Best-of-Show. Other members have won gold, silver and bronze medals and great prizes donated by WeekendBrewer, White Labs and others.

For those who have not entered a competition, the most important thing to remember is save your beer. That means keep at least a six-pack of all of your favorite brews in a cool dark place and keep posted as to when the entry dates are. The requirements and the fees are all about the same, with the AHA being the most costly, but then, if you win they publish your recipe in Zymurgy.



Big Beautiful Barleywines

By Harrison Gibbs

During these last cold weeks of winter, few beers have the right stuff to warm a person up as the Barleywine, which is very much a beer, albeit a very strong and often intense beer despite its name. In the Anglo/American tradition of brewing, it's one of the strongest of the beer styles, comparable to the Belgium's Tripel of Belgium, Germany's Dobbelbock and Scotland's Wee Heavy.

Barleywine takes on the wine moniker from its strength, complexity and sophistication. Garrett Oliver of Brooklyn Brewery writes in his book, *The Brewmaster's Table*:

In the early 1700's the emergence in England of a wealthy merchant class, the development of pale malts, and a more scientific approach to the brewing process gave rise to ales that rivaled the finest wines in their finesse, complexity and strength. These beers were not for the masses, but for the aristocracy, who had grown tired of having their wine supplies cut off by pesky wars with France.

They are not refreshing but thought-provoking, sip by contemplative sip. Serve it in a snifter and slightly above a chill. When experienced the style for the first time, most people compare it to a brandy or a port, a drink to savor.

Any beer of this strength and complexity can be a challenge to the palate. The flavors are lively and fruity, sometimes sweet, sometimes bittersweet, but always alcoholic. Expect anything from an amber to dark brown colored beer, with aromas ranging from intense fruits to intense hops. Body is typically thick, alcohol will definitely be perceived, and flavors can range from dominant fruits to palate smacking, resinous hops.



English varieties are quite different from the American efforts, what sets them apart is usually the American versions are insanely hopped to make for a more bitter and hop flavored brew, typically using American high alpha oil hops. English version tend to be more rounded and balanced between malt and hops, with a slightly lower alcohol content, though this is not always the case.

Most Barleywines can be cellared for years and typically age like wine. In fact most benefit from cellaring for a year or two, and some for a decade or more. Barley wines are sometimes dated with the brewing equivalent of the vintage year, and, even more so than wine, vintages can be entirely different.

The style almost died in England, but in America, craft brewers have taken on the style as a special challenge and an opportunity at personal expression. No beer tests a brewer's skill so much as barley wine. Requiring

Yeti Another Big Beer: A Big Foot Clone Recipe

OG: 1.102 FG: 1025 SRM: 16 IBU: 100

Ingredients:

13 Oz Crystal Malt 60L

9 lbs Dry Light Malt Extract (or Substitute 19 lbs US 2-Row)

4 lbs of Alexander's Pale Malt Extract (delete for all grain)

2.5 oz of Nugget or Chinook 12% Hops – 60 min

1 oz Cascade Hops (Flavor Hop) – 15 min

1 Tsp Irish Moss

1 oz Cascade (Aroma Hops) – 1 min

Steep specialty grains for 30 minutes in 1 gallon 150F water. Sparge and add to pot with malt extract and 3 Gal of boiling water. Boil for 60 minutes adding hops at appropriate times. If brewing all-grain, substitute the malt extract for 19 lbs of Pale Malt. Mash at 150F for 90 minutes. Use 20% less hops if not brewing with extract. If you use a partial mash set up, mash 3 lbs of pale malt and reduce recipe by 3 lbs of malt extract.

After pitching the last hops, cool and pitch a very big starter of American Ale Yeast. Ferment for 2 weeks until fermentation slows and rack to secondary. After a month, rack again to a tertiary and bulk age for 6 months. Bottle with 1.25 cups of dry malt extract and pitch a fresh strain of the above yeast. Bottle condition for 3 to 6 months then sip.



extended fermentation, the brewer must cajole the yeast with care to make sure it finishes. Sometimes, more alcohol tolerant yeast may be needed. The result is a strong brew, 9 or 10 percent alcohol at a minimum, as against a typical beer's 5 percent. Many American brewers aim even bigger, naturally, up to 15 percent, while staying true to the complex, evocative spirit of barley wine.

BEER ADVOCATE'S TOP TEN AMERICAN BARLEYWINES From beeradvocate.com

1. **Old Ruffian Barley Wine** by Great Divide Brewing Company, abv: 10.20%
2. **Insanity** by Weyerbacher Brewing Co., abv: 11.10%
3. **Bigfoot Barleywine Style Ale** by Sierra Nevada Brewing Co.: 9.60%
4. **Behemoth Blonde Barleywine** by Three Floyds Brewing, abv: 12.50%
5. **Old Horizontal** by Victory Brewing Company, abv: 11%
6. **Thomas Hooker Old Marley Barleywine**, by Troutbrook Brewing Company, abv 10%

The Other Cup: A Pressing Story Part I – The Apple

By Harrison Gibbs

Once upon a time, farmers considered their winter stores incomplete until several barrels of cider were put in the cellar. This was not today's sweet cider in plastic jugs but good hard cider. As I mentioned in the September 2005 newsletter, British farmers never gave up their pints of cider, the French their champagne cider, nor the Basque their sidre poured from on high. However, here in the US popular interest in hard cider has almost completely vanished. The commercial stuff you find is more fruit cooler than real cider.

Luckily, my brother Avery lives in the heart of Virginia apple country, among the orchards surrounding Winchester Virginia. The pictures are from our pressing last October.

In this three part series, I will explore the true art of cider making beginning with the most basic component to the process – the apple.

Apples suited for hard cider making differ from standard apple varieties, in much the same way that wine grapes differ from table grapes. Cider apple varieties have juice characteristics that develop only with fermentation. Fresh from the tree, cider apples can even be unpalatable, because of the tannin content of the juice - the bitter, astringent flavor familiar to most of us as the taste of an old tea bag. This is especially true with the rougher variety of crab apples that have more in common with the apples used in cider than they do with those shiny things sold in your local supermarket.



Tannin is one of the key elements that give fermented cider its characteristic flavor. Like the tannins pulled from grape skins, tannin is what provides the feeling of body and a dry balance to the remaining sugars and alcohol in fermented cider. Cider best uses a blend of the juice qualities found in cider apples that combine the desired levels of sugar, acid, tannin and chemical flavoring compounds unique to each variety.

Some varieties can be used to produce a vintage or single-variety cider, if the juice is such that it contains a natural balance of the elements needed for successful fermentation and a good, distinctive flavor. However, I have found that my best ciders are those that rely on the largest assortment of apples. My 2004 Cider which relied on apple juice pressed at a roadside orchard in western Virginia, consisted of Winsap, McIntosh, Red Delicious, Granny Smith, Jonathon, Fuji and Gala. While none of these are necessarily good varietal apples, together, they had most of the qualities that you want from a cider apple. I did add processed tannin to the mix to help balance the one flavor that was lacking.

In the cider world, there are two classifications used for determining cider apples. The European method and the American method. The European method reflects certain threshold levels of tannin and acid to separate cider apples into categories. The standard categories are:



Sweet (SW) - tannin less than 0.2 g/ml, malic acid less than 0.45 g/ml (low tannin, low acid). Standard apples include Sweet Coppin, Baldwin, Ben Davis, Golden Russet*, Grimes Golden*, McIntosh*, Rambo, Rome Beauty and Roxbury Russet*.

Bittersweet (BSW) - tannin greater than 0.2 g/ml, malic acid less than 0.45 g/ml (high tannin, low acid). Apples include Yarlington Mill, Newtown Pippin and Red Astrakhan.

Sharps (SH) - tannin less than 0.2 g/ml., malic acid greater than 0.45 g/ml (low tannin, high acid). Standard apples include Cox's Orange Pippin*, Esopus Spitzenberg, Granny Smith*, Gravenstein*, Jonagold, Jonathan, Northern Spy, Stayman and Winesap.

Bittersharps (BSH) - tannin greater than 0.2 g/ml, malic acid greater than 0.45 g/ml (high tannin, high acid). These are the hardest to come by and would include Foxwhelp, Kingston Black, and many varieties of Crabapples such as Dolgo, Hewes, Martha*, Red Siberian and Transcendant*. (**Aromatic apples contributing bouquet or nose to cider.*)

This classification system applies best to European cider apples. Most American apples used in cider fall somewhere in between the categories. This may be due to fact that these apples developed on the "frontier" and so became known for providing a bigger range of flavors, which in effect required less blending.

For our pressing last fall, my brother and I collected apples from the local orchards that we thought would best meet the above descriptions. In the sweet category we collected Ida Red, York, McIntosh, Gimes, and Golden and Red and Delicious. Our sharps included Staymen, Winsap, and Granny Smith. For Bitters we relied on two types of crab apples.

Next time, **The Pressing**....



Classic Cider Apples

Foxwhelp - midseason sharp (to bittersharp), harvest immediately after Gravenstein, large fruit, consistently productive, good tree habit. One of the most famous English cider apples, the cider has a characteristic aroma and flavor. Though classed as sharp, juice contains enough tannin to produce a good single varietal cider.

Kingston Black - midseason bittersharp, tree quite manageable, not highly vigorous, moderate productivity, juice has high brix in good seasons, slow to ferment. Ranks as one of the best English single varietal ciders.

Yarlington Mill - late midseason bittersweet, good tree habit, grower friendly despite some tendency to biennial bearing, produces a good cider with a pleasant aroma.

Grimes Golden - old American standard discovered in West Virginia in 1832, common in old commercial orchards, vigorous and productive, but tends to biennial, ripe mid to late September. Flavor is spicy with a heavy aroma, which combined with its high sugar content contributes to quality for hard cider.

Jonagold - from Geneva, NY breeding program, very vigorous, triploid, large fruit, very productive, ripens in late September to early October. Juice has very high sugar content, good sugar/acid balance. Susceptible to scab.

Roxbury Russet. - probably the oldest named American variety, originated in Massachusetts in the early 1600s, moderately vigorous, some natural resistance to scab. Fruit stores well and aromatic juice is good for blending or as a single-variety sweet cider.



The CASK Calendar of Club Events and Competitions

Plan your brewing year now and hit as many club-only and other competitions as possible.

January	Belgian Strong Ales
February	Barleywines
March	American Pale Ales
April	Extract Beers
May	TBD
June	TBD
July	Summer Party Iron Brew
August	Stout
September	TBD
October	TBD
November	Light Hybrid
December	Free for All

February 2006: Big Beautiful Belgians Club-Only Competition Hosted by Lori Brown and the Greater Everett Brewers League of Everett, WA. *Category 18**, *Belgian Strong Ale*. For more information, contact Lori Brown at loribrown@att.net. *Entries due February 4, 2006. Judging will be held February 11, 2006.*

February 19, 2006: TransAtlantic Showdown 2006 Hosted by Hampton Roads Brewing and Tasting Society. Entry Accepted from: 1/30/06 to 2/11/06. Entry Fee is \$8.00/entry. All registration materials, beer and money to be sent to Mellissa Pensinger at HomebrewUSA Categories will be: 8C, 10A & 10C, 11 B & C, 12 A & B, 13 A & E, 14 A & B and 19 B & C. BJCP 2004 Styles and Judging Guidelines will be followed.

March/April 2006: American Ale (BJCP Category 10) Hosted by Jeffery Swearingin and the Fellowship of Oklahoma Ale Makers (FOAM) of Tulsa, OK.

Entries are due by 4/01/06 and judging will be held on 4/8/06. Shipping Address: High Gravity Homebrewing & Winemaking Supplies, 7164 S. Memorial Dr., Tulsa, OK USA 74133 For more information, contact Jeffery Swearingin at beertracker@alemakers.com.

April 21-30, 2006, AHA National Homebrew Competition (First Round)

11 Regional Judging Sites, US & Canada

This is the largest and most prestigious Beer Competition in the World. Don't miss your opportunity to compete! Judges recognize the most outstanding beer, mead and cider produced by amateur brewers in the U.S. and Canada and abroad.

Fee: \$8.00

Entry Deadline: 4/3/2006 - 4/14/2006

Contact: Gary Glass

Email: gary@brewersassociation.org

Web: <http://www.beertown.org/events/nhc/index.html>

May 2006: Extract Beers Hosted by Tim Bardet and Pacific Gravity of Culver City, CA.

This competition covers All BJCP beer styles (Categories 1-23)*. Extract must make up more than 50% of fermentables.

For more information, contact Tim Bardet at tbardet@finance.ucla.edu.

August 2006: Mead Hosted by John Tull and the Washoe Zephyr Zymurgists of Reno, NV, Categories 24-26*

Entries due by 8/12/2006 and judging will be held 8/19/2006. Shipping Address: WZZ AHA COC, 2335 Dickerson Road, Reno, NV 89503. For more information, contact John Tull at jctull@biodiversity.unr.edu.

September/October 2006: Stout Hosted by Steve Fletty and the St. Paul Homebrewers of St. Paul, MN. For more information, contact Steve Fletty at fletty@UMN.EDU.

November/December 2006 Light Hybrid Beer Hosted by Bill Gornicki & Kevin Kutskill of the Clinton River Association of Fermenting Trendsetter CRAFT of Macomb Twp, MI Category 6* covering Cream Ale, Blonde ale, Kölsch, and American Wheat or Rye Beer

For more information, contact Bill Gornicki at gornicwm@earthlink.net.