The Cellar

The Official Newsletter of the Colonial Ale Smiths and Keggers

February Meeting Round-up

By Norman W. Schaeffler

CASK held it second meeting of 2006 at the home of CASK Vice President, Steven Davis. We had a large turnout for the meeting which featured several presentations and lots of great beer. We started off with a presentation on decoction mashing given by Steven Davis. Steven followed up his presentation by showing everyone some of the equipment he uses in his brewery while doing decoctions. Next up was this month's flavor presentation in which I featured the flavors "skunky" and alcoholic. We compared bottled to canned Heineken to isolate the "skunky" flavor that many green-bottled euro-lagers have and sampled a Bud Light spiked with Everclear to isolate the alcoholic flavor. The Style of the Month was barleywines and Dave Bridges gave an excellent presentations on all the sub-styles followed by a tasting. A Thomas Hardy Ale, a few Sierra Nevada Bigfoots and a barleywine from Salt Lake City were just a few of the beers sampled. We rounded off the evening with a raffle and some great conversation. While there were no new members in February, but there were a few new faces visiting for a meeting. A good time was had by all.

CASK at the Transatlantic Showdown 2006

Five members of CASK entered beers in the Inaugural Transatlantic Showdown, sponsored by the HRBTS, our homebrewing friends on the Southside. Dave Bridges entered his American IPA and was awarded second place for American and English IPA. Harrison Gibbs entered his Brown Ale and took a third in American and English Brown Ales. Steven Davis entered a English Pale Ale, Norm Schaeffler entered an American Pale Ale and Brian Hershey a Porter and a Pale Ale.

In addition to entries, CASK also sent some judges and stewards over to the competition. Steven Davis, Harrison Gibbs, Norm Schaeffler, Brian Hershey, and Hugh Burns were all judges and Dave Bridges and Susan Hershey were stewards. Lunch was served, along with some fine St. George's brews, and the competition was run very smoothly. A first class effort all around.

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CASK
Colonial Ale Smiths & Keggers

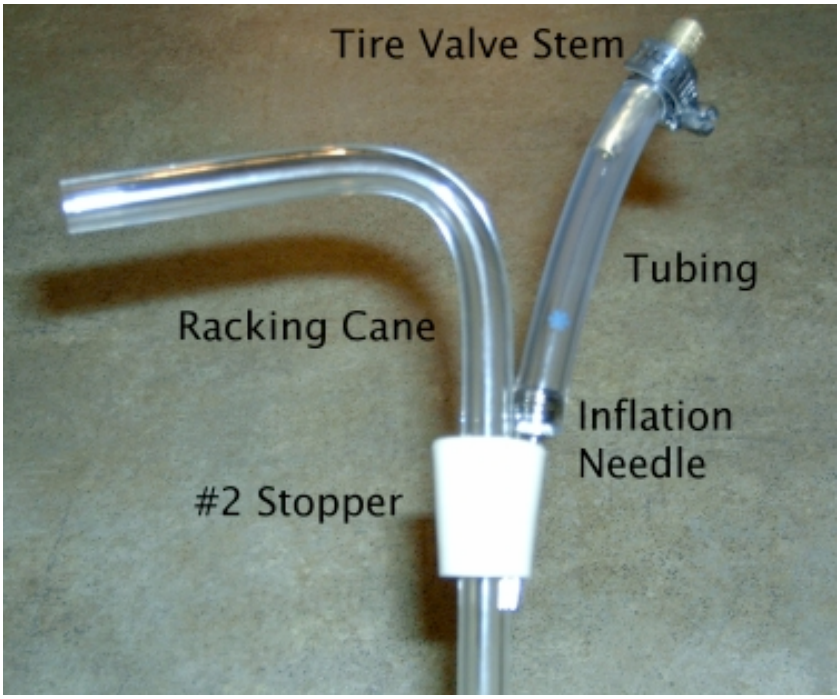
The Cellarmaster

By Norman W. Schaeffler

Counter (Filler) Culture

If you keg, then there is always the problem of how to get some of your beer into a bottle, either to enter a competition or share at a meeting. One technique is to get the beer and bottles as cold as possible, add some tubing to your tap and fill the bottle. While this works okay, there usually is some foaming of the beer, and subsequently some loss of carbonation, and a risk of oxidizing the beer. This is the way that I have done bottles for a while, but the last time I did it, I decided to look for a better way. Another way to get your beer from keg to bottle is to use a counter-pressure bottle filler. A counter-pressure bottle filler (CPBF) works on a very simple principle. Beer flows from keg to tap because of a pressure difference between the headspace in the keg and atmospheric pressure. When you set the regulator on your CO_2 tank to 12 psi, that sets the pressure in the headspace to be 12 psi above atmospheric pressure. When you open the tap, that pressure difference "pushes" the beer down the beer line and out the tap. The length of beer line offers resistance to the flowing beer and if the length of beer line is long enough, the pressure difference will be reduced by the resistance and the beer will emerge from the tap with just the correct amount of head. If the beer line is too short, the pressure drop, or head loss as it is known in plumbing systems, will not be enough and too much CO2 will come out of solution and you will get a glass of foam. So if there was a way of controlling how pressure is in a bottle while it is being filled, we could minimize the amount of foaming.

I asked on the CASK Message Board if anyone in the club had a CPBF and what their experiences with it were. I got some great comments back and while I was looking at a few options to purchase one, at a cost of $50-$80, I decided that maybe I could build my own and perhaps save a few bucks. *Brew Your Own* ran an article on how to build one not too long ago, so looked into that design. I didn't like the use of the copper tube and also the part list totaled over $30 in cost. So I kept on looking and that's when I found "The Poor Man's Real Counterpressure Bottler" (brewery.org/library/PMRCB_KS0796.html). This design had a part list that could be bought for under $10 and looked like it just might work, so I built one. The design is quite simple. Take a number two drilled stopper, which fits a beer bottle, drill a small (1/16 inch) hole along side the main hole from top to bottom of the stopper. Into this new hole push in an inflation needle like you use for inflating footballs and basketballs. This is how the CO_2 will get into the bottle. Then, add a tire valve stem for a car tire to the end of the inflation needle to fill and control the venting. The original article I found says to "Just screw the threaded part of the needle into the rubber underside of the valve." I found that this did not work too well. The bottom of the valve was too big and I could not get a good enough seal between the valve stem and the needle. So using a razor blade and some sandpaper, I removed all the rubber from the valve stem, leaving just the brass valve itself. I inserted this into a piece of tubing and connected the other end to the inflation needle. I also added a trimmed racking cane to go through



the stopper. Then, I got an air chuck from the hardware store, most expensive part in the whole system at $3, and connected it to my CO_2 bottle, via some tubing. The racking cane fits perfectly into the cobra tap which I normally have on my kegs. So slide the racking cane into the cobra tap and that is your beer valve. To operate, first put the air chuck on the valve stem and pressurize the bottle. When you do this, you will notice that the stopper wants to pop out (you are holding onto the stopper, right?), this first time let it pop out and release the pressure in the bottle, repeat three or four more times. This will purge most of the air out of the bottle, minimizing the risk of oxidation. Pressurize the bottle again and then hold open the cobra tap. A small amount of beer will flow into the bottle and then stop. Success! The beer stopped because the pressures were equalized, keg to bottle. Now I found that by relaxing my grip on the stopper, I could control the flow of beer into the bottle and fill the whole bottle with no foam. Quickly pull the filler out and cap. I bottled a six pack the first time I used this filler and did not have any foaming problems at all. I was impressed, not to bad for under ten bucks! Till next time, Cheers!

What is Malt Extract?

By Harrison Gibbs

Beer is made by fermenting the sugars extracted from malted barley (mostly maltose). Malt is a general term used as an abbreviation for several things associated with maltose and malted barley. Malt extract is the sugars removed from the malted grain. Essentially, it is the food for the yeast. Using malt extract takes a lot of the work out of brewing.

Malting is the process in which barley is soaked and drained to initiate the germination of the plant from the seed. When the seed germinates, it activates enzymes which start converting its starch reserves and proteins into sugars and amino acids that the growing plant can use. The purpose of malting a grain is to release these enzymes for use by the brewer. Once the seeds start to sprout, the grain is dried in a kiln to stop the enzymes until the brewer is ready to use the grain. The brewer crushes the malted barley and soaks it in hot water to reactivate and accelerate the enzyme activity, converting the barley's starch reserves into sugars in a short period of time.

When making malt extract, the sugar solution is drawn off, pasteurized, and run into vacuum chambers for dehydration. By boiling off the water under a partial vacuum, the wort sugars are not caramelized by the heat of full boiling and a lighter tasting extract is produced. To make a hopped extract, Iso-Alpha Acid extracts of hops are added along with hop oils to give a complete hop character to the final wort extract. These hop extracts are added at the end of the process to prevent loss during dehydration.

Malt extract is sold in both liquid (syrup) and powdered forms. The syrups are approximately 20 percent water, so 4 pounds of Dry Malt Extract (DME) is roughly equal to 5 pounds of Liquid Malt Extract (LME). DME is produced by heating the liquid extract and spraying it from an atomizer in a heated chamber. Strong air currents keep the droplets suspended until they dry and settle to the floor. DME is identical to LME except for the additional dehydration and lack of hopping. DME is not hopped because hop compounds would be lost during the final dehydration. DME also has a longer shelf life.

Part Two of "The Other Cup by Harrison Gibbs" will appear next month!

Flavor Profile: Fusel Alcohol

By Harrison Gibbs

Fusel Alcohol is sometimes referred to as “hotness” or “hot” and can be harsh or solvent-like when encountered at excessive levels. Produced during fermentation, Ethanol is a necessary component in beer, however it can be harsh if the beer contains any longer chain alcohols (fusel alcohols). Typically, it is a sensation of warmth in the mouth, and is considered a flaw if it detracts from the beers overall character and complexity. On the other hand, in the right style such as a Barleywine, it is a good flavor when encountered at a balanced level.

High levels of fusels are created during too high fermentation temperatures. It is best to try to keep fermentation below 80F regardless of beer style or yeast strain. (This is not really true for Saissons, but there are always exceptions to the rules). The flavor can also be caused by underpitching your yeast, and insufficient oxygen dissolved in solution before pitching. To resolve the solvent-like problem, keep fermentation temperatures at a reasonable temperature. Pitch a sufficient amount of yeast (always do a yeast starter with liquid yeast), and be sure to aerate your wort thoroughly before pitching.

News from the Beer World

By Don Welsh and the Usual Sources

100-year-old credits beer, fun and family for her longevity By Marisa Donelan, Sentinel & Enterprise

LEOMINSTER -- Irene Alice Goguen may know a secret potion for longevity. "Drink beer," the lifelong Leominster resident said. "I did, I'm still living." Goguen celebrated her 100th birthday Monday, and joked that she enjoyed a beer now and then while she and her late husband, Jack, owned the Blue Moon, a restaurant in Leominster. But her husband never drank, she said. "It was nice, we had a good business. We sold beer," she said. "We sold beer over the counter for years, and he never drank any of it." Birthday cards, posters and balloons crowded the area around Goguen's bed in the Keystone Center, where she has lived for about five years.

About 30 friends and family members went to the nursing home Sunday for a party in her honor. "There were flowers all over," she said. "We had fun." Irene Belrose, who lived near Goguen in the high rise apartments at 161 Spruce St. about a decade ago, said she wishes Goguen a happy 100th birthday.

"Well, enjoy life," Belrose said. 'If it's the beer, the laughter, whatever. You take one step in front of the other, and it's about not being afraid of your age."

St. George Brewing is Hiring

Ready to take your brewing to another level? Andy Rathmann at St. George's Brewing Company says that they are looking for a brewer’s assistant. If you are interested, please contact Andy at 865-7781. This is a full time position so please only serious enquiries!

From Keith Lemcke, Vice-President, Siebel Institute of Technology

I just wanted to let home brewing club members know that the annual Lallemand scholarship to attend the World Brewing Academy Concise Course in Brewing Technology is again being offered, giving one lucky homebrewer the ability to take this excellent 2 week course at Siebel Institute in Chicago this fall. The Concise Course is not only a great program for those wanting to expand their technical brewing skills, it is also an important course for those considering a career in professional brewing.

You need to be a member of the American Homebrewers Association to be eligible for entry in the draw for this scholarship. You can get full details on the scholarship and registration information on the American Homebrewing Association web site at http://www.beertown.org/homebrewing/scholarship.html . Please pass this information on to homebrewers in your club, and if you have any questions, fell free to contact me at klemcke@siebelinstitute.com . Advanced Homebrewing Course, July 24 - 28, 2006

Style of the Month: American Pale Ale

By Brian Hershey

American Pale Ales are an adaptation of English Pale Ales. However, they are lighter in color, less malty, and more bitter. They also have lots of hop flavor and aroma from late kettle additions or dry hopping. The hop flavor and aroma is from assertively hopping with American hop varieties such as Cascade, Chinook, and Columbus. The American hops give the beer a very citrusy flavor and floral aroma. Sometimes the flavor is described as piney or grassy. The hops are what really distinguishes American Pale Ales from their English counterpart.

American Pale Ales are extremely popular beers. Almost every microbrewery has a pale ale among it's offerings, and an American Pale Ale is usually the first beer that most homebrewers brew. This is because anyone can brew a great tasting pale ale without altering the mineral content of their water. If you happen to have very soft water where you live, you can add some gypsum to the water to increase the calcium and accentuate the hop bitterness. But most of the time that's not necessary.

There are so many excellent craft brewed American pale ales available that I can't list them all. Sierra Nevada Pale Ale is considered the classic example of the style, but St George Golden Ale and New River Pale Ale (Dominion) are also very good local examples of the style.

Because they are so popular and fairly easy to brew, American Pale Ales are usually the category with the greatest number of entries in most homebrew competitions. Pale ales are like chili or barbeque because every homebrewer probably has his or her own favorite recipe for pale ale. But the real beauty of Pale ales is that they can be enjoyed all year long. Whether you're having a backyard barbeque in the summer, or enjoying a meal at a local restaurant in the fall or winter, you can't go wrong by drinking a pale ale.

Cheers!

Nearly Nirvana Pale Ale

Official Recipe of Big Brew 2000
Developed by Chris P. Frey of the Ann Arbor Brewers Guild and Fermental Order of Renaissance Draughtsmen (FORD).

All-Grain Recipe for 5 gallons:

- 6.5 gallons water (2.5 mash, 4 sparge)
- 1 T Gypsum (unless using hard water)
- 9 lb U.S. two row malt
- 1/2 lb U.S. crystal malt 60 L
- 1/2 lb U.S. dextrin malt
- 1 oz Perle hops (bittering)
- 1oz Cascade hops (flavor)
- 1/2 t Irish moss
- 1/2 oz Cascade hops (aroma)
- 1oz Cascade hops (dry hop)
- Wyeast 1056 liquid ale yeast

Instructions:
Mash grains in water at 152° F for 60 minutes. Raise temperature to 168° F by draining mash tun, heating liquid to 180° F. Recirculate. Sparge with 168° F water with gypsum. Bring to wort boil. Add bittering hops. Boil 80 minutes. Add Irish moss and flavor hops. Boil 9 minutes. Add aroma hops. One minute later, turn off kettle. Chill. Transfer to fermenter. Pitch yeast and aerate. Do a two-stage fermentation. Add dry hops to secondary fermenter before racking. Bottle with 3/4 cup corn sugar or keg and force-carbonate when complete. Share with friends when ready.

Extract with Grain Recipe for 5 gallons:

- 5 gallons water (1 1/2 steep and boil, 3 1/2 added)
- 1/2 lb U.S. crystal malt 40 L
- 1/2 lb U.S. crystal malt 20 L
- 1 T Gypsum (unless using hard water)
- 6 3/4 lb Alexanders Pale Malt Extract Syrup
- 1 1/2 oz Perle hops (bittering)
- 1/2 oz Cascade hops (flavor)
- 1/2 t Irish Moss
- 1/2 oz Cascade hops (aroma)
- 1 oz Cascade hops (dry hop)
- Wyeast 1056 liquid ale yeast

I Want to Brew Extract and Still be Considered a Serious Brewer

By Harrison Gibbs

Most home brewers start their brewing adventure using extract and extract-based kits. A few of these brewers jump into the deep end and take up all-grain brewing. Some remain content using extract. And most will quit brewing altogether due to outside pressures. Once a brewer switches to all-gain brewing, it is easy to forget the fun and ease associated with extract brewing. On the flip side, extract brewers are often intimidated by their more experienced peers and forget that all all-grain brewing is really just focused on the creation of the malt "extract," the step they have easily avoided leaving more time to brew, clean up and get on with other pursuits. And all-grain brewers have forgotten what it was like to knock off a quick tasty batch of homebrew that you can be proud of.

However, there are a few ways for extract brewers to brew better beer. Most are techniques that your all-grain brethren have adopted and maybe now take for granted. To highlight these means of improvement, let us look at them during the normal steps of the brewing process.

Fresh Ingredients

Anheuser Busch is correct, always use the freshest ingredients. This is especially true with malt extract. As extract ages, it takes on unpleasant oxidation flavors that contribute a can or "pen ink" taste to your beer. If using liquid malt, buy the bulk extract if it is available at your homebrew shop. Since the stuff doesn't sit around the shop for long, you can be certain that it is fresher than the stuff on the shelves. Domestic cans may also be fresher than the imported extracts. Finally, dry is better than liquid as it will stay fresh indefinitely.

The use of specialty grains is another critical addition when taking an extract-based recipe to the next level. Specialty grains are those crystal and dark grains, which contribute color, flavor and body to any beer. All-grain brewers use them and so should you. If a brewer uses specialty grains, then there is never a reason to buy any color of malt-extract other than pale.

Using specialty grains does not require a lot of fancy expensive equipment. The use of a grain sock works well. As does a wire screen strainer. I often have a quart of 2 of hot water that I rinse the steeping grains with, as I strain them. This ensures that the goodness of the grain comes through.

Good quality hops are also essential. A lot of extract kits come with pre-hopped malt-extract. But the bittering and flavor characteristics are often lost during the can's stay on the shelf. Also forget about using high alpha hops. Use more low alpha hops. Four ounces of Czech Sazz provide rounder and fuller hop bitterness and flavor than the equivalent high alpha hop. This is especially true for aroma and flavor hops.

And forget about any hop aroma. If you do use a kit, make sure that the hops have been stored separately from the dry ingredients. And when you get home remember to toss you hops into the freezer. The cool dry air helps prevent early oxidation, and the darkness keeps down the skunking. I store all of my hops in a closed plastic container in the freezer.

Water makes up over 90 percent of your final product, and your tap water may not be good for your beer. It usually depends on the mineral salts and the levels of chlorine and chloramines municipalities use to keep the water supply safe. These last two compounds can create off flavors when they react to the hops and ester compounds essential to brewing.

I have found that filtered drinking water bought in gallon or larger containers is a good solution. It raises the cost, but the beer is usually better. Another benefit it that if you are not doing a full-wort boil (boiling all of the water with no dilution), then you can chill your diluting water in the freezer and use them to speed the cooling process (see below) while you are toping your batch off.

The most critical ingredient in all beers is the yeast. Extract brewers should take as much care in yeast selection and handling as any all-grain brewer. If you received a packet of dry yeast in your kit, don't throw it out. But don't use it for fermentation either. Dead yeast can provide great nutrition and are a good source of nitrogen. Toss it into your boil and never look back.

If you use dry yeast, select the best one for the style that you intend to brew. There are several new yeasts from Saflor that are clean and pure as liquid yeast. Remember to rehydrate your dry yeast in hot water (110F) before pitching.

Better yet, make the switch to liquid yeast and the use of starters. I have not found a brand of dry yeast that compares with liquid yeast. Costing a bit more, the difference in brews is well worth the extra dollars. Here starters also help. You can never use too much yeast. A strong yeast with a short lag time to full fermentation will outrun any other bugs that risk infecting your beer. If you use dry yeast, use 2 or 3 packs. If you use a liquid yeast, make a starter. This is never truer than when brewing high gravity beers like barley wines or strong Belgian ales.

Brew Day

Sanitation! Sanitation! Sanitation! I don't know if I can emphasis enough how important this step is. Clean, well-sanitized equipment is essential for making a flawless beer. All of the care taken in selecting ingredients and brewing is lost if the beer turns to the bad. If you are using bleach make sure that is well rinsed with very hot clean water. Don't worry about sanitizing equipment that touches the beer before boiling or during the boil. It is once the heat goes off that you need to worry.

Boil it all. All grain brewers usually use a full-boil, starting with 6 to 6.5 gallons for a 5-gallon batch. This takes a bigger pot and a bigger heat source. This is a good time in your brewing career to buy that turkey fryer from Lowes or Home Depot. This allows you to brew these bigger batches and move out of the kitchen onto the patio or driveway, something that the rest of your family should applaud.

Chill baby, chill. The faster your wort cools the better the end product, and that is the goal with making beer. Quick cooling reduces the level of infections and the off flavor dimethyl sulfide (DMS). Now is the time to buy or build your own wort chiller. I have also used ice cubes, a cold water bath, and chilled water dilution to get the wort from boiling to a pitching temperature of 75F.

Once the beer has chilled and you are ready to pitch the yeast, aerate the wort well. Slow fermentation starts are as often due to low oxygen levels then low yeast count. Vigorously aerate the wort by spraying the wort into the fermenter, especially if the streams are fine. Use an aerator attached to a siphon tube to create this effect. While an aquarium pump is effective, the addition of pure oxygen is the most effective method.

Keeping the Books

We learn through our mistakes. But without records, we can't really improve our brewing. Keeping a log is an important habit to develop. This log should include your recipe, techniques and any variables that you do differently. Also records make it easier to have your recipe handy when you enter your beer into competitions. And since you are now brewing better beer than before, you will want to enter your beer into competitions.

Now go out and brew that extract batch. If you are an all-grain brewer, give this technique a shot. And when the beer is done, bring a bottle to the next meeting, I can't wait to try it.

The CASK Calendar of Club Events and Competitions

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

March	American 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

March/April 2006: American Ale (BJCP Category 10) Hosted by Jeffery Swearengin 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 Swearengin 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, Categories24-26*
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..