

# ALPHA HOEDOWN

*The Monthly Newsletter of the Tennessee Valley Homebrewers / Hillbilly Hoppers  
May 2003*

The Tennessee Valley Homebrewers are a club of brewers and beer enthusiasts based in the Knoxville area. Brewers of all experience levels are invited to join us for the discussion and practice of brewing, beer evaluation, and safety. We typically meet each month on the third Saturday at or around 7:30 PM. Details of our next meeting time are in this issue. Contact us at [tvha@kornnet.org](mailto:tvha@kornnet.org) if you are interested! Visit our website at <http://www.knoxhomebrewers.com>

## NEXT MEETING

**We will meet May 3<sup>rd</sup>, National Homebrew Day at Allen Biermaken's and have a brew-out.** Currently Dennis Collins and Tom Karnowski are brewing. We will start brewing around 10.00 and we will have lunch as a club (bring \$2 for pizza). If you don't want to brew stop by sometime that afternoon. **At the Brew-out, we will COLLECT ENTRIES TO SHIP TO THE HOMEBREW COMPETITION IN ALPHARETTA, GEORGIA** which is part of the Mid-South Homebrewer of the Year program. Then our BIG meeting will be the CUMBERLAND KEGGER 2003 at Jay Schrade's farm in Crossville on May 17<sup>th</sup> (see below)



## NEWS

### LAST MEETING

Our last meeting was at Calhoun's on Bearden Hill April 8<sup>th</sup>. We had a raucous good time and sampled some awesome beers, as well as discussed the impending big brew at the Cumberland Kegger and collected entries for the National Homebrew Competition. Our attendance was excellent, with 11 people in attendance: Adam Crawford, Jason Schmidt, Dennis Collins, John Yust, Jonathan Shireman, David Myers, Tom Karnowski, Steve, Jay Schrade, Dirk Pohlman, and Brian Jackson. In addition to the great Calhoun's beers we had, we also passed around an interesting variety of homebrews, including Brian Jackson's French Vanilla Cream Ale, Adam Crawford's award winning molasses porter and Wee Heavy, a home grown, home harvested, home dried homebrew pale ale from Dirk Pohlman, and Brian Jackson / Tom Karnowski's wheat wine. We got a lot accomplished for the big brew and had a great time. We also passed around the conceptual representations of the club pub glasses (see below) and got some kind of pseudo-consensus on what to order (it'll be the "satin etch", see the photo in this issue). Hopefully we'll have a pre-production sample for the Biermakens brew out and possibly we'll have all the glasses ready for the Kegger.

## SECOND ANNUAL CUMBERLAND KEGGER: MAY 17, 2003

A Sanctioned American Homebrewers Associated Competition  
May 17<sup>th</sup>, 2003

Sponsored by

AHA  
All About Beer  
Allen Biermakens  
Briess  
BYO  
Calhoun's Microbrewery  
Crosby & Baker

Downtown Brewery  
Fermentations  
Hop Union  
Leaf and Ale  
Phoenix Imports  
Rocky River Brewing Co.  
White Lab

The Tennessee Valley Homebrewers / Hillbilly Hoppers from Knoxville are again having a keg based competition on May 17<sup>th</sup>: the Second Annual Cumberland Kegger, in Crossville, TN at member Jay Schrade's cattle ranch where camping sites are abundant. We're going to have a *spectacular time*, with

AHA-Sanctioned HOMEBREW Competition

Beer style seminar for non-judges conducted by Tom Karnowski, National BJCP judge (assuming he isn't needed to judge)

People's Choice Award

Potluck Dinner

Bonfire

Big Brewing

We have the following prizes to give away (depending on the number of entries)

1 year membership in AHA, including subscription to Zymurgy

2 subscriptions to All About Beer

50 lbs of base malt and specialty grains

1 subscription to BYO

10 \$5 gift certificates to homebrew shops

10 4-oz bags of hop pellets

2 Hop Union t-shirts

2 Hop Union ballcaps

6 Old Jock t-shirts

12 White Labs coupons for free yeast

BUT...

This isn't just ANY OLD POTLUCK DINNER!!

We will again be roasting a whole hog Hawaiian Style, in the ground, overnight, on hot rocks. We did our first one at the kegger last year, another one in July to perfect the technique, and this year we will be READY!!!!

Plan on a salad, veggie side or dessert. Meat & everything else is taken care of. There will be a keg of homemade Root Beer and cream soda for the designated drivers. Last year the bluegrass band cancelled at the last minute and this year we plan to have entertainment in addition to the bonfire. For any of you who would like to come out Friday night, there will be a supply of potable water at the site for cooking and cleaning up. There is also four acre lake/pond and two smaller farm ponds at the site that are stocked and have excellent fishing for bass, crappie, bluegill and catfish. Well behaved dogs are welcome too.



We are also brewing a 60+ gallon batch of Scotch Ale which we have named "Jock and Jack Cumberland Mountain Ale". It will be "blessed" at the beginning of the boil with a bottle of Old Jock and Jack Daniels.

If you are on the list to get beer (the list is full, sorry!) bring a sanitized carboy, a few \$\$ (we hope to keep it under \$15, which is very very good if you think about it) and take some Scottish Ale home with you.

We will also have a big supply of Scottish style yeast slurry available as well to make it truly authentic!

So mark your calendar, let Tom know you're coming, keg up a couple of your prize winning brews and load up the camping gear and head over to the Mountain for THE SECOND ANNUAL CUMBERLAND KEGGER! (O.K. if you don't camp, you can stay in town - it just won't be as much fun)

#### RULES AND REGULATIONS:

All BJCP style guideline categories are eligible for entry (see [www.bjcp.org](http://www.bjcp.org) for more details.) Entries must be brewed at home, not at Brew-on-premises or from commercial micros / brewpubs / megabrewers. The entry fee is \$6 and a 7-10 lb bag of ice, or \$7. You have to hand-carry your entries or have someone else do it for you. We WILL accept bottled entries but they must be hand-carried and their entry fee is \$7. We require 3 bottles per entry, and we reserve the right to limit the number of bottle entries due to logistical reasons.

#### CONTACTS:

To register, please email Dennis Collins at [dcollins@drain-all.com](mailto:dcollins@drain-all.com) with entry information between May 1<sup>st</sup> and May 7<sup>th</sup>, 2003.

Please contact Tom Karnowski at [karnowsk@esper.com](mailto:karnowsk@esper.com) if you would like to attend, judge, or steward.

For questions about the campsite contact Jay Schrade at [schrades@direcway.com](mailto:schrades@direcway.com)

#### SONG LIST

We have a list of guitar tablatures that we are hoping to jam to (if any of us gets a chance to practice) around the bonfire: they include

Wild Thing

All Along the Watchtower

Cinnamon Girl

Gloria

House of the Rising Sun

Knockin on Heavens Door

King of the Road

...and a few others. Bring your instrument!

#### CLUB PUB GLASSES

We held a discussion at the March meeting and we have decided to order some club pub glasses (see conceptualized picture). We will be using the "satin etch" color, which looks like etched glass. See the

logo below, along with a sample of the satin etch. These can be bought for \$5 each or \$12 for 3; if you want more let us know. We have started the order process and we will have a pre-production glass available very soon, hopefully by May 3<sup>rd</sup>.



#### **BJCP EXAM: AUGUST IN ASHEVILLE**

The following note is from Brian Cole of MALT (Mountain Ale and Lager Tasters) in Asheville NC:

The Mountain Ale and Lager Tasters plans to host the BJCP exam in Asheville on August 2<sup>nd</sup> (according to the BJCP web site). We have enough folks committed to take the exam and intend to hold an exam prep class in June and July. We invite anyone who is interested take the exam (and class) with us in Asheville. Please let me know if you are interested and give me your preference for the exam date. The BJCP recommends collecting a nonrefundable \$10 deposit from those who say they will take the exam, and that is our plan. For those who want more information on the exam, go to the BJCP website [www.bjcp.org](http://www.bjcp.org). Thanks.

The club will pay \$25 of the exam fee (\$50) of anyone who wants to take the exam, although you will need to pay the deposit. We can also hold some study sessions if you want and Tom Karnowski will provide you with a list of questions (and answers) to help you study. SO COME ON, we need more BJCP judges!!

#### **BREWER'S JAM RESCHEDULED FOR OCTOBER 18TH**

The Knoxville Brewer's Jam is rescheduled for October 18<sup>th</sup>. (that is the open date for UT Football in case you care – the weekend before the Alabama game, which is an away game for 2003.) Our club will have a role similar to last year's except will also bus ice and water to the brewer's tables during the event. The event should be at the World's Fair site, either on the festival or performance lawn. We will serve as the event hosts, and our jobs will be to log and store kegs on Friday, host the Brewer's Reception at Preservation Pub in the Market Square Mall, distribute kegs on Saturday along with ice and water, man our club booth, return the kegs after the event, and help clean up by stacking tables and chairs. On Sunday we will be needed for a brief time to return the kegs to the brewers. In exchange for this work we get in free to what is becoming the premier microbrewery festival in the SouthEastern USA, along with some fringe benefits like posters and t-shirts, as well as the good eats and brews on Friday night. This is not to be missed but we need participation. Email Tom Karnowski at [karnowsk@esper.com](mailto:karnowsk@esper.com) with feedback and confirmation of your willingness to participate.

#### **ROCKY RIVER BREWING COMPANY NOW PARTICIPATING IN AHA PUB DISCOUNTS**

Ron Downer, brewmaster of Rocky River Brewery in Sevierville and Tennessee Valley Homebrewers / Hillbilly Hoppers founder, has informed us that Rocky River Brewing Company is now participating in the American Homebrewers Association Pub Discount Program. AHA members who show their card at the restaurant will receive 10% off food. Great!! Rocky River

has also introduced a deliciously bitter German-style pilsner, Twin Peaks Pilsner, to their line-up as well.

### **ROCKIN' ROCKY RIVER BEERS AVAILABLE AT UNION JACKS!!**

In addition, as we've reported before, Ron Downer, brewmaster of Rocky River Brewery in Sevierville and Tennessee Valley Homebrewers / Hillbilly Hoppers founder, has informed us that Union Jacks on Northshore Drive now has SEVEN Rocky River beers on tap!! Stop in sometime, enjoy the English pub atmosphere, and knock back a handcrafted Rocky River beer.

### **SHAKESPEARE AND BEER**

The Tennessee Stage Company, a local theatrical group, has approached us and asked if we would like to participate in an event with them this spring / summer. They put on several productions of Shakespeare plays called "Shakespeare in the Park" and would like to feature homebrew at one of the post-production parties. This is a great opportunity to introduce some folks to homebrew. At the last meeting it looked like we had enough folks interested to brew up a few batches and take them out to sample. We may even make some mead or some Shakespeare-era beer (along with some regular stuff, of course.) If anyone else is interested in serving the beer and / or brewing it, or attending the event, please reply to Tom Karnowski at [karnowsk@esper.com](mailto:karnowsk@esper.com) if you are interested in participating. This is a good opportunity to get some culture as well as highlight the club. The tentative date for this event is August 9<sup>th</sup>. We will have a brew-out in mid-late June to make some batches for this event. We should try to have an ancient-styled ale, a light mead, and an English pale ale type of brew available.

### **BIG BEER COOLER AVAILABLE**

From Ex-President Jackson:

Up for grabs a slightly non-functional 2-door sliding coke cooler. All it needs is for some knowledgeable fellow to replace the compressor and do some rewiring. All you have to do is come to my house and get it. Though you might want to bring some extra help for lifting. Brian C. Jackson Jaxson28@aol.com or 865-368-5225



## MAY BEER OF THE MONTH

The Beer of the Month program is an effort to increase awareness of different beer styles. We've tried to have everyone brew to the schedule but it fails miserably. For about the 100<sup>th</sup> time, the line-up has been changed, but now it will include ALL the BJCP styles that exist (except for mead & cider.) So here is the schedule and this month's brew:

### Beer of the Month Schedule:

January...Hoppy Ales (APA, AAA, Alts, IPA, Cal Common, ABA)	June... Strong Belgians
Febrewary...Light Lagers (Helles, Maibock, Pilsners, Dortmund)	July...Lawnmower Beer (Am light & dark lager, light ales, kolsch)
March...Stout & Porter	August... Wheat
April...Brown Ales	September...Belgian
May...UK Ales (Bitters and Scottish)	October...Dark Lagers
	November...Specialties (Herb, Fruit, etc)
	December...Strong Ales

### 4A. Ordinary Bitter

**Aroma:** Hop aroma can range from moderate to none. Diacetyl and caramel aromas also moderate to none. Should have mild to moderate fruitiness. The best examples have some malt aroma.

**Appearance:** Medium gold to medium copper-brown. May have very little head due to low carbonation.

**Flavor:** Medium to high bitterness. May or may not have hop flavor, diacetyl and fruitiness. Crystal malt flavor very common. Balance varies from even to decidedly bitter, although the bitterness should not completely overpower the malt flavor.

**Mouthfeel:** Light to medium-light body. Carbonation low, although bottled examples can have moderate carbonation.

**Overall Impression:** Low gravity, low alcohol levels and low carbonation make this an easy-drinking beer.

**History:** Originally a draught ale served very fresh under no pressure (gravity or hand pump only) at cellar temperatures. Note that recently some British brewers have been using American hops (e.g., Cascade), but beers made like this fit better into the American pale ale guideline.

**Comments:** The lightest of the bitters.

**Ingredients:** Pale ale malt, crystal malts, English hops, often medium sulfate water are used.

**Vital Statistics:** OG: 1.030-1.038

IBUs: 20-40 FG: 1.008-1.013

SRM: 6-14 ABV: 3-3.8%

**Commercial Examples:** Henley's Brakspear Bitter, Boddington's Pub Draught, Thomas Hardy Country Bitter, Young's Bitter, Fuller's Chiswick Bitter.

### Looking ahead to July: Lawnmower beer

#### American Premium Lager

Very refreshing and thirst quenching. "Light" beers will have a lower gravity and less resulting alcohol than the standard. Premium beers tend to have fewer adjuncts or can be all-malt. This beer will be difficult to brew with extract but you can get reasonably close.

Assume 75% grain extraction rate. These recipes assume you are using pellet hops; increase the hop amounts by about 25% if you are using leaf or plug hops.

Suggested yeast: White Labs WLP840 (American Pilsner) or Wyeast 2035 (American Pilsner) for a Budweiser-like profile; other choices are WLP830 (German Lager) or Wyeast 2007 (Pilsen lager). If you cannot ferment cold, try using a very neutral ale yeast to get an interesting beer although it won't likely be in this style.

Estimated original gravity: 1.045

Estimated IBU: 13

If you cannot get dry malt replace it with about 1.4 X liquid malt (i.e. replace 3 lbs dry malt with 4.25 lbs liquid malt extract)

#### All Grain:

6 lbs American 6-Row malt

2 lbs Rice Extract

1 oz of Saaz hops at 3.5 AAUs ( for 3.5 total HBU)

Mash at 150 F by combining 2 gallons of water at 164 F with the grain. Rest for 60 minutes. Mash-out by heating the mash to 168 F. Then sparge with water at 170 F to collect 5.5 gallons. Add 2 lbs of Rice Extract to the wort. Boil the wort for 10 minutes. Add 1 oz of Saaz. Boil for 60 minutes. Chill to fermentation temperature, aerate and pitch yeast.

#### Partial-mash:

1.25 lbs light or extra-light dry malt (use pilsner-based if available)

4 lbs American 6-Row

2 lbs Rice Extract

1.25 oz of Saaz hops at 3.5 AAUs ( for 4.375 total HBU)

Mash at 150 F by combining 6 quarts of water at 164 F with the grain. Rest for 30 minutes. Mash-out by heating the mash to 168 F. Then sparge with water at 170 F to collect 1.5 gallons. Add more water to make 2.5 gallons. Add the dry malt extract. Add 2 lbs of Rice Extract to the wort. Boil the wort for 10 minutes. Add 1.25 oz of Saaz. Boil for 60 minutes. Add water (ideally, pre-boiled and chilled) to make 5 gallons. Chill to fermentation temperature, aerate and pitch yeast.

#### Extract:

3.5 lbs light or extra-light dry malt (use pilsner-based if available)

2 lbs Rice Extract

1.25 oz of Saaz hops at 3.5 AAUs ( for 4.375 total HBU)

Add more water to have a total of 2.5 gallons of wort. Add the dry malt extract. Add 2 lbs of Rice Extract to the wort. Boil the wort for 10 minutes. Add 1.25 oz of Saaz. Boil for 60 minutes. Add water (ideally, pre-boiled and chilled) to make 5 gallons. Chill to fermentation temperature, aerate and pitch yeast.



### **Gary Chumney's Guide to Sake Brewing** **By Gary Chumney**

#### *Introduction*

In an effort to get more club members involved with the newsletter, I solicited a few ideas targeted at specific club members. And Gary Chumney has risen to the challenge! Gary's homebrewed sake was a big hit at the Brewer's Jam in 2002. It also packed quite a wallop and was an extremely interesting and tasty drink. In my mind it helped show what homebrewing was all about - you can make delicious, sophisticated and interesting brews at home, bound only by your imagination and, perhaps, your research ability. Gary, who has been

homebrewing for 30 years, and was a member of the oldest homebrew club that I know of in East Tennessee (the Yeast Tennessee Brewers), has compiled an awesome guide to brewing sake at home. It is too long to fit in one newsletter so we will publish it in three parts. Part One: History and Ingredients, Part Two: Brewing Sake, and Part Three: Recipes will all be published in this and the next two issues of Alpha Hoedown. Enjoy, and I hope to have some homebrewed sake in the next year from some of our members! Indeed, if you cannot wait to get started, let me know [karnowsk@esper.com](mailto:karnowsk@esper.com) and I'll email you the whole package today.  
Tom Karnowski, Newsletter Editor

## **Part One: History and Ingredients**

Water and rice are the main ingredients in sake. Both were crucial to the survival to Japan's earliest agricultural settlements, as water and rice were staples for the foods and drink of the earliest settlers. Water not only provided the base drink but also provided purifying properties, but also the liquid motion described the smooth flow of life. Rice not only is a staple food item it was connected to fertility. Japanese culture today represents the rice paddy mentality of a smooth running society of shared public diligence, group effort and sometimes-bland conformity. Many Japanese people believe they are drinking the very essence of their earth and spirit when they drink Sake.

Sake is very similar to the Chinese strong rice wine and shares its roots with many other rice based fermented drinks in the other eastern cultures. Sake was brewed in Japan before the first contact with the Chinese. Like many other things Japanese, the Japanese borrow many techniques from other cultures then adapt them with improvements. In fact the Chinese and Japanese share the same Chinese character for sake or pronounced "shu".

### **Earliest Forms of Sake Brewing**

Chewing the rice, millet or chestnuts and then spitting the wad into a wooden tub, where it was allowed to ferment several days, made the first sake. The enzymes in saliva will convert starch into glucose, which in turn is converted into alcohol by airborne yeast and bacteria. This brewing technique was used in one of the rituals performed during Shinto religious ceremonies. Many times it was performed only by young virgins of the community, where they were considered the mediums of the gods. The sake they produced was called *bijinshu*, or beautiful woman sake.

The most significant techniques of brewing Japanese sake seem to have been discovered by accident. One of the local histories relates how a cast of steamed rice had been accidentally uncovered. The owner of the cask of rice discovered to his horror a few days later that the rice was covered with a mold. The negligent man failed to dispose of the spoiled rice. Several days later he discovered the spoiled rice had been transformed into a cast of delicious sake. Similar accidents seemed to have occurred in other places; soon the ancients discovered that it was the mold that was responsible for the transformation of steamed rice into the first sake. The earliest brewers of sake soon learned to save a part of the rice with the mold in order to start a new batch of sake. The molded rice is what now is called *koji*. This mold is *Aspergillum oryzae* and the use of this mold is what makes sake brewing so special.

Sake was still very different than what we know as sake today. There was no knowledge of yeast in the production of the earliest sake and it contained very little alcohol. Since, at that time there was very little water added to the brewing process of sake, sake was little more than rice and *koji* rice, which was fermented. This mash was heaped into a bowl and eaten with a pair of chopsticks. There was also, a broad-mouth pitcher in which the mash was mixed with water and drank through a straw.

The most important aspect of drinking sake during this period was its profound social and religious significance. In early Japanese agricultural communities making and drinking of sake was dependent upon the close cooperation of the community and the kinship that held the community together. The community would offer up sake to the gods in order to quell their violent spirits and tempt them to descend and give benefits to the human beings. At the same time humans could assume god-like qualities by consuming this marvelous beverage.

The power of the gods was needed to be benevolent in order to have a good crop of rice, as well as, the transformation of the rice into sake. While ceremonial drinking of sake was performed in the presence of all the gods, a few of the gods took a special interest in the brewing process and each household had a special shrine for their protector and offered them their own offering of sake in the household. Sake's early connection with the gods makes it the ritual drink of choice at almost all ceremonies and celebrations.

The use of polished rice and additions of water and steps of multiple additions of koji, steamed rice and water were slowly developed. Polishing the rice and the pasteurization of the sake were developed in the 1500's. The many years of observation and experimentation lead to the stable sake that we would recognize today. The earlier brewers did not have water analysis that we have today but again the ancients found the best waters to produce better sake, even if it had to be transported to the brewery. The procedure for brewing sake was also paralleled the production of lager brewing as it was done during the coldest months of the year in order to produce the cleanest tasting sake.

### **Ingredients**

The water used in sake brewing is very low in dissolved minerals with some carbonates, phosphates and potassium. There should be no iron in the water used to produce sake as it deteriorates the sake taste. The use of distilled water is often used with the addition of the appropriate salts to provide the correct mineral content for the water.

The rice used for the production of premium sake is a short grain rice that is grown only for sake production with the proteins and lipids on the outer surface of the rice and it is often polished as much as 50 percent of the original size. Lesser grades of sake can be produced with short-grained rice that has only been polished to 70 percent of the original size. Rice used for eating is polished to about 90 percent of the original size. There are several varieties of rice grown for the production of sake. These varieties of rice are grown for the flavors they produce, as well as, the conditions to the region that they are grown.

The koji mold that is used to produce the koji rice to seed the sugars for the yeast is very similar to the mold that produce miso and soy sauce. The mold spores are mixed into fresh steamed rice that has been polished to a greater extent than the normal polishing of the rice used to produce sake. There are several strains of the koji spores that are used and each brewer may use one or more strains to get the final flavors that the brewer desires. This process usually last from 40 to 48 hours, koji rice will turn white smell some what like cheese and have a sweet taste.

The yeast that is used in the fermentation of sake is ale yeast *Saccharomyces cerevisiae* with several subspecies that produce different flavor profiles. Each is chosen by the brewer to complement the flavor of the rice and the of fermentation process used.



### **Book Review**

#### **Principles of Brewing Science by George Fix**

Reviewed by Tom Karnowski

This was a very interesting book, although it was a bit heavier read than most brewing books that homebrewers peruse. The notes on the back of the cover state:

The science and mystique of what makes truly great beer is explored with logic and order. The long-awaited second edition of the George Fix classic looks at ways in which fundamental science impacts brewing. This comprehensive and highly technical study bridges the gap between professional brewing texts and standard texts on chemistry, biochemistry, and thermodynamics.

The late George Fix was a mathematician by training, with a PhD from Harvard, and a Professor and Chairman of the Department of Mathematics at Clemson University. We heard him give a brief talk at the 1999 Mountain Ale and Lager Tasters competition, and he was quite engaging and seemed very knowledgeable. When this new edition came out, I ordered it very quickly and began reading. It is very interesting, but a warning is probably necessary – it covers a lot of rather detailed topics and is pretty scientific, although it is written very well and doesn't read like a textbook at all.

There are 6 main chapters to the book. The first takes up almost 1/3 of the entire text; it is devoted to malting and mashing. This topic begins by examining the role of water as a solvent and discusses water chemistry with respect to the different minerals found in brewing water. The chapter moves on to the different chemicals in malt (things like carbohydrates, amino acids, and lipids), then finishes with malting and mashing itself. The next chapter is on wort boiling and includes things like hop compounds and their transformations during boiling. Then the topic of fermentation is covered, followed by oxidation, beer stabilization, and then the book concludes with a bit of physics on the role of gases in brewing.

Before I read this book, I felt like it was probably a completely academic process; in other words, I enjoy knowing things for the sake of knowing, and I assumed most of the knowledge in this book wouldn't really help me make better beer. However, after reading it I learned several things I didn't know and I think they will help me in my homebrewing. For example: The water profile of Dortmund is very hard. Yet the Dortmund beers are described as being malty and on the sweet side. This is not what hard water tastes like, generally, so using water treatments to turn your local water into Dortmund water won't really help you duplicate the style. Fix then reveals that Dortmund brewers were pioneers in water treatment techniques! His main advice in this regard is to essentially ignore historical data, and adjust water during subsequent brewing sessions according to taste. I do wish some of his measurements were given in English units, although I understand why scientific people prefer metric units.

In conclusion, this was a very engaging book, and I would encourage everyone who has mashed or has read much about the steps of mashing to at least take a look at it. Fix does an excellent job of writing down to the reader, and never allows the science to overshadow the intended goal – brewing beer. There were no "side-tracks" taken ever in the book, except maybe the brief explanation of the ideal gas law, and thus it was always easy to see how the science pertained to brewing. Much of the material will be interesting to extract brewers as well, although it would have been nice to see some coverage of how malt extract is made and the possible detrimental (or positive) effects the concentration process has on the brewing process.



## **AROMA OF THE MONTH**

### **Autolysis**

Many homebrewers will rack their beer from the primary fermentation vessel to a secondary after about 2 or 3 weeks. They leave behind a massive layer of yeast, trub, and possibly hop particulate. Every time you disturb your beer you are risking oxidation and infection. So, why do they perform this racking stage? The answer: remove the chances of autolysis.

Autolysis is the term used to refer to the final stage of yeast life. In an early edition of Dave Miller's "The Complete Handbook of Home Brewing", autolysis is described as "process in which starving yeast cells feed on each other by excreting enzymes; causes a rubbery stench in beer". Some writers like Al Korzonas have stated that they believe the fear of autolysis is overrated. Anecdotal accounts of lazy homebrewers leaving their beer "on the yeast" for

many, many weeks with none of the effects of autolysis are often heard. And many of us have asked the question, "If autolysis is so bad, why don't my bottle conditioned brews have it?" So, is autolysis common? What is it really like? If I bottle condition my homebrew and I taste it many months later, will it have autolysized notes?

From Miller's description, one may expect to smell something like "Burnt Rubber Porter" or "Bald Tire Ale". But, is this truly an accurate description of autolysized yeast? Discussions on Home Brew Digest (circa early February, 1999) maintain that the aroma can run the gamut of meaty, nutty, toasty, or sulfuric. One contributor ( George DePiro ) has stated that some yeasts are more susceptible to autolysis than others. Another (Stephen Alexander ) stated that some champagnes and sparkling wines have some autolysis notes in their aroma. Finally, have you ever heard of vegemite? It is made from yeast! We'll examine these aspects when we take a whiff of this month's featured stinker, "Autolysized Yeast"! Bring your nostrils and maybe your barf bag!



### BJCP QUESTION OF THE MONTH

**Describe, differentiate and compare the taste and aroma characteristics of the following beer styles. Give commercial examples of each style; a) Koelsch, b) Cream Ale, c) Munich Helles**

By Tom Karnowski

(In answering these kinds of questions you don't exactly have to parrot the exact contents of the BJCP style guidelines, but obviously the more detail you can give the better your score would be. Generally if you can summarize the "overall impression" part of the BJCP guideline, give some good approximation to the "statistics" of the beer, and cite a commercial example, you can get a decent score with few words. Here we will describe each beer in detail along with commercial examples, then we will make some notes about the differences and similarities between them.)

KOELSCH (OG: 1.040-1.048, FG: 1.008-1.013, IBU: 16-30, SRM: 3.5-5.5) is a German ale which is cold conditioned to provide a level of smoothness. Overall the beer is delicately balanced, with a hint of flavor/aroma hops and fruitiness that finishes dry to slightly sweet with a crisp bitterness and a base of smooth Pils malt flavor. The beer has a clean aroma, featuring mainly perhaps a slight hop aroma from German noble hops and a slight fruitiness that comes from both the hops used and some slight fermentation by-products. The beer is very pale to light gold. The flavor features a light hop fruitiness and a delicate dryness to slight sweetness in the finish. The balance is toward bitterness but not strongly so. The beer is light in body with medium carbonation. Commercial examples are not easily found in the USA, but in Germany there Hellers, and Sion. The Rocky River 10 Point Ale is a beer inspired by Kolsch beers.

CREAM ALE (OG: 1.044-1.055, FG: 1.007-1.010, IBU: 10-22, SRM: 2-4) is a light, refreshing beer of American origin. The beer has low to no hop aroma and low maltiness. Some corn character may be present from the use of corn as an adjunct or from low levels of DMS. The beer is very light in color, pale straw to pale gold, and the flavor features low hop bitterness and low maltiness. Some corn sweetness may be present, and low levels of fruitiness are acceptable. The beer has light body and is well carbonated, although it should have a smooth mouthfeel. Corn or rice are often used as adjuncts. Commercial examples are Genesee Cream ale and Little Kings Cream ale.

MUNICH HELLES (OG: 1.044-1.055, FG: 1.012-1.017, IBU: 18-25, SRM: 3-5) is a very clean beer that is balanced on the malty side without being heavy. Malt dominates both aroma and flavor. The beer is slightly sweet with enough hop bitterness to just balance. No fruitiness or esters are tasted. The beer is medium body with a medium carbonation level and no astringency. The beer is overall focused on malt flavor with underlying hop bitterness. Commercial examples include Calhoun's Velas Helles and Spaten Premium Lager.

These beers are all rather light in terms of both color and flavor profile, with the Helles being the heaviest followed by the Koelsch and the Cream Ale. All are cold conditioned, although the Koelsch is top-fermented and the Cream Ale may be. They are all relatively free (compared to British and Belgian ales) of fermentation by-products like esters, with the Helles as a true lager being the most clean, and the Koelsch and Cream ale following in that respect. All the beers have very similar original gravities, although the final gravity is higher in the Helles, and all have fairly modest hop bitterness levels, although the cream ale definitely has the lowest range of the three. Finally, we should note that the Helles is all-malt, the Koelsch is usually all-malt although some breweries add up to 20% wheat malt, and the cream ale comes out as the lightest with many breweries adding corn or rice adjuncts to the grist.

## CALENDAR

April 25-May 4<sup>th</sup>...First round judging of AHA Nationals

May 3rd ... Brew-out at Allen Biermaken's AHA National Homebrew Day; collect entries for Brewmasters of Alpharetta competition. [www.georgiabrewer.com/brewmastersopen](http://www.georgiabrewer.com/brewmastersopen)

May 17th Cumberland Kegger competition and camp-out at Jay Schrade's ranch in Crossville

May 17<sup>th</sup>...Brewmasters of Alpharetta (GA) competition judging

June 14th Sat...Club brew-out at Leaf & Ale; possibly make Shakesbeer brews?

June 19-21<sup>st</sup>...Second round judging of AHA Nationals

June 24th Tues...Weeknight meeting at Downtown Brewery & Grill, assuming they are open on weeknights in the summertime; if not we can go to preservation pub

July 15th (Tues) ... Weeknight meeting at Preservation Pub

Aug 2<sup>nd</sup> (Sat)...BJCP exam in Asheville NC

Aug 9th (Sat)...Shakesbeer festival

Aug 19th?? (Tues)...Weeknight meeting at Calhoun's to gather entries for Asheville - date depends on their competition deadlines (usually in September)

Aug 23<sup>rd</sup>...Rafting trip (?)

Sept 9th (Tues) ... Weeknight meeting at Downtown Brewery & Grill (gather Asheville entries if we don't do that on Aug 19th)

Sept 14 or 20th Saturday... Brew-out, Fermentations or members' house, must not conflict with Asheville competition if possible

Oct 7 (Tues) or 14 ... gather entries for Nashville competition

Oct 17<sup>th</sup>...Brewer's Jam, brewer check-in and reception (afternoon to evening)

Oct 18<sup>th</sup>...Brewer's Jam, Worlds' Fair Park Lawn. 3.00 to 9.00. [www.brewersjam.com](http://www.brewersjam.com)

Oct 19<sup>th</sup>...Brewer's Jam, brewer check-out

Nov 1st Saturday Brew-out for Teach a Friend to Homebrew Day; Fermentations or members' house

November weeknight meeting at Pres. Pub

1st weekend of December - Christmas get-together at brewpub