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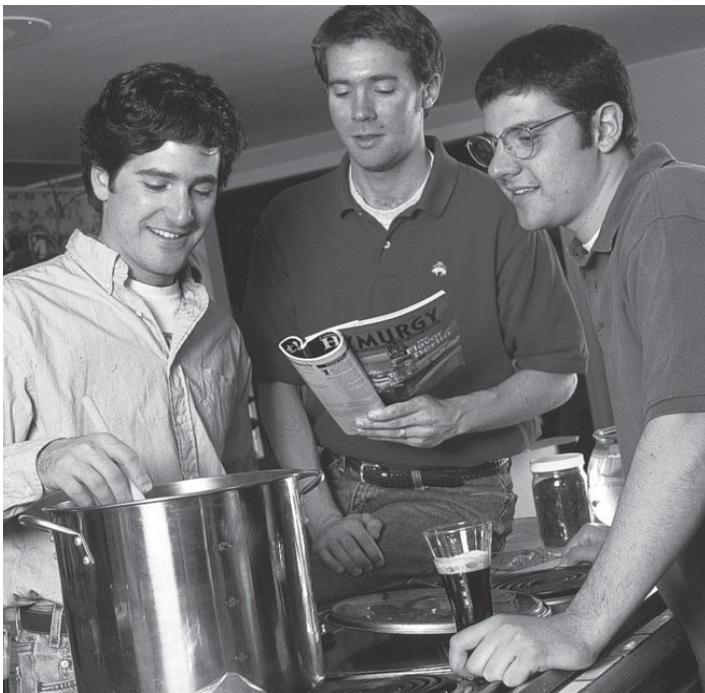
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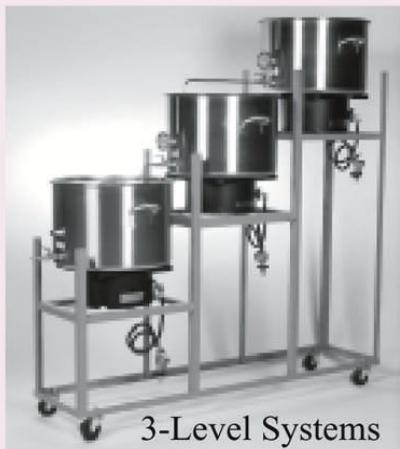
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Zymurgy \zī'mər jē\ n: the art and science of fermentation, as in brewing.

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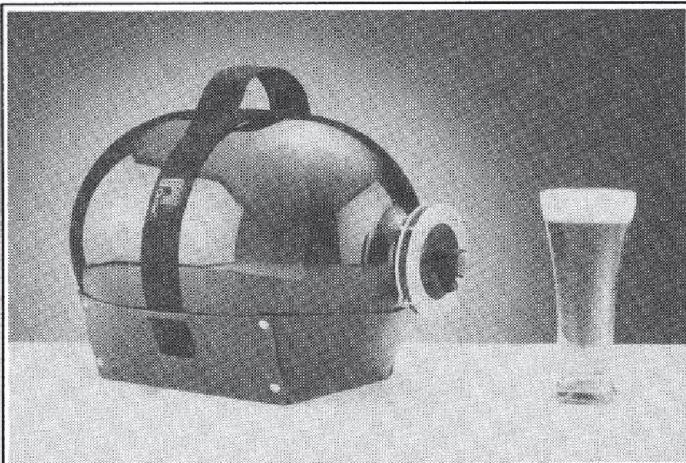
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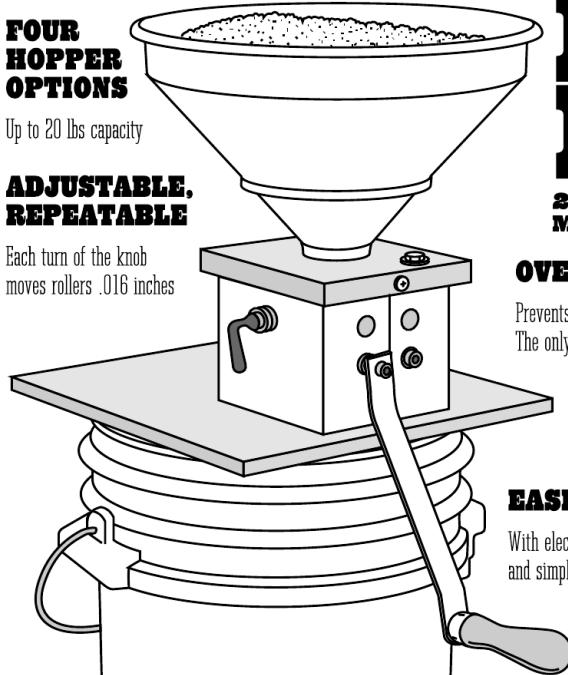
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BY PAUL GATZA

Spring is a time for renewal and rebirth in nature, and the same holds true for the American Homebrewers Association. Each spring we gear up for three big events put on by our members for our members—the competition, conference and National Homebrew Day. I'd like to take this opportunity to have my beer (in this case it's an English-style dark mild) talk a little about each of these events.

National Homebrew Competition

The AHA National Homebrew Competition is now in its 22nd year. Over 33,000 beers have been judged over the 21 years of the NHC. As my beer mentioned last column, we have adopted the BJCP Guide to Beer Styles for use in this and all AHA sanctioned competitions. My, how far the styles have come from the original four categories of the first NHC—Beers and Lagers (light and dark), Ales (light and dark), Stouts and Unusual Brews.

With its history, quantity of entries and quality of competitors, the NHC is the most prestigious homebrew competition in the world. It is also a great example of what my vision for the AHA is all about, members coordinating and running events under the AHA banner. In my last column, the year-end thanks, I neglected to thank the great folks in the Southeast who ran the 1999 first round Florida site, notably Sarah Bridegroom, John Larsen, Errin and Kari Pichard and all of the sorters, stewards and judges who helped out.

The North Florida Brewers League have committed to running the Southeast site again this year. The big map of where to send your entries, what we call the site locator guide is shown on page 13 of this *Zymurgy*. Remember the entry window is April 5th to the 14th. You'll need to enter one bottle for the first round and save three back for the second round. If you missed the entry packet in the January/February *Zymurgy* you can



download the material off of www.beertown.org or email eric@aob.org and he'll send or fax a copy right out.

I look at the the National Homebrew Competition as the Olympics of homebrew competitions. It is the largest, is open to all homebrewers (except staff) and has the greatest number of competitors. The best beer in a category wins. The best of show winner becomes the Homebrewer of the Year. I would also like to have the glass that contains me be raised to Louis Bonham and the St. Louis Brews who are running the Masters Championships of Amateur Brewing (MCAB). The MCAB rewards consistency in brewing. First-place winners of selected categories advance to a judging coming up at the end of March. Most brewers who advance from local competitions rebrew a beer in the same style for the finals. The goal is for a brewer to show they have mastered the style. For information on what club competitions serve as qualifying events for MCAB, visit www.hbd.org/mcab.

AHA National Homebrewers Conference

Those of you who attended the Last Great Homebrew Party of the Century (also known as the 1999 AHA National Homebrewers Conference in Olathe, KS) already know that good times are in store for atten-

dees of MIY2K. MIY2K is the acronym for the organizing group and distribution list for the 2000 AHA National Homebrewers Conference coming to Livonia, MI on June 22 through 24. As we step into the new century or millennium, or end the last one depending on who your accountant is, we will be firing up the time machine to return to some of the pre-Prohibition and Prohibition activities of beer in Michigan. That will serve as our general theme for the conference, and we'll have fun events on the scale of last year's successful club night, party and NHC (and other awards) banquet. The speakers list is coming together. An updated speakers list, hotel and conference pricing options and a registration form can be found online at www.hbd.org/miy2k. In addition, we'll have a registration form in the May/June *Zymurgy*.

National Homebrew Day/ AHA Big Brew

The 2000 AHA Big Brew will be on National Homebrew Day again this year. The official congressional resolution that created National Homebrew Day states the date as May 6th. We have traditionally celebrated it on the first Saturday of May because many employers refused to close their doors to allow homebrewers to celebrate National Homebrew Day when the 6th of May fell during the week. Well this year we are lucky, the 6th of May is on a Saturday, so we can celebrate at the right time. One of the nice things about having National Homebrew Day on the first Saturday of May is that it coincides with the Kentucky Derby. I love to make beer in the morning and take a rare foray into the world of mixed drinks with a mint julip (in my left hand, homebrew in my right) and have a full day of brewing and celebrating with my soon-to-be bride from Kentucky. (continued on page 54)

The first and last word in homebrewing is now a hypertexted, html-encoded, clickable link.

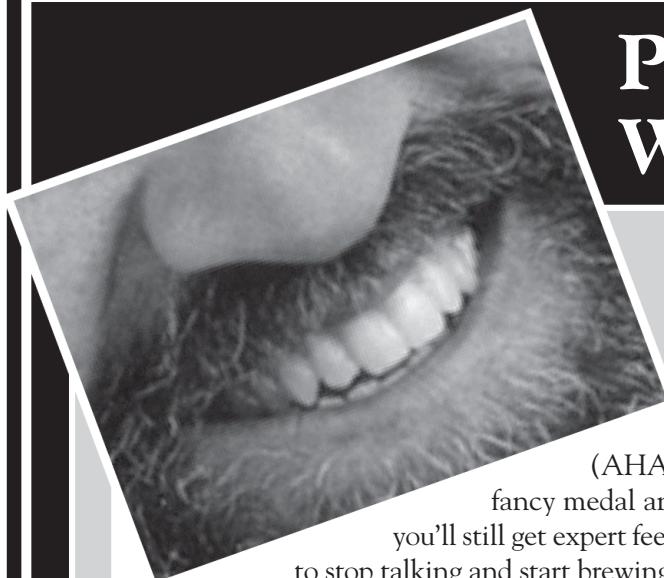
(In other words, *Zymurgy* is now on-line.)



Boost your homebrewing knowledge with a monthly dose of *Zymurgy On-Line*. On the 15th of every month, the AHA will post a new article, written by expert *Zymurgy* contributors, to www.beertown.org. A word of caution: *read slowly*, this stuff is packed with technical homebrewing information.

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More Wine and Mead!

Dear *Zymurgy*,

In response about wine and mead in your magazine, I think *Zymurgy* should put all related products in your magazine. I have been brewing for 3 1/2 years. I also make wine and mead. In fact one of my wines, a zinfandel, received first place at the county fair. I just entered to get some feed back on how I was doing with my wine making. Last year the mead I entered received first place & Best of Show at the county fair.

Maybe you need to separate your magazine into sections. Have a beer section with beer articles, beer ads, recipes, etc. Then a wine section, mead, sake, etc.

After all "zymurgy" means fermentation, right? The money that would be generated by a different advertising market would mean a bigger magazine with more information. The big picture is the more ads +more information=more people going to their local brew store and purchasing more products, which helps keep them in business. So homebrewing will go on forever!

For those people that don't want to read about wine or mead, they can skip those sections, and just read about what interests them.

After all, there probably are many brewers just like me that like to make everything, and I bet there are a lot out there that would like to learn how to make more than just beer!

P.S. I have a nice home made Kahlua recipe if any one's interested.

P.S.S. Join a local beer club, it's the best investment you can make!

Steve Morrisey
Germantown, MD
Member of GABS & FOAM beer clubs

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Hey Steve..I've forwarded your ideas on to Ray Daniels, who will be taking over the Editorship next issue. Lots of homebrewers are trying wine and mead and other even more exotic fermented beverages.

Lambic Corrections

Dear *Zymurgy*,

Thank you for publishing my recipe on lambic fruit beers in the Nov./Dec. issue of *Zymurgy* (Vol. 22, No. 6). I was honored to meet Charles Gottenkieny, 1999 Homebrewer of the Year, and Doug Faynor, brewer of the commemorative, "Geezer's Gueuze" for the 1999 AHA Nationals in Olathe, KS. We had many fruitful discussions on our various methods of lambic brewing and I learned a lot.

One minor quibble regarding the recipe: the final mash temperature step was left out. The step-infusion regimen should be: 122 degrees F (50 degrees C) boil for 1/2 hour, 140 degrees F (60 degrees C) hold for 1/2 hour, and a final step at 154-156 degrees F (68-69 degrees C) for an hour. I might even suggest extending the first infusion to an hour if you're using more than 30% raw wheat in your grist.

I also have extended the aging time for my lambics, letting the raw lambic go for a year on lees, followed by another year on the fruit, and then a third racking for a month or so to clear. Once again, YMMV.

Thanks again and I look forward to AHA Nationals 2000!

Cordially,
Marc Gaspard
Kansas City, MO

*Thanks for the correction. Here's a substitute paragraph for that recipe, which appeared in the Nov./Dec. 1999 issue (Vol. 22, No. 6) of *Zymurgy*:*

Mash in pale malts at 132 degrees F (56 degrees C), allow to drop to 122 degrees F (50 degrees C) and hold for 30 minutes or until torrified wheat is ready. Cook torrified wheat at 160 degrees F (71 degrees C), then raise to a boil for 20 minutes. Add boiling wheat to mash gradually to raise temperature to 140 degrees F (60 degrees C); hold for one-half hour. Add boiling water or heat on stove to raise to 154 to 156 degrees F (68-69 degrees C) and hold for one hour. Perform iodine test to check for starch conversion. Add crystal malt and hold for 30 minutes. Raise to 167 degrees F (75 degrees C) and hold for 10 minutes to mash out. Sparge to collect 6 plus gallons (22.7 L) of wort.

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Geeks, Gluttons and Snobs

When I was a newcomer to homebrewing I noticed some common characteristics amongst my fellow brewers. Sure, they all seemed different enough on the surface: some were lawyers, real estate brokers or advertising executives others tended bar, drove trucks or sold shoes. But as I talked to homebrewers and watched them interact, it became clear that each viewed beer and brewing in a slightly different way. Some seem fascinated with the science of beer and greedy for techno toys. Others focus on the product itself; they found the greatest happiness just in drinking the beer. Finally, we had those who groused and grinded at every faint fault in a beer—the beer purist who sought perfection in every ounce that he drank.

Over the years, these three categories of brewers have come into sharper focus as I have come to know more and more homebrewers. These days, I refer to them with a simple shorthand: the geek, the glutton and the snob. Each has a definite set of behaviors by which they can be identified. Here's my take on each.

The Geek: Homebrew geeks provide few visual clues to their personality. Indeed, many are normal people when not engaged in a conversation about beer. You can't see their socks while they are standing. Most avoid wind breakers and bad haircuts and some don't even wear digital watches. But turn to the topic of beer and they go geeky. We're talking puppy-love-smiles-and-sparkling-eyes-over-stainless-steel-doodads kind of weird here. Real undeniable all-American electro-mechanical hormone rush casualties.

Fascination with all things equipment related is a sure sign of beer geekitude. Most homebrewers suffer from this to a certain degree—all-grain brewers can't avoid it.



Hard-core cases seem more interested in making beer equipment than in making beer. These extreme examples know their hardware and generally display affection for good old scientific stuff. They know the location of the nearest store that sells used laboratory glassware, 304 stainless steel ball valves and digital in-dwelling probe thermometers. Most dream of building a fully-automated computer controlled homebrewery that would crank out beer tailored to their specifications while they lounged in the control room with a cool beer.

Of course geeks do like to make beer—as long as it isn't easy. They love decoction mashes, home grown hops and wild yeast fermentations. Figuring, "Why brew a beer that you can buy?" they scour the pages of ancient texts to find abandoned old recipes and methods that they can laboriously reproduce. The results are usually noteworthy—in one extreme or another.

So I think you get the general idea, but just for reference here's my summary of a geek at a glance:

Favorite brewing ingredient: Tie between quinoa, applewood chips and bog myrtle.
All-time Favorite Beers: Cantillion Gueuze,

Gayle's Prize Old Ale, Celis White

Tasting glass: Glass worn on string around the neck.

Homebrew Motto: Only brew beers that you'll never be able to buy.

Items required when drinking homebrew: Thermometer, hydrometer, color gauge.

Most likely response when offered a beer: How did you make it?

Most likely response to "unique" homebrew: What is the grain bill?

Measures brewing success by: Number of ingredients used.

Ultimate compliment: I've always wanted to try a beer like this!

The Glutton: Plain vanilla gluttony is a sin that most beer enthusiasts—whether homebrewer or not—would have to admit to. For most of us, it takes an iron will or a semi-professional interest in marathon running to keep the pounds from creeping upward over the years. Thus, most homebrewers I know carry a small part of every beer they've ever met firmly attached to either the dorsal or ventral portion of their mid-section.

But true beer gluttons are a breed unto themselves.

For starters, gluttons are very relaxed about beer—the congeniality award winners of the homebrew milieu. In practical terms, beer gluttons will tell you that they have never met a beer they didn't like. At homebrew meetings, parties and other affairs where beer is flowing freely, the glutton is indeed happy. He or she won't decline a beer because of its heritage, hop rate or horrible reputation. And once it hits the glass, it's going down the gullet. Gluttons do not pour out or abandon beer, no matter what minor imperfections or gross infections it might display.

Of course, most gluttons can be easily identified by an extreme example of that



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natural tendency toward bloating mentioned above, i.e. a good sized gut. The proper glutton will have a gut with its own personality, one that seems to wiggle and whomp in a way that almost communicates. Indeed in a beer-rich environment, the glutton's mouth is kept busy with the tasks of acquiring and consuming beer—only the stomach communicates his true thoughts. A great beer will rate two wiggles and a whomp.

When gluttons brew, they go for impact, not image. Large quantities of extract brewed up quick are standard fare for these folks. And just to make sure that they get plenty of bang for the buck, they target those big beers: barley wines, eisbocks and just plain-old, sugar-infused high octane ales. They enjoy their brew in part because they have convinced themselves that they are "saving money" by brewing at home.

Oh, and one last thing: the prototype gluttons all have great nick names, things like "Gas Giant," "HMS Steve," or single-name monikers that can be recognized in beer festival tents nationwide, such as "Ro-o-g-g-er."

Glutton at a Glance

Favorite brewing ingredient: Malt extract; the more, the better.

All-time Favorite Beers: Samichlaus, Sierra Nevada Bigfoot.

Tasting glass: Ein Maas: one liter stein.

Homebrew Motto: I never met a beer I didn't like.

Items required when drinking homebrew: Seconds!

Most likely response when offered a beer: What's the alcohol content?

Most likely response to "unique" homebrew: Got any more?

Measures brewing success by: Number of batches brewed.

Ultimate compliment: Wow! That's strong!

The Snob: True snobs, who think beer a common thing, seldom deign to drink it. Beer snobs are just folks who demand superior beer at all times and then get cranky when it's not available.

Beer snobs are quick to find fault with any beer, whether homebrewed or commercial. Mere molecules of mislaid diacetyl, DMS or disulfide spring to their noses allowing them to identify off-flavors almost before the beer hits the glass.

Such sensitivity is essential for the beer snob. Without it, he or she might wind up with a glass of imperfect—and therefore non-potable-beer. To guard against this, beer snobs prefer tasting rooms that offer ready receptacles for rejected beer. A sink will do, floor drains are dandy and potted plants that dine on beer dregs will serve in a pinch.

The worst snobs are those with well-traveled palates. Blessed with a perfect memory of each beer they have consumed, they'll taste your beer only so they can hold forth on how the "real stuff" tastes over in Europe. "Not bad," they'll allow, "but nothing like the one I had in that little brewery in Düsseldorf . . ." If dirty looks don't quiet such diatribes, you might want to pour something vile in their glass for revenge.

Snobs brew of course, but they hold themselves to the strictest standards. They struggle for complete compliance with the German purity law of Reinheitsgebot. They brew only to style. They accept no off-flavors or aromas in their own beers. Of course, a snob's best brews are reserved for homebrew competitions and chance encounters with Michael Jackson. Only their less-than-perfect beers will be offered up for general consumption.

Snob at a Glance

Favorite brewing ingredient: 2-row Bohemian Pilsener malt.

All-time Favorite Beers: Warsteiner, Bitburger, Pilsener Urquell.

Tasting glass: Juice glass: 4 ounce capacity.
Homebrew Motto: Keep it simple, Sigfried: Never brew a beer with more than four ingredients.

Items required when drinking homebrew: Dump bucket.

Most likely response when offered a beer: What style is it?

Most likely response to "unique" homebrew: Where's the bathroom?

Measures brewing success by: Number of ribbons won.

Ultimate compliment: I could drink some more of that!

Having read all this, you may be relieved to think that your own approach to homebrew doesn't fit neatly into any of these three designations. But here's the catch: pure types are rare. Most of us combine some blend of these traits and it is the unique brewer who presents that perfect balance of all three. Read through the profiles again and I'm sure you'll soon see yourself there as some seemingly rational mixture of homebrew monster: part geek, part glutton, part snob.

Ray Daniels is an internationally known expert on beer and brewing. He has won more than 100 awards as a homebrewer, including several best of show and National Homebrew Competition awards and he has twice won Midwest Brewer of the Year honors. He is a graduate of the Siebel Institute's Diploma Course in Brewing and has written several books on brewing including *Designing Great Beers*, *101 Ideas for Homebrew Fun*, *Brown Ale* and *The Perfect Pint*.

Guinness Draught

Asking a brewer to name his favorite beer is a bit unfair—it depends on the time of day, the weather outside, the company, how many you plan to have at a sitting. You can't just blurt out, "Guinness." But then again, maybe you can. As a session ale in the category of popular beers worldwide, the classic Irish stout is hard to beat.

Okay, so what about cloning your own at home? Well, this proves to be a bigger challenge than one would think, but a satisfactory simulation can be made. The style is deceptive—four factors need to be taken into account to really nail it. First, roasted barley. Not chocolate, not black patent, but roasted barley, and don't be too heavy-handed with it; the beer should be light and crisp without the roundhouse kick of roastiness packed by many heavier American-style stouts.

Second, flaked barley. You are making a light beer, but you want to give it a head that will cover it like a mattress right down to the bottom of the glass, leaving rings down the glass with every gulp. A high proportion of flaked barley is crucial for this.

Third, no late hops. You want a dry beer, and lots of dryness comes from the roast



barley, but the classic Guinness packs a whopping 45 bittering units. One or two very early additions will be truest to style.

The final factor is in the gravity—start low (low 1.040s) and finish low (1.010 is good). Keep the mash temperature right around 150 degrees F (66 degrees C) and use a yeast that attenuates well: the Irish stout strains are fine, but clean American ale yeasts seem to do just as well.

Notice that there is no mention of crystal malt here! Brewers seem to think that not adding a little crystal malt to a beer is some sort of sin, but you must resist the temptation in a dry stout. Stick with the three traditional ingredients in the grain bill, namely pale two-row malt, flaked barley and roasted barley and it will come out just fine, trust me.

Amahl Turczyn is frequent contributor to *Zymurgy*. 



Emerald Isle Stout

Ingredients for 5 U.S. gal (19 L)

6	lb two-row malt (2.72 kg)
2	lb flaked barley (.91 kg)
.75	lb British roasted barley (.34 kg)
2	oz Willamette hops, 5.1% alpha (57 g) (first-wort hopped)
1	oz Fuggle hops, 4.1% alpha (28 g) (60 min.)
	Irish or American ale yeast

- **Mash: 60 min. at 150 degrees F (66 degrees C)**
- **Boil: 90 min.**
- **Original gravity: 1.042**
- **Final gravity: 1.010**

Then there's the presentation. Guinness taps use a nitrogen blend to force a lightly carbonated beer at high pressure through a restriction plate perforated with tiny holes; this allows for an evolution of dissolved gas into very

tiny bubbles, which in turn makes the beer cascade into the classic, tight head. To simulate this with a Cornelius keg and a cobra-head tap, chill your kegged beer down to 45 to 50 degrees F (7 to 10 degrees C), then carbonate it very lightly (about half the amount of carbonation you would normally put in your English ales, or a little over one volume).

Crank the head pressure up to 12 to 15 psi. Tilt a clean glass about 25 degrees then, with the other hand, just slightly depress the cobra-head tap. You'll hear the beer foam a bit as it comes out in a steady but narrow stream. It should take you a minute or two to fill the glass, as is appropriate. You should get a rolling, tightly beaded cascade which will then separate into a classic black-and-cream Irish stout.



AHA Administrator Gary Glass

The AHA welcomes Gary Glass to our full-time staff as AHA Administrator. Gary lives in Lafayette, CO, and has been homebrewing for several years there and in San Luis Obispo, CA. As a teaching assistant and research assistant at the University of Colorado during his masters candidacy, Gary gained valuable database and other computer experience and project experience.

Gary will be the lead staffperson for the Sanctioned Competition Program, Big Brew, Teach a Friend to Homebrew Day and the Clubs Program. Gary and I will coordinate the National Homebrew Competition together. Gary's email is gary@aob.org and he can be reached by phone at (303) 447-0816 X 121. Drop him a line to let him know what's going on in your neck of the bottle.

New England Homebrewer of the Year Competition

Every year five New England homebrew clubs join to sponsor competitions to select the following:

New England Homebrewer of the Year

New England Club of the Year

New England Cider Maker of the Year

New England Mead Maker of the Year

The selection of winners is based upon the results of the following competitions: the Southern New England Regional Homebrew Competition (Connecticut), the Boston Homebrew Competition (Boston), the Green Mountain Homebrew Competition (Vermont), the Northern New England Regional Homebrew Competition (Maine), and the New England Fall Regional Homemade Beer Competition (Western Massachusetts).

All brewers and clubs in New England are eligible to compete for these awards. Brewers and clubs from other areas are encouraged to enter these competitions, and their accom-

plishments are recorded and announced in the report of results. Competition entry forms and bottle labels are available at www.mail.symuli.com/NEHBOTY/.

Club-Only Competition News

Lambic Club-Only Competition Entry Information

Kevin Johnson and the HeadHunters brewing club will be hosting the Belgian Lambic AHA Club-Only Competition. Kevin has expressed an interest to involve judges from the Urban Knaves of Grain and the Chicago Beer Society, so contact him at krjohnson3@lucent.com if you are in the Chicago area and want to participate. The entry deadline is March 27. Ship two bottles of the best entry in your club from Category 20 of the style guidelines with a \$5 check made out to AHA to: Belgian Lambic COC, Lil' Olde Winemaking Shoppe, 4S. 425 Wiltshire Lane, Sugar Grove, IL 60554.

Winter Warmer Quest

The AHA would like to thank Keith Curtachio, Ed D'Anna, Bill Koch, Tim Collins and the Niagara Association of Homebrewers for hosting the Quest for the Ultimate Winter Warmer AHA Club-Only Competition in December.

This competition was the third one in the August to May cycle with points going toward the Homebrew Club of the Year trophy on a six points for first, three for second and one for third basis. Other points for clubs are scored in the first and second round of the AHA National Homebrew Competition. Thanks to everyone who entered. There were 26 entries, comprised of 11 Strong Scotch Ales and 15 Old Ales: *Congratulations to the following winners:*

First Place

Dave Dixon, Fort Worth, TX representing the NET Hoppers with his Old Ale called

"Dave's Dreaded Wee Heavy." Dave also won the 1999 NHC California Common Beer category gold medal.

Second Place

Chris Kaufman, Derby, KS, representing Derby Brew Club with his Strong Scotch Ale called "140 Shilling." The Derby Brew Club was the 1997 AHA Homebrew Club of the Year.

Third Place

Guy Johnson, Jefferson, OR, representing Capitol Brewers with his Old Ale called "Old Millennium." The Capitol Brewers were the 1998 AHA Homebrew Club of the Year.

AHA Homebrew Club of the Year Standings

Points - Club

- 6 - Brew Angels
- 6 - Kansas City Bier Meisters
- 6 - NET Hoppers
- 4 - Capitol Brewers
- 3 - Brewers United for Real Potables (BURP)
- 3 - Derby Brew Club
- 1 - Ann Arbor Brewers Guild
- 1 - Cincinnati Malt Infusers

Style Guidelines

Just a reminder, The AHA has adopted the BJCP Style Guidelines for AHA club-only competitions for 2000. For full descriptions and specifications, please visit www.beertown.org or www.bjcp.org. Here is the numbering for the remaining 2000 AHA club-only competition:

Mid May: "Weiss is Nice" Category 17 Wheat Beer (all four subcategories).

End of August: Best of Big Brew (pale ale)

Mid-October: "Best of Fest" Category 9 German Amber Lager.

Early December: Historical Beers from Category 24.

AHA head Paul Gatza is the softball coach for Hop Barley and the Alers.

AHA National Homebrew Competition 2000

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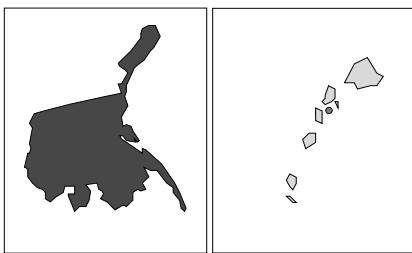
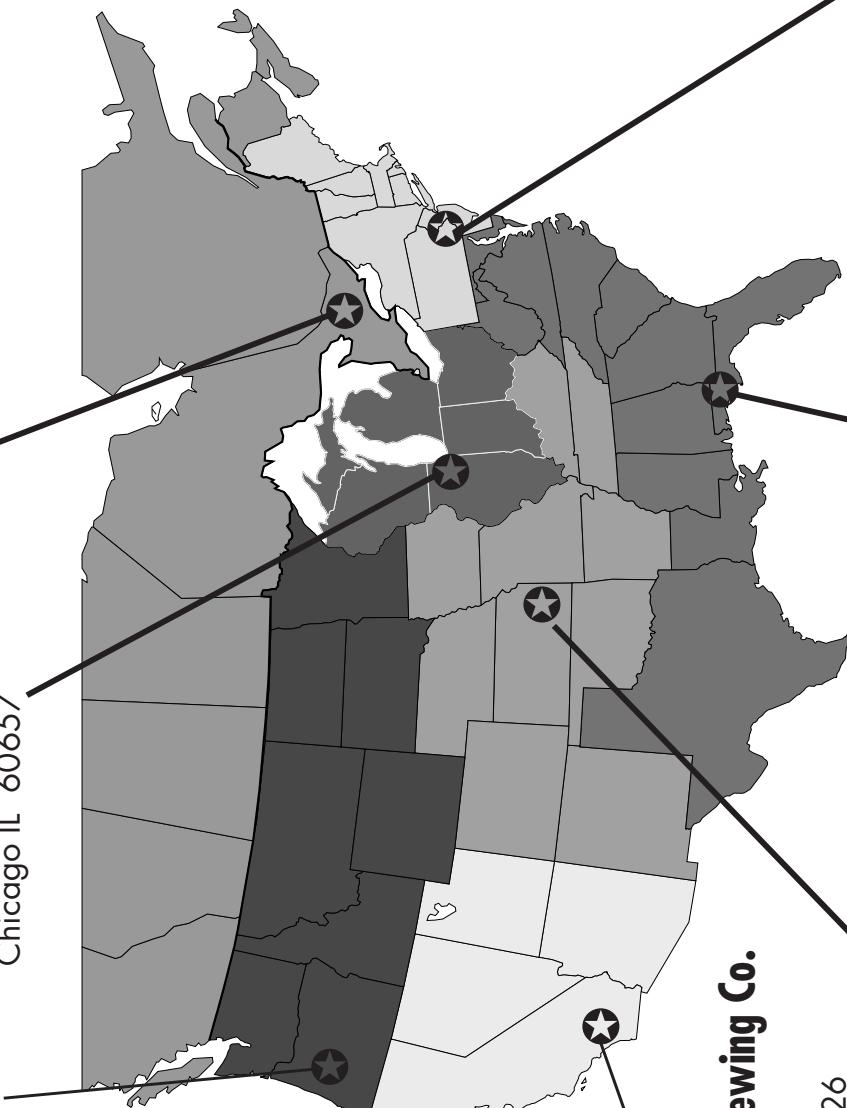
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The Ultimate Pyramid Scheme

Lemon beer?

Strawberry beer?

Apple beer?

No, not "yeech." Instead, think Egyptian.

According to the *New York Times*, an American-trained entrepreneur is redefining the beer industry in the shadow of the pyramids, and he's doing with (of all things) fruit-flavored nonalcoholic beer.

"It tastes like beer," Director of Marketing for Al Ahram Beverages Company Fatenn Mostafa told the *Times*, "and it's a little naughty."

When the Egyptian government put the national beer company up for sale a few years ago, nobody was buying.

Though the brewery had no competition and had been steadily turning a profit, it was a management nightmare. Workers lounged around reading newspapers or napping while grimy, ancient machines gushed foaming beer into dirty green bottles, often along with insects, twigs and clumps of dirt. The taste of the flagship Stella beer varied from one batch to another, and sales were falling. If all that were not enough headaches, beer drinking for many people in Egypt, a predominantly Muslim country, is considered a sin.

Enter Ahmed Zayat, an Egyptian entrepreneur with degrees from Harvard and Boston University and a Wall Street background. Nearly three years after taking control of Al Ahram Beverages Company, the former bad beer stronghold has become one of the best-performing companies in Egypt. Next year, in fact, the Egyptian brewery will

start producing Guinness, long a stickler for the strictest quality control.

The real profit, though, may be in a line of non-alcoholic beers, with non-beery fruit flavors like apple, lemon and strawberry. Not only are the non-alcoholic fruit brews a hit in Egypt, but they're taking off in other Muslim countries like Saudi Arabia.

The company has also pioneered home delivery, figuring that many conservative Egyptians might be embarrassed to buy their beer over the counter.

"We will never succeed in getting every Egyptian to drink beer," the company's marketing director said. "It will always be a Muslim country. But non-alcoholic beer has all the elements to succeed. It's very healthy. It doesn't have caffeine."

"It looks like beer. It tastes like beer. But it's religiously accepted."

Selling Refrigerators to Polar Bears

According to the Rueters News Service, smuggling beer into Britain across the English Channel is becoming one of the fastest growing, retailing sectors this year, even if underground, with business up nearly 12%.

The survey by the Brewers and Licensed Retailers Association (BLRA) estimated that more than 100,000 heavily-laden vans will have carried largely illegal beer across the Channel from Calais in northern France during 1999.

This is a 11.9 percent rise from the 91,000 vans observed in 1998, and almost twice the number seen some six years ago on the formation of the single market for Europe.

It's not that Britain is suffering a shortage of domestic brews. Rather, beer in France is taxed at a rate of one-eighth the

onerous British tithe. The survey said beer drinkers in France pay around four pence a pint in excise duty compared to 32p a pint in the U.K. At least 1.5 million pints of beer come across the Channel every day, and U.K. Customs and Excise estimate that over 75 percent of this beer is smuggled.

"The beer-runners are well-organized and are cheating the country of millions of pounds of taxes," said a BLRA spokesman. The southeast of England is the most likely destination for the smugglers with more than 12,600 vans a year, but no part of the U.K. is exempt from the beer-runners, with vans operating from Scotland, Wales and Northern Ireland. (© 1999 Reuters Limited)

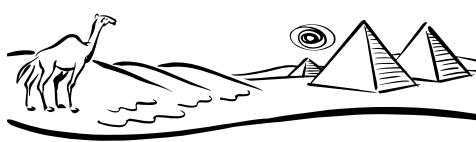
Czech Brewers In the Squeeze

You'd think that beer-obsessed Eastern Europe would be a great place to be a brewer. But think again. According to the *New York Times*, globalization is squeezing out the smaller breweries in the Czech republic, home of the heartiest beer drinkers in the world.

Battles for company ownership, waged since the early 90s, have left most of the market in foreign hands. The reputation and tradition of Czech lager, considered some of the best beer in the world, attracted global investors who bought strong brands and introduced economies of scale.

Since 1995, aggressive marketing, exclusive contracts with restaurants and extremely competitive pricing by foreign-owned breweries has driven many smaller Czech breweries out of business.

Breweries that remain cope with low profit margins. Czechs on average consume 160 liters of beer annually, or 42 gallons, more than any



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other people, but pay only a fraction of the price common in the West.

A pint of beer in a pub costs the equivalent of 40 to 50 cents. And the locals, whose wages are only a fraction of those in the West, are used to having it that way. Like vodka in Russia, beer was cheap in Communist Czechoslovakia—a way for the regime to divert people's attention from the grimness of everyday life.

But there have been some recent signs that the domestic price war will end. In October, the Japanese investment bank Nomura said it would sell its majority stake in Pilsner Urquell and in Radegast, a popular regional brand, to South African Breweries. The \$629 million transaction will make South African Breweries the third-largest beer producer by volume in the world, outstripped only by Anheuser-Busch and Heineken N.V., both of whom also courted the two Czech breweries.

Pilsner Urquell's chief executive, Vladimir Perina, said his beer would do well in the U.S. "Our target group on the American market," he said, "is people who understand beer, who like premium brands and are willing to pay superior price for superior quality."

The battle for Czech beer is not over. Attention has been focused on Jihoceske Pivovary (South Bohemian Breweries), which used to be a part of Budvar and still claims the right to use the historical trademark "Budweiser" in Germany.

Budvar itself has been involved in a century-long legal battle with Anheuser-Busch over the use of the name Budweiser in Europe. The Americans have been using the trademark since 1876, when the company's founder, Adolphus Busch, decided to name his beer after the Czech city of Budweis, today called Ceske Budejovice.

Twenty years later, the newly founded Budvar brewery started using the Budweiser trademark, as well. Today, Anheuser-Busch cannot use the Budweiser name in most of Europe, where Budvar's Budweiser beer is a popular brand.



Boiling Question

Dear Professor Surfeit,

I have been brewing for about a year now and joined the AHA four months ago. I have been brewing enthusiastically ever since my girlfriend gave me my first kit for Christmas (with mixed results). Every time is a learning experience and every time I do it a little better.

Two questions: The first has been perplexed me since the beginning. When my wort is boiling, should it be a low, rolling boil, or a fast, vigorous one? (Does it make a difference and if so what?) Second, I just racked an IPA from my secondary to a third carboy. I had dry hopped it and left it in the secondary for the better part of three weeks. I have another wort on the stove right now and intend to put it into my secondary from before, using the sludge at the bottom. My question is if it OK that said sludge still has a lot of the spent hops in it? I'm just going to give it a go (with no worries)! But I'm still curious.

It sure smells good in here!

Manuel Zitzmann

Danbury, CT

Manuel my dear man,

Can't think of a nicer Christmas present! The gift that keeps on giving and giving. To boil the boil or roll the boil, that is the question. Truth be known it is always good to revisit the basics. Bring the wort to a boil and watch over the pot for the first five to 10 minutes. Why, because you do want a good rolling boil but not so much that during the first few minutes you have a boil over because you rolled the boil too fast. Once what is called the hot break occurs the foam will break down and you can crank the heat up to get a good rolling boil. Careful—keep the lid off or you'll have a messy boilover. And

if you use an electric stove, place a trivet or fashion some wire to place between the pot and coil so you don't scorch the wort.

Now about that secondary sediment with hops. Theory is that you wouldn't want to subject the hops to more stress and breakdown in another fermenting wort. Also the chances of you having contaminated this "culture" sediment with microorganisms from the addition of dry hops is great. I wouldn't advise reusing this yeast. But you did the right thing and not worry and did it anyway. I'm sure your brew turned out well, but you took a chance not worth taking. Secondarily sedimented yeast is good for starting up another batch so long as you've been sanitary and kept the yeast uncontaminated. The best way to do this is using closed fermentation throughout. Next time

add your dry hops to the third-fermenter and spare the secondary fermentation yeast sediment spent hops. In the long run you'll have cleaner brews.

Good brew to you,
The Professor, Hb.D.

Halogens in the Belfry

Dear Professor Surfeit,

As I reread old *Zymurgy* issues (on the thinking throne) I came upon a letter that addresses iodine stains or bromine stains and or chlorine smells in plastic fermenters. Should we toss or not?? Tut tut mon professore'. A quite safe chemical names sodium thiosulfate (or hyposulite I believe) can remedy all problems. This chemical neutralizes by binding all halogens of a disinfecting variety, about a 5% solution. I suggest contacting a home brewing pharmacist actually for supplies. This ingredient has been sold for years to remove chlorine (binding it) from fresh water aquariums.

J. Rawson
Boring, OR

Dear J.

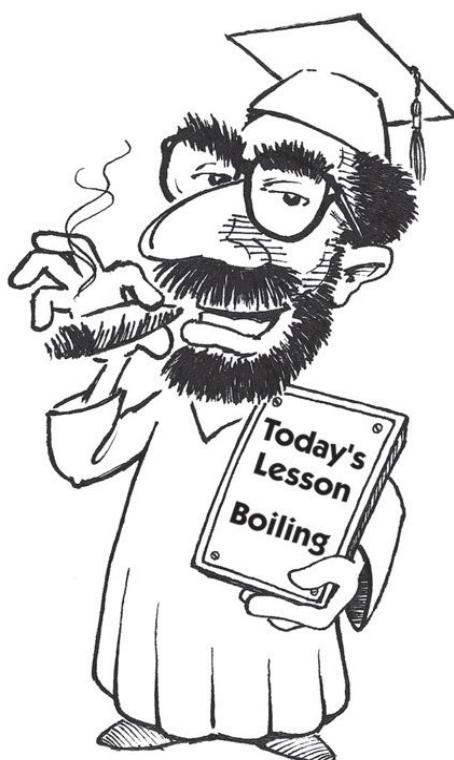
Well I'll be dethroned. A tip of the seat to you. Thanks for the bit of advice. I don't know the details about sodium thiosulfate, but let's advise the complete rinse with warm water after using, eby.

Tut tut to you too,
The Professor, Hb.D.

Breathing in that Oxygen

Dear Professor Surfeit,

I like the idea of using oxygen absorbing bottle caps, however, I would like to understand how they work. What activates the



oxygen absorbing properties? If there is not activation method, what keeps the cap from absorbing all the oxygen they can hold while sitting on the shelf? I was told once that contact with the liquid activates the cap. If this is true, how would you sanitize the cap without starting the oxygen absorbing capabilities before it gets on the beer bottle? One guy told me not sanitize; just cap, then tip the bottle upside down to activate. He said breweries use the caps right out of the box without sanitizing. But breweries usually also pasteurize. Would this be

a safe procedure for a homebrew or mead, which will sit for many months or a few years? I've have many theories on this, but no one seems to have the facts to back them up.

Waiting to activate,
Gregg Ferlin
New Lenox, IL

Dear Gregg,

You asked me this question back in March of 1997. I've been trying for years to get information from the manufacturer and

other sources, but to no avail. I've never encountered such secretiveness. Finally I was able to get some indication of what is up with the oxygen absorbing bottle caps from Joe Powers, an instructor at the Siebel Institute in Chicago. He addressed my question (actually your question) in the Institute for Brewing Studies members only email forum. I'll paraphrase his two responses:

It looks as if there used to be two patents held that imitated hemoglobin compounds (these synthetic compounds were metals complexed with organic compounds and scavenged oxygen as hemoglobin in blood does). These patents appear to have been dropped. Two patents on "flavor protectant closure liner compositions" have been issued to Zapata with some of the same inventors who gave a paper that appeared in the Master Brewers Association of the Americas Quarterly on page 122, Number 4, 1990. The two newer patents, US 5863964 and US 5663223 include two antioxidants, an inorganic sulfite such as sodium sulfite and/or a tocopherol compound such as vitamin E. I guess their crowns use both compounds since they took the trouble to patent both.

So Gregg, that's as close as we can get for the time being. You're right about the caps needing moisture to be activated. I simply pour high proof spirits over them, drain and immediately cap. This certainly sanitizes as well as activates, though the activation will naturally occur once the bottle is sealed and the natural humidity inside the bottle will activate the process. I've been told that as long as they are kept dry storage is not a concern.

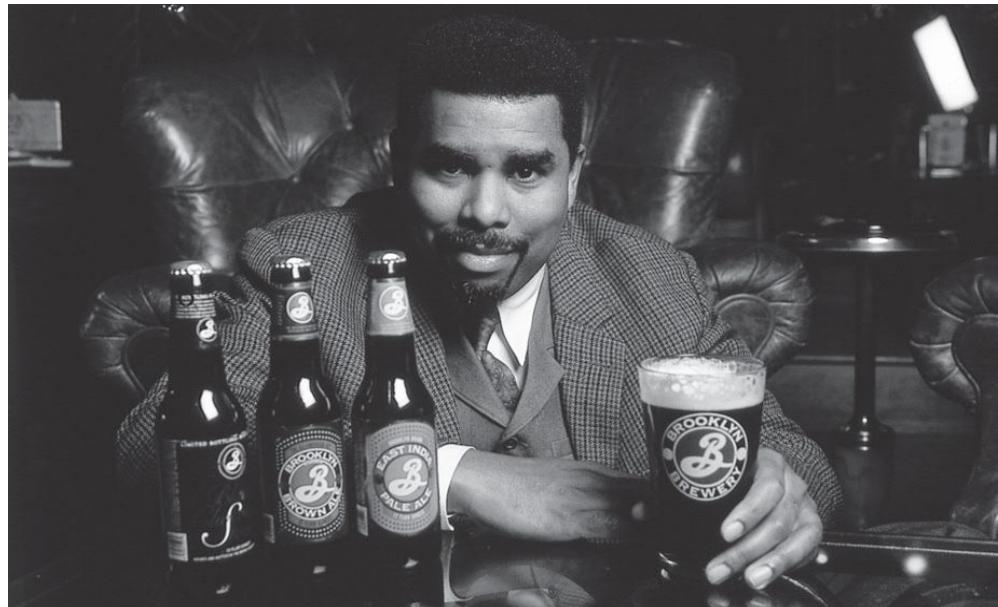
It should be pointed out that oxygen absorbing caps is no remedy for good packaging practices. If you aerate your beer during transfer, the caps won't really absorb all the oxygen you've introduced. Be quiet and don't aerate during siphoning and transfers of finished beer.

Keep in mind that there is always a small amount of what's called "air ingress." That is the slow creeping of air through any resilient barrier into the bottle of beer. No matter how well sealed a bottle cap is air will creep into the bottle. The cap is principally designed to scavenge for these trace amounts of oxygen that can dramatically effect light lager. (continued on page 55)

Garrett Oliver's Top Five

Garrett Oliver of the Brooklyn Brewery in Brooklyn, NY, couldn't choose one. "That's too difficult a question," he laughed. But after pressing him to try for a top five, just off the top of his head, he grudgingly conceded. His own "Black Chocolate Stout" an example of the Imperial style, came first. At 8.7% by volume, Oliver nonetheless says it shows remarkable dryness compared to stouts of similar strength. It also has a surprisingly refined structure of roasty flavors, and along with the dry finish comes a somewhat paradoxical warmth. A beer definitely worthy of its regal status.

Next on Oliver's Top Five was Saison Dupont, with its huge complexity and brightness of character. Aromas of this classic Bel-



Garrett Oliver of the Brooklyn Brewery in Brooklyn, NY

A guess at Schneider Weisse:

Ingredients for 5 U.S. gal (19 L)

- 6.5 lb wheat malt (2.95 kg)
- 2 lb Pilsener malt (.91 kg)
- 1.5 lb Vienna malt (.68 kg)
- .5 lb CaraMunich malt (.23 kg)
- .5 oz Hallertauer Hersbrucker hops, 4% alpha acid (14 g) first-wort hopped
- Bavarian wheat beer yeast or cultured Schneider yeast
- .75 cup dextrose (177 mL) to prime
- Original specific gravity: 1.054
- Final specific gravity: 1.012
- Boiling time: 90 min.

Brewer's Specifics

Use a double decoction mash schedule, or a step infusion with the following schedule: 122 degrees F (50 degrees C) for 20 minutes; 149 degrees F (65 degrees C) for 60 minutes; 170 degrees F (77 degrees C) for 10 minutes.

gian ale may include grass, lemon, pear, oak and sage, all with a voluminous head, tart, spritzy palate and abruptly dry finish. Oliver remarked it was not one of those beers you could easily brew yourself, and it is that mystery that makes the beer so fascinating.

Then came Schneider Weisse, unique among the many Bavarian hefeweizen wheat beers, says Oliver, because of its balance. Most examples have varying levels of the style's typical esters and phenolics, namely banana, clove, smoke and what is typically referred to as bubble gum, but Schneider seems to accomplish a perfect balance of all four. Its bready, rich malt aromas also are a trademark of this beer, no doubt a result of the double decoction mash employed. Pale, amber and Vienna malts are used in the grist with a wheat-to-barley ratio of 60:40. The tan-orange color of Schneider also sets it apart from its peers as one of the darkest hefeweisse beers on the market. Schneider is also one of the few breweries that uses its primary yeast strain to bottle-condition the beer, along with

unfermented wort or speise (pronounced shpay-zuh). So some enterprising homebrewer who wishes to try to duplicate this classic may be able to come very close!

Fuller's London Pride also qualified, but Oliver clarified that it must be served on cask. While this beer can vary from pub to pub, and as most real ales do, from day to day, a fresh example on a good day is hard to beat. This English bitter, weighing in at just 4.1% by volume, is perhaps the lifeblood of the centuries-old brewery, and after all these years when it's good, it's good.

Finally, Westmalle Tripel was the fifth beer Garrett Oliver considered a favorite. The floral combination of orange, coriander and herbal malt, along with the foamy egg white head and pale-golden color seduce the drinker into thinking the beer can't possibly be 9% by volume. That this beer is often considered the best tripel in Belgium should come as no surprise.

Amahl Turczyn is a 1998 GABF Gold Medal-winning professional brewer and a frequent contributor to Zymurgy.

CALENDAR

AMERICAN HOMEBREWERS ASSOCIATION

MARCH

4 11th Annual Reggale and Dredhop Competition, **AHA SCP**, Boulder, CO. Entries due 2/25/00 with \$5 entry fee. Contact Bob Kauffman at (303) 828-1237 (h), email: acme-brew@juno.com, http://www.members.xoom.com/hbabeweb.

4 Drunk Monk Challenge, **AHA SCP**, Warrenton, IL. Entries due 2/19/00 through 2/26/00 with \$5 entry fee. Contact Steve McKenna at (630) 305-0554 (h) or (630) 961-7846 (w), email: stmckenna@compuserve.com, http://www.synsysinc.com/srcoombs/ukgdmc/ukgdmc2k.htm.

4 Seventh Annual America's Finest City Homebrew Competition, **AHA SCP**, San Diego, CA. \$6 entry fee. Contact Peter Zien at email: pz.jdzinc@worldnet.att.net, http://softbrew.com/AFCHBC/.

11-25 Bluebonnet Brew-Off, **AHA SCP**, Irving, TX. Entries due 2/11/00 through 3/3/00 with \$6 entry fee for AHA members, \$7 entry fee for non-members, \$10 late entries. Contact Rett Blankenship at (972) 353-3116 (h) or (214) 670-6295 (w), email: Firebrew20@aol.com, http://www.welcome.to/bluebonnet.

12 Heartland Homebrew Competition, **AHA SCP**, Des Moines, IA. Entries due 2/1/00 through 3/11/00 with \$5 fee for first entry and \$3 for additional entries. Contact Bill Van Zante at (515) 270-6785 or (515) 252-0979, email: vanzantewm@phibred.com.

12 Third Annual Eastern Connecticut Homebrew Competition, **AHA SCP**, Willimantic, CT. Entries due 2/27/00 through 3/8/00 with \$6 entry fee. Contact Paul T. Zocco at (860) 742-7879 or (860) 666-6951, email: ptzocco@snet.net, http://www.geocities.com/southbeach/coast/1609.

16-18 5th Annual Kona Brewers Fest, **AHA SCP**, Kailua-Kona, Hawaii. Entries due 3/6/00 through 3/10/00 with \$5 entry fee. Contact Rod Romanak at (808) 325-7449, email: rocketuds@prodigy.net.

18 Shamrock 2000, **AHA SCP**, Raleigh, NC. Entries due 3/15/00 with \$6 for the first entry and \$5 for additional entries. Contact Larry Matthews at (919) 362-9407, email: 1matt@ipass.net, http://www.hbd.org/carboy.

18-19 St. Patrick's Cascadia Cup Homebrew Competition, Woodinville, WA. Entries due 3/10/00 with \$6 entry fee. Contact Marc Milrod at (206) 632-5832, email: MMILROD@nwhsea.org, http://www.cascadebrewersguild.org.

19 Ninth Annual NYC Spring Regional Homebrew Competition, **AHA SCP**, Staten Island, NY. Entries due 3/16/00 with \$5 entry fee. Contact Ken Johnsen at (718) 667-4459, email: kbjohns@peakaccess.net, http://pbsbeer.com/hosi/hosimain.html.

24 1st Annual Bitter Root Valley Homebrew Competition, **AHA SCP**, Hamilton, MT. Entries due 3/17/00 through 3/23/00 with \$4 entry fee. Contact Tony Wickham at (406) 363-0457 or (406) 363-7468.

25 TRASH X, **AHA SCP**, Pittsburgh, PA. Entries due 2/1/00 through 3/11/00 with \$6 entry fee. Contact Ralph Colaizzi at (412) 331-8087, email: rcw@pair.com, http://www.trashhomebrewers.org.

31-April 1 5th Annual Hurricane Blowoff, **AHA SCP**, West Palm Beach, FL. Entries due 3/13/00 through 3/25/00 with \$6 entry fee. Contact Dan Oliver at (561) 533-5317 or (561) 686-4019, email: olds442@gate.net, http://www.fortunecity.com/littleitaly/giotto/175.

APRIL

1 The Bay Area Mashers World Cup of Beer, **AHA SCP**, Berkeley, CA. Entries due 3/18/00 with \$5 entry fee. Contact Lee Shephard at (510) 849-0400 or (510) 268-0611, email: lshephard@earthlink.net, http://www.bayareamashers.org.

1 Maltose Falcons Mayfaire, **AHA SCP**, Woodland Hills, CA. Entries due 3/4/00 through 3/18/00 with \$6 entry fee. Contact John Aitchison at email: john.aitchison@homebeer.com, http://www.maltosefalcons.com.

1 Salt City Homebrew Competition, **AHA SCP**, Syracuse, NY. Entries due 3/17/00 with \$7 for first entry, \$4 each additional entry. Contact Andrew Moon at (315) 656-8917 (h), email: VAYELIRIVERA@prodigy.net, http://www.hbd.org/clubs/scbc.

1 Slurp and Burp Open, **AHA SCP**, McMinneville, OR. Entries are \$6 for the first, \$5 for each additional entry. Contact Ted Hausotter at (503) 538-9501 or (503) 625-2566.

7-8 12th Annual Homebrewer's Extravaganza, **AHA SCP**, Germantown, TN. Entries due 3/22/00 through 4/1/00 with \$5 entry fee. Contact Jay Grabowski or Rob Harris at (662) 449-0493 (h) or (662) 562-5252 (w), email: jgrabowski@aol.com, http://memphisbrews.com.

8 2nd Annual Palmetto State Brewers Open, **AHA SCP**, Columbia, SC. Entries due 1/31/00 through 4/1/00 with \$5 entry fee. Contact Joel W. Masters at (803) 739-1419 or (803) 217-7980, email: whalebrew@aol.com, http://www.psbrewer.org/.

8 Knickerbocker Battle of the Brews, **AHA SCP**, Albany, NY. Entries due 4/1/00 with \$6 for first entry and \$4 for each additional entry. Contact Jim Raimo at (518) 884-8689, email: jraimo@nycap.rr.com, http://www.moonbrew.com/kbotb/.

13-15 2000 Crescent City Competition, **AHA SCP**, New Orleans, LA. Entries due 3/16/00-3/31/00 with \$6 entry fee. Contact Andy Hollis at (504) 393-1592 or (504) 289-8505, email: honyhollis@aol.com, http://members.xoom.com/wacjr/the1.htm.

14-15 Ninth Annual Brewers of South Suburbia Challenge, **AHA SCP**, Crete, Illinois. Entries due 3/30/00 through 4/13/00 with \$6 entry fee. Contact Jerry Sadowski at (708) 758-5538 or (708) 758-6045, email: jsadow1@email.msn.com, http://www.megsinet.net/~bethke/boss/index.html.

16 New Jersey's 2nd Gold Medal Homebrew Competition, **AHA SCP**, Woodbridge, NJ. Entries due 3/20/00 through 4/7/00 with \$5 entry fee. Contact Keith Seguine at (732) 636-0622, email: keith042@aol.com, http://www.njbrewpubs.com, link to whales.

21-30 American Homebrewers Association National Homebrew Competition. Rules and regulations available by calling (303) 447-0816. Shipping addresses for first round sites on page 13.

29 B.E.R. 4th Annual Homebrew Competition, **AHA SCP**, Nesconset, NY. Entries due 4/15/00 with \$5 entry fee. Contact James B. Thoms at (631) 269-5833, email: Thomsjam@email.msn.com, http://www.homebrewshop.com.

MAY

6 7th Annual Sin City Sudzzers Homebrew Competition, **AHA SCP**, Sheboygan, WI. Entries due 5/2/00 through 5/5/00 with \$5 entry fee. Contact Rick Woods at (920) 467-9962 or (920) 457-4441x7-2834, email: rick.woods@kohlerco.com, http://www.data-plusnet.com/homebrew.

6 Green Mountain Homebrew Competition, **AHA SCP**, Burlington, VT. Entries due 4/1/00 through 4/28/00 with \$5 entry fee, \$4 each for 5 or more. Contact Dan Marshal at (802) 862-7667.

6 4th Annual Western New York Homebrew Competition, **AHA SCP**, Buffalo, NY. Entries due 4/17/00 through 4/28/00 with \$7 for the first entry, \$5 for additional entries. Contact Keith Curtachio at (716) 877-8767, email: goodbeer@niagarabrewers.org, http://www.niagarabrewers.org.

AHA SCP = American Homebrewers Association Sanctioned Competition Program

The Calendar of Events is updated weekly and is available from the Association of Brewers: info@aob.org or www.beertown.org on the web.

To list events, send information to **Zymurgy** Calendar of Events. To be listed in the May/June 2000 Issue (Vol. 23, No. 3), information must be received by March 8, 2000. Competition organizers wishing to apply for AHA Sanctioning must do so at least two months prior to the event. Contact Gary Glass at gary@aob.org; (303) 447-0816 ext. 121; FAX (303) 447-2825; PO Box 1679, Boulder, CO 80306-1679.

- 6** Northern Brewer Homebrew Competition, AHA SCP, St Paul, MN. Entries due 4/14/00 through 4/26/00 with \$8.50 for the first entry, \$4.50 for additional entries. Contact Chris Schiffer or Chris Farely at (651) 291-8849, email: mail@northernbrewer.com, http://www.northernbrewer.com.

Upcoming competitions.
Details next issue.

May 19-20 Oregon Homebrew Festival

May 19-21 11th Annual Sunshine Challenge

May 20-21 Hops Annual May Fest III

June 4 Celtic Brewoff

July 15-19 E.T. Barnette Homebrew Competition

August 18-20 12th New Mexico State Fair ProAm Beer, Mead & Cider Competition

• KUDOS •

AHA SANCTIONED COMPETITION PROGRAM

• JUNE 1999 •

Orange County Fair Homebrew Competition

Costa Mesa, CA, 98 entries – Dan Taylor of Huntington Beach, CA won best of show.

• SEPTEMBER 1999 •

Harvest Moon Beer Competition

Regina, Sask, Canada, 51 entries – Gary Falkenstein of Regina, Sask. won best of show.

5th Annual Brewers Dream Homebrew Competition

Libertyville, IL, 17 entries – Bill Hoey of Marietta, GA won best of show.

• OCTOBER 1999 •

Kansas City Renaissance Festival Homebrew Competition

Bonner Springs, KS, 24 entries – Jackie Brown of Kansas City, KS won best of show.

Flavor of the North

Duluth, MN, 76 entries – Bob and Tina Packwood and Mike Talarico of Duluth, MN won best of show regular beer, Bryn Jacobson of Duluth won best of show flavored beer.

Hoppy Halloween Challenge

Fargo, ND, 155 entries – Ray Sanders of Fargo, ND won best of show.

• NOVEMBER 1999 •

Novembeerfest

Kent, WA, 88 entries – Jay Reeves of Huntsville, AL won best of show.

Great Brews of America

Lake Harmony, PA, 74 entries – David Houseman of Chester Springs, PA won best of show.

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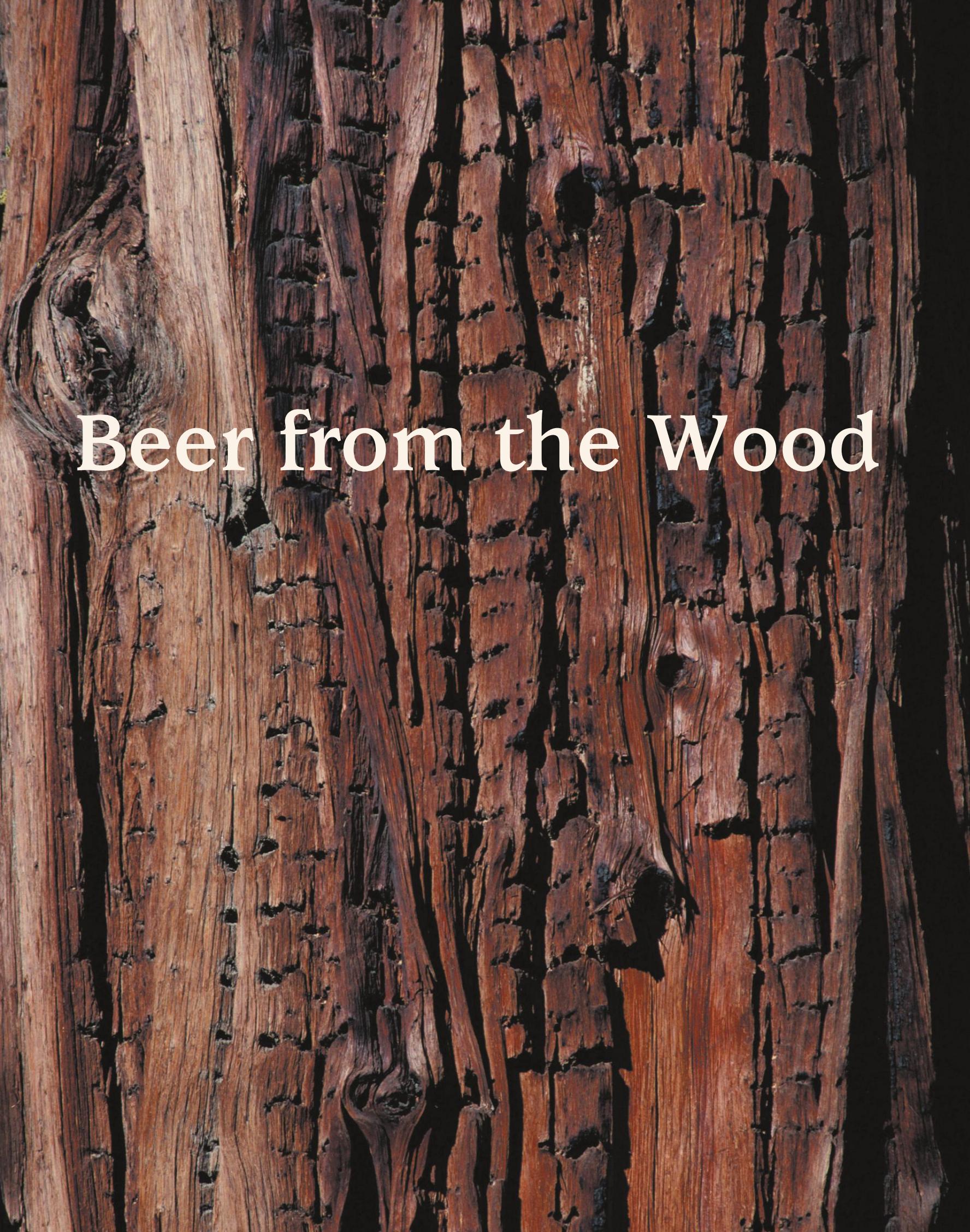
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Beer from the Wood



By Ray Daniels

Wood plays an important role in the human aesthetic experience. From the rich, honeyed hues of a new cabinet to the coarse earthen texture of a well-worn deck, we find some organic magnetism in the character of wood. We surround ourselves with smooth, full-grained surfaces inside our homes and offices. Outside we manicure our yards and parks with wooden fences and benches as well as with trees that present wood in its most natural form.

These days we see oak and birch, pine and teak, cherry and maple in decorative roles. At the same time, wood is an important structural material that holds up many of our houses and also provides the support base for much of our furniture.

Given the pervasive influence of wood in our lives, it's not surprising that there is some relationship between wood and beer. Indeed, most Americans have consumed wood-aged beers from their earliest drinking days. After all, America's number one brewer, Anheuser-Busch, has used wood in their brewing process for many decades and continues to do so even today.

Of course, the A-B process relies on beechwood chips solely for their physical

properties. All traces of flavor are cleansed from the chips long before they come in contact with the beer. In a similar fashion, many brewers who use wood these days attribute little, if any significant flavor to the wood itself. Despite this, there is a strong culture of wood-tinged alcoholic beverages and some brewers are beginning to get in on the action.

Of Wine and Whiskey

Wood barrel aging holds a prominent place in the production of a number of alcoholic beverages. The oakiness of certain Chardonnays is a well-loved flavor feature for many a wine drinker. So too are the vanilla and toasty traits imparted in scotch and bourbon from their casks.

Makers of these fine beverages recognize and desire the flavor potential that can be extracted from wood. In addition, they know that long aging in wood produces other, more subtle changes. This occurs because the porosity of wood allows small amounts of air to interact with the beverage over the years. The slow oxidation that occurs mellows a fine Cabernet and contributes additional complexity to whiskies. In the case of long-aged scotches, the character of the sur-

rounding air—be it saturated with sea salt or bog peat—may be detected in the finished product.

Most beer lacks the alcohol content needed to fully extract wood flavor compounds. At the same time, its relatively short life span compared to wine and whiskey does not afford it the luxury of extended aging in wood. As a result, many traditional brewers in England feel that wood has little, if any, flavor impact.

"We gave up wood casks in 1973," says Reg Drury, Brewing Director at Fuller's in London. "We believe that for the time that beers spend in the cask, it doesn't really add a lot." In addition, Drury points out that wood casks are highly prone to microbial infection and very difficult to clean.

Still, he acknowledges that wood can have an impact with some beers: "In the high gravity beers it gives a much more mellow flavor," he says. "The beer becomes more like a sherry, with a richness and mellowness that you wouldn't get otherwise. The same beer from a metal cask would be harsher."

As an example, Fuller's sometimes ages a hogshead of their Golden Pride barley wine for three months before serving it. "It is fantastic," says Drury.

Fermentation: the Old and the New

While Fuller's has given up on wood both for fermentation and serving, a number of brewers can be found both in England and U.S. who use wood in some form today. Amongst those brewers using wood, we find a mixture of centuries-old tradition and neophyte innovation. Not surprisingly, the innovation comes from U.S. craft brewers where the fibrous magnetism of wood has hooked brewers on the use of oaken barrels.

Perhaps the most exciting of the American wood-brewed products is Firestone Double Barrel Ale from the Firestone Walker Brewing Company in California. Founder Adam Firestone has a day job as a wine maker, but found that he had a strong yearning to make beer.

"There's a saying in the wine business that it takes a lot of good beer to make a great wine," says Firestone. Over many years of involvement in making his family's Firestone Barrel Fermented Chardonnay, his appreciation for beer grew. At the same time, he was intrigued by the possibilities that the oak-barrel-fermentations used for wine might have if applied to beer.

"We started out fermenting ales in old Chardonnay barrels. As it turns out, it was one of those things that was great in theory, but a disaster in practice," he says. Apparently wine kept many microorganisms in the barrels in check but the lower alcohol beer could not. "We had some real run-away fermentations."

The next strategy was to experiment with fermentation in new oak barrels such as those used for wine and whiskey. "We used oak that is grown in Minnesota, coopered in Kentucky and given a medium roast on the inside," Firestone says. When used for primary fermentation, these barrels give the beer a distinctive wood flavor that Firestone finds appealing.

"We haven't been able to get anyone to articulate chemically what is going on here

yet," he says, "but our palate tells us there is something special happening." Firestone says that the oak-fermented beer displays a roundness and fruitiness in the mid-palate that you don't get from the same beer when fermented in stainless steel. In addition it has a detectable wood character.

To sustain the effect of the wood on their product's flavor, Firestone Walker replaces two of their 16 oak barrels after every fermentation. This keeps the average age of the barrels and their flavor contribution consistent for every batch.

The Firestone Walker brewing system called a Firestone Union is based upon a design that was once popular in England where it is called a "Burton Union." The last remaining Burton Unions operate today at the Marston's brewery in Burton-upon-Trent, England, a few hours north of London.

"The wood creates flavor in the beer, no doubt about that," says Marston's Deputy Head Brewer, John Cheetham. "But the significance is not that great. Still we know that if we use the wrong wood, or if we try to go to stainless steel, the beer just doesn't taste the same."

Unlike Firestone Walker's efforts to keep a "new oak" flavor in their beers, Marston's uses wood in a way that produces more subtle effects. The Burton Union's wood barrels are used for about three years before the inside is scraped to expose fresh wood. "The first few batches after the scraping have a definite 'green' flavor," says Cheetham. Beer from these early batches must be blended into the regular production in small quantities, but after that the wood gives a consistent flavor until the next scrape down.

Like Fuller's, Marston's does not use wooden casks for distribution of their product. "If they dry out or are open to the air, they get infected," says Cheetham. "The risk of using them is simply too great." For cleaning the Burton Union casks, hot water is all that gets used.

"Every thing is hot scalded," says Cheetham. "When this is done properly, the outside of the cask must be too hot to touch."

Other brewers in Britain ferment their beers in wood as well, although most use open-topped round or square fermenters. While many of these old vessels are copper lined today, some continue to put the beer in direct contact with the wood. One such case is George Gale & Company in the south of England.

Gale's uses fermenters made of a rare wood that was once imported from New Zealand, called Kowrey pine. In the early part of this century, this wood was highly valued because the trees grew quite tall before branching. As a result, the wood had very few knots that could cause leaks when built into a vessel for beer. The Gale's fermenters were built in 1925, just one year before New Zealand halted the export of this wood. Still these fermenters are a critical part of the brewery's production process today.

"We installed some new stainless steel fermenters in 1983," says Derek J. Lowe, Head Brewer at Gale's. "But the beers fermented in them simply didn't taste like Gale's beers." As a result, the stainless steel tanks now sit idle except for occasional use as water coolers.

The peculiar flavors imparted by wood have been known to brewers in other cultures as well. Some Belgian brewers continue the use of wood today and see it as essential to the flavor of their products. Both Lambic maker Cantillion and Flanders brown ale producer Rodenbach continue these traditions. At Rodenbach, the oak barrels harbor bacteria that contribute to the beer's flavor.

Wood vessels can also be found in the U.S. For instance, Dixie Brewing Company in Louisiana uses 18 pitch-lined cyprus aging tanks to lager all their products. Brewmaster Peter Caddoo says beers aged this

American brewers offer a wide variety of high alcohol products and many have started to experiment with wood aging.

There can be little doubt that the various uses of wood add to the overall experience of beer consumption.

way definitely taste different from those aged in stainless steel. Another recent adaptation of wood to beer production has come at the Jack Daniel Brewery, where oak barrels are used during aging.

Aging in Wood

As Fuller's Drury stated, wood aging for beer is only practical for stronger products. Such strong beers have become quite novel in Britain because of the high taxes on strong beers. By contrast, American brewers offer a wide variety of high alcohol products and many have started to experiment with wood aging.

Brewer Greg Hall, from Chicago's Goose Island pub and brewery, started out adding cherry wood chips to a strong brown ale and now regularly produces a bourbon-barrel-aged strong stout.

"We get some residual bourbon flavor as well as some vanilla character from the barrels that we use," says Hall. He purchases used bourbon-aging barrels from the Jim Beam distillery and then fills them with imperial stout. "The tannin and burnt wood flavors from the barrel work well with this type of high-gravity beer that has a lot of sweetness."

The result of Hall's effort goes by the name "Bourbon County Stout" when served in bars around Chicago. It weighs in at about 10 percent alcohol. The barrel aging takes 100 days after the beer has finished primary fermentation. During that time, it ferments further and also develops a very low-level oxidation character. "That helps to take the sweet edge off and flatten it out a bit," says Hall.

Goose Island has produced 10 to 20 barrels of the Bourbon County Stout during the past few years and sold it only on draft. Later this year, they plan a larger batch that may find its way into distribution as a bottled product.

Another innovator in wood aging is Jeff Charnock at the Commonwealth Brewpub in Boston. When it first opened, Commonwealth had a collection of about 30 wooden casks

that could be used for serving beer, but the practice was abandoned long before Charnock's arrival. As a result, most of the casks were ruined. "If you don't keep a wood cask filled with beer or water, it will dry out and fall apart," he says. Today, Charnock is left with just a single wooden cask in useable condition.

"There is a definite oaky character from the wood—like a bit of tannin," says Charnock. When he first started using it, he thought that the cask would be too old to yield any wood flavor, but it did. "The beer is still able to extract tannins from this wood at a subtle but noticeable level," he says.

Charnock generally reserves the cask for a strong ale called "Commonwealth Special Old Ale," allowing it to age for three to six months before serving. The resulting beer has a mellow complexity with dark fruit notes and some vinous alcohol character. It is sometimes complimented by a touch of acidity that may be attributable to acid-producing bacteria deeply ingrained in the wood.

Serving From The Wood

Many brewers fear using wood casks for beer distribution because of their high potential to ruin beer with microbial infections. Still, a brave few distribute some of their product this way and most feel it adds a special something to their beers.

In Germany, you'll see wood kegs used for serving beer in pub breweries such as Dusseldorf's Zum Uerige and at beer gardens and beer festivals throughout Bavaria. To reduce the problems associated with wood, these serving vessels are lined with pitch. This provides a smooth, sealed surface that protects the beer from bacteria and air. In the U.K., some brewers still use unlined wood casks. Samuel Smith's, Wadworth's and Theakston's each distribute a portion of their production in wood, generally to pubs within a few miles of the brewery.

Wadworth's head brewer, Trevor Holmes says that any of their cask products can be found in wood, although "probably

80 percent of it" is served within 20 miles of the brewery. As for a flavor difference between the wood and metal products, he says "It's almost there despite what we do." He explains that the casks are soaked and cleaned quite carefully, sometimes spending as long as six months in a sanitizer solution.

As for consumer perception, he notes that some pubs just want to have their beer from oak. "They set them up on the back bar and dispense directly from the cask by gravity. It presents a very traditional image, but one that tends to be more of a public relations exercise."

In the U.S., Minnesota brewpub owner Bill Burdick agrees. "We have been producing beer like this because we just don't know any better," he says. Burdick's Sherlock's Home brewpub has been serving beer from wooden casks since it opened in 1989. Because the establishment is modeled after a 19th century English pub, the wooden casks were seen as an authentic touch for serving a portion of their beer.

"I don't know of anyone who really needs to do this," he says. "The fact is that beer doesn't taste any different in either wood or metal."

A blind tasting of ales served from wood and metal would probably support Burdick's conclusion. Despite this, most people enjoy the image of their beer as well as its flavor. There can be little doubt that the various uses of wood add to the overall experience of beer consumption. Thus, even as brewing science progresses, the role of wood in enhancing the aesthetic value of beer seems destined to continue.

Ray Daniels is an internationally known expert on craft beer. He is the organizer of the Real Ale Festival which recently completed its fourth year and he is the author of several books on beer and brewing.

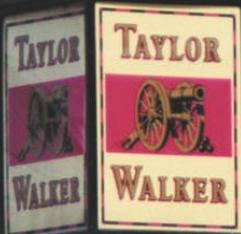




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ACCESS TO
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SEATING THROUGH
MAIN BAR

BY JIM DORSEY

“T

here are two kinds of beer in the world: the English kind, and the kind everyone else drinks,” writes Michael Jackson. Those words might be somewhat less true in today’s lager-swilling England, but in the minds of the world, nothing has changed.

The world believes that the English drink warm, flat ale, but we know it’s cellar temperature, carbonated lightly and sometimes a brown ale, porter or stout. Or perhaps a mild or old ale. But if it’s not lager, it’s probably a bitter.

But what’s a bitter? Depends on where you drink it. Near London, it’ll be headless and bitter, true to its name. Travel north and a collar of foam is de rigueur, and malt dominates.

It also depends on who makes it. Most English breweries produce a range of bitters from ordinary to special or strong. Instead of meeting specific criteria, these styles are designed to fit into the range produced by a particular brewery.

An ordinary bitter typically has an original gravity of 1.033-1.038. And most other English styles are also modest in gravity. Your assignment is to pack as much flavor as possible into these beers.

An Island Nation

Lagers have been common in England for decades, but it is only recently that they have dominated over ales. It only makes sense, for England is an island—isolated from the Continent by a body of water and possessing fixed boundaries.

England has had only three conquerors: the Romans in 55 B.C., the Danes in 1013-16 A.D. and the Normans in 1066 A.D., so foreign influence—at least the forced kind—has been minimal. England was instead “invaded” by small groups of hardy souls who blended into the population at large.

The English, says Strong, are both an inward—and outward—looking people. Looking inward, one sees the immutable English character. Conversely, the island’s isolation motivated its inhabitants to explore the world. Looking inward, one sees mild and bitter. Styles such as India Pale Ale and imperial stout developed as the English reached out to the rest of the world.

Today, at the dawn of the Internet age, lager is on the rise. In 1998 lager accounted for more than 60 percent of British beer sales (source: Brewers and Licensed Retailers Association, <http://www.blra.co.uk>). Perhaps this is unavoidable in a world that becomes smaller by the day, but it would be a terrible shame if English beer came to reflect the bland sameness we see in fast-food emporia and shopping malls across the U.S., and increasingly around the world.

THE SUN Never Sets on ENGLISH BEERS

Mad Dogs IPA

George Hummel, Philadelphia, PA

Ingredients for 5 U.S. gal (19 L)

- 10 lb Maris Otter pale malt (4.5 kg)
- 1 lb British amber malt (.45 kg)
- .5 lb British 60 °L crystal malt (.23 kg)
- 1.88-2.5 oz Challenger hops, 8% alpha acid (53-71 g) (60 min.)
- 1 oz Kent Goldings or Fuggles, 5% alpha acid (28 g) (30 min.)
- 1 lb Demerara sugar (.45 kg) (15 min.)
- 1 tsp Irish moss (4.9 mL) (15 min.)
- 1 tsp yeast nutrient (4.9 mL) (15 min.)
- 2 oz Kent Goldings or Fuggles (end of boil) (57 g)
- Wyeast No. 1275 Thames Valley yeast
- 2 oz Kent Goldings or Fuggles, 5% alpha acid (dry-hop in secondary) (57 g)
- .75 cup dry malt extract or dextrose (177 mL), or
- .5 cup Demerara (118 mL), for priming
- Original specific gravity: 1.055-1.060
- Final specific gravity: 1.012-1.016
- Boiling time: 90 minutes
- Primary fermentation: 1 week at 70 degrees F (21 degrees C) in glass
- Secondary fermentation: 2-4 weeks at 50-65 degrees F (10-18 degrees C) in glass

Brewer's Specifics

Mash grains for 2 hours at 154 degrees F (68 degrees C). Boil for 90 minutes. Add Demerara sugar after 15 minutes. Add Challenger hops with 60 minutes remaining. Add Fuggles or Goldings with 30 minutes remaining. Add Irish moss and yeast nutrient with 15 minutes remaining. Add Kent Goldings or Fuggles at end of boil. Dry hop in secondary with Kent Goldings or Fuggles. Allow at least 4 weeks on the dry hops, bottle or keg, and enjoy.

To produce a mash/extract version, reduce the Maris Otter to 2 pounds (.91 kg) and retain specialty malts. Steep for 30 minutes at 150-160 degrees F (66-71 degrees C). Add 6.6 pounds (3 kg) of British pale malt extract syrup and 2 pounds (.91 kg) of British pale dry malt extract. Follow the rest of the brewing schedule.

This is what I imagine the real deal tasted like. The use of the high-alpha hops is a modern improvement and cuts down on kettle waste. Too many modern brewers think IPA is just about hops. It's about malt and alcohol, too! This should produce a beer that hits all the notes. To oak or not to oak? Many modern brewers think their "traditional" IPAs should be oaked. Since the barrels were lined with brewer's pitch, no oak flavor was likely imparted. The beer might have had a lactic character—I chose to omit this in my "reproduction."

Barley Wine

Fal Allen, Seattle, WA

Ingredients for 5 U.S. gal (19 L)

- 1 oz gypsum (28 g)
- 18 lb Maris Otter pale malt (8.2 kg)
- 1.5 lb Great Western Munich malt (.68 kg)
- .5 lb Dewolf Cosyns aromatic malt (.23 kg)
- 2 oz Crisp chocolate malt (57 g)
- .5 lb Crisp crystal malt (.23 kg)
- 1.25 oz Magnum hops, 15% alpha acid (35 g) (2 hours)
- .5 oz Liberty hops, 4% alpha acid (14 g) (30 min.)
- 1 oz Irish moss (10 min.) (28 g)
- .5 oz Spalt hops, 4% alpha acid (end of boil) (14 g)
- Wyeast No. 1318 London Ale yeast
- .5 cup dry malt extract or dextrose for priming (118 mL)

- Original specific gravity: 1.098-1.100
- Final specific gravity: 1.014-1.018
- Boiling time: 2 hours
- Primary fermentation: 1 week at 68-70 degrees F (20-21 degrees C) in glass
- Secondary fermentation: at least three months at 70 degrees F (20-21 degrees C) in glass

Brewer's Specifics

Treat water with gypsum; mash grains for 2 hours at 149 to 152 degrees F (65 to 67 degrees C). Boil for 2 hours. Add Magnum hops at beginning of boil, Liberty hops and Irish moss with 10 minutes remaining, and Spalt hops at end of boil. Oxygenate chilled wort as much as possible. Pitch three times the amount of yeast you would pitch in an ESB (gravity 1.048).

The Shaping of English Beer

English beer is generally characterized by modest alcohol content, gentle carbonation and, at least when compared to U.S. craft beers, balance.

It's easy to see why English beers tend toward lower alcohol levels than American microbrews. English beers are taxed accord-

ing to alcohol content. Until recently the tax was levied according to original gravity by the Free Mash Tun Act of 1880. Either measure encourages the production of low-gravity beers.

There's another reason for modest alcohol content. English beers are designed to be drunk in quantity, for the pub is a social

Best Bitter

Tony Babinec, Chicago, IL

Ingredients for 5 U.S. gal (19 L)

7 lb British pale ale malt (3.2 kg)
.5 lb British 60 °L crystal malt (.23 kg)
.5 lb flaked maize (.23 kg)
.5 oz Challenger hops, 7% alpha acid (14 g) (60 min.)
.5 oz Target hops, 9% alpha acid (14 g) (60 min.)
.5 oz Northdown hops (14 g) (5 min.)

Wyeast No. 1968 London ESB

Brewer's Specifics

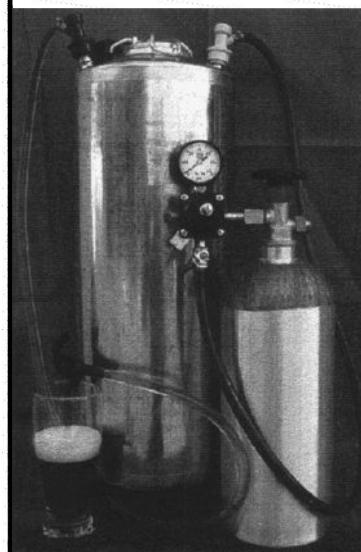
Single-step infusion mash at 150 degrees F (66 degrees C) for about 2 hours. Mash out at 168 degrees F (76 degrees C). Lauter and collect wort. Boil for 90 minutes. Mash liquor volume should be about 10 quarts (9.5 L), or 1.25 quarts per pound of malt or adjunct (2.6 liters/kilogram). Sparge liquor volume should be 4 to 5 gallons (15-19 L). (Rule of thumb: .5 gallon per pound, or 4.2 liters per kilogram, of malt or adjunct). If water is fairly soft, the brewer can add a teaspoon (4.9 mL) of gypsum to the sparge water.

The extract brewer can substitute about 5 pounds (2.3 kg) of unhopped dry malt extract for the pale ale malt and .5 pound (.23 kg) of sugar for the flaked maize. Steep the crystal malt, then remove and bring to a boil.

This recipe is broadly in the vein of Fuller's beers. Use the suggested hops and yeast for that essential English ale flavor.

center. "The pub—and the conversation in the pub—is the entertainment for the evening," says Englishman George Hancock, recently retired president of Pyramid Breweries in Seattle, WA.

Clearly, a beer with less gas will lend itself better to a session in one's local. And balance fits perfectly. Not everyone can knock down pint after pint of gassy, highly-hopped beer.



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Brewing English-Style Beers

What's the best way to achieve British character in your beer? "Use British ingredients," says George Hummel writer and owner of Home Sweet Homebrew in Philadelphia, PA.

Hummel sees no problem with American malts except that they tend to be paler than British pale malt at 1-2 degrees Lovibond vs. 2-3 degrees. Instead of crystal malt, Hummel recommends a toasted malt like Victory—up to a half-pound (.23 kg) per five gallons (19 L) in a bitter and one pound (.45 kg) in a darker beer—to bring the color up. Hummel also likes melanoidin malt and Special Roast.

"Malts such as Maris Otter, especially if floor-malted, give more flavor," says Fal Allen, co-author of *Barley Wine*. This is an important consideration when brewing brews of modest gravity such as bitter.

An 1847 act allowed English brewers to use sugar, resulting in the occasional use of this ingredient even today. It's also not uncommon to find corn grits or torrified wheat used in English beers, although not in proportions like those used by large brewers in the U.S.

"As a homebrewer, there's almost no reason to use sugars," says Steve Hamburg, a homebrewer and writer in Chicago, IL. Hummel believes there's a place for sugar, particularly Demerara, to keep the beer's body from going out of skew. Hummel suggests one-half to one pound (.23 to .45 kg) per five gallons (19 L) of a lighter

beer, and as much as two pounds (.91 kg) in an ESB or IPA.

The English commonly use a single-step infusion mash, and this should work well for you. "The big decision," says Hamburg, "is whether you want a malty beer or more fermentable wort." Mash at 152-155 degrees F (67-68 degrees C) for the former, at 149 degrees F (65 degrees C) for the latter.

While native hop varieties naturally predominate, English brewers are starting to use more American varieties. The crucial variable is balance. "The key for me," says Hamburg, "is this whole notion of balance and elegance. You don't want to blow your palate away; you're going to drink a few."

The most important hop addition by far is the first, according to Hamburg. You want a firm bitterness. "It's not a flaw if it doesn't have hop aroma," he adds.

There are lots of good yeasts, says Hamburg. The clean-fermenting Chico strain might not be the best choice. "In British beers the fruit character is a little more assertive," he says.

"I'm particularly fond of Wyeast no. 1275 Thames Valley," says Hummel. "It produces trace levels of acetaldehyde."

"Any good English yeast will work well," says Allen. "I like the Fuller's yeast quite a bit. It does a good cask beer, falls out really quickly and is easy to work with. The only drawback is that it likes to be warm. In the mid- to low 60s (16 to 18 degrees C) it conks out." *(continued on page 56)*

AUG. 25, 1999 LONDON, ENGLAND



My direct Denver-to-London flight had barely reached cruising altitude before the British Airways stewardess handed me a can of Fuller's London Pride ale—a perfect start to a journey to experience London's Great British Beer Festival organized by The Campaign for Real Ale (CAMRA). While I have been fortunate to experience 11 years of Denver's Great American Beer Festival®, this was my first visit to the British festival that inspired the 1982 launch of GABF.

I made my way to London's cavernous Olympia Hall August 3rd in time to hear the announcement of the winning beers. The announcing of the winners is very brief compared to GABF's because instead of Denver's 35 or so categories the GBBF has just five: bitter, best bitter, strong bitter (aka ESB), bottle conditioned beer and specialty beer. The British fest also names one Champion Beer of Britain from among the gold medal cask ales (Timothy Taylor brewery's Landlord best bitter this year).

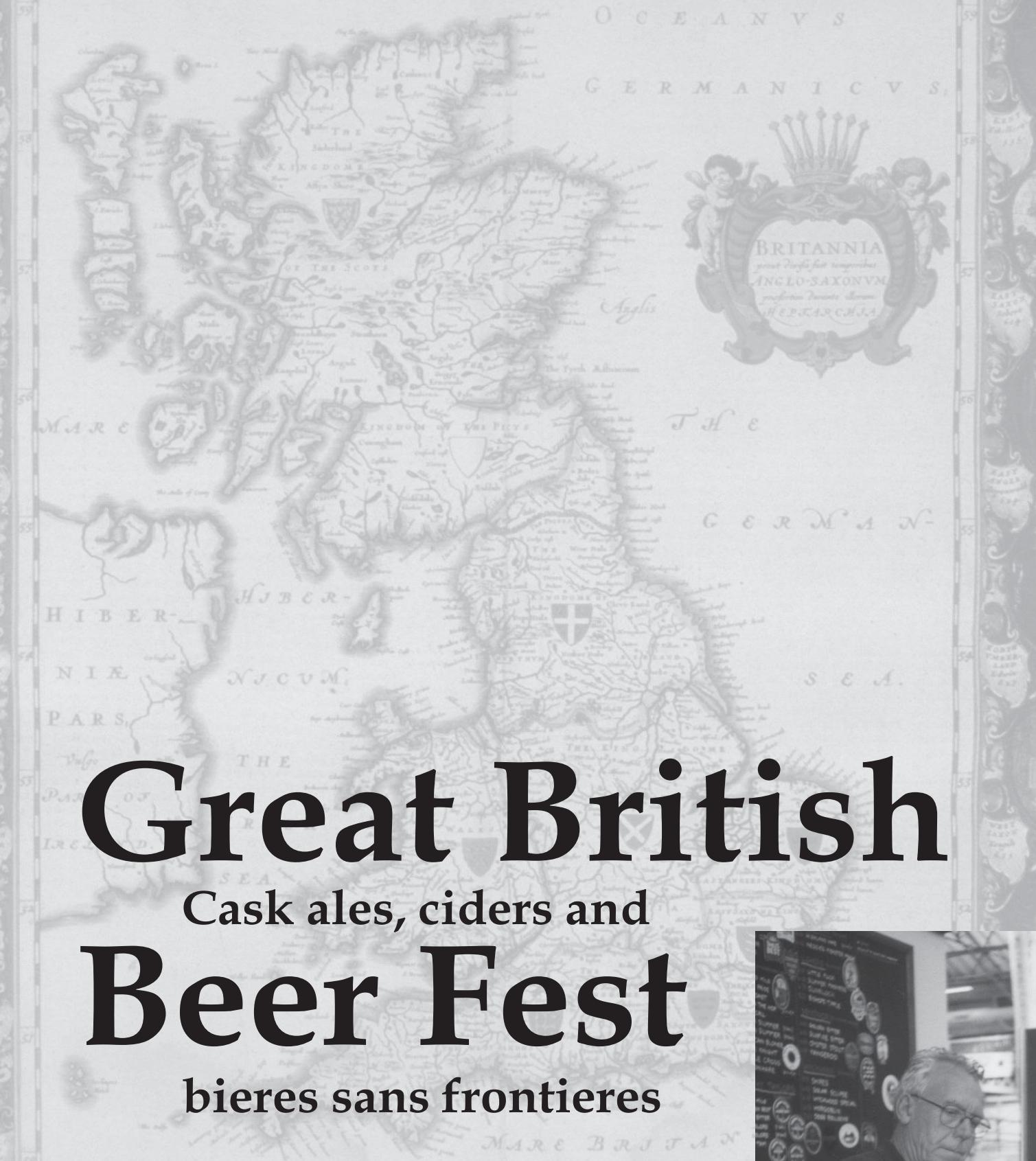
After bumping into festival judging organizer Keith Thomas, I was invited to join in a post-awards re-judging of the gold medal beers, allowing him to see how opinions and observations of each of the beers varied to a different group of judges. Our mixed group of a dozen American and European brewers and beer writers ended up agreeing with the original champion judges on which beers were most flawed, but disagreeing about which were the best. We gained tremendous insight into the challenges inherent in this type of judging, especially in the comparing-apples-to-oranges aspect of trying to determine if an excellent bitter is better or worse than an excellent mild ale.

When identities were revealed, two beers among the group that I liked the best were Ballards brewery's Nyewood Gold and Oakham brewery's Jeffery Hudson Bitter. After being steeped in British bitter and mild for several hours, I joined some compatriots at the "bieres sans frontieres" bar on the festival floor for a round of the unique and hoppy classic Belgian Orval beer, a thoroughly enjoyable if somewhat unexpected ending to my first afternoon at GBBF.

I took a break from the festival for two days. The first day I was lucky to join a group from Colorado's Odell's Brewing Co. for a tour of London's Young's Brewery by quality control manager John Hatch. As a bonus to his five-year employees, Odell's owner Doug Odell and his partners flew a small group of their brewers to London for several days of "rigorous" brewery touring, followed by free time for more personal R&R. Young's Brewery has existed in one form or

BY DAVID EDGAR
Institute for Brewing Studies director

Great British Cask ales, ciders and Beer Fest bieres sans frontieres



another at the same location since 1611. It's also one of the few breweries in the world that still delivers a portion of its beer via horse and dray. The brewery is a mix of both century-plus-old brewkettles and fermenters alongside more modern automated equipment. I found myself surprised that besides their Young's Special Bitter and bottled Special London Ale, my other favorites were brands produced in response to Britain's lager boom: their all-malt lagers, Export and Pilsener.

The second day I ventured out sightseeing with my wife and 3-year-old daughter. From a beer-lover's perspective, I was delighted at the huge number of pubs in London selling cask-conditioned ales. However, as a tourist-with-toddler, I was always disappointed because whenever I tried to walk inside, pushing the stroller, the publcan invariably greeted me with "Sorry, no children allowed." Some things are still better in the States.

I returned to the Great British Beer Fest with two more days' opportunity to immerse myself in cask ales. Two among the strong bitter brands I especially enjoyed happened to be beers that are also generally available in the U.S.: Fuller's Extra Special Bitter and Shepherd Neame's Bishop's Finger. (Other favorites of mine: Hopback brewery's Thunderstorm best bitter, Swale brewery's Hare on the Hop bitter and Smiles brewery's Best Bitter.)

If you don't fancy British ale there are still plenty of other tasty choices at the GBBF. The Cider and Perry bar offered 36 different ciders and 14 perries (perry is like cider, although from pears instead of apples). Each offering is assigned a numerical rating on a 1-to-12 scale of sweet-to-dry telling the potential buyer where on that spectrum it fits. I tried my first perry, Double Vision from Staplehurst, 7% ABV and rating a 5 on the scale (medium sweet). I found it delightfully fruity and delicious.

The *Bieres sans Frontieres* area had more than 80 bottled and draft beers in a broad range of lagers, lambics, *bieres de gardes*, American microbrews and other wonders of the beer world at the "foreign" bar.

I heartily recommend experiencing the GBBF. With five days of festival, there's plenty of time to enjoy as much beer as you like while also taking a break, if you like, to rest up for further tasting or visit some of London's attractions. I was impressed by the diversity of other beers and beverages available there in addition to cask ales. Nonetheless, promoting cask ale, which almost died out in Britain before CAMRA established itself in the name of saving and promoting it, is still the primary purpose of this event.

"At the end of the day the festival is very much about promoting British cask-conditioned beers," says CAMRA research

Champion Beer of Britain 1999

Full results of this year's competition announced at CAMRA's Great British Beer Festival, London Olympia, August 3rd-7th

Supreme Champion Beer of Britain Timothy Taylor's Landlord

Silver

Oakham Jeffrey Hudson Bitter

Bronze

Caledonian Deuchars I.P.A.

Milds

Gold - Bateman's Dark Mild

Silver - Elgood's Blackdog

Bronze - Cain's Dark Mild

Bronze - St Austell XXXX Mild

Bitters

Gold - Oakham Jeffrey Hudson Bitter

Silver - Caledonian Deuchars I.P.A.

Bronze - Woodforde's Wherry

Bronze - Goddard's Special Bitter

Best Bitters

Gold - Timothy Taylor's Landlord

Silver - Harveys Armada

Bronze - Jennings Cock a Hoop

Bronze - Watkin OSB

Strong Bitters

Gold - Ballards Nyewood Gold

Silver - Durham White Bishop

Bronze - Hop Back Summer Lightning

Bottled Conditioned Beers

(Competition sponsored by *The Guardian*)

Gold - Youngs Special London Ale

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Bronze - Dark Star Zingiber



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director Iain Loe. "What we're doing by running these festivals is saying to brewers it's worth your time to produce these products."

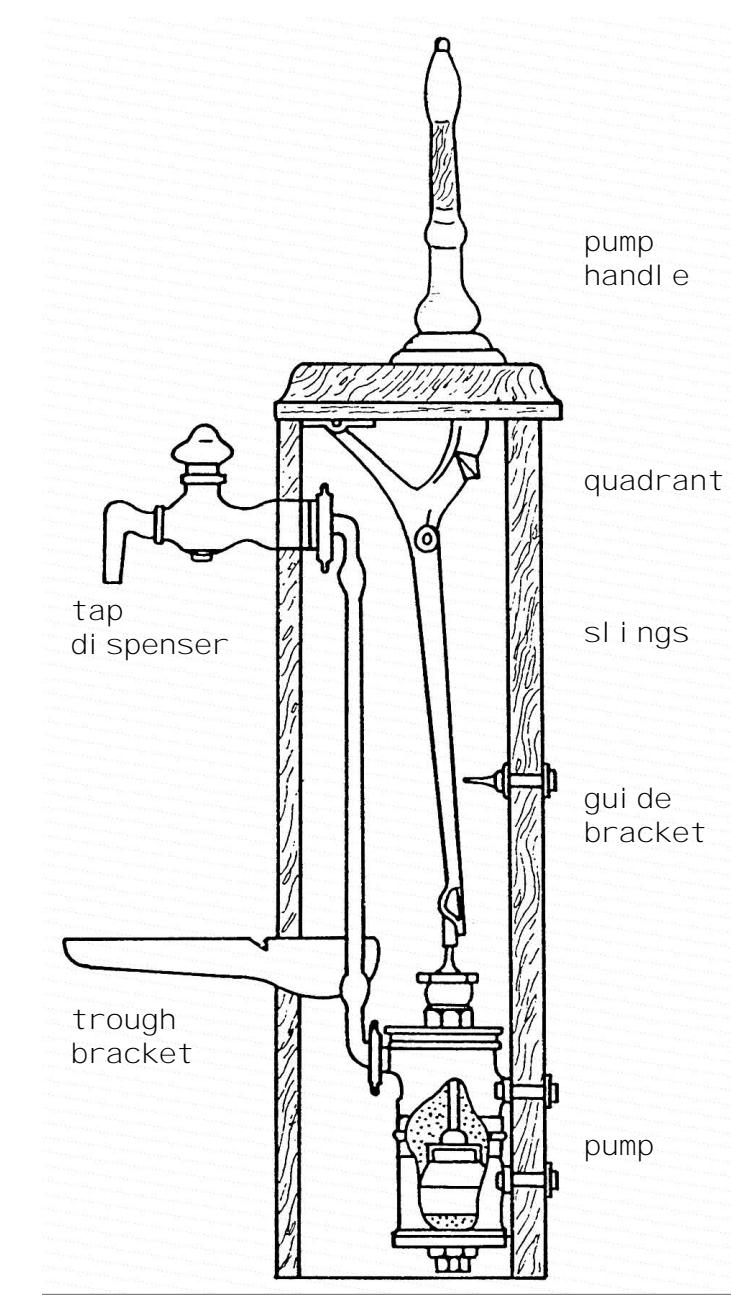
David Edgar is director of the Institute for Brewing Studies.

Grab a Handle *& Pull!*

Back in London's mid-1700s, you could pop down to your local pub for a quart of fine porter, and it would probably cost you about threepence. The pub would probably be smoky, crowded and dimly lit—not terribly unlike London pubs today. But one thing would be conspicuously absent: if you asked for beer on draught, people would not know what you were talking about.

Ale was stored in the pub's cellar, usually below the floorboards, where a proper storage temperature of about 52 degrees F (11 degrees C) could be maintained. It was kept in large casks—called butts—of about 108 gallons capacity, tapped as needed. It was up to the pub's servers, called pot boys, to fill pitchers of the stuff for thirsty patrons above. It wasn't until the year 1797 when a man named Joseph Bramah realized that in the golden age of industrialization, there had to be an easier way to bring up beer from the cellars as it was needed. So that October, he applied for a patent on what he called a "beer engine."

By Amahl Turczen



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Bramah had come up with similar hydro-dynamic inventions, among them a hydraulic press and a "water-closet," or W.C.—yes, the toilet. His beer engine used the same basic principles, but was rather

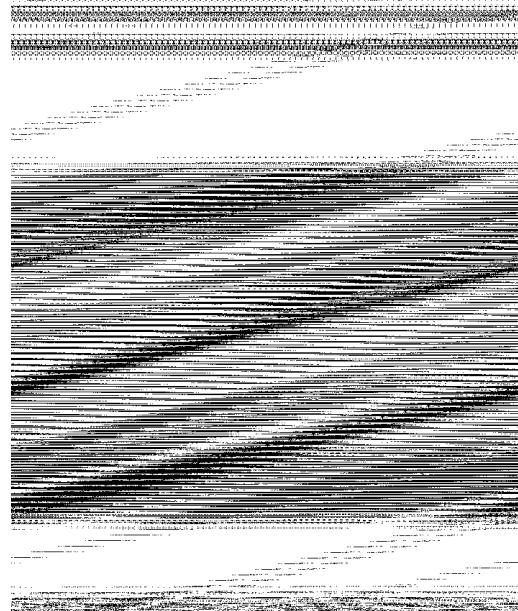
complicated, employing a system of boxes weighted with sand and raised up from the cellar by pistons. These sand boxes fitted down snugly into large beer storage containers, forcing the beer up through pipes to the bar.

Unfortunately, the standard casks shipped to breweries couldn't be used with this engine's sand boxes, so the beer had to be transferred by the pub workers from butt to the special storage containers. It soon became apparent that this system was no more efficient than the trusty pot boy, but it did give others the notion that a simpler version of the same device should be possible.

In fact, it is a wonder no one came up with the idea sooner. Beer historian Peter Mathias pointed out that at the time the idea was hit upon to use a simple manually operated hand pump for bringing up beer from the cellars, the device had already been around for quite some time. Seafaring beer drinkers in port cities must have used similar devices on board their ships for pumping water from lower decks, so why hadn't anyone thought to bring the hand pump to the pub? Perhaps the ale itself had in some way stifled this simple revelation.

19th Century

In the first years of the 19th century, several London-based inventors rapidly regis-



Victorian advertisement for a bank of beer engines.

tered beer engines, one after the other. John Chadwell, Thomas Rowntree and A.G. Green all began producing them before 1809. Not surprisingly, there was no recorded objection from the public—beer lovers liked having their ale served cold and with minimal delay. By the 1820s, beer engines could be found in nearly every pub in the London area. At one point in Victorian times, a company called Gaskell & Chambers employed 700 people at their beer engine factory in Birmingham.

Of course, the design changed somewhat throughout the years. One of the earliest designs was called a "cash register" type, which consisted of a row of three or four pumps with short handles mounted on the bar. They were enclosed in a curved box much like an early cash register, and the handles were positioned high enough to allow servers to pull a pint with little physical effort. Examples of this type of engine still exist in England, one at the Old Crown, in Kelston, near the city of Bath, and one at the George in Southwark. Both are still used, and the latter is said to be 150 years old.

The working parts of the engines have also undergone some changes. The actual cylinder of the beer pump was first made of leather, until brass or gunmetal was substi-

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His beer engine used the same basic principles, but was rather complicated, employing a system of boxes weighted with sand and raised up from the cellar by pistons. These sand boxes fitted down snugly into large beer storage containers, forcing the beer up through pipes to the bar.

tuted. Finally, in the late 1970s, stainless steel made an appearance.

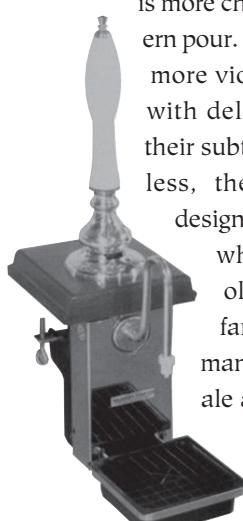
Originally, pipes were made of lead. In 1795, Sir George Baker realized that the illness called "Devonshire colic" was in fact lead poisoning, but lead continued to be used for pipes until well into the 20th century when the practice was banned. Glass piping sections connected by rubber tubes replaced the lead piping, then stainless steel, and finally micro-bore plastic.

Spigot Design

Much controversy surrounds the change of the beer engine spigot design. One older design, which is today more common in the south of England, is a short, straight, horizontal tube with a wide tap on the end. The other, called the "swan neck" because of its long, curved shape, is more popular in the north. Each can be fit with a device called a "sparkler," which is a nozzle that forces the beer through tiny holes, disrupting dissolved gas into a thick head of foam. Generally, however, a thicker head on the beer is more characteristic of a northern pour. Some have argued the more violent pours rob beers with delicate hop aromas of their subtler character. Regardless, the newer swan-neck design is used nearly every-

where in Britain. The older straight tubes are far less ubiquitous, and many die-hard fans of real ale are hoping they won't be replaced.

There was also some worry in the



1930s that the introduction of electric pumps in beer engines would spell doom for the old-fashioned manual type. The electric pumps came in two varieties—a free-flow design, which pumped continually until shut off, and the metered design, which automatically measured out half-pint pours. Again, their use varies with geographical location, being far more prominent in the north and west of the U.K. than in the south.

Kegs

Technically, though, they are still considered a beer engine. The trouble was, they were often difficult to distinguish from an altogether different method of dispensing beer, which began to make an appearance about this time: keg beer. The increasing popularity of this artificially carbonated, often filtered, beer was considered anathema by many real ale advocates. Lagers came from kegs, not traditional British ale. Preserving real ale and its time-honored beer engines was a cause soon taken up by organizations like CAMRA, the Campaign for Real Ale, which fights for its worthy cause to this day.

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- Protz, Roger, *The Great British Beer Book*, 1987.
Foster, Terry, *Pale Ale*, 2nd Ed., Brewers Publications, 1999.

Special thanks to Iain Loe of CAMRA, and Jim Homer of the BJCP.

Amahl Turczyn is frequent contributor to *Zymurgy*.

#3 in a series

An Ale For All Seasons.

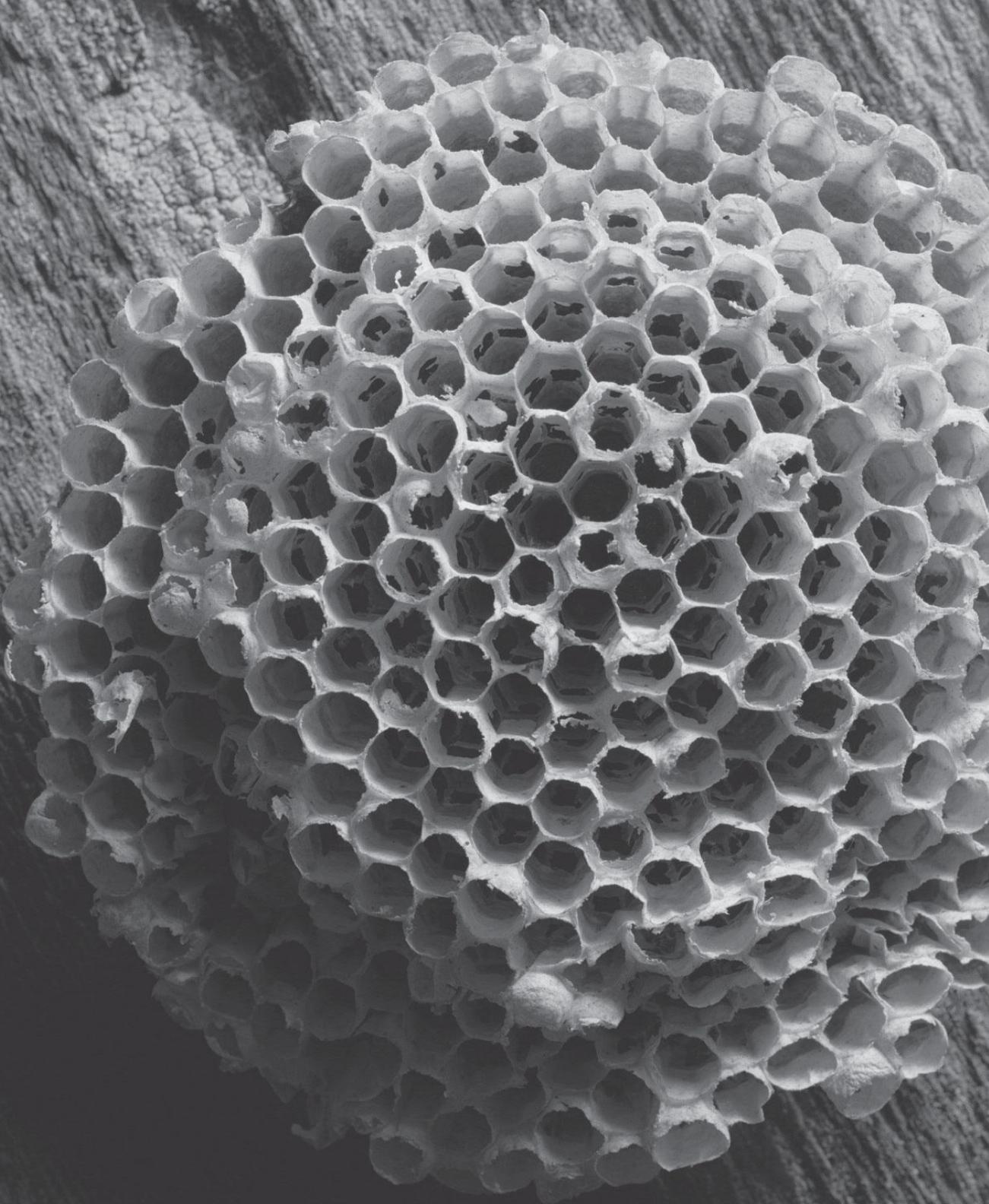
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BY STEVE DELLA SALA





We'll spend some time discussing and learning about the similarities between meads and wines as we draw from the experiences of wine judging and apply them to our honey wine. It is recommended that the reader sample a variety of meads and wines in hopes to better understand balance, body, aroma and appearance and how these and other technical terms apply to meads (or just to drink and enjoy them). The information presented will be tailored around the new Beer Judge Certification Program (BJCP) guidelines as the basis of mead judging.

Mead Flaws

There are many flaws that can be encountered in meads that the Judge should be aware and capable of identifying. These problems include incomplete fermentation, boiling of the honey, overuse of fermentation enhancers and fruit extracts.

HOW TO JUDGE Meads

Mead is the oldest known fermented beverage. This article is intended for mead enthusiasts interested in learning the fundamental aspects of how to judge, understand and appreciate meads. Hopefully, this information will be useful whether you hope to become a mead judge or are just interested learning more about this ancient beverage.

Incomplete Fermentation

This is perhaps the most common problem encountered during the brewing of meads, especially traditional types. Due to the nature of honey and its various mechanisms that inhibit spoiling (such as peroxide), it is common for the brewer to bottle the beverage prior to completion of fermentation. Since most homebrewers are familiar with one to two weeks of fermentation for beer, they believe that the slow bubbling of the airlock means that the mead is done, and thus, the honey and water solution that is thought to be "mead" is bottled. If a mead is oversweet with little alcohol, or



if carbonation is developing in a still mead, it may be under fermented.

Boiling of Honey

This technique carries over from making beer. However, boiling honey for sanitation is not necessary, since honey is sterile from the hive. Boiling honey will only strip it of all the wonderful aromas that add essential character to the final product. It will also change the sugar structure of the honey, resulting in adverse effects to the overall body. The most aromatic of the common honey types are orange blossom and wild flower. Meads made from these types of honey should have a strong floral and honey aroma. The BJCP guidelines for traditional meads state that "honey aroma should dominate". If there is little honey, or none, in the nose, it is a good sign that it has been unnecessarily boiled away.

Fermentation Enhancers

To compensate for slow fermentation associated with most traditional mead brewing, some brewers choose to use fermentation enhancers. In small doses, they can work fine; however, given the delicate flavor of honey, they are easily detected if overused. A sure sign of their presence can be found in the off flavors associated with their addition.

Fruit Extracts

Fruit extracts are commonly used in the making of melomels, alone or with actual fruit. Their effect in melomels create high fruit aroma and if used too much, may create a lollipop taste. Again, balance between aroma, flavor and color should help in determination of the presence of extracts. Extracts tend to be all up front with flavor and leave little to depth. As a purist, I believe that real fruit can't be beat. At times, I find it necessary to enhance the aroma of a final melomel by adding minimal amounts of extract, but not enough to overpower the nose or taste. BJCP guidelines for melomels states that "there should be a balanced honey character".

Similarities between Wines and Meads

Although meads are the oldest form of alcohol known to man, they have become, in many ways, a lost art. For the purpose of setting up a broader perspective of

mead, it's helpful to know something about its history. Mead is a truly amazing beverage; for millennia it was the beverage of choice. Over time, however, honey became too expensive to continue brewing. This was especially true when fermentation became common knowledge, and mass-produced beverages were being developed. At some point in time, people began to look for alternative forms of fermentable sugars to produce a more economical brew.

One of the many alternatives that succeeded was the less expensive grape, and wine quickly began its dominance of the market. In its beginning, wine was initially compared to mead. As time went on, mead-making became a lost art, and aside from a small town in England and other scatter places in Europe, meads virtually became extinct. With the loss of meads and the generations that knew them, the comparison of wines to meads was no longer observed.

Interestingly, if wines were initially compared to meads, there must have been some startling similarities. In fact, if you read the new BJCP Guide to Beer Styles for Home Brew Beer Competitions, it states that "most will be wine-like, with the warming presence of alcohol", thus acknowledging the similarities.

Once we accept the similarities between these beverages, it affords us an opportunity to tap into an entire world of knowledge and experience that may not have been previously considered. Classifying, categorizing, judging and tasting wines has evolved into a fine art through centuries of effort by wine connoisseurs and sommeliers. If wines and meads are indeed similar, then why not utilize some of the wine judging techniques used by sommeliers for the judging of meads?

Tasting and Judging Meads

It is possible to implement wine judging techniques for mead without violating BJCP guidelines. Utilizing these techniques will help the judge to identify important characteristics of the mead as well as detect flaws.

Visual Inspection

When judging beer, it's important to catch all the volatile aromas (such as hops

and yeast) before they dissipate; thus the reason for the smelling of the beer prior to further examining. When examining wines however, it is standard to hold the visual inspection as the first part of judging and appreciation, in order to make several important observations prior to smell and taste.

To the sommelier, appearance and color are key elements in any quality assessment. There is even an ongoing debate in the wine community as to the importance of appearance when scoring wines. Some say that it should be held to as much as 40% of the overall score, while others say less. In general, all agree that appearance should be worth no less than 20% of the overall score. BJCP values appearance as 6 points (3 for color and 3 for clarity) out of 50, making it only worth 12%.

So what is so important about visual appearance that the wine world would even consider it as 40% and settle for no less than 20% of overall scores? Well, many important factors about the wine—and mead—can be determined by visual inspection alone.

Appearance

The primary characteristics that a wine Judge looks for in appearance is the clarity (limpidity) of the wine as well as the surface (meniscus) or disc of the wine. A limpid, crystalline appearance can be the first indication of a "fine" wine. A dull, lusterless appearance is indicative of a "poor" wine. When these very same observations are applied to meads, the same comparisons of fine and poor hold true.

Clarity

Setting aside braggots (barleyed meads) for now, most meads are nothing more than honey with the possible addition of fruits or vegetables (melomels). Without all the complications associated with fermentable and non-fermentable grains, there should be nothing to cloud a mead, if fermentation is done correctly and clean. BJCP guidelines state that "clarity may be good to brilliant," supporting the fact that cloudy meads are not favored.

The world of wine also describes clarity with words such as "brilliant" for a perfect crystal-clear appearance; "bright" for

slightly less, and "clear" for an acceptable degree of clarity. For less attractive and troubled wines, terms are used such as "dull" for a minor fault; "hazy" for a serious problem, and "cloudy" for something totally unacceptable.

These attributes and terminology can also be applied effectively to the judging of meads. As they are scored to these qualifications, it is likely that meads observed as "brilliant" will be "good" meads, and the "cloudy" will be seriously flawed. The reason why this is a valid observation for both wine and mead is that haziness or cloudiness are significant signs of flaws such as exposure to air (oxidized), cold and heat, prolonged exposure to light, absence of sterility, unstable tannins from added fruits, infections, or yeast proteins.

Surface

During wine tasting, sommeliers will spend some time holding a filled glass to the light while rotating (not swirling). During this procedure, they are carefully looking at the upper surface (meniscus) of the beverage. Given the color and body similarities of wines and meads, these same analogies apply to both. A quality wine or mead will have a bright, shiny and reflective meniscus and if the surface is flat, dull or has a "matte" finish, it is indicative of a serious flaw. Such problems can be attributed to wild yeast or bacteria present, or even oxidation.

Flocculation

This is another observable fault that you can encounter in both wines and meads. Flocculation is nothing more than a high-tech term used to describe clustered or lumpy particles that are adrift in the beverage. This is usually indicative of an undesirable yeast growth or infection and should be scored accordingly.

Color

You don't have to be an expert to appreciate a beautifully colored and clear mead. There is a psychological factor associated with the overall appreciation of a wine or mead based on the likes or dislikes of its color. It is also possible for color to influence the way people react to certain smells and tastes. These subjective opinions can great-

ly affect the overall scoring of the beverage, and an experienced judge is careful not to let his or her opinions or preference of the color get in the way of the task at hand.

In the world of mead, how do we know what color the mead should be? This is a difficult task, since honey itself varies drastically in color, from almost pale whitish yellow to dark golden brown. The differences in color are based on the type of honey and its origin. But even a specific type of honey, such as orange blossom for example, can vary in color slightly from season to season. This can occur because the moisture content of the honey is different, or perhaps wildflower honey was introduced from bees that wandered off and refused to stay in the orange grove as intended. To make matters worse, melomels or braggots add more factors to the equation, such as fruits, vegetables and spices.

So what do we do? Well, fortunately for us, color is every bit as complicated in the world of wine as it is for meads. Wine col-

ors are subjected to different noble grapes, climates, soil conditions, aging and a whole list of other variables. The good news is that the world of wines successfully deal with the many colors, so there is hope for meads. It is helpful to draw from the experiences of wine judges and what they look for in color.

Tint, or hue, and the depth, or density of the color are two major factors regarding overall color in the world of wines. The skins of the grapes play a primary factor in their overall final color. In meads, it is the characteristics of the honey, the type of fruit or vegetable (if any), or other additives, such as malts or spices. What do various colors and depths tell us about wine, and more importantly, about meads?

A "good" color wine is indicative of good extraction from fully ripened grapes. It may be safe to say that a "good" color melomel can help the Judge to determine if the fruit present is derived from real fruit, concentrates, or extracts. This can be somewhat obvious with *(continued on page 57)*



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Striking Gold in Alaska

BY GREG KITSOCK

"What you're tasting is a little splash of history from 100 years ago," announces Geoff Larson, president of the Alaskan Brewing & Bottling Co. in Juneau, AK. The setting is the Brickskeller Restaurant in Washington, DC, and the wait staff is passing around plastic cups filled with a mahogany-colored liquid topped by a cocoa-colored foam. It's Alaskan Smoked Porter, a four-star recipient in *Michael Jackson's Pocket Guide to Beer* and one of the most medal-decked beers in Great American Beer Festival® competition.

Geoff and his wife Marcy (the brewery's vice president) didn't fly across the Continent solely to conduct a beer tasting. Earlier that day, the two had attended a reception at the U.S. Department of State where the Small Business Administration honored them as Alaska's 1999 small business persons of the year. At the soiree, the Larsons met a snowshoe manufacturer

from Vermont whose wares, they can personally attest, come in handy in the Frozen North. It's a small world after all.

Geoff seems happy to visit his old stomping grounds; he graduated from the University of Maryland in College Park, a few subway stops from downtown DC. The 150 or so beer lovers in the audience are elated over the opportunity to sample the Larsons'

beers. A late fall/early winter seasonal, the Smoked Porter is rarely encountered east of the Rockies. Outside Alaska it's sold in Washington, Oregon, Idaho, Montana and Northern California. There are no plans to expand distribution.

"We're saving you \$900," says Larson, referring to the cost of an airplane ticket to Juneau.

Malt at its Best

At the heart of Alaskan Smoked Porter is a complex beer brewed from five malts: pale, caramel,







Geoff and Marcy Larson

Munich, chocolate and black patent. Only one of these malts is smoked over alder wood, confides plant manager Dayton Canaday. (Which one is a proprietary secret.) Of the total grist, Canaday estimates that the smoked malt accounts for "under 20%." Balance is important in this style; too much smoked malt and the beer will wind up tasting like an ashtray.

Hopping consists of Chinook and Willamette for bittering, Willamette for aroma. Alpha acid content amounts to 42 to 45 IBUs, estimates Canaday.

Alaskan Brewing Company taps into the municipal water supply for its brewing needs. Nearby glaciers are a source of H₂O that's remarkably soft and free of vegetable matter. "We like to boast that we pre-age our water for 10,000 years," laughs Geoff Larson.

Fermentation

Canaday ferments the Smoked Porter with the same ale yeast that the brewery uses for its other products. Fermentation takes place at a higher temperature than the flagship Alaskan Amber to give the porter a



The Alaskan Brewing Co.

slightly fruity character, which has been described as raisiny or plummy or even cherrylike. Primary fermentation takes a week to 10 days, secondary fermentation lasts another week. The beer subsequently undergoes a rough filtration that leaves a very small amount of live yeast in the beer (although not enough to call it bottle conditioned, says Canaday). The Smoked Porter is then packaged in kegs and 16-ounce vintage-dated bottles.

"Very complex, with mellow woodiness, roastiness, oiliness, hoppiness, acidity, fruitiness and sweetness" is how Michael Jackson assesses the Smoked Porter.

"The palate is dry with a smoky malt background and a subtle feature of roasted malt," observes Ray Daniels, who has been researching smoked beers for a book to be published in fall 2000. "A luscious smoky cherry note rides across the entire flavor experience..."

"This remarkable beer is the meeting point of porter and the smoked or Rauchbiers of Bavaria..." writes Roger Protz.

Somehow, it's appropriate that such a big beer should come from our largest state. Alaska stretches across as many degrees of longitude than all the lower 48 states combined. The Aleutian Islands in the southwest straddle the international date line, making Alaska the first state—and the last state—to welcome the year 2000. Distances between cities are huge. Juneau, for instance, is 800 miles from Anchorage, and 1,600 miles from Nome.

By the way, if you're thinking of visiting, there is no highway to Juneau. Alaska's capital is surrounded on one side by Gastineau Channel, on the other sides by Mt. Juneau and Mt. Roberts. Transportation in and out is by plane and boat...when the weather permits. Juneau's climate is temperate by Alaskan standards (winter temperatures range from minus 10 to 32 degrees F), but the city receives about 90 inches of precipitation a year. Juneau is also one of the most avalanche-prone cities in North America. Marcy Larson notes that the drive home each day takes her across 11 different avalanche paths. Sometimes, she adds, city authorities will fire a Howitzer to dislodge dangerous accumulations of ice and snow. But if Alaska remains a frontier even in mod-

ern times, think of what life was like for the sourdough prospectors who flocked to the state 100 years ago.

Gold Rush

Secretary of State William Seward purchased Alaska from the Russians for \$7.2 million back in 1867. Many Americans derided the new land as Seward's Icebox, or ignored it entirely, until gold was discovered near Juneau in 1880. Subsequent gold strikes in Klondike (just across the border in Canada's Yukon territory), Nome and Fairbanks doubled Alaska's population during the 1890s. Amenities were scarce, and what social life the pioneers had revolved mostly around the makeshift saloons that sprang up by the dozens. Most were crude structures thrown together out of rough-hewn timber, with two feet of dirt and moss piled on the roof for insulation. During the Alaskan summer, when the sun lingered above the horizon for up to 20 hours a day, many saloons never closed their doors.

Drinks, of course, cost a premium, as a result of the hefty transportation costs. A keg of beer typically wholesaled for \$100-125, more than what a keg of Alaska Smoked Porter costs today in the local market. Currency was in short supply, so miners settled their bar bills with sacks of gold dust. Instead of a cash register, the bartender maintained a scales for weighing out his compensation. If the customer was tipsy, a dishonest barkeep might pour out a little extra gold for his own troubles. One source estimated that this rake-off amounted to 30-40 cents for every \$2.50 that crossed the bar.

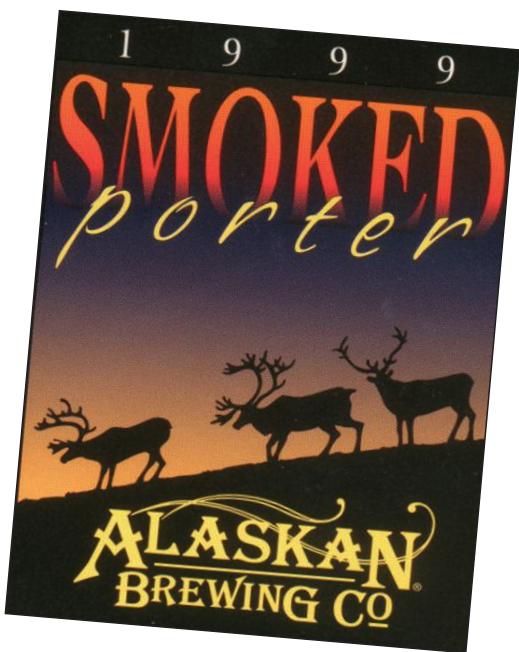
Of the \$150 million in precious metal that was wrested from the frozen earth during the Gold Rush, a large chunk went directly to the saloons. In addition to the high costs of liquid refreshment, lonely sourdoughs threw away small fortunes at the roulette and faro tables, and spent extravagant amounts impressing the dance hall girls. A prosperous miner might drop an average of \$500 a day on a visit to town.

Breweries quickly sprouted to lubricate Alaskan social life. Geoff Larson, in his research, has identified 48 breweries that operated in Alaska before Prohibition. During the peak year of 1899, 22 were turning out beer, including five in the settlement of

Skagway, which served as a gateway to the Klondike gold fields. Many of these frontier breweries were brewpub-sized operations servicing a single establishment; however, one plant in Dyea near Skagway produced a respectable 5,000 barrels a year.

As the surface gold was stripped away, many of the boomtowns evaporated along with their breweries. During the 1930s and 1940s, short-lived breweries operated in Fairbanks and Ketchikan. (Marcy also tells of a floating brewery on a boat off the coast, which the feds quickly shut down.) In 1976, a German conglomerate established Prinz Brau Alaska, Inc. in Anchorage to sell beer to the pipeline workers. The German-style beers, however, failed to draw a following, and Prinz Brau closed in 1979. The plant was subsequently dismantled and shipped to the Dominican Republic, where it now produces Guinness.

The modern chapter in Alaskan brewing history begins in 1979, when Geoff Larson was a student at the University of Maryland, studying chemical engineering and homebrewing in his spare time. While hitchhiking



across the country, Geoff ran out of money near Glacier National Park, Montana, and took a temporary job as a chef to earn some quick cash. There he met his future wife Marcy, who was working as a night auditor. Both were outdoors-oriented people with a

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desire to experience the unspoiled wilderness of Alaska. The craft beer movement was still in its infancy, and the two hatched a plan for opening the first microbrewery in the Land of the Midnight Sun.

After graduating, however, Geoff took a job designing and installing alcohol processing plants, which converted corn husks into ethanol. "He learned quite a bit about welding and all sorts of practical skills," recalls Marcy. "It set him up nicely for the brewery."

Alaska Bound

What brought the Larsons to Alaska was the same lure that attracted tens of thousands of pioneers a century ago: gold. Geoff found work with a gold mine, devising a chemical process for separating the gold from the ore that didn't involve arsenic (an environmental hazard). "In the long run, that job didn't pan out," says Marcy (no pun intended). So in 1984, the two began working full-time on the brewery, which opened in (continued on page 60)

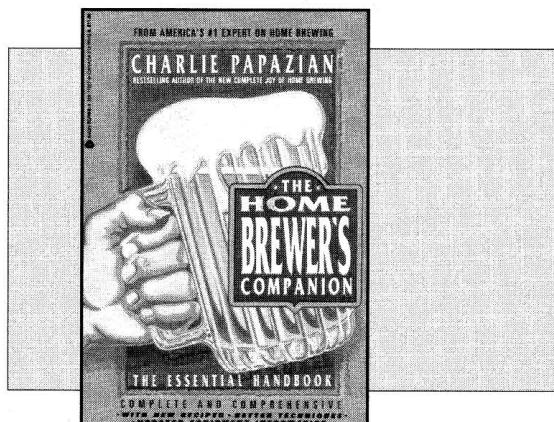
Smoked Porter

If you want a good smoked beer recipe, go to the source. John Maier was named AHA Homebrewer of the year in 1988. He worked for Alaskan Brewing Co. from 1987 to 1989, and has been head brewer for Rogue Ales from 1989 to the present. His two creations, Alaskan Smoked Porter and Rogue Smoke, have won medals at the GABF every year since the Smoke-flavored category was created through 1998 (often finishing first or second).

—Greg Kitsock

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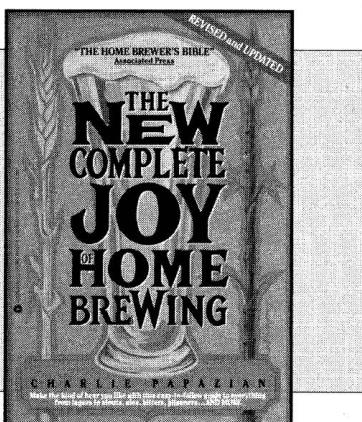
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Ingredients for 10 U.S. gal (37.8 L)

8 lb pale malt (3.6 kg)
1 lb hand-smoked Munich malt (.45 kg)
1 oz Perle hops (28 g)
1 oz Cascade hops (28 g)
Wyeast American ale yeast

- Primary fermentation: 5-7 days
- Secondary fermentation: 5-7 days
- Original gravity: 1.056
- Final gravity: 1.018

Brewing specifics

For smoking the malt, use a Weber grill with a tight-mesh screen. Kindle a low-intensity fire, using alder, beechwood or apple. (Different woods add different flavor nuances to the malt. Alder will give the beer a rich, oily taste, while beechwood imparts a much drier flavor.) Crack and wet grain, spread over screen. Smoke until aroma of malt can be detected from a distance of six inches. Do not burn.

Boil for 90 minutes. Add 1 ounce Perle hops at beginning of boil, .5 ounces Cascades 60 minutes into boil, .5 ounces Cascades at end of boil. Ferment at approximately 65 degrees F (18 degrees C). After bottling, Maier recommends aging the beer in your refrigerator for at least a month to allow the smokiness to mellow out.

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The Beer Ark

The flood waters of light and lighter lager beer continue to rise throughout the world. All the evidence, market data and international trend analyses currently suggest the oceans of the world indeed are salty and the oceans of beer the majority of consumers tend to prefer are lightly hopped, lightly flavored, lightly malted, clear, pale lager beers. Can the statistics and market trends leave any doubt?

Perhaps it's not the doubt I tend to be drawn to, but rather the interesting backwaters and special set of circumstances created by an ocean of light lager whose waters continue to rise. These flood waters have created a unique set of opportunities many entrepreneurial brewers have successfully addressed. The flood waters have also created what one may euphemistically consider a divine intervention—a calling to save the beers of the planet Earth from extinction.

While walking down the long corridors of the train station in Munich I encounter a member of the American Homebrewers Association. He is Belgian. We talk and he is so very supportive of the direction American brewing has taken. He makes a point to tell me, "You can find a greater and truer to tradition variety of Belgian beers in the United States than you can in Belgium. Belgians think they have all the tradition, but we are losing it. It is the Americans who are helping save what we Belgians are losing...but no one will listen to me. They won't believe me when I tell them what is happening in the United States."

A British real ale personality, judging at the Great American Beer Festival®, confides in me, "Good English mild ales are becoming less common in the U.K. I can find better English mild ales in the United States now than I can in the U.K." I myself reflect how new American breweries revived the traditions of English porters and oatmeal stouts. Some beer journalists of fame often note how some

styles of beer might have been near extinction by now were it not for the new brewing revival in America.

Oktoberfest in Munich heralded the comment from Americans and Germans alike, "They're modeling their Oktoberfest beer after Coors Extra Gold [a good beer, but certainly not an Oktoberfest]. The tradition of this great beer style is being diluted...I can find better Oktoberfest-style beers in America." I can't help interject my own opinion by adding that the character of the Munich helles style of lager continues to migrate toward a milder Pils, losing the richness of malt and special character of hops that used to set this beer apart. I too know I can make or find a better helles in the U.S. than I often found in Munich on a recent visit. Though I do believe

in the countryside small brewery traditions and character are still being preserved. But I am concerned for their future.

I often recall driving through the cold and quiet fog and misted forests of the Baltic country Latvia. Seeking one particular brewery we passed quietly as ghosts as we made our final approach to a small farmhouse brewery. Coopers were busy fashioning wooden casks for this locally distributed beer. We arrived. We toured. We shivered. We drank from the wood. Our hearts were warmed. The beer was unknown to the rest of the world yet it was fresh and rich with character; a character indelibly cherished.

This one particular experience is always brought to mind when I recall my world travels and the country beers, enjoyed from small



HOMEBREW BITTERING UNITS (HBUs) are a measure of the total amount of bitterness in a given volume of beer. Homebrew Bittering Units can easily be calculated by multiplying the percent of alpha acid in the hops by the number of ounces. For example, if 2 ounces of Northern Brewer hops (9 percent alpha acid) and 3 ounces of Cascade hops (5 percent alpha acid) were used in a 10-gallon batch, the total amount of bittering units would be 33: $(2 \times 9) + (3 \times 5) = 18 + 15$. Bittering units per gallon would be 3.3 in a 10-gallon batch or 6.6 in a five-gallon batch, so it is important to note volumes whenever expressing bittering units.

INTERNATIONAL BITTERNESS UNITS (IBUs) are a measure of the bitterness of a beer in parts per million (ppm), or milligrams per liter (mg/L) of alpha acids. You can estimate the IBUs in your beer by using the following formula:

$$\text{IBU} = \frac{\text{ounces of hops} \times \% \text{ alpha acid of hop} \times \% \text{ utilization}}{\text{gallons of wort} \times 1.34}$$

Percent utilization varies because of wort gravity, boiling time, wort volume and other factors. Homebrewers get about 25 percent utilization for a full one-hour boil, about 15 percent for a 30-minute boil and about 5 percent for a 15-minute boil. As an example, 1 ounce of 6 percent alpha acid hops in five gallons of wort boiled for one hour would produce a beer with 22 IBUs:

$$\text{IBU} = \frac{1 \times 6 \times 25}{5 \times 1.34} = 22 \text{ IBUs.}$$

METRIC BITTERNESS UNITS (MBUs) are equal to the number of grams of hops multiplied by the percent alpha acid.

casks, made by great men and great women. There is fear that they are destined to be inundated by the need to modernize and become competitive in the international marketplace. In the face of the flood waters their panic grows and almost always a concession to the rising water is to abandon hope and swim amongst the light-lagered waters rather than create a safe harbor, or might I dare say, recognize and take heart in uniqueness, pleasure and flavor.

I believe, as do many of my colleagues that here in the United States of America we have helped to inspire an Ark. Let's call it

the Beer Ark. Not filled with things American. How odd. Wouldn't the rest of the world assume that if Americans were to create an Ark to protect treasures from impending doom, that of course we'd protect our own treasures? For this moment in time, our American homebrewer and craft brewer have uniquely embraced a sense of tradition. We the grass roots of the beer world have created something unique in the world of things important. It will be lasting and of immeasurable value for generations to come.

We have inadvertently created the Beer Ark. It is a magnificent sailing vessel floating

above the light-lager oceans of the world, harboring with care and passionate enthusiasm the great beer traditions of the world. Little does the world realize the care and research many American homebrewers (as well as homebrewers turned commercial craft brewers) have involved themselves in, taking aboard the ark the world's well and lesser known beer types. With heart and care and without pretension American homebrewers and beer enthusiasts seem to be scouring the earth for threatened and lost beers, to revive and explore them here in the U.S.

This may seem pretentious of me, an American writer, observer and beer enthusiast myself. But I share these thoughts with you not because they are only my own, but because they are also those of knowledgeable people who respect the traditions of beer and are not American.

The Beer Ark is my own perception, though not without precedent in the world of traditions and cultural treasures. As the waters continue to rise the question becomes, what will we take on board? Fortunately arks are only needed until the waters recede. Hopefully craft and homebrewers as well as consumers will take heart in the culture of beer and traditions and the day will soon arrive when we don't need an ark.

So let's cut the shuck and jive and get on with a recipe.

Simplicity is the beauty of this extraordinary mild ale. The British have orphaned this style, so why not raise it as our own? With a foundation of American-bred Crystal and Cascade hops this mild brown ale is both refreshing and respectful of its British roots. Cascade heresy? Not at all. It is lively, yet with a generous dose of caramel maltiness and sweet cocoa. Light, refreshing and yes it has a ray of drinkability that is crafted to satisfy. You don't have to devise an all-grain recipe. Use quality yeast and cleanliness and your beer will be worthy of the Beer Ark.

Noah's Mild Brown Ale

Here is a recipe using malt extract and simple procedures for 5.5 U.S. gal (21 L).

Malt

- 6 oz crushed black patent malt (170 g)
- 6 oz crushed chocolate malt (170 g)



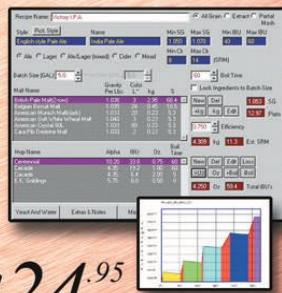
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World Beer Cup 2000

The quality and diversity of beers available from around the world prove that brewing excellence knows no borders. Quality beers brewed to traditional styles are now being brewed by companies large and small outside the areas of style origin. Belgian styles in Japan, altbiers in the U.S., pale ales in Germany, bock beers in Brazil are some of the interesting and developing anomalies in the changing international marketplace. Consumers are discovering and enjoying a wider variety of new and traditional beer styles—some brewed close to home and others brewed on the other side of the world. Traditional beer styles are not only celebrated in their native lands, but are now being shared, brewed and enjoyed worldwide. The number of new styles and style interpretations appears to be limited only by the creativity of the world's brewing community.

As consumer choices expand, the availability of information becomes more important. With this in mind the Boulder, CO, based Association of Brewers developed and staged The World Beer Cup® International Competition. The World Beer Cup is staged every two years (1996, 1998 and the World Beer Cup 2000) to celebrate the art and science of brewing by recognizing outstanding achievement. A professional panel of beer judges honors the top three beers in 70 categories with gold, silver and bronze awards. The results of this prestigious competition help educate consumers about different beer styles and flavor profiles while promoting international brewing excellence.

The World Beer Cup® International Competition judging will take place April 25-26, 2000, in Milwaukee, WI. The finalists will be announced April 28, 2000, at the 17th Institute for Brewing Studies National Craft-Brewers Conference in Milwaukee, WI. The winners will be announced at an awards presentation on June 19, 2000, in New York, NY.

For more information visit the World Beer Cup 2000 on the web at <http://beertown.org/wbc>

- 1.33 lb crushed crystal malt
(20 °Lovibond) (0.6 kg)
- 3.5 lb extra light dried malt extract
or
- 4.3 lb light malt extract syrup

Hops

- 0.5 oz Cascade hops (2.75 HBU/77 MBU) pellet-60 minutes (14 g)
- 1.0 oz American Crystal hops
(4.2 HBU/118 MBU) pellet-20 minutes (14 g)

- 0.25 oz American Saaz pellet hops-dry hopping (7 g)
 - .25 tsp powdered Irish moss
 - .75 cup corn sugar/glucose (priming)
(180 mL)
 - ale yeast, either White Labs English Ale Yeast or Wyeast Thames Valley 1275 Ale Yeast
- Original gravity 1.032 to 1.036 (8 to 9 °B)
 - Final gravity 1.008-1.010 (2 to 2.5 °B)
 - IBUs: about 16
 - Approximate color: 22 SRM (44 EBC)
 - Alcohol: 3.3% by volume
 - Apparent yeast attenuation: about 74%

Add the malt extract and Cascade hops to three gallons of boiling water. The total boil time will be 60 minutes. When 20 minutes remain add Crystal hops. When 10 minutes remain add Irish moss. After a total wort boil of 60 minutes turn off the heat and cool the pot of wort in a cold water bath for 20 minutes, then strain and sparge into a sanitized fermenter to which you've added 3 gallons (11.5 L) of water. It helps to prechill (33 degrees F (1 degree C)) the water added to the fermenter rather than simply adding tap water. Top off the volume to 5.5 gallons (21 L).

Pitch a good dose of healthy active ale yeast and primary ferment at temperatures of about 65 to 70 degrees F (18 to 21 degrees C); make sure nearly all of the fermentation is complete before racking, adding the dry-hop pellets and "cellar" (secondary fermentation) at about 55 degrees F (13 degrees C) for about 2 weeks. Your net yield will be about 5 gallons (19 L) to the secondary.

Prime with sugar and bottle when complete.

World traveler Charlie Papazian is the founding president of the Association of Brewers and the author of numerous best-selling books on homebrewing. His most recent books are *Home Brewers Gold* (Avon, 1997), a collection of prize-winning recipes from the 1996 World Beer Cup Competition, and *The Best of Zymurgy* (Avon, 1998) a collection of the best articles and advice from 20 years of *Zymurgy*.



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Three of the recipes in this Winners Circle call for decoction mashing. But in this modern era of highly modified malts, why go to the extra time and trouble? Well, after talking with some of the brewers of these beers, the main reason is the extra malt aromas and flavors encouraged by the decoction mash. They seem to think the difference is significant enough to make their beers winners. Also, decoction mashing is more efficient because it breaks down and gelatinizes more of the grist starches for conversion, resulting in a desirably lower wort pH, and it gives you cleaner wort because more trub precipitates out of solution during the decoction boiling, which is subsequently filtered out during the sparge. So if you haven't decocted, give it a try and judge for yourself.

If you are going to commit to a decoction mash, it is suggested that you pick up a copy of Greg Noonan's *Brewing Lager Beer*—his explanation of the decoction process is very thorough. But if you don't, here are a few things to remember: First, it's better to pull too large a decoction and overshoot your temperature than the other way around. Have some ice cubes on hand if you need to cool down a pulled mash rapidly. Second, stir constantly! Scorching is bad news and when using most home decoction systems it's easy to do. Third, remove the thickest part of the mash when you pull your decoction(s). Finally, make your saccharification rests at least 15 minutes long; the same goes for boiling periods. Remember, German brewers have been doing this for years, so get out those kettles, have plenty of thermometers on hand, and go to it. We're rooting for you.



Every gold-medal winning recipe from the AHA 1999 National Homebrew Competition was printed in the 1999 Nov/Dec Zymurgy (Vol. 22, No. 6) "Winners Circle."

Scottish-Style Ale



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

**John Avard, Chris Columbus and Matthew Goody,
Manchester, NH**

**"WAG Light Scottish"
Scottish-Style Light Ale**

Ingredients for 5 U.S. gal (19 L)

5 lb extra-light dry malt extract (2.27 kg)
1 lb CaraPils malt (.45 kg)
2 oz roasted barley (57 g)
2 oz smoked malt (57 g)
1 oz Fuggle hops, 5% alpha acid (28 g) (60 min.)
1 oz Fuggle hops, 5% alpha acid (28 g) (30 min.)
Wyeast No. 1728 Scottish ale yeast
.75 cup dextrose (177 mL) to prime

- Original specific gravity: 1.042
- Final specific gravity: 1.012
- Boiling time: 60 min.
- Primary fermentation: 14 days at 55 degrees F (13 degrees C) in glass
- Secondary fermentation: 3 weeks at 55 degrees F (13 degrees C) in glass

Brewers' Specifics

Steep grains at 160 degrees F (71 degrees C) for 30 minutes. Remove grains and boil with extract for 60 min.

Judges' Comments

"Rich, nutty flavor, prominent smokiness. Very nice! Nearly flawless beer. Less smoke and perhaps a bit less bitterness would be perfect."

"Nice, well-made beer. Caramellike malt character is evident; lower hops for style."

American-Style Lager



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Weston Sampson, Orlando, FL
[Untitled]

American Premium Lager

Ingredients for 5 U.S. gal (19 L)

7 lb Pilsener malt (3.18 kg)
.5 lb CaraPils malt (.23 kg)
.5 oz Tettnanger hops, 4.7% alpha acid (14 g) (60 min.)
1 oz Tettnanger hops, 4.7% alpha acid (28 g) (20 min.)
.5 oz Tettnanger hops, 4.7% alpha acid (14 g) (5 min.)
Wyeast No. 2124 Bohemian Lager yeast
1.25 cup dry malt extract (296 mL) (to prime)

- Original specific gravity: 1.040
- Final specific gravity: 1.012
- Boiling time: 60 min.
- Primary fermentation: 2 weeks at 48 degrees F (9 degrees C) in glass
- Secondary fermentation: 6 weeks at 34 degrees F (1 degrees C) in glass

Brewer's Specifics

Mash grains using a single decoction mash schedule.

Judges' Comments

"The flavor balance and crispness are very good. Great beer! Thanks."

"Excellent job. Waiting for the head to clear is a little frustrating. The motion of the riding mower would bubble this out of the bottle, but here at the table it stands up well."

Vienna/Märzen/ Oktoberfest



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Mike Kilian, Fenton, MO

"Vienna"

Vienna/Märzen

Ingredients for 5.5 U.S. gal (20.8 L)

5 lb Pilsener malt (2.27 kg)
5 lb Munich malt (2.27 kg)
.5 lb CaraPils malt (.23 kg)
1 oz Hallertauer hops, 5.6% alpha acid (28 g) (60 min.)
.5 oz Hallertauer hops, 5.6% alpha acid (14 g) (30 min.)
Wyeast No. 2124 Bohemian Lager yeast
forced CO₂ to carbonate

- Original specific gravity: 1.052
- Final specific gravity: 1.008
- Boiling time: 70 min.
- Primary fermentation: 7 days at 54 degrees F (12 degrees C) in glass
- Secondary fermentation: 20 days at 50 degrees F (10 degrees C) in glass
- Tertiary fermentation: 3 months at 40 degrees F (4 degrees C) in glass

Brewer's Specifics

Mash grains using a double decoction mash schedule.

Judges' Comments

"Clean of esters or any defect. Nice beer. Some more hop bitterness can help it."

"Right on. Just enough of everything. Yummy good. A bit more viscosity. A bit more . . ."

German Ale



BRONZE MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Mike Riddle, Napa, CA

"98 Kölsch"

German-Style Kölsch

Ingredients for 10 U.S. gal (37.85 L)

13 lb pale malt (5.89 kg)
1.5 lb wheat malt (.68 kg)
1.5 oz Hallertauer hops, 4.8% alpha acid (43 g) (60 min.)
1 oz Hallertauer hops, 4.8% alpha acid (28 g) (30 min.)
1 oz Hallertauer hops, 4.8% alpha acid (28 g) (15 min.)
Wyeast No. 2565 Kölsch yeast

- Original specific gravity: 1.044
- Final specific gravity: 1.016
- Boiling time: 90 min.
- Primary fermentation: 5 days at 67 degrees F (19 degrees C) in glass
- Secondary fermentation: 7 days at 67 degrees F (19 degrees C) in glass

Brewer's Specifics

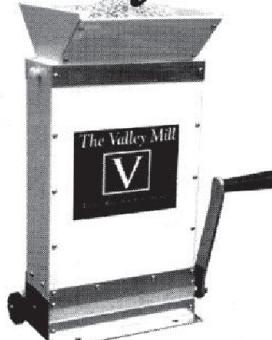
Mash grains at 154 degrees F (68 degrees C) for 90 minutes.

Judges' Comments

"Good, light, well-balanced. Good beer!"
"Nice malt aroma. Good use of hops.
Clean. Could be a tad maltier, but this is a good job."

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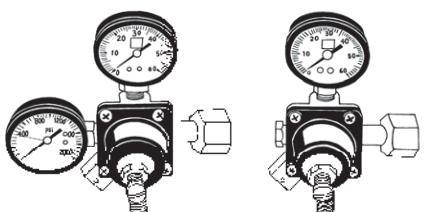
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German-Style Dark Lager



SILVER MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Wesley W. Wilson, Honolulu, HI

"German Schwarzbier"

German-Style Schwarzbier

German-Style Wheat Beer



SILVER MEDAL

AHA 1999 NATIONAL HOMEBREW COMPETITION

Dan Gross, Gettysburg, PA

"El HefeWeizen"

German-Style Weizen/Weissebier

Ingredients for 5 U.S. gal (19 L)

- 4 lb amber malt extract (1.81 kg)
 - 4 lb dark malt extract (1.81 kg)
 - .75 lb 80 °L crystal malt (.34 kg)
 - 6 oz chocolate malt (170 g)
 - 4 oz black malt (113 g)
 - 2 oz Hallertauer hops, 3.9% alpha acid (57 g) (60 min.)
 - .5 oz Liberty hops, 5% alpha acid (14 g) (30 min.)
 - .5 oz Liberty hops, 5% alpha acid (14 g) (5 min.)
 - Wyeast No. 2206 Bavarian lager yeast
 - forced CO₂ to carbonate
- Original specific gravity: 1.050
 - Final specific gravity: 1.011
 - Boiling time: 60 min.
 - Primary fermentation: seven days at 50 degrees F (10 degrees C) in glass
 - Secondary fermentation: 90 days at 48 degrees F (9 degrees C) in glass
 - Tertiary fermentation: 14 days at 48 degrees F (9 degrees C) in steel

Brewer's Specifics

Steep grains for 30 minutes, then remove and boil wort with extract for 60 minutes.

Judges' Comments

"Good balance. Malt flavor low in sweetness. Very nice example of style."

"Damn, I could drink a lot of this! Very complex, well-balanced beer. Kudos! Couldn't find a flaw."

Ingredients for 5 U.S. gal (19 L)

- 6 lb wheat malt (2.72 kg)
- 4 lb pale malt (1.81 kg)
- .5 oz Hallertauer hops, 5% alpha acid (14 g) (120 min.)
- Wyeast No. 3068 Weihenstephan weizen yeast
- 4.25 oz dextrose (120 g) (to prime)

- Original specific gravity: 1.046
- Final specific gravity: 1.013
- Boiling time: 120 min.
- Primary fermentation: 7 days at 70 degrees F (21 degrees C) in glass
- Secondary fermentation: 8 days at 65 degrees F (18 degrees C) in glass

Brewer's Specifics

Mash grains using a double decoction mash schedule.

Judges' Comments

"Very lively carbonation. This is wonderful. The beer has quite a lot of spicy character. Great job."

"I like this beer. Nice, clean profile and great finish. Well done."

Amahl Turczyn is a 1998 GABF Gold Medal-winning professional brewer.

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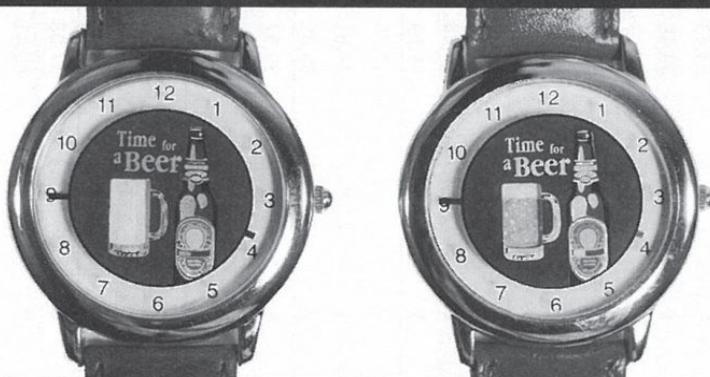
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It's the Beer Talking (from page 5)

Three years ago former AHA staffer Brian Rezac created the AHA Big Brew. The original idea was to have a day of simultaneous brewing around the world. We were hoping to get the results in the Guinness Book of World Records, but they have not been interested yet. (Maybe the year they show a flicker of interest is the year we make it a slam dunk and brew a Guinness stout clone.) Big Brew I was the Rob Moline's recipe for the Big 10/20 Barleywine. Big Brew II was Bob McCracken's recipe for Collaborator Milk Stout. For Big Brew III, the style will be an American Pale Ale. The extract and all-grain versions of the recipe will be available in the next *Zymurgy* and on www.beertown.org.

Thanks to Michael Bane

I raise my glass to Michael Bane. This issue marks the final issue for Michael Bane with *Zymurgy*. When Michael took over *Zymurgy* on a contract basis in 1997, he brought the expertise of working on 10 magazines to the AOB, and we needed his expertise badly. Michael succeeded in

shortening the time line for producing an in-house magazine by a full month. He worked hard with Stephanie and the rest of the production staff to rethink the way we went about making a magazine. The timing coincided with a downturn in the homebrewing industry and a dramatic reduction of advertising dollars coming in. More and more member dollars were needed to supplement *Zymurgy* and Michael adjusted what the magazine is to fit the budgetary constraints and delivered a quality magazine on time every time. While *Zymurgy* has long had the header "For the Homebrewer and the Beer Lover," that vision has only been realized under Michael's watch. I'll always admire Michael's passion for living and beer. I'll admire it from my armchair as I do not share Michael's passion for extreme sports, such as the Iditarod 100-mile run in Alaska.

Welcome to Ray Daniels

Michael streamlined the process so well with *Zymurgy* that the Association of Brewers is now able to have a single editor man-

age both *Zymurgy* and *The New Brewer*, the magazine put out by our sister organization, the Institute for Brewing Studies. For those of you who have not heard, Ray Daniels, famed author of *Designing Great Beers* and several other brewing books and founder of the Real Ale Festival, has taken over the editor position for both *Zymurgy* and *The New Brewer*. Amahl Turczyn returns to the association as associate editor.

AOB Board Reorganization

In order to better represent the four divisions that make up the Association of Brewers, the AOB Board of Directors has increased the participation of the divisional boards of advisers on the AOB Board. Right now, the advisory board chair of the AHA and the IBS also serves on the AOB Board of Directors. In July of 2000, the AHA, the IBS and Brewing Matters (Great American Beer Festival®, World Beer Cup®) boards will each have three representatives and Brewers Publications will have one member on the AOB Board of Directors. A year ago we had our first AHA advisory board election, so now there is a conduit for direct member involvement on the AOB Board of Directors.

AHA Board Elections

In 1999 the general membership of the AHA elected Rob Moline as the first new Board member since the bylaws were changed to allow direct election to the board. The May/June *Zymurgy* will include candidate statements and a ballot for the next round of elections. I am hoping that more members will vote this time around than last time, as I am excited to continue our transition into a grassroots, bottoms up group. I am still seeking AHA members to serve as liaisons to provide a better AHA presence around the country and stronger link for homebrewers and the AHA on membership, program and other issues that affect homebrewers. Contact paul@aob.org if you are interested in getting involved as an AHA liaison. Thanks.

Well, Paul has pretty much drank me and is probably going to fill up his glass with barleywine or something of that ilk. I'll see you next mug.

Homebrewer and former homebrew shop owner Paul Gatzka is the director of the AHA. ☺



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Dear Professor (from page 18)

For my prize meads, barley wines and strong laying down brews I dip the capped neck of each bottle into melted paraffin to serve as an added barrier. It seems to work well. Come taste my 13 year old exquisite barleywine!

Aging gracefully,
The Professor, Hb.D.

Back to Africa

Dear Professor Surfeit,

I enjoyed the recounting Charlie Papazian's African journey in the recent *Zymurgy* article 'A Castle Golden Pilsener, Please'. As an enthusiast of 'unusual' grain brewing, Charlie's article allowed me a glimpse into a world I will probably never see first hand.

You may be interested in my Gluten Free Brewing Project, which makes extensive use of malted sorghum. Although my beers are not of the type you describe in your article, I thought you might be surprised to see an American brewer making use of such an indigenous ingredient, hopefully on a commercial scale someday.

Here is the direct link: <http://www.fortunecity.com/boozers/brewerytap/555/gfbeer.htm>

I am planning to have at least one style of my gluten free beer available for sampling at the Second Annual MCAB event here in St. Louis next March. Hope to see you there.

Sean Sweeney
Gluten Free Brewing Project and the
Amateur Hop Growers Journal

Dear Sean,

Thanks for your added insight and enthusiasm. Sorry I can't make the MCAB in St. Louis. AHA Director Paul Gatza has it on his schedule to attend. Have a Gluten free for me.

The Professor, Hb.D.

Cocoa Oil and Foam

Dr. Professor Surfeit,

I brewed a batch of Stout last weekend and I am concerned about the head retention of this batch. In the spirit of brewing what you can't buy, I decided to add some natural cocoa powder that we had pur-

chased from a spice shop. I added .25 cup of cocoa in the last 15 minutes of the boil.

Here is my concern. After the wort was cooled, I noticed that there seemed to be an oily sheen on the surface. I transferred the wort from the kettle to the carboy by siphon. I let the wort splash into the carboy from the top to aerate. Typically, this causes a one to two inch thick foam to form. With this batch, there was no foam. Fermentation started quickly and was very active, but very little foam was formed on the surface. Once fermentation began to slow, there was almost no foam at all.

Is it possible that the natural oils in the cocoa are inhibiting head retention? This was an all-grain five gallon batch with nine pounds of grain and one pound of flaked barley. It was mashed with a single step infusion at 155 degrees F (68 degrees C). Not to sound too cliché, but this has never happened to me before.

I've seen lots of recipes that call for cocoa or unsweetened chocolate, but there is no mention of the effect on head reten-

tion. Any thoughts on what might have gone wrong?

Thanks.
Paul Vezzetti
Raleigh, NC

Dear Paul,

I bet your stout is long gone by now and I'll bet you noticed a good head in the final pour. Why? Because you siphoned the beer from your primary into another vessel, added sugar and then siphoned again into bottles. Your siphon was submerged below the film of oil and thus you didn't transfer any of the oil into the final bottles. Same things have happened to this old man, but with foam aplenty in the final mug.

Relax Don't Worry
The Professor, Hb.D.

Send your homebrewing questions to "Dear Professor", PO Box 1679, Boulder, CO 80306-1679; FAX (303) 447-2825 or professor@aob.org via e-mail.



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More Thoughts of a Bitter Man

Steve Hamburg teamed with fellow Chicagoan Tony Babinec to present some thoughts on English bitter ("Confessions of Two Bitter Men," *Zymurgy*, Summer 1995). Here's what he had to say recently.

"For me, English beers always evoke images of their greatest contribution to western society—the pub. With very rare exceptions, English beers are meant to be savored over long sessions in the pub. They are the perfect accompaniment to conversation—they have flavor and just enough alcohol to loosen the tongue and free a bit of passion on just about any subject, whether it's work, politics, sports, film, etc."

"I was motivated to brew and drink real ales because they are the epitome of social drinks. They are low enough in alcohol and carbonation to avoid getting sated, smashed and gassy. The genius of traditional English brewers is their ability to produce beers of great flavor and character, yet relatively low in alcohol."

"When brewing English-style beers, keep in mind that these are more subdued, elegant beers. Balance is critical—beers are almost never 'over the top' with hops or malt. Also, because real ales are meant for consumption in the pub, drinkability is key. Almost without exception, the primary styles of beer in the English Isles are fairly low in alcohol, meant for relaxed pub drinking."

"A key on serving: nobody, but nobody accepts any sort of haze in an English beer. Cask beers should be served absolutely bright. Homebrewers don't need to filter their beers, but a good fining agent helps. And bottle-conditioned beers should be carefully served off the yeast."

The Sun Never Sets... (from page 29)

Serve & Enjoy

Carbonate your English-style beers with a light hand. Ideally, this will be done by cask-conditioning. If not, try to achieve a level of about one volume of CO₂. A typical "keg" or bottled beer exceeds two volumes, and often approaches three volumes.

Serve cool, around 50 to 52 degrees F (10 to 11 degrees C). Finish the beer, then pour another. I think you're starting to get the idea.

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Best Bitter

Steve Hamburg, Chicago, IL

Ingredients for 5 gallons (19L)

- 7.25 lb Hugh Baird English pale malt (3.3 kg)
.5 lb 60 °L crystal malt (.23 kg)
.25 lb flaked wheat (.11 kg)
1.33 oz Northern Brewer whole hops, 7.1% alpha acid (38 g) (60 min.)
.5 oz Styrian Golding hop plug, 5% alpha acid (dry-hop in keg/cask) (14 g)
Wyeast No. 1968 London ESB Ale yeast
1.4-2 oz cane sugar as syrup for priming (41-59 mL)
finings (optional)

- Original specific gravity: 1.044
- Final specific gravity: 1.011
- Boiling time: 90 minutes
- Primary fermentation: 1 week at 65-68 degrees F (18-20 degrees C) in glass
- Secondary fermentation: 1 week at 65-68 degrees F (18-20 degrees C) in glass

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Burtonize brewing water. Single-infusion mash at 150 degrees F (66 degrees C), 90 minutes. Raise to mash-out at 170 degrees F (77 degrees C). Sparge at 170-175 degrees F (77-79 degrees C) and collect wort.

Coates, undated (<http://www.mindspring.com/~strecorsoc/macaulay/title.html>).

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Jim Dorsch is the publisher of *Mid-Atlantic Brewing News*.

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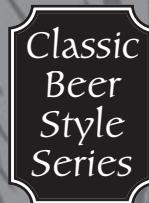
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How to Judge Meads (from page 39)

fruits such as blueberries, raspberries, blackberries and any other dark skinned fruits. If real fruits or concentrates are used, there is a color imparted to the mead by the fruit. Blueberry melomels will be blue, and raspberry melomels will be red.

It is more challenging, but still possible, to identify real fruit from extract with pears, peaches and the "whiter" fruits. The whiter fruits will impart a golden and possibly reddish color to the mead. If extracts alone are used for the fruit flavor, the colors and flavors will be more like a "lollipop" than a fermented fruit.

Depth

There is more to just the observation of general color of mead to consider. The next level of color to be observed is the depth. Depth can be thought of as how vivid the color of the mead appears. Depth becomes more significant in observations of melomels since it can aid the judge in determining if real fruit or extracts were used. Those made with real fruit will tend to have more depth than ones produced from extracts. In addition to fruit affecting depth, the amount of alcohol will also contribute to this factor. This is primarily due to the fact that the pigments from the fruit are generally not very soluble in water, but they are soluble in alcohol. If a melomel is fermented to completion with a significant amount of alcohol, it should have greater color depth than one that is lower in alcohol.

This can be somewhat misleading though, as can be seen in the following example. Depending on the brewer, one raspberry melomel may have twice as much fruit in it than another. This is where only experience in making, tasting and judging meads can provide the knowledge necessary to formulate an answer. But keep in mind that the specific fruit used to make the melomel should be apparent in its color and depth.

When considering traditional meads, color is dependent on the type of honey, the season, and if oxidation is present. Meads range in colors pale straw to deep amber. The color, or tint, of traditional meads can tell us about the concentration of honey present in the mead. In general,



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a pale mead is indicative of less honey used to make the brew, thus resulting in a lighter body. Traditional meads that are on the deep amber side of the spectrum are usually higher in body because there is more honey and alcohol present, but if the color is too extreme, the mead may have experienced oxidation.

It should be obvious at this point that there is some ambiguity regarding the visual characteristics of meads. Visualization of meads becomes easier with experience, and is a vital method used to determine if the mead is correctly fermented, and if there are any significant observable flaws. But as you can see, visual assessments alone can not allow us to fully judge meads.

Nose

Once they derive all that can be determined from visualization, sommeliers move on to the famous wine swirl. You have seen it in movies, you have even mimicked it with your friends to try to look cool at wine tasting, but what does the swirl really mean? The swirl is actually pertinent in determining two major factors of wines and meads. The first is its aroma, and the second is its body and alcohol. The swirl offers a solution to the problem by releasing the more volatile smells in a wine or still mead. When sitting stagnant in the glass, there is little outgassing occurring, but when the beverage is agitated, a flood of aromas are released. By swirling, there is an increase in the surface area of the wine or mead as it is agitated and aerated. This forces out more of the volatiles, making the job of judging possible.

It is important to point out that the swirling must be consistent between meads. If one mead requires more agitation than another, it may not be a fair assessment. Also, keep in mind that if carbonation is present, natural outgassing will occur from the CO₂ that will aid in outgassing and the sensation of smell.

A wine expert is looking for some significant characteristics as they smell their way through the glass. In the world of wines, aroma is divided into three major facets which include intensity, aroma and bouquet.

Intensity

The first factor known as intensity, can be thought of as the overall "strength" or "prominence" of the smell. This includes the "strength" of the alcohol, honey, fruits/vegetables, spices and other additives incorporated in the mead. How much of their presence is detectable is an important consideration when judging.

Aroma

Aroma describes the odors that originate exclusively from the honey, fruit, or spices that are used in the mead. For example, if orange blossom honey is used in a traditional mead, there should be a floral aroma of the orange blossom. In addition, honey has a unique aroma that can be experienced by placing your nose over a honey jar. If these aromas are not present in the mead, there is a good chance that the honey was boiled and all good aromas have been destroyed. This should be taken under consideration when evaluating the aroma of the mead.

When judging melomels, aroma from the fruit should be present. If the fruits aroma is stronger than expected (almost like a lollipop), be aware that extracts may have been used as an enhancer, and judge accordingly. If spices are used in the mead, their presence should be detectable in the aroma, but not over-powering.

Bouquet

Assessing the bouquet of a mead, in simple terms, can be described as the attempt to make an assessment of the level of complexity, and balance, of its overall aroma. It is simply the art of using your nose to smell the balance between the honey, fruit, spices, yeast, alcohol, additives and a list of other smells that come forth from the glass.

As you smell your way through the mead, be sensitive to any additives or faults that may be present. It may be helpful to have a sheet in hand that summarizes the aromas associated with such faults as astringent, chlorophenolic, metallic and more. The BJCP mead score sheet actually lists many of the most common faults that can be sensed through smell. Learn them and use them well for they will be encountered and should be identified.

Mouth Feel

After slowly working their way through above observations, sommeliers finally come

to a point everybody loves, placing the mead in their mouth. Be forewarned, however, that their first sip is not for taste—it is, instead, for feel. Perhaps these guys make everything hard instead of fun, but their observations are usually flawless and their wealth of knowledge is amazing to observe.

Touching wine or mead involves two important aspects. The first being the "body," and the second is astringency or stypticity.

Body

Body is a difficult sensory assessment to classify. Body depends on the amount of alcohol, sugars, and glycerin present in the wine or mead. Body on the tongue can be described as a "velvety" or a "silky" sensation in the mouth. To calibrate the senses, it is helpful to try some varying degrees of light bodied to heavy bodied wines to develop an appreciation of their differences in mouth-feel.

Body is not only observed by sensation, but it can also be observed visually. This brings us back to the famous wine swirl. Another phenomenon that comes forth from the swirl is a visual observation that brings forth the term "legs." Legs are the tears of wine that drip down the side of the glass as the wave of liquid leaves that region. It is not the size or number of these legs that are important, but instead the amount of time two or more tears start,

become visible and begin to slide down the glass. Wines or meads that are very low in alcohol and glycerin have legs that move quickly, or form droplets. In general, the longer the legs take to form, the more "body" the beverage has. Body is important when trying to ascertain the balance of the mead. If you are judging a sweet mead for example, the body will help you determine if it is truly a mead, or a solution of honey and water. As an example, a sweet mead should be balanced with a "heavy" body and a significant amount of alcohol.

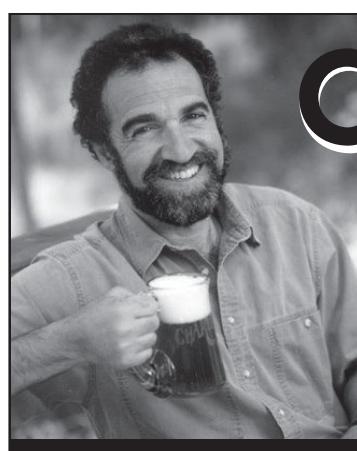
Astringency

Another factor of touching includes astringency, or "bitterness" of the beverage. BJCP guidelines for meads state that "astringent character should be avoided." Astringency may be imparted to mead from the honey, fruit, vegetable, or even spices that are used. They are caused by polyphenols that are present in all the above mentioned ingredients. Astringency is an easy sensation to inspect. It leaves a rough, gritty feeling on the back center of your tongue and in your mouth. A mead with low or no astringency can be said to be "smooth," and too much astringency can be "harsh".

Tasting

Finally, after obsessing on all the above factors and observing in great detail their precise order, comes the most exciting point—tasting. It is important to note that taste is affected by temperature of the beverage as it is placed in your mouth. Temperature is a challenging factor to control in a competition, mainly because all the beverages are placed in iced coolers prior to judging. This is why it is important that the beverage be removed from ice prior to judging to allow it to come to the appropriate temperature. If one mead is judged too cold and the other too warm, it will be difficult to get a fair comparative assessment. An ideal temperature range for judging meads should be between 50 to 55 degrees F (10 to 13 degrees C).

Again, looking at the perspective of the world of wines, there are some basic characteristics that are to be considered when tasting a wine or mead for judging. The most important of these characteristics include sweetness and acidity.



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Sweetness

Sweetness is a very touchy subject when judging any type of alcoholic beverage. Residual sugars can be quite pleasing to most palates, thus causing a biased opinion from the judge. But sweetness or dryness do not make for a good or bad mead. Because of this dilemma, meads should be divided into sub-categories based on overall sweetness.

The BJCP Guidelines indicate that entrants must specify "whether the mead is dry, semi-sweet or sweet." This outline is a good indicator for dividing the meads into sub-categories and should be followed closely in competitions. Placing meads into sub-categories that are dependent on residual sugars will certainly help to eliminate the "personal preference" problem. When judging for sweetness, it is important to look for an overall balance between the amount of sweetness and the body. An overly sweet mead with little alcohol, for example, may be underfermented.

Also, depending on the type and amount of honey and the type of yeast, meads may dry out to a finishing gravity of less than one. Not many people are familiar with tasting extremely dry beverages. If someone is planning on judging this sub-category, it may be helpful to calibrate the tastebuds with some extremely dry white wines. This will help to acquire a taste for dry meads, since they tend to not be as palatable as medium or sweet types. In competitions, it is common to see meads with flaws win because of the amount of residual sugars and the palate of the judge. But sweetness or dryness alone do not determine a quality wine or mead. It is important to also consider acidity levels and how they balance with sweetness.

Acidity

Acidity creates the sensation of crispness, tartness and zing. Without it, the beverage would be dull and flat to the taste. Too much of it will cause lips to pucker and will result in an unpleasant mead. There is no clear definition of the amount of acidity that the mead should have, nor is it addressed in the BCJP guidelines, but there is an important balance with sweetness that must be present.

For example, elderberries tend to leave more acid in a final melomel product than blueberries. Should a judge score a more

acidic melomel differently than a less acidic melomel with a different fruit? I would think the answer to this question should be yes. The problem with judging acidity in meads is that most homebrewers are not familiar with this factor. Acidity is something that is much more "automatic" when brewing beers. When brewing meads however, the burden of responsibility must fall on the brewer to balance out the acid levels. The homebrewer should become cognizant of the techniques used by wine-makers to raise and lower pH levels such that the final product is "balanced" correctly. The judge should recognize that there are techniques available to change pH levels in wines and meads, inform the brewer that a change is necessary (if applicable), and score accordingly.

Conclusion

Mead knowledge is not something that can be obtained by teaching and reading alone. It must also be balanced and supported by experience. The simple fact is that there are not many experienced, and therefore knowledgeable, mead judges. Ten thousand years ago, it is doubtful that anyone took the time to categorize, classify, analyze, scrutinize and judge meads.

Dividing meads into specific categories and sub-categories is a valid method for segregating meads in competitions, but it is not enough for proper judging. This is

mainly because most judges are not familiar with all the attributes associated with the large variety and styles of meads. The sommeliers and their knowledge of wines, can provide a useful and proven perspective that, if applied to meads, can offer additional factors to judge them by. The Alliance of Sommeliers have existed for 25 years and consists of professionals with a wealth of knowledge about a closely related beverage.

History shows that wines were once compared to meads; it may be time to consider reviving the past and applying these comparisons once again. In addition, brewing techniques for wine and meads are similar in many ways. Wine makers with centuries of effort have made an art of creating a balanced beverage, and it is important for the mead brewer and judge to know that these techniques are also available to help create a balanced mead. If we form an alliance between the world of wines and the world of beers, it may allow us the opportunity to develop a better understanding of meads both as makers and judges. They are not a wine or a beer, but something closely related that fits nicely in between.

Steve DellaSala is an eight-year Meadmaster and, in general, a fanatic on the subject of honey wine. This is his first story for Zymurgy.

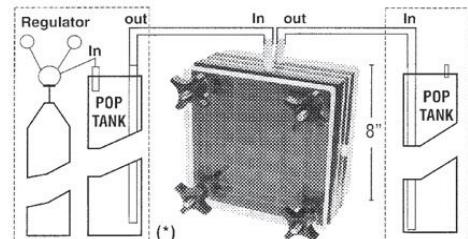
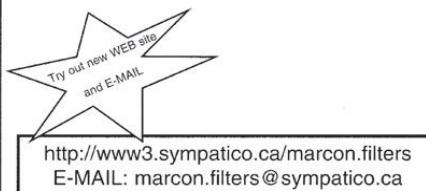


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Geoff Larson spreading the malt with Mt. Juneau in the background.

Striking Gold in Alaska (from page 44) 1986 as the Chinook Alaskan Brewing Company.

Chinook refers to a southwesterly wind, an Indian tribe, a kind of hop and a type of salmon. Unfortunately for the Larsons, it was also the name of a winery in Washington state, which threatened to sue over trademark infringement. As a result, the word Chinook was dropped from the company stationery and all brand names.

ton state, which threatened to sue over trademark infringement. As a result, the word Chinook was dropped from the company stationery and all brand names.

Alaskan Brewing Company's first product was Alaskan Amber, which was based on a 1907 recipe and produced in the style



of a German altbier: a top-fermented brew cold-aged like a lager. The Smoked Porter didn't appear on the scene until 1988. At that time, the brewery stood just across the street from the Taku Smokeries, a fish processing plant. On Friday afternoons, workers at the smokery would gather at the brewery to swap smoked salmon for beer and celebrate the end of the work week. The smoked fish, however, was so assertive that "after a few bites, the amber almost disappeared," recalls Marcy.

On one occasion, Geoff and his brew crew were talking about brewing techniques in preindustrial times, before the use of coke and coal became common. They speculated that malt roasted over wood would have imparted a pronounced smokiness to the beer. According to Geoff's research, brewers in Gold Rush-era Alaska may have produced a similar brew. They were dissatisfied

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Loading the racks of malt into the smoker.

with the pale malt shipped from the Lower 48, and roasted it over a wood-fueled fire to achieve a darker color. Words led to actions, and the Larsons decided to produce his own smoked beer based on a porter recipe by then head brewer John Maier.

Using an outdoor barbecue grill, Maier experimented with various types of wood. "Some of the test brews were wonderful, some were awful," recalls Canaday. Alder was chosen because it yielded a flavor that wasn't too tannic like oak, or acidic like hickory. Alder also happens to flourish in the cold, moist Juneau climate. "It's the first thing that grows when the glaciers recede," notes Marcy. Very probably this is the wood that early Alaskan brewers used for roasting their malt. The only other local sources of timber are hemlock and spruce, and soft woods are rarely used for smoking foodstuffs because they impart an intense, unpleasant resinous aroma.

Sandro Lane, owner of the Taku Smokeries, offered the use of his facility for smoking the malt. "He probably foresaw some trading action going on!" laughs Marcy. The Alaskan Brewing Co. crew prepared special stainless-steel racks with screens for lay-

ing the malt on, and, in the early years, supplied their own fuel...including some alder stumps that were dredged out of brewer Tom West's backyard. Originally, the smoked porter recipe contained a secret ingredient: olive oil. It wasn't added to the beer but to the chain saws used for cutting up the wood; the Larsons were afraid that machine oil might leak out and compromise the beer.

As demand for the Smoked Porter increased (260 bbl were produced last year, compared to 20 bbl in 1988), the brewery began purchasing alder wood already processed into a sawdustlike consistency.

Why Isn't There More?

Marcy Larson often fields the question: Why don't you brew the Smoked Porter year round? She gives two reasons. First of all, the beer is labor-intensive. "We spend a minimum of three days putting in 12-hour shifts," says Dayton Canaday of the smoking process.

Second, offers Marcy, brewing the Smoked Porter from January through December would make it difficult to compare different vintages. For a beer of modest strength (6.1% ABV, OG 1.065), Smoked Porter ages very gracefully. At the aforementioned Brickskeller tasting held last spring, participants got to sample four vintages, dating as far back as 1995. None showed any trace of microbial infection or the cardboardy taste associated with severe oxidation. The older samples had developed sherrylike notes and the smokiness had faded to a faint aroma of charcoal, allowing the specialty malts to come to the fore.

Oddly, the 1995 seemed to have a more pronounced smoky character than the 1996 version. Marcy has noticed this, too: after fading to a mere whiff, the smoke seems to rally and make a comeback. She attributes this to a kind of gustatory illusion, a result of the hop aroma and flavor dissipating. With the hops gone, the smokiness appears to become stronger.

Smoked beer is an esoteric style that most beer aficionados either love or loathe. Outside of Bamberg, Germany, there is no major tradition of brewing smoked beer. Even in Scotland, the celebrated "peat reek" is a characteristic of whiskey and only rarely

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beer. If smoked beer is enjoying a minor revival in the U.S., Alaskan Brewing Company's Smoked Porter deserves credit for sparking interest in an obscure style. Granted, most craft breweries that do a smoked beer use beechwood- or peat-smoked malt, probably because these varieties are commercially available. However, porter is arguably the most common base for creating a smoked beer. (Smoked Märzens and Scotch ales are also common. What these styles have in common is a moderate body and a fair degree of residual sweetness. "You don't see too many highly hopped smoked beers," notes Ray Daniels.)

The Great American Beer Festival® has bestowed more kudos on Smoked Porter than on any other single brand. Between 1991 and 1995, the beer won an unprecedented five straight gold medals in the Smoke-Flavored Beer category. It's also won three silver medals, usually finishing behind Rogue Smoke, (another beer formulated by brewer John Maier, who now toils for Rogue Ales in Newport, OR).

Curiously, the beer has finished out of the money the last two years at the GABF

Professional Panel Blind Tasting. Marcy is at a loss to explain why. The recipe is the same each year, she explains; as far as the malt preparation is concerned, the smokehouse uses a computer to control the airflow and temperature of the smoke. Canaday is unconcerned. "The Smoked Porter has become a standard for other brewers to aspire to, and for me, that's enough recognition."

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- Greg Kitsock is a regular contributor to Zymurgy.**



This was in the early days of the Smoked Porter—they made the alder chips with a chainsaw (hence the crew affectionately terming the process "chainsaw brewing"). They used olive oil in the chainsaw as a lubricant. Geoff is on the left kneeling and Dayton Canaday, the plant manager who has been with the company since they opened their doors, is on the right.



Geoff and Marcy receiving their "Small Business Persons of the Year" award in May 1999. From left to right: Ron Veltkamp (SBA), Lt. Governor Fran Ulmer, Marcy, Geoff, Gretchen Sorenson (Regional Director of SBA), Governor Tony Knowles.

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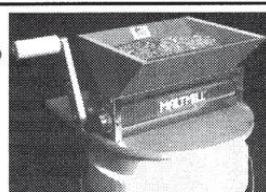
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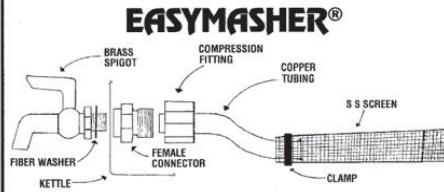
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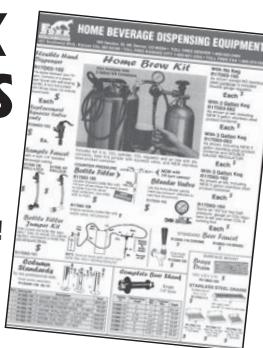


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Boston Ale Golden Pilsner Honey Porter Cream Stout Lightship Scotch Ale Triple Bock Cherry Wheat Double Bock Octoberfest Cranberry Lambic Winter Lager Old Fezziewig



Grant Wood

Jim DeBoer

Richard Dube

Walter Scheuerle
David Grinnell

Jim Koch

Jose Ayala
Jim Pericles

William Reed (not present)

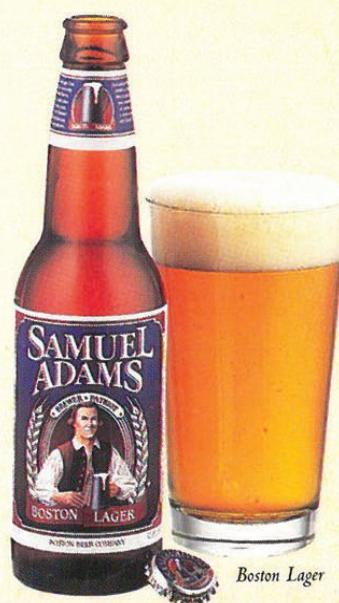
R&D.

Our nine brewers spend their time perfecting the brewing process at the traditional breweries where we brew our Samuel Adams beers.

With more than 125 different parameters to control in every batch, it's not surprising to find them tasting, testing, and talking beer deep into the night.

As they tell us all too often, a brewer's work is never done.

The Brewers of Samuel Adams Beer



Boston Lager